

CLAYTON QUARRY
CEMEX CONSTRUCTION MATERIALS PACIFIC, LLC

**DRAFT MITIGATION MONITORING AND REPORTING
PROGRAM**

COUNTY FILE # CDLP15-2030/31

515 MITCHELL CANYON ROAD
CLAYTON, CA 94517

ASSESSORS PARCEL NUMBER(S):
122-020-007 & 122-020-013

FEBRUARY 2022

CLAYTON QUARRY

DRAFT MITIGATION MONITORING AND REPORTING PROGRAM

INITIAL STUDY

CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES	
<p>Impact 5b: Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5</p> <p>Impact 5c: Disturb any human remains, including those interred outside of formal cemeteries</p> <p>Impact 18a: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)</p> <p>Impact 18b: A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1</p>	
Mitigation Measure(s):	
<p>Mitigation Measure CUL-1: The following Mitigation Measures shall be implemented during project demolition/construction activities.</p> <ol style="list-style-type: none"> 1. A program of on-site education to instruct all demolition/construction personnel in the identification of prehistoric and historic deposits shall be conducted prior to the start of any grading or construction activities. 2. If archaeological materials are uncovered during grading, trenching, or other onsite excavation, all work within 30 yards of these materials shall be stopped until a professional archaeologist who is certified by the Society for California Archaeology (SCA), and/or Society of Professional Archaeology (SOPA), and the Wilton Rancheria Tribe, have had an opportunity to evaluate the significance of the find and suggest appropriate mitigation(s) if deemed necessary. 	
Monitoring Responsibility:	Lead Agency, Operator and, if needed, professional archaeologist.
Implementation Schedule:	Prior to the start of any grading or construction activities. If any archaeological materials are uncovered during earthmoving reclamation activities.
Compliance Verification:	
<p>Mitigation Measure CUL-2: Should human remains be uncovered during grading, trenching, or other on-site excavation(s), earthwork within 30 yards of these materials shall be stopped until the County coroner has had an opportunity to evaluate the significance of the human remains and determine the proper treatment and disposition of the remains. Pursuant to California Health and Safety Code Section 7050.5, if the coroner determines the remains may be those of a Native American, the coroner is responsible for contacting the Native American Heritage Commission (NAHC) by telephone within 24 hours. Pursuant to California Public Resources Code Section 5097.98, the NAHC will then determine a Most Likely Descendant (MLD)</p>	

tribe and contact them. The MLD tribe has 48 hours from the time they are given access to the site to make recommendations to the land owner for treatment and disposition of the ancestor's remains. The land owner shall follow the requirements of Public Resources Code Section 5097.98 for the remains.	
Monitoring Responsibility:	Lead Agency and Operator.
Implementation Schedule:	If any human remains are uncovered during earthmoving reclamation activities.
Compliance Verification:	

DRAFT ENVIRONMENTAL IMPACT REPORT

SECTION 4.1: AESTHETICS AND VISUAL RESOURCES	
Impact 4.1-4: Creation of a New Source of Substantial Light and Glare That Would Adversely Affect Day or Nighttime Views in the Area	
Mitigation Measure(s):	
Mitigation Measure 4.1-4: Daily Limitation of Reclamation-Related Construction Activities All reclamation-related construction activities shall be limited to the hours of 7 a.m. to 7 p.m. Monday through Friday.	
Monitoring Responsibility:	Operator.
Implementation Schedule:	During reclamation-related activities.
Compliance Verification:	

SECTION 4.3: BIOLOGICAL RESOURCES	
Impact 4.3-1: Have an Adverse Effect, Directly or Indirectly, on Habitat for Special-Status Plant or Wildlife Species due to Ground Surface Disturbance and Vegetation Removal	
Mitigation Measure(s):	
Mitigation Measure 4.3-1a: Conduct Botanical Surveys To avoid and minimize potential impacts to special status plants, the following shall apply: <ol style="list-style-type: none"> 1. Prior to the commencement of reclamation-related ground disturbing activity (which includes clearing, grubbing, or grading) in previously undisturbed areas identified as having potential special status plant species in the project biological resources assessment report, a qualified botanist or biologist shall conduct a pre-construction survey for special status rare plant species. The survey shall occur within 30 days prior to commencement of ground-disturbing activity. If a special-status species is detected, the applicant shall avoid activity in the area if doing so is feasible in conjunction with meeting project objectives. 	

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<p>2. If rare plant species are found and avoidance is not feasible, and the plant is listed under CESA, then the applicant shall mitigate on a 1:1 ratio and obtain and comply with necessary permits from CDFW.</p>	
<p>Monitoring Responsibility:</p>	<p>Operator.</p>
<p>Implementation Schedule:</p>	<p>30-days prior to the commencement of reclamation-related ground disturbing activity.</p>
<p>Compliance Verification:</p>	
<p>Mitigation Measure 4.3-1b: Conduct Special-status Vertebrates Surveys, Personnel Training, and Avoidance</p> <p>To avoid and minimize impacts to special status vertebrates, the following shall apply.</p> <ol style="list-style-type: none"> 1. No more than 48 hours prior to the commencement of reclamation-related ground disturbing activity (i.e., clearing, grubbing, or grading) associated with the overburden fill areas, tree screen, diversion outlet structure, or other areas, a qualified biologist shall conduct a pre-construction survey of suitable habitat in the project reclamation area. 2. The biologist shall supply a brief written report (including date, time of survey, survey method, name of surveyor, and survey results) to the Department of Conservation and Development prior to the commencement of ground disturbing activity. 3. Construction personnel shall receive worker environmental awareness training prior to the commencement of ground disturbing activity. This training instructs workers how to recognize special status vertebrate species and their habitat. 4. If a special-status species is detected, all work will be halted until the animal has left the work area or, if necessary, has been relocated by a qualified biologist with applicable authorizations. 	
<p>Monitoring Responsibility:</p>	<p>Operator.</p>
<p>Implementation Schedule:</p>	<p>No more than 48 hours prior to the commencement of reclamation-related ground disturbing activity.</p>
<p>Compliance Verification:</p>	
<p>Mitigation Measure 4.3-1c: Conduct Bat Surveys, Avoidance, and Employ Approved Eviction When Necessary</p> <p>To avoid and minimize potential impacts to special status bats, the following shall apply:</p> <ol style="list-style-type: none"> 1. If reclamation-related ground disturbing activity (which includes clearing, grubbing, or grading) is to commence within 50 feet of suitable bat habitat, including structures and trees with large cavities, during the winter hibernaculum season (e.g., November 1 through March 31), then a qualified biologist shall conduct a pre-construction survey within 50 feet of the 	

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<p>reclamation project footprint on the CEMEX property to determine if a potential winter hibernaculum is present, and to identify and map potential hibernaculum sites.</p> <ol style="list-style-type: none"> The biologist shall supply a brief written report (including date, time of survey, survey method, name of surveyor and survey results) to the Department of Conservation and Development prior to the commencement of ground disturbing activity. If no winter hibernaculum sites are found during the survey, then no further mitigation would be required. If potential hibernaculum sites are found, then the applicant shall avoid all areas within a 50-foot buffer around the potential hibernaculum sites until bats have vacated the hibernaculum. Winter hibernaculum habitat shall be considered fully avoided if reclamation-related activities do not impinge on a 50-foot buffer established by the qualified biologist around an existing or potential winter hibernaculum site. The qualified biologist will determine if non-maternity and nonhibernaculum day and night roosts are present on the project site. If necessary, a qualified biologist will use safe eviction methods to remove bats if direct impacts to non-maternity and non-hibernaculum day and night roosts cannot be avoided. If a winter hibernaculum site is present, then reclamation activities shall not occur within 50 feet until the hibernaculum is vacated, or, if necessary, safely evicted using methods acceptable to CDFW. 	
Monitoring Responsibility:	Lead Agency and Operator.
Implementation Schedule:	If reclamation-related ground disturbing activity (which includes clearing, grubbing, or grading) is to commence within 50 feet of suitable bat habitat, including structures and trees with large cavities, during the winter hibernaculum season; If potential hibernaculum sites are found, then the applicant shall avoid all areas within a 50-foot buffer around the potential hibernaculum sites until bats have vacated the hibernaculum.
Compliance Verification:	
<p>Mitigation Measure 4.3-1d: Wildlife Exclusion Fence A temporary wildlife exclusion fence shall be installed around the perimeter of any previously undisturbed area prior to the initiation of new ground-disturbing activities to discourage small wildlife from entering the site. The fence shall have escape funnels pointing outwards to allow small wildlife to exit the work area.</p>	
Monitoring Responsibility:	Operator.
Implementation Schedule:	Prior to the initiation of new ground-disturbing activities.
Compliance Verification:	
<p>Mitigation Measure 4.3-1e: Biologist Presence A qualified biologist shall be present for all initial reclamation-related ground-disturbing activities in areas that have not been previously disturbed.</p>	
Monitoring Responsibility:	Operator.

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Implementation Schedule:	Prior to all initial reclamation-related ground-disturbing activities.
Compliance Verification:	
<p>Mitigation Measure 4.3-1f: No Monofilament Plastics To prevent the entrapment of Alameda striped racers and other wildlife, monofilament plastics shall not be used for erosion control.</p>	
Monitoring Responsibility:	Operator.
Implementation Schedule:	At all times.
<p>Mitigation Measure 4.3-1g: Conduct Nesting Bird Surveys and Avoidance To avoid and minimize impacts to nesting birds, the following shall apply:</p> <ol style="list-style-type: none"> 1. If reclamation-related ground disturbing activity is to commence within 50 feet of nesting habitat between February 1 and August 31, then a qualified biologist shall conduct a pre-construction survey for active migratory nests within 5 days prior to the commencement of ground disturbing activity. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. 2. The biologist shall supply a brief written report (including date, time of survey, survey method, name of surveyor and survey results) to the Department of Conservation and Development prior to the commencement of ground disturbing activity. If no active nests are found during the survey, then no further mitigation would be required. 3. If active nests are found in the survey area, then a non-disturbance buffer centered on the nest and of a size determined by a qualified biologist shall be established and maintained around the nest to prevent nest failure. Active nests shall be monitored weekly to ensure that the exclusion zones are intact and that the young are developing. All construction activities shall be avoided within this buffer area until a qualified biologist determines that nestlings have fledged and are foraging independently as determined by a qualified biologist, unless otherwise approved by the Conservation and Development Department and CDFW. 	
Monitoring Responsibility:	Operator.
Implementation Schedule:	If reclamation-related ground disturbing activity is to commence within 50 feet of nesting habitat between February 1 and August 31, then a qualified biologist shall conduct a pre-construction survey for active migratory nests within 5 days prior to the commencement of ground disturbing activity.
Compliance Verification:	
<p>Mitigation Measure 4.3-1h: Burrowing Owl Protection To avoid and minimize potential impacts to western burrowing owl, the following shall apply:</p> <ol style="list-style-type: none"> 1. If reclamation-related ground disturbing activity is to commence in previously undisturbed areas within 500 feet of suitable owl burrow habitat, then a qualified biologist shall conduct a 	

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<p>pre-construction survey for burrowing owl. The survey shall occur within 30 days prior to the date that reclamation activities will encroach within 500 feet of suitable habitat. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. Surveys shall be conducted in accordance with the following:</p> <ol style="list-style-type: none"> a. A survey for burrows and owls shall be conducted by walking through suitable habitat over the proposed reclamation construction site and in areas within 500 feet of the project disturbance area. b. Pedestrian survey transects should be spaced to allow 100 percent visual coverage of the ground surface. The distance between transect center lines should be no more than 30 meters, and should be reduced to account for differences in terrain, vegetation density, and ground surface visibility. Surveyors should maintain a minimum distance of 50 meters from any owls or occupied burrows. c. If no occupied burrows or burrowing owls are found in the survey area, then the biologist shall supply a brief written report (including date, time of survey, survey method, name of surveyor and survey results) to the Conservation and Development Department and no further mitigation is necessary. d. If occupied burrows or burrowing owls are found, then a complete burrowing owl survey is required. This consists of a minimum of four site visits conducted on four separate days, which must also be consistent with the Survey Method, Weather Conditions, and Time of Day sections of Appendix D of the California Department of Fish and Wildlife (CDFW) "Staff Report on Burrowing Owl Mitigation" (March 2012). The applicant shall then submit a survey report to the Planning Division which is consistent with the CDFW 2012 Report. e. If occupied burrows or burrowing owls are found during the complete burrowing owl survey, then the applicant shall contact the Planning Division and consult with CDFW prior to construction, and will be required to submit a Burrowing Owl Mitigation Plan (subject to the approval of the Planning Division and CDFW). This plan must document all proposed measures, including avoidance, minimization, exclusion, relocation, or other measures, and include a plan to monitor mitigation success. The CDFW "Staff Report on Burrowing Owl Mitigation" (March 2012) should be used in the development of the mitigation plan. <p>2. Comply with the mitigation requirements and conditions of any Section 1600 Streambed Alteration Agreement (Agreement), if any, with CDFW for project reclamation activities, as applicable to burrowing owl. If there is a conflict between the terms of mitigation item 1 above and the Agreement, then the Applicant shall abide by the terms of the Agreement.</p>	
Monitoring Responsibility:	Operator.
Implementation Schedule:	If reclamation-related ground disturbing activity is to commence in previously undisturbed areas within 500 feet of suitable owl burrow habitat;
Compliance Verification:	
<p>Mitigation Measure 4.3-1i: Bumblebee Protection To minimize the take of Crotch's and western bumblebee species, a qualified entomologist shall conduct a take avoidance survey for active bumblebee colony nesting sites in any previously undisturbed area prior to each phase of reclamation-related construction, if the work will occur during the flying season.</p>	

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<p>Survey results, including negative findings, shall be submitted to CDFW prior to implementing reclamation-related ground-disturbing activities. Surveys shall take place during flying season when the species is most likely to be detected above ground, between March 1 and September 1. The surveys shall occur when temperatures are above 60 degrees Fahrenheit (°F), on sunny days with wind speeds below 8 miles per hour, and at least 2 hours after sunrise and 3 hours before sunset. Surveyors shall conduct transect surveys focusing on detection of foraging bumble bees and underground nests using visual aids such as binoculars. At minimum, a survey report should provide the following: If no Crotch’s or western bumble bees or potential Crotch’s or western bumble bees are detected, no further mitigation is required. If potential Crotch’s or western bumble bees are seen but cannot be identified, the applicant shall obtain authorization from CDFW to use nonlethal netting methods to capture bumble bees to identify them to species. If protected bumble bee nests are found, a plan to protect bumble bee nests and individuals to ensure no take of Crotch’s and western bumblebee species shall be developed by a qualified entomologist in consultation with the Conservation and Development Department. The Conservation and Development Department shall approve the plan prior to implementation.</p>	
Monitoring Responsibility:	Operator.
Implementation Schedule:	Prior to each phase of reclamation-related construction, if the work will occur during the flying season; between March 1 and September 1.
Compliance Verification:	
<p>Mitigation Measure 4.3-1j: Take Coverage for Federally Listed Species If required by the USFWS for certain previously undisturbed areas to support reclamation-related construction activity, the applicant shall obtain take coverage for federally listed species (Alameda striped racer and California red-legged frog). This may be from a Section 7 Consultation resulting in a Biological Opinion (BO) or a Section 10 consultation resulting in a Habitat Conservation Plan (HCP). All avoidance, minimization, and mitigation measures in the BO or HCP shall be implemented as a condition for operating in that area.</p>	
Monitoring Responsibility:	Operator.
Implementation Schedule:	Ongoing
Compliance Verification:	
<p>Mitigation Measure 4.3-1k: Trapping Federally Listed Species If necessary, a qualified biologist approved under an active BO or HCP will be contracted to trap and move federally listed species (Alameda striped racer and California red-legged frog) to nearby suitable habitat.</p>	
Monitoring Responsibility:	Operator and qualified biologist.
Implementation Schedule:	Ongoing
Compliance Verification:	

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Mitigation Measure 4.3-1l: Take Permit for State Listed Species	
If required by CDFW, the applicant shall obtain a California Endangered Species Act Section 2081 Incidental Take Permit (ITP) for the Alameda striped racer associated with new reclamation-related disturbances in previously undisturbed areas. If further future information warrants their inclusion, the permit shall cover Crotch's and/or western bumble bee as well. All avoidance, minimization, and mitigation measures in the ITP shall be implemented as a condition for operating in that area.	
Monitoring Responsibility:	Operator.
Implementation Schedule:	Ongoing
Compliance Verification:	
Impact 4.3-3: Have an Adverse Effect on Riparian Habitat or Other Sensitive Natural Communities	
Mitigation Measure(s):	
Implement Mitigation Measures 4.3-1a, 4.3-1b, 4.3-1c, 4.3-1d, 4.3-1e, 4.3-1f, 4.3-1g, 4.3-1j, 4.3-1k, and 4.3-1l (see Impact 4.3-1).	
Mitigation Measure 4.3-3: Acquire Necessary Permits for Jurisdictional Features	
The applicant shall mitigate these impacts at an approved ratio and shall obtain required permits to impact the jurisdictional ephemeral stream from the relevant regulatory agencies, including the USACOE, CDFW, and RWQCB, as applicable. These permits will include conditions and Best Management Practices (BMPs) that the quarry shall implement during construction. These permits may also specify mitigation, which the quarry shall provide as specified by the agencies. All terms of the permits shall be implemented as a condition of the project. If permits require mitigation at a higher ratio than 1:1, that requirement will be met.	
Monitoring Responsibility:	Operator.
Implementation Schedule:	These permits will include conditions and Best Management Practices (BMPs) that the quarry shall implement during construction.
Compliance Verification:	
Impact 4.3-6: Conflict with Local Policies or Ordinances Protecting Biological Resources	
Mitigation Measure(s):	
Mitigation Measure 4.3-6a: Tree Avoidance	
The project reclamation plan shall avoid as many protected trees as feasible. The project plan shall incorporate placement of tree protection fencing outside of the avoided trees' drip line, which shall be determined by the diameter of each tree trunk in inches at breast height and multiplied by 12. Preserved trees on the project site shall be avoided during construction by following best management practices as outlined in the following measures.	
Monitoring Responsibility:	Lead agency and Operator.

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Implementation Schedule:	During Construction; Ongoing
Compliance Verification:	
<p>Mitigation Measure 4.3-6b: Tree Maintenance During Construction, Root Zones Tree roots often extend far beyond the canopy drip line, which shall be determined by the diameter of each tree trunk in inches at breast height and multiplied by 12. Excavation work within the drip line of avoided trees shall not be allowed.</p>	
Monitoring Responsibility:	Lead agency and Operator.
Implementation Schedule:	During Construction; Ongoing
Compliance Verification:	
<p>Mitigation Measure 4.3-6c: Tree Protection Fencing Prior to the start of fill disposal, Tree Protection Fencing (TPF) shall be installed. The TPF shall be maintained during the entire fill disposal process to prevent direct damage to trees and their growing environment. The TPF shall consist of blaze orange barrier fencing supported by metal "Trail" fence posts, unless wildlife exclusion fencing is in place. The TPF shall be placed at a distance that is at or outside of the drip lines, which shall be determined by the diameter of each tree trunk in inches at breast height and multiplied by 12, of avoided trees. The TPF shall be installed as part of the site preparation before fill disposal or tree removal/trimming begins and shall be installed under the supervision of a qualified arborist. The TPF shall not be altered in any way that would increase the encroachment on the avoided trees during fill activities.</p>	
Monitoring Responsibility:	Operator.
Implementation Schedule:	Prior to the start of fill disposal; Ongoing
Compliance Verification:	
<p>Mitigation Measure 4.3-6d: Use of Heavy Equipment Heavy machinery shall not be allowed to operate (excavation, grading, drainage and leveling) or park within the drip line, which shall be determined by the diameter of each tree trunk in inches at breast height and multiplied by 12, of avoided trees unless approved by a qualified arborist.</p>	
Monitoring Responsibility:	Operator.
Implementation Schedule:	Ongoing
Compliance Verification:	
<p>Mitigation Measure 4.3-6e: Storage of Construction Materials and Debris Fill materials shall not be placed against the trunks of avoided trees. Disposal or depositing of oil, gasoline, chemicals or other harmful materials within the drip line, which shall be determined by the diameter of each tree trunk in inches at breast height and multiplied by 12, is prohibited.</p>	
Monitoring Responsibility:	Operator.

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Implementation Schedule:	Ongoing
Compliance Verification:	
Mitigation Measure 4.3-6f: Incidental Damage to Protected Trees	
The attachment of wires, signs, and ropes to any protected tree is strictly prohibited. Workers may be allowed to rest under trees, but they must not injure trees by any means. The County shall be notified if any damage occurs to a retained tree during fill disposal so that proper treatment may be administered.	
Monitoring Responsibility:	Lead agency and Operator.
Implementation Schedule:	During fill disposal; Ongoing
Compliance Verification:	
Mitigation Measure 4.3-6g: Trimming	
All pruning of protected trees shall be performed by a licensed contractor familiar with International Society of Arboriculture pruning guidelines and shall comply with the guidelines established by the International Society of Arboriculture, Best Management Practices, Tree Pruning, and any special conditions as determined by a certified arborist or the County's Director. A certified arborist shall coordinate all activities involving protected trees near the construction zone that are not permitted for removal.	
Monitoring Responsibility:	Operator.
Implementation Schedule:	Ongoing
Compliance Verification:	
Mitigation Measure 4.3-6h: Tree Planting Monitoring and Establishment	
Tree planting shall be monitored according to the methods outlined in Section 2.9.6 of the Reclamation Plan for successful establishment of installed trees. Establishment will be considered successful if 50 percent of the number of plantings required by the County have become established with no significant intervention for at least two years.	
Monitoring Responsibility:	Operator.
Implementation Schedule:	Ongoing
Compliance Verification:	

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Mitigation Measure 4.3-6i: Oak Tree Plan	
<p>The operator of the Clayton Quarry shall consult with an arborist to develop a plan that identifies where oak trees can be planted within the project site upon the completion of mining without substantially exacerbating wildfire risk on the site. The oak tree plan shall be provided to the Contra Costa County Fire Protection District and to the Planning Division for review and comment, to confirm that the additional oaks would not substantially exacerbate wildfire risk by connecting the two very high fire hazard severity zones on the project site. Oak trees shall be planted on the site during final reclamation activities as indicated in the final oak tree plan. Tree planting shall be monitored according to the methods outlined in Section 2.9.6 of the Reclamation Plan for the successful establishment of installed trees. The monitoring shall verify that the following performance standard is met: the planted trees must be healthy and must survive three years without intervention to be considered established. If the survival rate is less than 80 percent after three years, the trees that did not survive shall be replaced. The verification monitoring shall continue until the 80 percent survival rate of the trees planted under the oak tree plan has been achieved for three consecutive years.</p>	
Monitoring Responsibility:	Operator.
Implementation Schedule:	Upon the completion of mining.
Compliance Verification:	

SECTION 4.4: GEOLOGY AND SOILS
Impact 4.4-4: Exposure of People or Structures to Potential Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death, as a Result of Rockfalls and Landslides within the Quarry
Mitigation Measure(s):
<p>Mitigation Measure 4.4-4: Slope Stability Monitoring</p> <p>The operator of the Clayton Quarry (Operator) shall retain a County-approved qualified engineering geologist or geotechnical engineer experienced in evaluating the stability of slopes within the Knoxville formation at the diabase/Knoxville contact. These slopes shall be inspected every 5 years, or at an alternative frequency, if recommended by the engineering geologist or geotechnical engineer and approved by the County. The results of the inspection and any recommendations by the engineering geologist or geotechnical engineer shall be documented and submitted to the County within 30 days following the inspection. The report shall be accompanied with the Board of Supervisor’s approved fee for review by the County Geologist. Inspections shall summarize the rock types observed, provide detailed rock mass descriptions and measured discontinuity orientations, observed seepage conditions, and compare the observed conditions relative to those identified in the project geotechnical evaluation completed for the revised reclamation plan by Golder Associates Inc. [Golder] in 2017 (“Geotechnical Evaluations for Revised Reclamation Plan, Clayton Quarry, Clayton, California”). The geotechnical evaluation shall be appended to the Mitigation Monitoring and Reporting Program and shall be incorporated into the conditions of approval for the project. If the conditions vary from the geotechnical evaluation document characterization, the engineering geologist or geotechnical engineer shall evaluate whether the changes have an adverse impact on slope stability, and, if so, provide feasible recommendations to mitigate the slope stability concerns to achieve a minimum static factor of safety of</p>

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<p>1.3 and a pseudo-static factor of safety greater than 1.0. Recommendations shall be implemented within 6 months by the Operator, if feasible, otherwise as soon as practicable thereafter, upon approval by the County.</p>	
Monitoring Responsibility:	<p>A County-approved qualified engineering geologist or geotechnical engineer experienced in evaluating the stability of slopes within the Knoxville formation at the diabase/Knoxville contact.</p>
Implementation Schedule:	<p>These slopes shall be inspected every 5 years, or at an alternative frequency, if recommended by the engineering geologist or geotechnical engineer and approved by the County; The results of the inspection and any recommendations by the engineering geologist or geotechnical engineer shall be documented and submitted to the County within 30 days following the inspection; Recommendations shall be implemented within 6 months by the Operator, if feasible, otherwise as soon as practicable thereafter, upon approval by the County.</p>
Compliance Verification:	
<p>Impact 4.4-11: Directly or indirectly Destroy a Unique Paleontological Resource</p>	
<p>Mitigation Measure(s):</p>	
<p>Mitigation Measure 4.4-11: Paleontological Resources The operator of the Clayton Quarry (Operator) shall inform its employees and contractors involved in ground disturbing activities associated with reclamation of the sensitivity of the project area for paleontological resources and shall include the following directive in employee and contractor training materials:</p> <p style="padding-left: 40px;">“The subsurface of the quarry may be sensitive for paleontological resources in the Knoxville formation (the east side of the quarry pit) and in the alluvium (east side of the Clayton Quarry property). If paleontological resources are encountered during subsurface disturbance, all ground disturbing activities within 100 feet of the find shall be redirected and a qualified paleontologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. Employees and contractors shall not collect or move any paleontological materials. Paleontological resources include fossil plants and animals, and such trace fossil evidence of past life as animal tracks. Employee/contractor acknowledges and understands that excavation or removal of paleontological material is prohibited by law and constitutes a misdemeanor under California Public Resources Code, Section 5097.5.”</p> <p>A copy of the training materials and documentation of completed training shall be provided to the County for review upon request.</p> <p>If a paleontological resource is encountered during implementation of the revised reclamation plan, the Operator shall notify the County and all activity within 100 feet of the find shall halt until it can be</p>	

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<p>evaluated by a qualified paleontologist. The paleontologist shall evaluate the resource and determine its significance. If significant, the paleontologist shall notify the County and the Operator, in consultation with the County and the paleontologist, shall prepare a treatment plan such that the fossil would be recovered and scientific information preserved. The paleontologist shall implement the treatment plan in consultation with the County and Operator prior to allowing work in the 100-foot radius to resume.</p>	
<p>Monitoring Responsibility:</p>	<p>Lead Agency, Operator or, if needed, a qualified paleontologist</p>
<p>Implementation Schedule:</p>	<p>Ongoing; If a paleontological resource is encountered during implementation of the revised reclamation plan, the Operator shall notify the County and all activity within 100 feet of the find shall halt until it can be evaluated by a qualified paleontologist.</p>
<p>Compliance Verification:</p>	

<p>SECTION 4.5: GREENHOUSE GAS EMISSIONS</p>	
<p>Impact 4.5-1: Gas emissions generated by reclamation activities could have a significant impact on global climate change.</p>	
<p>Mitigation Measure(s):</p>	
<p>Mitigation Measure 4.5-1a: Idling Times Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure CCR Title 13, Section 2485). Clear signage shall be provided for construction workers at all access points. [Measure applies to idling times for all equipment other than diesel-powered equipment].</p> <p>Mitigation Measure 4.5-1b: Idling Times for Diesel-powered Equipment Minimize the idling time of diesel-powered construction equipment to two minutes. [Measure applies to idling times for diesel-powered equipment only].</p> <p>Mitigation Measure 4.5-1c: Equipment Maintenance All construction equipment shall be maintained and properly tuned in accordance with manufacturer’s specifications.</p> <p>Mitigation Measure 4.5-1d: Alternative Fuel Plan Prior to construction, develop a plan demonstrating that alternative fueled (e.g., biodiesel, electric) construction vehicles/equipment will represent at least 15 percent of the construction fleet if commercially available.</p> <p>Mitigation Measure 4.5-1e: Local Building Materials Use at least 10 percent local building materials in construction (e.g., construction aggregates, concrete pipe).</p>	

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Mitigation Measure 4.5-1f: Recycle or Reuse Construction and Demolition Materials	
Recycle or reuse at least 50 percent of construction waste or demolition materials (e.g., during decommissioning and removal of processing plant facilities).	
Mitigation Measure 4.5-1g: Generator Alternative Fuel	
Use alternative fuels for generators at construction sites such as propane or solar, or use electrical power, as feasible for each construction site.	
Monitoring Responsibility:	Lead Agency and Operator.
Implementation Schedule:	Ongoing
Compliance Verification:	

SECTION 4.6: HYDROLOGY AND WATER QUALITY	
Impact 4.6-1: Violate Water Quality Standards or Waste Discharge Requirements or Substantial Degradation of Surface Water or Groundwater Quality	
Mitigation Measure(s):	
Mitigation Measure 4.6-1a: Compliance with General Permit Requirements	
Compliance with requirements set forth in applicable NPDES and SWPPP. The operator of the Clayton Quarry (Operator) shall comply with the requirements set forth in any applicable NPDES program or SWPPP requirements, including, but not limited to, submitting a Notice of Intent prior to the start of activities under the Construction General Permit, updating the existing SWPPP as required by the Industrial General Permit based on changes to site conditions, and implementing typical BMPs for the protection of water quality.	
Monitoring Responsibility:	Operator and RWQCB.
Implementation Schedule:	Ongoing
Compliance Verification:	
Mitigation Measure 4.6-1b: RWQCB Discharge Approvals	
The operator of the Clayton Quarry (Operator) shall submit a Report of Waste Discharge to the San Francisco Regional Water Quality Control Board (RWQCB) prior to discharging any pit lake water. The report shall include information on the estimated characteristics of the quarry pit lake water quality as described in the "Quarry Lake Water Quality and Aquatic Life Criteria" Technical Memorandum, prepared by EMKO Environmental, Inc., July 2, 2021. The Operator shall implement any WDRs issued by the RWQCB in response to the Report of Waste Discharge. The Operator shall inform the County that a Report of Waste Discharge has been submitted, and shall provide the County with evidence of NPDES coverage and WDR compliance prior to any off-site discharge and at any time thereafter upon County request.	
Monitoring Responsibility:	Operator and RWQCB
Implementation Schedule:	Prior to discharging any pit lake water; Ongoing

Abbreviations:

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Mitigation Measure 4.6-1c: Funding Mechanism

Within 30-days after the effective date of this permit, the Operator shall submit for review and approval by the Director of Conservation and Development, or designee, (“Director”) a proposed funding mechanism (e.g., a bond) and cost basis to secure costs related to the required post-reclamation activities. The funding mechanism shall be in a form and an amount reasonably acceptable to the Director and shall be sufficient to cover costs associated with those post-reclamation activities described in Table 1 below, including the activities required by Mitigation Measure 4.6-7. The funding mechanism shall be held by the County, or held and managed by a third party approved by the Operator and County, as determined by the Director. On the fifth anniversary of this permit’s effective date, and at five-year intervals thereafter, the Operator shall submit an updated post-reclamation activity funding mechanism and cost basis to the Director for review and approval. The updated cost basis must be calculated to account for inflation and updated materials, construction, and maintenance costs, sufficient for the Director to determine whether the funded amount sufficiently secures anticipated costs related to the required post-reclamation activities. The Operator shall submit a Condition of Compliance review application (or equivalent) and associated deposit with each 5-year review to cover County time and material costs related to the Director’s review of the updated funding mechanism and cost basis.

**Table 1
Clayton Quarry Lake Drainage Post-Reclamation Inspection and Maintenance Activities**

Item	Description	Implementation Timing
Inspection Items		
1	Quarry pit drainage outlet structure, including: a. Condition of concrete bulkhead (e.g., spalling, exposed reinforcing, cracks, joint openings) b. Condition of steel plate (e.g., abrasion, rust) c. Condition of debris screen (e.g., abrasion, rust, connection to steel plate)	Annual inspection
2	24-inch HDPE drainage pipe (culvert), including: a. Condition of pipe at inlet b. Condition of pipe at manholes (2) c. Condition of pipe connection at Mitchell Canyon Rd.	Annual inspection
3	Rip-rap mound above drainage outlet (e.g., scour, undermining, washout, or other damage)	Annual inspection
4	Quarry lake perimeter fencing	Annual inspection

Abbreviations:

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Maintenance Items		
5	Repairs to quarry pit drainage outlet structure (e.g., concrete facing and reinforcement)	Deficiencies to be addressed prior to next inspection; immediate repair if structural integrity of drainage outlet is in jeopardy
6	Clean-out of 24-inch HDPE drainage pipe (culvert)	Deficiencies to be addressed prior to next inspection; clean out sediment and debris prior to onset of rainy season, if needed
7	Maintenance of rip-rap mound (e.g., clean-out of sediment and debris and replacement of rip-rap rock)	Deficiencies to be addressed prior to next inspection; clean out sediment and debris and re-establish rip-rap protection prior to onset of rainy season, if needed
8	Repair damaged quarry lake perimeter fencing	Deficiencies to be addressed prior to next inspection; repair wire mesh and barbed wire, if needed
Monitoring Responsibility:		Contra Costa County Director of Conservation and Development, or designee, and Operator.
Implementation Schedule:		Within 30-days after the effective date of this permit, the Operator shall submit for review and approval by the Director of Conservation and Development, or designee, ("Director") a proposed funding mechanism (e.g., a bond) and cost basis to secure costs related to the required post-reclamation activities; Ongoing
Compliance Verification:		
Impact 4.6-4: Substantially Alter Drainage Patterns in a manner which would result in Erosion or Siltation within the Quarry, Mitchell Creek, and Transitional Watershed Areas		
Mitigation Measure(s):		
<p>Mitigation Measure 4.6-4a: Incorporate Haul Road Erosion Control Measures Incorporate erosion control measures into the revised reclamation plan consistent with recommendations of the "Runoff from East Rim Access and Upper Quarry Haul Roads" Memorandum, prepared by EMKO Environmental, Inc., April 18, 2017. The memorandum shall be appended to the Mitigation Monitoring and Reporting Program and shall be incorporated into the conditions of approval for the project. Erosion control measures include, but are not limited to the installation of drainage controls such as cross slopes and rock-lined ditches along the portion of east rim haul road located in the Knoxville formation.</p>		
Monitoring Responsibility:		Lead Agency and Operator.
Implementation Schedule:		Ongoing

Abbreviations:

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Mitigation Measure 4.6-4b: Incorporate Quarry Pit and Overburden Fill Area Erosion Control Measures	
<p>Incorporate erosion control measures into the revised reclamation plan consistent with recommendations of the “Geotechnical Evaluations for Revised Reclamation Plan, Clayton Quarry, Clayton, California” Report, prepared by Golder Associates, May 2017. The geotechnical evaluation shall be appended to the Mitigation Monitoring and Reporting Program and shall be incorporated into the conditions of approval for the project. These erosion control measures include, but are not limited to, the placement of rip-rap and vegetation along the quarry pit lake shore, as well as the following measures to be implemented within the overburden fill areas:</p> <ul style="list-style-type: none"> • 2.5H:1V or flatter slopes with wheel and track rolling compactive effort; • Slope heights under 50 feet vertical, unless interim benches are used for drainage control; • Use of “J-ditches” or functional equivalent where beneficial to direct drainage horizontally across fill areas to designated drainage channels; • Fill slopes revegetated with appropriate erosion control seed mix; and • Erosion control fabric, wattles and other BMPs implemented as needed to reduce erosion and improve stability of the surficial layer of soil. 	
Monitoring Responsibility:	Lead Agency and Operator.
Implementation Schedule:	Ongoing
Compliance Verification:	
Impact 4.6-7: Substantially Alter Drainage Patterns in a manner which would result Uncontrolled Discharges from the Quarry Pit Lake and Thereby result in On- Or Off-Site Flooding or Exceed the Capacity of the Existing Storm Drainage System	
Mitigation Measure(s):	
<p>Mitigation Measure 4.6-7: Quarry Pit Lake Outlet Structure and Pipeline Maintenance. Following the construction of the quarry pit lake outlet structure and drainage pipeline, the operator of the Clayton Quarry shall retain a qualified professional engineer approved by the County to conduct inspection and as-needed repair of the drainage pipeline annually, in the late summer/early fall, and after any earthquake in Contra Costa County that generates strong (modified Mercalli Intensity VI) or greater ground shaking. Reports documenting inspection findings and any repair completed shall be submitted to the County after each inspection.</p>	
Monitoring Responsibility:	Operator and qualified professional engineer.
Implementation Schedule:	Following the construction of the quarry pit lake outlet structure and drainage pipeline
Compliance Verification:	

Abbreviations:

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SECTION 4.8: NOISE	
Impact 4.8-1: Generation of a Substantial Temporary or Permanent Increase in Ambient Noise Levels in the Vicinity of the Project Site in Excess of Standards Established in the Local General Plan or Noise Ordinance, or Applicable Standards of Other Agencies	
Mitigation Measure(s):	
<p>Mitigation Measure 4.8-1: Noise Reduction During Removal of Processing Plant and Support Structures</p> <p>To reduce potential construction-equipment reclamation-related noise impacts associated with the removal of processing plant and support structures on the project site, the following multi-part mitigation measure shall be implemented during the removal of the processing plant and support structures:</p> <ul style="list-style-type: none"> • The operator of the Clayton Quarry (Operator), employees, and the demolition contractor shall ensure that all internal combustion engine-driven equipment are equipped with mufflers that are in good condition and appropriate for the equipment. • The demolition contractor shall locate stationary noise-generating equipment as far as feasible from sensitive receptors. In addition, the construction contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site. • The demolition contractor shall locate, to the maximum extent practical, on-site equipment in staging areas to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site. • The demolition contractor shall prohibit unnecessary idling of internal combustion engines. • An on-site complaint and enforcement manager (manager) shall be available to respond to and track noise complaints. The telephone number of the manager shall be posted at the entrance to the quarry site. The manager shall be trained to use a sound level meter and should be available during all construction hours to respond to noise complaints. The manager shall be responsible for responding to any noise complaints regarding construction noise and for coordinating with the adjacent land uses. The manager will determine the cause of any complaints and coordinate with the demolition team to implement effective measures (considered technically and economically feasible, such as noise curtains, temporary sound walls, berms, etc.) to correct the problem. The complaints and noise reduction measures shall be documented and provided to the County upon request. • At least one week prior to commencement of the removal of the processing plant and supporting structures, the Operator shall prepare a notice that the demolition work will commence. The notice shall be posted at the site and mailed to all the owners and occupants of property within 300 feet of the exterior boundary of the project site as shown on the latest equalized assessment roll. The notice shall include the telephone number of the complaint and enforcement manager. A copy of the notice shall be mailed to Contra Costa County Department of Conservation and Development. • This mitigation measure 4.8-1 only applies to reclamation activities, not to operational activities. 	
Monitoring Responsibility:	Operator.

Abbreviations:

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Implementation Schedule:	During the removal of the processing plant and support structures; At least one week prior to commencement of the removal of the processing plant and supporting structures, the Operator shall prepare a notice that the demolition work will commence.
Compliance Verification:	

Abbreviations:

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