

Initial Study/Proposed Mitigated Negative Declaration

Lehigh Southwest Cement Company Calaveras Cement CKD-3 Closure Project



Prepared for:



Central Valley
Regional Water Quality
Control Board

January 2020

Prepared by:



Initial Study/Proposed Mitigated Negative Declaration
**Lehigh Southwest Cement Company
Calaveras Cement CKD-3 Closure Project**

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Project No. 1802172.1.5

PROPOSED MITIGATED NEGATIVE DECLARATION

Project: Lehigh Southwest Cement Company Calaveras Cement CKD-3 Closure Project

Lead Agency: Central Valley Regional Water Quality Control Board

PROJECT LOCATION

The project site is approximately 2.5 miles south of San Andreas, in Calaveras County, California. The project site is accessed via Pool Station Road from State Route 49.

PROJECT DESCRIPTION

The Lehigh Southwest Calaveras Cement Plant (Plant), owned by the Lehigh Southwest Cement Company (Lehigh), is a former 250-acre limestone quarry and cement production facility that ceased operation in 1982. While the facility was in operation from 1926 to 1982, cement kiln dust (CKD) and waste rock were discharged to three CKD dust piles (CKD-1, CKD-2, CKD-3) and two waste rock piles (West Rock Storage Area and East Rock Storage Area). Mining and processing activities ceased in 1982 and the facilities have been decommissioned and demolished. Since activities ceased in 1982, the Central Valley Regional Water Quality Control Board (RWQCB) has updated Waste Discharge Requirements (WDRs) for closure of this site on three separate occasions. On June 9, 2017, the Central Valley RWQCB issued WDR Order No. R5-2017-0077 in accordance with Title 27, Division 2 of the California Code of Regulations, which supersedes all prior WDR Orders. The order classifies the Plant as mine waste Group B and identifies WDRs for closure of CKD-3. The project involves consolidating CKD material at the CKD-3 site under a low-permeability cover, installing a leachate collection and removal system to control subsurface drainage, installing surface water drainage controls, and closing the CKD-3 site in compliance with Central Valley RWQCB WDR Order No. R5-2017-0077-01 and Title 27 Requirements.

The Central Valley RWQCB amended the compliance deadlines with WDR Order No. R5-2019-0011, which states the deadline for closing CKD-3 is December 31, 2020, and the related compliance deadline for the final Construction Quality Assurance report is March 31, 2021.

FINDINGS

An Initial Study (IS) was prepared to assess the project's potential effects on the environment and the significance of those effects. Based on the IS, it has been determined that the proposed project would not result in significant adverse effects on the physical environment after implementation of proposed mitigation measures. This conclusion is supported by the following findings:

1. The proposed project would have no impacts on land use and planning, population and housing, public services, and recreation.
2. The proposed project would have less-than-significant impacts on aesthetics, agriculture and forestry resources, air quality, energy, greenhouse gas emissions, mineral resources, noise, transportation, utilities and service systems, and wildfire.
3. The proposed project would have potentially significant impacts on biological resources, cultural resources, Tribal cultural resources, geology and soils, hazards and hazardous materials, and hydrology and water quality, but mitigation measures are proposed to avoid or reduce these effects to less-than-significant levels.
4. The proposed project would have beneficial impacts related to aesthetics and hydrology and water quality.
5. The proposed project would not have the potential to substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; substantially reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory.
6. The proposed project would not have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.
7. The proposed project would not have possible environmental effects that are individually limited but cumulatively considerable and contribute to a significant cumulative impact. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.
8. The environmental effects of the proposed project would not cause substantial adverse effects on human beings, either directly or indirectly.

Following are the proposed mitigation measures that would be implemented to avoid or minimize potentially significant and significant environmental impacts. Implementation of these mitigation measures would reduce the potentially significant and significant environmental impacts of the proposed project to less-than-significant levels. The responsibility for implementation of each mitigation measure is identified; however, the Central Valley RWQCB is ultimately responsible for ensuring each measure is implemented.

Mitigation Measure BIO-1a: Avoid Failure of Tricolored Blackbird Nest Colony.

Lehigh and its construction contractor(s) will implement the following measures to avoid potential failure of a tricolored blackbird nest colony during project implementation:

- Vegetation removal shall be conducted between September 1 and March 1, to the extent feasible, to avoid vegetation removal during the tricolored blackbird nesting season.
- If project activities (including vegetation removal) are required during the tricolored blackbird nesting season (March 1 through August 31), surveys for nesting activities shall be conducted by a qualified biologist in areas of suitable nesting vegetation on and within 500 feet of the project site. A minimum of one survey shall be conducted no more than 7 days before project activities begin.
- If nesting activity is observed, an appropriate buffer shall be established and maintained around the outer edge of the nesting colony to avoid nest failure from project activities. The appropriate size and shape of the buffer shall be determined by a qualified biologist and may vary depending on the nest location, nest stage, construction activity, and existing disturbance levels. The buffer may be adjusted if a qualified biologist determines it would not be likely to adversely affect the nest. Monitoring shall be conducted to confirm that project activities are not resulting in detectable adverse effects on nesting birds or their young. No project activities shall occur within the buffer areas until a qualified biologist determines that the young have fledged or the colony site is otherwise no longer in use.

Timing: Before and during project construction activities
Responsibility: Lehigh

Mitigation Measure BIO-1b: Minimize Potential to Destroy Active Bird Nests.

Lehigh and its construction contractor(s) will implement the following measures to minimize potential to destroy an active bird nests during project implementation:

- Vegetation removal shall be conducted between September 1 and March 1, to the extent feasible, to avoid vegetation removal during the bird nesting season.
- If project activities (including vegetation removal) are required during the nesting season (March 1 through August 31), a qualified biologist shall conduct surveys of suitable nesting habitat that would be directly disturbed by project activities (including vegetation removal). A minimum of one survey shall be conducted no more than 7 days before project activities begin.
- If any active bird nests are documented, protective buffers shall be established by a qualified biologist and implemented until the nests are no longer active, to ensure that known active nests are not accidentally destroyed during project activities.

Timing: Before and during project construction activities
Responsibility: Lehigh

Mitigation Measure BIO-2: Protect Riparian Habitat, Obtain and Comply with Necessary State Permits/Authorizations, and Develop and Implement a Mitigation Plan, if Necessary.

Lehigh will implement the measures described below to minimize impacts on riparian habitat and compensate for loss of riparian habitat, such that there is no net loss of riparian functions and values:

- Before beginning project construction activities (including vegetation removal), high-visibility fencing shall be installed to protect riparian habitat maintained during project construction activities. Fencing shall be installed adjacent to the construction area to preclude encroachment of personnel and equipment. The fencing shall be inspected before the start of each work day and shall be removed when construction is completed. Sensitive habitat information shall be incorporated into project bid specifications, along with a requirement for contractors to avoid these areas.
- Prior to removal of riparian vegetation, a California Department of Fish and Wildlife (CDFW) streambed alteration agreement shall be obtained under Section 1602 of the California Fish and Game Code, and riparian habitat mitigation resulting in no-net-loss of riparian functions and values shall be provided. Mitigation may be accomplished through habitat replacement, enhancement of degraded habitat, offsite mitigation at an established mitigation bank, contribution of in-lieu fees, or other methods acceptable to CDFW. Conditions of issuance of the streambed alteration agreement, including minimization and compensation measures, shall be implemented as part of the project, such that there is no net loss of riparian functions and values.
- If compensation is provided through permittee-responsible mitigation, a mitigation plan shall be developed to detail appropriate compensation measures determined through consultation with CDFW, methods for implementation, success criteria, monitoring and reporting protocols, and contingency measures to be implemented if the initial mitigation fails.

Timing: During project activities
Responsibility: Lehigh

Mitigation Measure BIO-3: Protect Jurisdictional Waters, Obtain and Comply with Necessary Federal and State Permits/Authorizations, and Develop and Implement a Mitigation Plan, if Necessary.

Lehigh will implement the measures described below to minimize impacts on jurisdictional waters, including wetlands, and compensate for loss of seasonal wetland, such that there is no net loss of seasonal wetland functions and values:

- Before beginning project activities, high-visibility fencing shall be installed to protect the drainage and wetland habitat maintained during project activities. Fencing shall be installed adjacent to the construction area to preclude encroachment of personnel and equipment. The fencing shall be inspected before the start of each work day and shall be removed when construction is completed. Sensitive habitat information shall be incorporated into project bid specifications, along with a requirement for contractors to avoid these areas.
- Prior to disturbing jurisdictional waters, authorization for impacts on jurisdictional waters shall be secured – a Clean Water Act (CWA) Section 404 permit from the United States Army Corps of Engineers (USACE) and a water quality certification pursuant to CWA Section 401 from the Central Valley RWQCB – before starting project activities. Any measures determined necessary during the 404 and 401 permitting processes shall be implemented, such that there is no net loss of functions and values of jurisdictional waters.
- Mitigation may be accomplished through habitat replacement, enhancement of degraded habitat, offsite mitigation at an established mitigation bank, contribution of in-lieu fees, or other method acceptable to the regulatory agencies, such that there is no net loss of wetland functions and values. If compensation is provided through permittee-responsible mitigation, a mitigation plan shall be developed to detail appropriate compensation measures determined through consultation with USACE and Central Valley RWQCB, methods for implementation, success criteria, monitoring and reporting protocols, and contingency measures to be implemented if the initial mitigation fails.

Timing: During project activities

Responsibility: Lehigh

Mitigation Measure CR-1: Address Previously Undiscovered Historic Properties, Archaeological Resources, and Tribal Cultural Resources.

Lehigh shall implement the following measures to reduce or avoid impacts on undiscovered historic properties, archaeological resources, and tribal cultural resources. If buried or previously unidentified historic properties or archaeological resources are discovered during project construction activities, all work within a 100-foot-radius of the find shall cease. Lehigh shall retain a professional archaeologist meeting the Secretary of the Interior’s Professional Standards for Archaeologists to

assess the discovery and recommend what, if any, further treatment or investigation is necessary for the find. Interested Native American Tribes will also be contacted. Any necessary treatment/investigation shall be developed with interested Native American Tribes providing recommendations and shall be coordinated with the State Historic Preservation Officer and U.S. Army Corps of Engineers, if necessary, and shall be completed before project activities continue in the vicinity of the find.

Timing: During project construction activities
Responsibility: Lehigh

Mitigation Measure CR-2: Avoid Potential Effects on Undiscovered Burials.

Lehigh shall implement the following measures to reduce or avoid impacts related to undiscovered burials. In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, all potentially damaging ground-disturbance in the area of the burial and within a 100-foot-radius, shall halt and the Calaveras County Coroner shall be notified immediately. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, then Federal laws governing the disposition of those remain would come into effect. Specifically, the Native American Graves Protection and Repatriation Act, Pub L. 101-601, 25 U.S.C. 3001 et seq., 104 Stat. 3048 requires Federal agencies and institutions that receive Federal funding to return Native American cultural items to lineal descendants and culturally affiliated Indian Tribes and Native Hawaiian organizations. Cultural items include human remains, funerary objects, sacred objects, and objects of cultural patrimony. The Native American Graves Protection and Repatriation Act also has established procedures for the inadvertent discovery of Native American cultural items on Federal or Tribal lands, which includes consultation with potential lineal descendants or Tribal officials as part of their compliance responsibilities.

California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. Lehigh shall ensure that the procedures for the treatment of Native American human remains contained in California Health and Safety Code Sections 7050.5 and 7052 and Public Resources Code Section 5097 are followed.

Timing: During construction activities
Responsibility: Lehigh

Mitigation Measure GEO-1: Continue to Implement a Stormwater Pollution Prevention Plan (SWPPP) and Associated BMPs as Required Under Existing General Permit for Stormwater Discharges Associated with Industrial Activities (NPDES No. CAS000001) and Obtain Coverage and Comply with Requirements of the General Construction Stormwater Permit 2009-0009-DWQ.

Lehigh shall continue to implement the appropriate SWPPP, or Stormwater Management Plan (SWMP), to prevent and control pollution and to minimize and control runoff and erosion in compliance with State and local laws, as detailed in the project site's existing General Permit for Stormwater Discharges Associated with Industrial Activities (NPDES No. CAS000001) and Obtain Coverage and Comply with Requirements of the General Construction Stormwater Permit 2009-0009-DWQ. The SWPPP or SWMP shall identify the activities that may cause pollutant discharge (including sediment) during storms or strong wind events and the BMPs that will be employed to control pollutant discharge. Construction techniques that will be identified and implemented to reduce the potential for runoff may include minimizing site disturbance, controlling water flow over the construction site, stabilizing bare soil, and ensuring proper site cleanup. In addition, the SWPPP or SWMP shall include an erosion control plan and BMPs that specify the erosion and sedimentation control measures to be implemented, which may include silt fences, staked straw bales/wattles, silt/sediment basins and traps, geofabric, trench plugs, terraces, water bars, soil stabilizers re-seeding with native species and mulching to revegetate disturbed areas. If suitable vegetation cannot reasonably be expected to become established, non-erodible material will be used for such stabilization. The SWPPP shall also include dust control practices to prevent wind erosion, sediment tracking, and dust generation by construction equipment.

The SWPPP or SWMP shall also include a spill prevention, control, and countermeasure plan, and applicable hazardous materials handling plans, and shall identify the types of materials used for equipment operation (including fuel and hydraulic fluids), and measures to prevent, and materials available to clean up, hazardous material and waste spills. The SWPPP or SWMP shall also identify emergency procedures for responding to spills.

The BMPs presented in either document shall be clearly identified and maintained in good working condition throughout the construction process. The construction contractor shall retain a copy of the approved SWPPP or SWMP on the construction site and modify it as necessary to suit specific site conditions through amendments approved by the SWRCB and/or Central Valley RWQCB, if necessary.

Timing: Before and during construction activities
Responsibility: Lehigh and Construction Contractor(s)

Mitigation Measure HYD-1: Evaluate CKD-1 Treatment System Adequacy and Apply for Revision of the Notice of Applicability (NOA) Under RWQCB Order No. R5-2016-0076-01, if needed.

Before discharging effluent from CKD-3 into Calaveritas Creek under RWQCB Order No. R5-2016-0076-01, Lehigh shall evaluate the adequacy of the CKD-1 treatment system to accommodate construction effluent and/or leachate collected from CKD-3, as necessary. Per the provisions of RWQCB Order No. R5-2016-0076-01, II.C.3, Lehigh shall demonstrate that that the proposed discharge meets the criteria in section II.C.1 of the General Order and the following criteria:

- 1) A representative sample of the discharge has been analyzed for the constituents with effluent limitations specified in the NOA; and
- 2) The concentrations of constituents in the discharge do not exceed the Effluent Limitations listed in section V of the Order, as specified in the NOA.

If the existing system cannot accommodate the CKD-3 leachate, then Lehigh shall:

- 1) dispose CKD-3 leachate at an approved, offsite facility; or
- 2) Modify the CKD-1 treatment facility to accommodate the additional leachate to ensure discharge remains in compliance with RWQCB Order No. R5-2016-0076-01; and/or
- 3) Revise the NOA under RWQCB Order No. R5-2016-0076-01, as needed:
 - a. Under the existing Order (R5-2016-0076-01), Lehigh must ensure that the discharge shall not exceed the final effluent limitations for the constituents and parameters identified in the Discharger's (Lehigh) NOA from the SWRCB Executive Officer. The Executive Officer indicates the applicable Effluent Limitations in the NOA when a Discharger is enrolled under this General Order. The NOA will contain applicable final effluent limitations for each specific Discharger and shall be based on the effluent limitations shown in the General Order. Note: The CKD-1 site is classified as a Tier 2 discharge site under the General Order (due to the need for effluent treatment, prior to discharge to Calaveritas Creek).
 - b. Lehigh shall abide by the provisions of Section II.B.3 of the Order.

Timing: After project construction activities and before discharge into Calaveritas Creek

Responsibility: Lehigh

INITIAL STUDY

PROJECT INFORMATION

1. Project title:	Lehigh Southwest Cement Company Calaveras Cement CKD-3 Closure Project
2. Lead agency name and address:	Central Valley Regional Water Quality Control Board 11020 Sun Center Drive, Suite 200 Rancho Cordova, CA 95670-6114
3. Contact person and phone number:	Natasha Vidic Engineering Geologist 916-464-4614 Natasha.Vidic@waterboards.ca.gov
4. Project location:	2288 Pool Station Road, San Andreas, CA 95249 Calaveras County
5. Project sponsor's name and address:	Andy Burgin Land and Environmental Specialist Lehigh Hanson 7675 North Ingram Avenue, Suite 104 Fresno, CA 93711
6. General plan designation:	Natural Resources Lands: Timber/Mineral Resource Area (MRA-2a)/Dam Inundation Area
7. Zoning:	See #6, above.
8. Description of project:	The project involves consolidating cement kiln dust (CKD) material at the CKD-3 site under a low-permeability cover, installing a leachate collection and removal system to control subsurface drainage, installing surface water drainage controls, and closing the CKD-3 site in compliance with Central Valley Regional Water Quality Control Board Title 27 Waste Discharge Requirement Orders R5-2019-0011 and R5-2017-0077-01. See Chapter 2, "Project Description."
9. Surrounding land uses and setting:	The project site is approximately 2.5 miles south of San Andreas, in Calaveras County, California. The project site is accessed via Pool Station Road from State Route 49.

	Surrounding land uses are open space and rural residential. See “Environmental Setting” discussion under each issue area in Chapter 3, “Environmental Checklist.”
10. Other public agencies whose approval may be required or requested (e.g., permits, financing approval, or participation agreement):	<p>Central Valley Regional Water Quality Control Board Clean Water Act (CWA) Section 401 Water Quality Certification</p> <p>U.S. Army Corps of Engineers CWA 404 Permit</p> <p>California Department of Fish and Wildlife Lake/Streambed Alteration Agreement</p> <p>State Water Resources Control Board General Construction National Pollutant Discharge Elimination System Permit</p>
11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?	Yes. Consultation is described in more detail in Sections 3.5, “Cultural Resources,” and 3.18, “Tribal Cultural Resources.”

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Abbreviations and Acronyms

ALUCP	Calaveras County Airport Land Use Compatibility Plan
APE	area of potential effect
B.C.E.	Before Common Era
BMPs	best management practices
BSC	California Building Standards Commission
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CalFire	California Department of Forestry and Fire Protection
CalRecycle	California Department of Resources Recycling and Recovery
CalTrans	California Department of Transportation
CARB	California Air Resources Board
CCAPCD	Calaveras County Air Pollution Control District
CDFW	California Department of Fish and Wildlife
CGS	California Geologic Survey
CKD	cement kiln dust
CNPS	California Native Plant Society
CO ₂ e	carbon dioxide equivalents
CQA	construction quality assurance
CRHR	California Register of Historical Resources
CWA	Clean Water Act
cy	cubic yards
dB	decibels
DOC	California Department of Conservation
DOF	California Department of Finance
DPM	diesel particulate matter
DWR	California Department of Water Resources
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FGC	California Fish and Game Code

EC	electrical conductivity
ft	feet
GEI	GEI Consultants, Inc.
GHG	greenhouse gas
HDPE	high-density polyethylene
IS/MND	Initial Study/proposed Mitigated Negative Declaration
Lehigh	Lehigh Southwest Cement Company
L _{max}	maximum instantaneous sound level
LLDPE	linear low-density polyethylene
LCRS	Leachate Collection and Removal System
LPC	low-permeability cover limits
MRA	Mineral Resource Area
MRA-2a	Timber/Mineral Resource Area
MRZ	Mineral Resource Zones
MT	metric tons
NAHC	Native American Heritage Commission
NMFS	National Marine Fisheries Service
NO _x	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
NPS	National Park Service
NRCS	U.S. Department of Agriculture Natural Resources Conservation Service
OHP	California Office of Historic Preservation
PM ₁₀	particulate matter less than 10 microns in diameter
PMC	Pacific Municipal Consultants
PPV	peak particle velocity
PRC	Public Resources Code
Plant	Lehigh Southwest Calaveras Cement Plant
project or proposed project	Lehigh Southwest Cement Company Calaveras Cement CKD-3 Closure Project
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SDS	Proposed Surface Drainage System
SR	State Route

SSR	Shingle Springs Band of Miwok Indians
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SMAQMD	Sacramento Metropolitan Air Quality Management District
SRA	State Responsibility Area
TAC	toxic air contaminant
TDS	total dissolved solids
U.S.	United States
USACE	United States Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
UBC	Uniform Building Code
VMT	vehicle miles travelled
WDR	Waste Discharge Requirements
WQPS	water quality protection standards

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Chapter 1. Introduction

The Central Valley Regional Water Quality Control Board (RWQCB) has prepared this Initial Study/proposed Mitigated Negative Declaration (IS/MND) in compliance with the California Environmental Quality Act (CEQA) to address the potentially significant and significant environmental impacts of the proposed Lehigh Southwest Cement Company (Lehigh) Calaveras Cement CKD-3 Closure Project (proposed project or project) in Calaveras County, California. The Central Valley RWQCB is the lead agency under CEQA.

To satisfy CEQA requirements, this document includes:

- A Notice of Intent to adopt an MND for the proposed project
- an IS
- a proposed MND

After the required public review of this document is complete, the Central Valley RWQCB will consider adopting the proposed MND, adopting a Mitigation Monitoring and Reporting Program, and approving the proposed project at a public hearing.

1.1 Purpose of the Initial Study

This document is an IS prepared in accordance with CEQA (California Public Resources Code [PRC], Section California Code of Regulations [CCR] 21000 et seq.) and the State CEQA Guidelines (Title 14, Section 15000 et seq. of the CCR). The purpose of this IS is to (1) determine whether proposed project implementation would result in potentially significant or significant impacts on the physical environment; and (2) incorporate mitigation measures into the proposed project design, as necessary, to eliminate the proposed project's potentially significant or significant project impacts or reduce them to a less-than-significant level. An MND is prepared if the IS identified potentially significant impacts, and: (1) revisions in the proposed project mitigate the potentially significant impacts to less-than-significant levels; and (2) there is no substantial evidence, in light of the whole record before the lead agency, that the proposed project, as revised, may have a potentially significant or significant impact on the physical environment.

An IS presents environmental analysis and substantial evidence in support of its conclusions regarding the significance of environmental impacts. Substantial evidence may include expert opinion based on facts, technical studies, or reasonable assumptions

based on facts. An IS is neither intended nor required to include the level of detail provided in an Environmental Impact Report (EIR).

CEQA requires that all State and local government agencies consider the potentially significant and significant environmental impacts of projects they propose to carry out or over which they have discretionary authority, before implementing or approving those projects. The public agency that has the principal responsibility for carrying out or approving a proposed project is the lead agency for CEQA compliance (State CEQA Guidelines, CCR Section 15367). The Central Valley RWQCB has principal responsibility for carrying out the proposed project and is therefore the CEQA lead agency for this IS/MND.

If there is substantial evidence (including the analyses in an IS) that a proposed project, either individually or cumulatively, may have a significant or potentially significant impact on the physical environment, the lead agency must prepare an EIR (State CEQA Guidelines, CCR Section 15064[a]). If the IS concludes that impacts would be less-than-significant, or that mitigation measures committed to by the project proponent would reduce impacts to a less-than-significant level, a Negative Declaration or MND may be prepared.

The Central Valley RWQCB has prepared this IS to evaluate the potential environmental impacts of the proposed project and has incorporated mitigation measures to reduce or eliminate any potentially significant project-related impacts. Therefore, an MND has been prepared for this project.

1.2 Summary of Findings

Chapter 3, Environmental Checklist, of this document contains the analysis and discussion of potential environmental impacts of the proposed project. Based on the issues evaluated in that chapter, it was determined that:

The proposed project would result in no impacts on the following issue areas:

- Land use and planning
- Population and housing
- Public services
- Recreation

The proposed project would result in less-than-significant impacts on the following issue areas:

- Aesthetics
- Agriculture and forestry resources

- Air quality
- Energy
- Greenhouse gas emissions
- Mineral resources
- Noise
- Transportation
- Utilities and service systems
- Wildfire

The proposed project would result in less-than-significant impacts *after* mitigation implementation on the following issue areas:

- Biological resources
- Cultural resources
- Tribal cultural resources
- Geology and soils
- Hazards and hazardous materials
- Hydrology and water quality
- Mandatory findings of significance (including cumulative impacts)

The proposed project would result in beneficial impacts related to the following issue areas:

- Aesthetics
- Hydrology and water quality

1.3 Document Organization

This document is divided into five key sections:

Chapter 1, “Introduction,” describes the purpose of the IS/MND, summarizes findings, and describes the organization of this IS.

Chapter 2, “Project Description,” describes the project location and background, project need and objectives, project characteristics, construction activities, project operations, and discretionary actions and approvals that may be required.

Chapter 3, “Environmental Checklist,” presents an analysis of environmental issues identified in the CEQA Environmental Checklist and determines whether project implementation would result in a beneficial impact, no impact, less-than-significant impact, less-than-significant impact with mitigation incorporated, potentially significant impact, or significant impact, on the physical environment in each issue area. Should any impacts be determined to be potentially significant or significant with mitigation incorporated, an EIR would be required. For the proposed project, however, mitigation measures have been incorporated as needed to reduce all potentially significant and significant impacts to less-than-significant levels.

Chapter 4, “References Cited,” lists the references used to prepare this IS.

Chapter 5, “Report Preparers,” identifies individuals who helped prepare or review this document.

Chapter 2. Project Description

This chapter describes the project location and background along with the project objectives, project components and characteristics, construction activities, project operations, and discretionary actions and approvals that may be required.

2.1 Project Location

The project site is situated east of Pool Station Road approximately 2.5 miles south of San Andreas in Calaveras County, California, as shown in **Figure 2-1**. The project is within Section 29 of the United States (U.S.) Geological Survey (USGS) 7.5-minute San Andreas Quadrangle, Township 4 North, Range 12 East. The project site encompasses approximately 15.6 acres of land and elevations range from approximately 880 feet above mean sea level at the southern boundary to 1,000 feet at the northern boundary. The land is owned by Lehigh.

2.2 Project Background

The Lehigh Southwest Calaveras Cement Plant (Plant) is a former 250-acre limestone quarry and cement production facility that ceased operation in 1982. The facility opened in 1926 as the Calaveras Cement Company where limestone was quarried from the Quarry Pit and produced cement. While the facility was in operation from 1926 to 1982, cement kiln dust (CKD¹) and waste rock were discharged to three CKD dust piles (CKD-1, CKD-2, CKD-3) and two waste rock piles (West Rock Storage Area and East Rock Storage Area). Mining and processing activities ceased in 1982 and the facilities have been decommissioned and demolished.

Mining activities at the Plant were originally regulated by National Pollutant Discharge Elimination System (NPDES) Order No. CA0003891, which regulated the discharge of cooling waters into Calaveras Creek. This order was rescinded in 1979 after Lehigh made a material change in the disposal method with the reuse of cooling water. Since activities ceased in 1982, the Central Valley RWQCB has updated Waste Discharge Requirements (WDRs) for closure of this site on three separate occasions; WDR Orders No. 87-213, 97-011, and 98-095 reflect those periodic updates. On June 9, 2017, the Central Valley RWQCB issued WDR Order No. R5-2017-0077 in accordance with Title 27, Division 2 of the California Code of Regulations, which

¹ CKD is fine-grained, solid, highly alkaline waste removed from cement kiln exhaust gas by air pollution control devices. CKD not returned to the production process is typically disposed in land-based disposal units, such as occurred at CKD-3.

supersedes all prior WDR Orders. The order classifies the Plant as mine waste Group B and identifies WDRs for closure of CKD-3.

CKD-3 is an approximately 8-acre area containing an estimated 430,000 cubic yards (cy) of highly alkaline CKD. CKD material ranges from a maximum depth of 102 feet along the south facing slope of CKD-3, to depths of 20 to 40 feet located south of the toe of the slope. Over 10 years ago, CKD-3 was graded and covered with soil to prevent direct exposure and erosion of the CKD. Stormwater best management practices have been maintained to minimize surface water impacts. Other previous activities conducted at CKD-3 since the closure and at the direction of the Central Valley RWQCB, include: installing two groundwater monitoring wells and several piezometers, grading the top-deck of CKD-3 to prevent ponding, and constructing a perimeter drainage channel along the east side of CKD-3.

In December 2014, Lehigh submitted notification to Central Valley RWQCB of measurably significant evidence of a release from CKD-3 observed in monitoring data from wells downgradient of the CKD pile that total dissolved solids, pH, aluminum, total chromium, hexavalent chromium, and molybdenum concentrations exceeded applicable water quality standards. Historical surface water monitoring data indicated periodic exceedances of applicable water quality standards for electrical conductivity, total dissolved solids, molybdenum, and manganese.

Lehigh has proposed closure of CKD-3 by re-grading the site to install a low-permeability cover, installing a leachate collection and removal system (LCRS), and developing a surface water drainage plan.

2.3 Project Objectives

The project objectives are to:

- Significantly reduce infiltration of stormwater into the CKD material at the CKD-3 site
- Significantly reduce potential leaching of CKD material into nearby groundwater and surface waters
- Effectively manage potentially impacted groundwater
- Consolidate CKD material at the CKD-3 site under a low-permeability cover
- Close CKD-3 in compliance with WDR Order No. R5-2017-0077-01 and Title 27 Requirements²

² Title 27 of the California Code of Regulations provides combined regulations of the State Water Resources Control Board (SWRCB) and California Integrated Waste Management Board for disposal of solid waste to land for treatment, storage, or disposal. The SWRCB regulations pertain to water quality aspects of discharges of solid waste.

Figure 2-1. Project Location Map

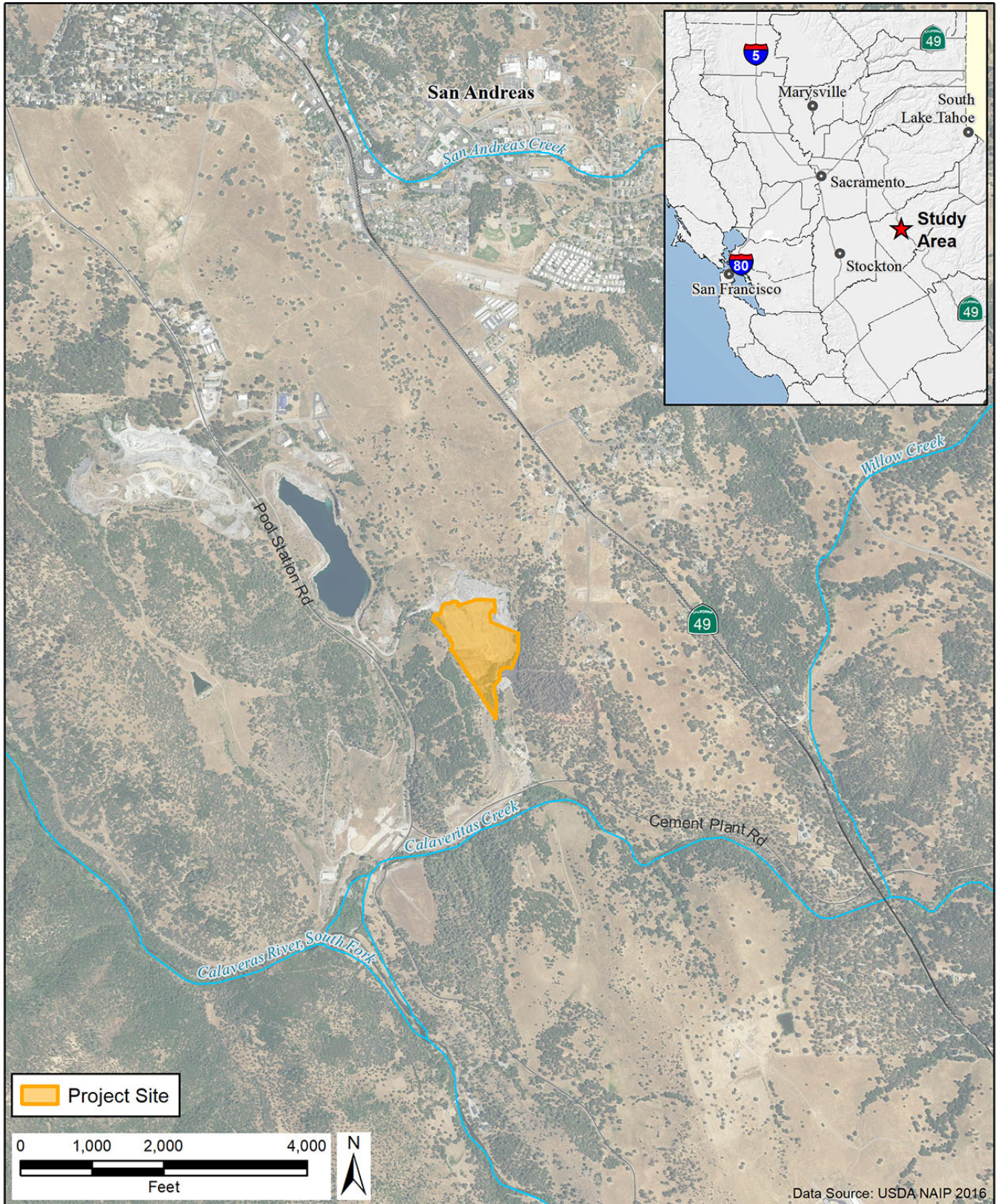


Figure Source: GEI Consultants, Inc. 2018.

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2.4 Project Components

The proposed project consists of consolidating CKD material under a low-permeability cover, installing a LCRS to control subsurface drainage, and installing surface water drainage controls, as shown in **Figures 2-2** and **2-3**. Each of these components is described below in this section.

2.4.1 Low-Permeability Cover

The primary purpose of the low-permeability cover is to significantly reduce the infiltration of water into the CKD material and leaching to waters of the State. The cover would encompass approximately 8 acres and consists of an approximately 0.5-foot-thick subgrade, overlaid by an approximately 60 mix textured linear low-density polyethylene (LLDPE) geomembrane, overlaid by drainage geocomposite, and covered by an approximately 1.5-foot vegetative soil layer. The south facing slope of the cover would be graded to an approximately 3:1 slope. The low-permeability cover concept is shown in **Figure 2-4**. The LLDPE geomembrane layer would be tested for leaks using the dipole method³ after the soil cover layer is installed. If a leak is identified, the leak would be uncovered, fixed, and re-tested.

A small amount of CKD deposits outside the proposed cover limits would be excavated and consolidation under the cover. No CKD material would be left outside the cover limits after the project is complete. Clean waste rock stockpiled onsite and outside of the CKD area would be sourced and used in developing the cover. Outside of the cover, approximately 1 foot of fine-grained soil would be installed on the east bench, west top deck, and areas where clean waste rock is sourced onsite. Surface water drainage over the cover would be managed by new drainage features developed for the project and discussed in Section 2.4.3, “Surface Drainage Plan.”

2.4.2 Leachate Collection and Removal System

The Leachate Collection and Removal System (LCRS) would collect leachate from the CKD low-permeability cover for periodic disposal offsite. The LCRS at CKD-3 consists of leachate collection trenches and dual riser pipes, as shown in Figure 2-3. The trenches would be a minimum of 2 feet wide and 6 feet deep and located at the existing ground surface below the regraded CKD (and below the cover layers) within the southern/downslope half of the low-permeability cover area. The trenches would be filled with aggregate base including from use of clean waste rock sourced onsite. The riser pipelines would consist of two-dual 18-inch pipes extending through the low-permeability cover and above-ground and covered above the ground surface. The purpose of the dual riser pipe design is to provide redundancy. The riser pipes would be perforated within the drainage aggregate below ground. A minimum two percent grade would be maintained within the drainage aggregate to facilitate flow of leachate to the riser pipes.

³ The “dipole method” is a geoelectrical method for detecting leaks, splits, and tears in geomembrane materials, where voltage is applied to soil covering the geomembrane material through a positive electrode to generate an electrical signature that identifies leaks.

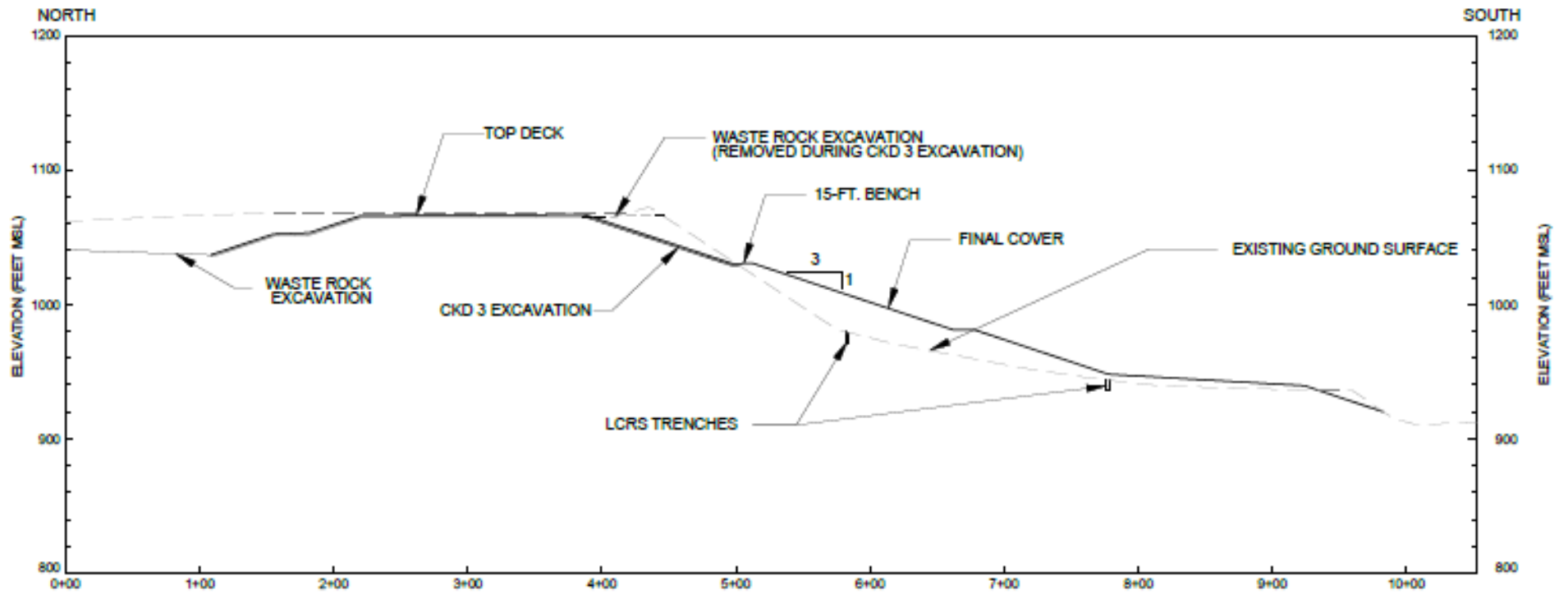


Figure 2-2. Proposed Project Representative Cross-Section

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Figure 2-3. Proposed Project Components

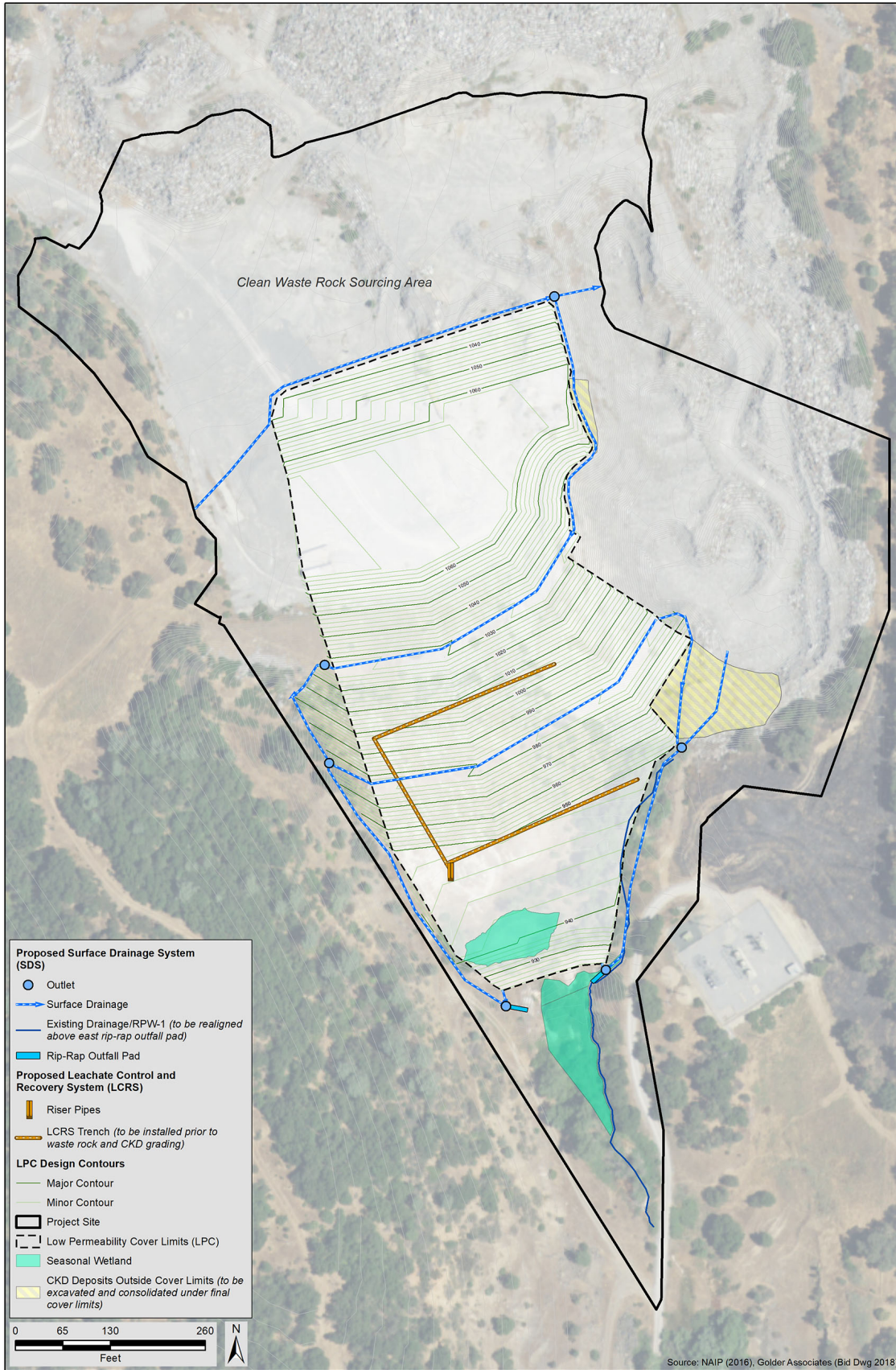
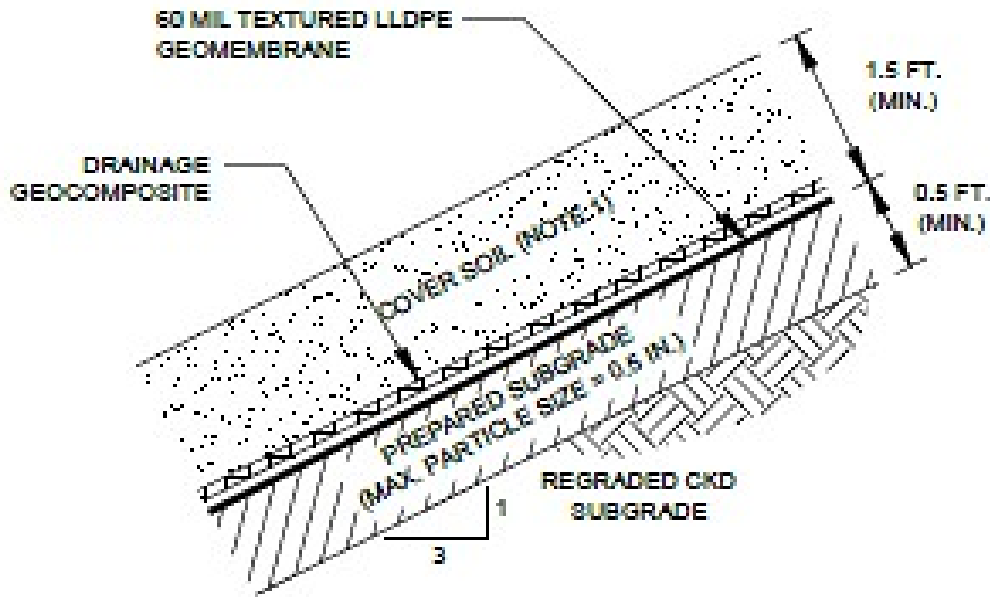


Figure Source: GEI Consultants, Inc. 2019.

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Figure 2-4. Low-Permeability Cover Concept



Leachate would periodically be pumped from the riser pipes, stored in temporary storage tanks on a skid near the riser pipes, if needed, and trucked approximately 1.5 miles to an existing treatment facility at CKD-1 at the former Plant. The current treatment system at CKD-1 filters fines and adjusts the pH of leachate collected. The treated water is discharged into Calaveritas Creek under RWQCB Order No. R5-2016-0076-01. Leachate from CKD-3 would be treated in combination with existing leachate generated from CKD-1. No improvements to the treatment system at CKD-1 are expected to be needed to treat leachate from CKD-3.

2.4.3 Surface Water Drainage Plan

The project includes constructing drainage channels around the perimeter of the low-permeability cover to facilitate surface water drainage to the south and away from the cover. The drainage channels, shown in Figure 2-3, would be erosion control mat-lined v-ditch, concrete-lined v-ditch, grouted rip-rap channel, and rip-rap channel. Rip-rap and concrete channels are used where needed to reduce potential erosion. An existing intermittent drainage channel near the eastern perimeter of the low-permeability cover would be excavated to remove CKD material and re-created along the new eastern perimeter of the low-permeability cover. The capacity of this channel would remain the same. All other drainages developed for the project would be newly constructed.

A system of perforated high-density polyethylene (HDPE) pipes ranging from 6 to 10 inches in diameter would be installed within the limits of the low-permeability cover to collect surface drainage water and convey this water to the new drainage channels around the cover perimeter. The HDPE pipes would be encompassed in drainage aggregate rock above the drainage geocomposite layer but below the cover soil layer. Clean waste rock sourced onsite would be used for drainage aggregate material. The pipe system within the low-permeability cover would have multiple outlets into the new drainage channels, as shown in **Figure 2-3**.

Rip-rap pads would be created at the east and west sides of the southern end of the low-permeability cover grading area to prevent down-gradient erosion. The rip-rap pads would receive surface drainage water from the perimeter drainage channels. The rip-rap pads would be approximately 3 feet wide and 2 feet deep with the east pad being approximately 25 feet long and the west pad approximately 30 feet long.

2.4.4 Closing the CKD-3 site in compliance with Central Valley RWQCB WDR Order No. R5-2017-0077-01 and Title 27 Requirements

CKD-3 will be graded and closed pursuant to Title 27 requirements. WDR Order No. R5-2017-0077 requires approval of design plans by Central Valley RWQCB and submittal of a final construction quality assurance (CQA) report for review and approval. Lehigh submitted a partial *Amended Report of Waste Discharge* in February 2015 and an *Engineering Feasibility Study for Corrective Action* in June 2016, which was then amended in September 2016. Central Valley RWQCB staff concurred with the conceptual closure plan for CKD-3 in October 2016 and requested submittal of detailed closure technical design plans and CQA plans in compliance with Title 27 siting and construction requirements for Group B waste.

Lehigh submitted the *Engineering Design Report for the Calaveras Cement Plant, Cement Kiln Dust Repository No. 3 Final Closure, Lehigh Southwest Cement Company – Calaveras County, California (Engineering Design Report)* on December 6, 2017 to fulfill the requirements of WDR Order No. R5-2017-0077. Lehigh submitted an *Updated Engineering Design Report* on May 4, 2018. Central Valley RWQCB staff provided comments on the updated engineering design and received responses to the comments from Lehigh, and then provided additional comments during a conference call which were addressed by Lehigh. Central Valley RWQCB staff concurred with the proposed engineering design in a letter to Lehigh on May 8, 2018.

The Central Valley RWQCB amended the compliance deadlines with WDR Order No. R5-2019-0011 (Order), which states the deadline for closure of CKD-3 is December 31, 2020, and the related compliance deadline for the final CQA report is March 31, 2021. Another amendment to the Order may need to be adopted to extend compliance deadlines.

2.5 Project Construction

Construction would begin with clearing, tree removal, grubbing, and stripping all cut and fill areas at the project site. Grubbing would consist of removal and disposal of stumps, trunks, roots, or root systems to a minimum depth of 6 inches below the ground surface. Stripping would include removal and disposal of all organic sod, topsoil, and plant growth and associated roots to the bottom of the root zone. Next, the LCRS components would be installed, followed by installation of the low-permeability cover and surface water drainage components. The following construction activities are required to install the low-permeability cover site:

- Sourcing stockpiled clean waste rock at the project site (and outside the CKD cover area) for use as producing aggregate material;

- Excavating CKD deposits outside the proposed cover limits and consolidation under the cover;
- Excavating, consolidating, and re-grading existing CKD deposits within the limits of the cover;
- Re-grading the south-facing slope and east bench;
- Developing slopes outside the cover limits using clean waste rock stockpiled onsite or other non-CKD clean material;
- Preparing the subgrade layer within the cover limits, including processing clean waste rock sourced onsite
- Installing the LLDPE geomembrane, drainage geocomposite, and vegetative soil layer over the subgrade; and
- Installing approximately 1 foot of fine-grained soil on the east bench, west top deck, and areas where clean waste rock is sourced onsite.

Once re-grading and the LCRS, low-permeability cover, and drainage system components are installed, the top soil layer of the cover and disturbed areas outside of the cover would be hydroseeded with an approved grass seed mix. In addition, standard best management practices (BMPs) to prevent erosion and the spread of invasive vegetation would be installed. In addition, if groundwater is encountered during construction activities, dewatering of excavations may be required. Water would be tested prior to dewatering.

Construction would require sourcing and onsite processing of approximately 262,000 cy of clean waste rock stockpiled onsite and located outside of the CKD area. In addition, re-grading and consolidating the CKD area requires excavating an additional approximately 52,500 cy of CKD material onsite. To complete construction of project components, an additional approximately 28,200 cy of imported material would be used, including approximately 19,000 cy for a 1.5-foot-thick soil cover, approximately 6,300 cy for a 0.5-foot-thick prepared subgrade layer, approximately 1,200 cy for a 1-foot-thick fine-grained soil cover outside the CKD area, and up to an additional approximately 1,700 cy of additional clean material.

Materials would be staged within the project site boundary shown on Figure 2-3. Up to 10 construction personnel would be onsite each day to construct the project. Construction equipment operating on any given day consists of the following: up to two excavators, two backhoes, two loaders/dozers, one grader, one skid steer, and three earth movers. Construction traffic would access the project site from State Route (SR) 49 and Pool Station Road to the project site.

Construction activities are planned for approximately 10 hours per day. Construction would occur during daytime hours, between 7:00 a.m. and 6:00 p.m. (consistent with Calaveras County Code) and potentially 7 days per week, including weekends, as determined necessary. Hauling to and from the project site for materials deliveries and off-hauling would be minimal—a total of 10 trips over 8 days at both the beginning and end of construction, and worker vehicle commutes would account for 10 trips per day over the construction period. Project construction is

anticipated to begin January 2021 after all permits and approvals are secured for the project. Construction would require approximately 135 working days. This project is subject to weather conditions which may prolong the start date and duration of the project.

2.6 Project Operations and Maintenance

Leachate would be periodically trucked to an existing treatment facility at CKD-1 at the former Plant. Leachate from CKD-3 would be treated in combination with existing leachate generated from CKD-1 and discharged into Calaveritas Creek under RWQCB Order No. R5-2016-0076-01. Following installation of the low-permeability cover and LCRS, maintenance plans for CKD-3 in WDR No. R5-2017-0077-01 include inspection and monitoring activities for 30 years after the closure of the entire site or until the site is no longer a threat to water quality. An estimated five truck trips per month would be made to the CKD-3 site for these operations and maintenance activities, including pumping and disposal of leachate at the CKD-1 treatment system.

2.7 Regulatory Requirements, Permits, and Approvals

As the CEQA lead agency, the Central Valley RWQCB has the principal responsibility for approving and carrying out the proposed project and for ensuring that CEQA requirements and all other applicable regulations are met. As discussed in Section 2.4.4, "Closing the CKD-3 site in compliance with Central Valley RWQCB WDR Order No. R5-2017-0077-01 and Title 27 Requirements," the Central Valley RWQCB has issued WDR Order R5-2019-0011 amending Order No. 2017-0077 extending the deadline for closure of CKD-3 to December 31, 2020, and the related compliance deadline for the final CQA report to March 31, 2021. The Central Valley RWQCB would also issue a Clean Water Act (CWA) Section 401 Water Quality Certification (WQC) which requires compliance with CEQA. The following permits are required for the proposed project:

- **CWA Section 401 WQC, Central Valley RWQCB.** Required for water quality impacts related to discharge of dredge/fill material into waters of the U.S./State related to the surface drainage plan for the proposed project. Lehigh applied for this permit for the proposed project in 2018.
- **CWA Section 404, U.S. Army Corps of Engineers.** Required for discharge of dredge/fill material into waters of the U.S. related to the surface drainage plan for the proposed project. Lehigh applied for this permit for the proposed project in 2018.
- **Lake/Streambed Alteration Agreement, California Department of Fish and Wildlife.** Required for alteration of drainage channels related to the surface drainage plan for the proposed project. Lehigh applied for this permit for the proposed project in 2018.
- **Construction General Permit 2009-0009-DWQ, Central Valley RWQCB.** Required to manage storm water runoff from construction sites before construction begins.

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Chapter 3. Environmental Checklist

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

<input type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agriculture and Forestry Resources	<input type="checkbox"/>	Air Quality
<input checked="" type="checkbox"/>	Biological Resources	<input checked="" type="checkbox"/>	Cultural Resources	<input checked="" type="checkbox"/>	Geology / Soils
<input type="checkbox"/>	Greenhouse Gas Emissions	<input checked="" type="checkbox"/>	Hazards and Hazardous Materials	<input checked="" type="checkbox"/>	Hydrology / Water Quality
<input type="checkbox"/>	Land Use / Planning	<input type="checkbox"/>	Mineral Resources	<input type="checkbox"/>	Noise
<input type="checkbox"/>	Population / Housing	<input type="checkbox"/>	Public Services	<input type="checkbox"/>	Recreation
<input type="checkbox"/>	Transportation	<input checked="" type="checkbox"/>	Tribal Cultural Resources	<input type="checkbox"/>	Utilities / Service Systems
<input checked="" type="checkbox"/>	Mandatory Findings of Significance	<input type="checkbox"/>	Energy	<input type="checkbox"/>	Wildfire

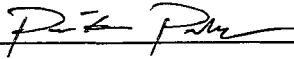
Determination (To be completed by the Lead Agency)

On the basis of this initial evaluation:

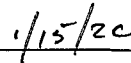
- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as

described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Patrick Pulupa
Executive Officer
Central Valley Regional Water Quality Control Board



Date

Evaluation of Environmental Impacts

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts. Operations and maintenance impacts of the proposed project are routine, minimal, and essentially the same as current operations and maintenance of the existing facilities. There is no potential for significant impacts to any resource category from project operations and maintenance of the existing and proposed facilities.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less-than-significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required. "Beneficial impacts" are also identified where appropriate to provide full disclosure of any benefits from implementing the proposed project.
- 4) "Less-than-significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less-

Than-Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less-than-significant level.

- 5) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 6) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 7) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.
- 8) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less-than-significant.

Significance thresholds are identified for certain resources, but others are not necessary because there is clearly no impact or the question itself provides the basis for the significance threshold.

3.1 Aesthetics

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
I. AESTHETICS – Except as provided in PRC Section 21099, would the project:					
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.1.1 Environmental Setting

The landscape at the project site is dominated by the partially graded CKD and waste rock stockpiles. The area surrounding the project site contains rolling topography, ranging from 900 to 1,200 feet (ft) elevation, covered primarily by oak woodland and oak savannah typical of the Sierra Nevada foothill areas. Ranching and agriculture surrounding rural residences contributes to the County's landscape of grassy open areas broken by oak trees, barns, corrals, fences, gates, and rock walls. This signature landscape is closely associated with the Sierra foothills that visitors and residents often see from County roads and highways and characterizes the area to the east of the project site. There are no State-designated scenic highways on or immediately adjacent to the project site. The California Department of Transportation (Caltrans) has designated portions of SR 49 as a State scenic highway; however, the designated portion is between mile marker 8.8 and 14.5 in Nevada County. SR 49 is located over 2,000 ft east of the project site (Caltrans 2017). There are no designated County scenic highways in the project vicinity (Caltrans 2019).

Viewer Groups

Viewer groups in the project area with high viewer sensitivity include rural residences to the east of the project site and motorists driving on nearby County roads and State highways. Several residences are located over 600 ft east of the project site along Howell Road and Magers Way. Although vegetation provides some screening of the project site, since the project site is in a topographic depression it may be currently visible from several of these residences due to the residences' slightly higher elevation. Pool Station Road is located over 1,000 ft west of the project site. The project site is not visible to motorists along SR 49 or Pool Station Road due to surrounding vegetation and topography.

3.1.2 Discussion

a) Have a substantial adverse effect on a scenic vista?

There are no designated scenic vistas in the project area. Therefore, there would be **no impact**.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

The project site is not visible to motorists along SR 49, a State scenic highway. Therefore, there would be **no impact**.

- c) **In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?**

As discussed above, rural residences over 600 ft east of the project site may have views of the project site. The view from these residences, where not screened by vegetation, is currently of the bright white/gray CKD and waste rock piles and other features of the decommissioned Plant. Visual impacts from construction would occur from use of equipment and staging of construction materials and would be temporary and short-term. The project would visually alter the project site through re-grading, covering CKD material, use of stockpiled waste rock, and installing new drainage features; however, the site would still exhibit waste rock piles and features of the decommissioned Plant and would not permanently degrade the existing visual character or quality of views of the project site and its surroundings. The project also includes installing cover soil over the low-permeability cover, and soil on the east bench, west top deck, and areas where clean waste rock is sourced onsite, and hydroseeding these areas. Once the project site is covered and hydroseeded with native grasses, the visual quality of the project site would greatly improve views. This impact to permanent visual character and quality would be **beneficial**. The project is not in an urban area and there would be no conflict with applicable zoning regarding scenic quality. Therefore, this impact would be **less than significant**.

- d) **Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?**

The project does not include new permanent sources of light beyond those currently present at the project site. Once the project components are installed, the top soil layer of the cover and disturbed areas outside of the cover would be hydroseeded, thereby eliminating the possibility of new sources of glare in these areas. Exposed project features would consist of small riser pipes with covers, new drainage channels, and rip rap outfall pads, which would not create new sources of glare.

As described in Section 2, "Project Description," construction activities would not occur at night in compliance with Chapter 9.02 of the Calaveras County Code, which requires construction near residential areas be limited to daytime hours between 7:00 a.m. and 6:00 p.m. Therefore, no substantial new sources of light or glare would be created by the project and there would be **no impact**.

3.2 Agriculture and Forestry Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
<p>II. AGRICULTURE AND FORESTRY RESOURCES:</p> <p>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may <i>refer to</i> the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may <i>refer to</i> information compiled by the California Department of Forestry and Fire Protection [CalFire] regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. – Would the project:</p>					
<p>a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Issue	Less-than-Significant				
	Potentially Significant Impact	Mitigation Incorporated	Impact with Less-than-Significant Impact	No Impact	Beneficial Impact
shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?					
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.2.1 Environmental Setting

The project site is located on private lands designated in the Calaveras County General Plan as Natural Resources Lands: Timber/Mineral Resource Area (MRA-2a)/Dam Inundation Area (Calaveras County 1996). Calaveras County does not currently have important farmland mapping data available and data have not been included in the Farmland Mapping and Monitoring Program (DOC 2016). The project site is not located on any Williamson Act contract lands (DOC 2013).

3.2.2 Discussion

- a) **Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**

The project site does not contain farmland. There would be **no impact**.

- b) **Conflict with existing zoning for agricultural use, or a Williamson Act contract?**

The project site does not have agricultural zoning or Williamson Act contracts. There would be **no impact**.

- c), d) **Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? Result in the loss of forest land or conversion of forest land to non-forest use?**

The project site carries a mixed zoning designation for Natural Resources Lands: Timber/MRA-2a/Dam Inundation Area. The project site has been used for storage of CKD and waste rock disposal for several decades; however, trees may be removed with the project site during construction, in the south and southeast margins of the project site. Tree removal is discussed in Section 3.4, "Biological Resources." Additionally, to ensure compliance with WDR Order No. R5-2017-0077-01 and Title 27 Requirements, only topsoil and native grasses can be placed on the site cover. Any planting of larger shrub or tree species within the limits of the approximately 8-acre low-permeability cover would risk penetration of the cover, and no plantings would occur within soil layer over the cover. However, implementation of the proposed project would not preclude planting of appropriate scrub or tree species outside of the cover limits. Scattered trees are present on adjacent hillsides. However, project construction and operation would not affect access to or preclude timber uses on adjacent lands. Additionally, the project site has been recommended for industrial uses in the upcoming Calaveras County General Plan Update and is unlikely to become a viable area for timberlands or timber resources in the future (Calaveras County 2019). Due to the small area affected by the project within the larger Natural Resources Lands designated area and the continued use of the site for CKD containment and monitoring, impacts are considered **less than significant**.

- e) **Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?**

There would be no other changes from the proposed project on the existing environment that would convert farmland to non-agricultural use or forest land to non-forest use. There would be **no impact**.

3.3 Air Quality

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
III. AIR QUALITY:					
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations. Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.3.1 Environmental Setting

The project site is in the Mountain Counties Air Basin. The Calaveras County Air Pollution Control District (CCAPCD) attains and maintains air quality conditions in Calaveras County. The Federal Clean Air Act and the California Clean Air Act required the U.S. Environmental Protection Agency (EPA) and California Air Resources Board (CARB) to establish health-based

air quality standards at the Federal and State levels. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) were established for the following criteria pollutants: carbon monoxide (CO), ozone, sulfur dioxide, nitrogen dioxide, particulate matter less than 10 microns in diameter (PM₁₀), particulate matter less than 2.5 microns in diameter, and lead. These standards have been established with a margin of safety to protect the public's health. Both EPA and CARB designate areas of the State as attainment, nonattainment, maintenance, or unclassified for the various pollutant standards according to the Federal Clean Air Act and the California Clean Air Act, respectively.

An "attainment" designation for an area signifies that pollutant concentrations did not violate the NAAQS or CAAQS for that pollutant in that area. A "nonattainment" designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as identified in the criteria. A "maintenance" designation indicates that the area previously had nonattainment status and currently has attainment status for the applicable pollutant; the area must demonstrate continued attainment for a specified number of years before it can be re-designated as an attainment area. An "unclassified" designation signifies that data do not support either an attainment or a nonattainment status.

Under the NAAQS, Calaveras County is designated as nonattainment for 8-hour ozone. Under the CAAQS, Calaveras County is designated as nonattainment for 8-hour ozone and PM₁₀. (CARB 2018).

3.3.2 Discussion

a) Conflict with or obstruct implementation of the applicable air quality plan?

The CCAPCD is responsible for establishing and enforcing local air quality rules and regulations that address the requirements of Federal and State air quality laws. Air quality management is achieved through public education and enforcement of rules and regulations. The CCAPCD has identified CEQA thresholds of significance for certain criteria air pollutants to assist lead agencies in determining air quality impacts for projects located in Calaveras County, as shown in **Table 3-1**. CCAPCD has the same significance thresholds for construction and operational emissions.

Project construction would temporarily generate criteria air pollutant emissions from exhaust associated with equipment operation, hauling truck trips, worker vehicle trips, and fugitive dust generation from ground-disturbing activities. Table 3-1 shows the proposed project's estimated daily construction emissions. Emissions from project construction were modeled using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2. Air quality modeling results are presented in Appendix A, "Air Quality Modeling Data." As shown in Table 3-1, calculated construction emissions of criteria air pollutants are below applicable significance thresholds.

Table 3-1. Project Construction Criteria Air Pollutant Emissions.

Category	ROG	NO _x	PM ₁₀
Project Construction (short-term)	5.96	64.62	12.91
Construction/Operational Significance Threshold ¹	150	150	150
Exceeds threshold?	<i>no</i>	<i>no</i>	<i>no</i>

Notes: ROG = reactive organic gases, NO_x = nitrogen oxides, PM₁₀ = particulate matter less than 10 microns in diameter

Source: ¹Calaveras County 2018

The project includes monitoring activities for 30 years after the closure of the site or until the site is no longer a threat to water quality and maintenance from periodically pumping leachate from the riser pipes and transportation offsite for disposal. Up to five truck trips per month would be made to the CKD-3 site for these monitoring and maintenance activities. Existing vehicle/truck trips are made to access monitoring wells, but a net increase in operational truck trips would result from the project. Emissions of criteria air pollutants from operational truck trips would be intermittent when maintenance activities occur and are substantially less than daily trips generated during construction. Accordingly, emissions would be substantially less than shown in Table 3-1 for construction activities and below applicable significance thresholds.

Two criteria are used to determine whether the proposed project would conflict with or obstruct implementation of the air quality plans. The first criterion is whether the proposed project is consistent with the population projections and vehicle miles traveled that were used as the basis of the air quality plan. The proposed project would not increase population in the project area and would not add a substantial enough number of vehicle miles traveled to exceed projections. The second criterion is whether the proposed project would increase the frequency or severity of existing air quality violations, contribute to new violations, or delay the timely attainment of air quality standards. The CCAPCD has developed thresholds of significance for criteria pollutants to evaluate regional impacts of project-specific emissions of air pollutants and their impact on the existing air quality plans. Emissions exceeding the thresholds have not been accommodated in the air quality plans and would not be consistent with such plans and therefore would be considered potentially significant impacts. As discussed, short-term construction emissions and intermittent operational emissions generated by the project would not exceed CCAPCD significance thresholds. Therefore, this impact would be **less than significant**.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or state ambient air quality standard?

As discussed above, Calaveras County is designated as nonattainment for 8-hour ozone under NAAQS and CAAQS and nonattainment for PM₁₀ under CAAQS (CARB 2018). The air basin's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its nature, air pollution is largely a cumulative impact. No single project by itself is sufficient in size to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. In developing thresholds of significance for air pollutants, the CCAPCD considered emission levels for which a project's individual emissions would be cumulatively considerable. In general, if a project exceeds its identified project-level significance thresholds, the project's cumulative impact would be cumulatively considerable. Construction and operation of the project would not exceed applicable significant thresholds as mentioned in Impact a) above. Therefore, the project would not result in a cumulatively considerable net increase in any of the criteria pollutants and this impact would be **less than significant**.

c) Expose sensitive receptors to substantial pollutant concentrations?

Some members of the population are especially sensitive to emissions of air pollutants and should be given special consideration during the evaluation of the project's air quality impacts. These people include children, older adults, any person with pre-existing respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. Sensitive receptors include residences, schools, playgrounds, child care centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The nearest sensitive receptors are residences over 600 ft east of the project site. Since construction and operation of the project would not exceed applicable significant thresholds, as mentioned in Air Quality Impact a) above, sensitive receptors would not be exposed to substantial pollutant concentrations including fugitive dust.

CARB has identified diesel particulate matter (DPM) from diesel-fueled engines as a toxic air contaminant (TAC). High volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Health risks from TACs are a function of both the concentration of emissions and the duration of exposure. Use of heavy-duty diesel equipment for construction activities would generate DPM. However, construction activities are temporary and would occur over a relatively short duration. As discussed in Impact a), emissions from monitoring and maintenance activities would be very small and intermittent and use of heavy-duty diesel equipment during these activities would be minimal, if it occurs at all. Given the limited construction and operational emissions and temporary nature of emissions, sensitive receptors would not be subject to substantial pollutant concentrations. Therefore, this impact would be **less than significant**.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Human response to odors is subjective, and sensitivity to odors varies greatly. Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, anxiety) to physiological (e.g., circulatory and respiratory reactions, nausea, vomiting, headaches). The proposed project would not create new objectionable odors. There would be **no impact**.

3.4 Biological Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
IV. BIOLOGICAL RESOURCES – Would the project:					
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations. Would the project:					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on state or Federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Issue	Less-than-Significant				
	Potentially Significant Impact	Mitigation Incorporated	Impact with Less-than-Significant Impact	No Impact	Beneficial Impact
through direct removal, filling, hydrological interruption, or other means?					
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.4.1 Environmental Setting

Information presented in this environmental setting is based on review of biological resource databases and observations made during three site visits, including a preliminary reconnaissance survey, wetland delineation, and riparian tree survey conducted on April 17, May 31, and August 22, 2018 by GEI wetland ecologist, Sarah A. Norris, and biologist, Brook Constantz.

Habitat and Land Cover Types

The project site is dominated by unvegetated or very sparsely vegetated land associated with historic mining operations. These areas include the CKD-3 pile and adjacent waste rock. Previously disturbed areas that have become sparsely vegetated and adjacent undisturbed

areas are dominated by nonnative annual grassland characterized by sparse to dense cover of nonnative annual grasses, including ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), Italian ryegrass (*Festuca perennis*), six-week rattail grass (*Festuca myuros*), wall barley (*Hordeum murinum*), and wild oat (*Avena fatua*). Forbs commonly encountered in these grasslands include shamrock clover (*Trifolium dubium*), broadleaf filaree (*Erodium botrys*), and spring vetch (*Vicia sativa*); native wildflowers occasionally encountered include common fiddleneck (*Amsinckia intermedia*), Shephard's purse (*Capsella bursa-pastoris*), and yellow mariposa lily (*Calochortus superbus*).

An unnamed drainage traverses the southern portion of the project site, shown as RPW-1 in **Figure 2-3**. This drainage begins at a seep near the southern edge of the CKD-3 pile and flows to the southern end of the project site. This drainage is approximately 5 feet wide and has an unconsolidated bottom of cobble, gravel, and sediment; during the May 31, 2018 field survey, flow was approximately 4 inches deep. This feature drains to Calaveritas Creek but passes through a nearly 600-foot-long culvert before joining the creek, approximately 1,100 feet south of the project site. Because of the relatively low input from the seep, surface flows in at least the lower portion of this drainage likely dry up by summer each year.

Two seasonal wetland areas (totaling approximately 0.4 acre) occur west of the drainage, as shown in **Figure 2-3**. One of the areas is approximately 300 feet south of the toe of the CKD pile, but its substrate is comprised of CKD. This area is within the proposed grading and low-permeability cover area. Because CKD has been exposed to high kiln temperatures, the material has a high tendency to absorb water. CKD has been in place at this location for decades and has become hydrated over time. The hydration process has caused the CKD to harden and impeded subsurface water movement, resulting in seasonal inundation. Vegetation in this wetland area is dominated by wild mint (*Mentha arvensis*), rabbitsfoot grass (*Polypogon monspeliensis*), common rush (*Juncus effusus*), and curly dock (*Rumex crispus*). Approximately 4 inches of standing water was present in this area on April 17, 2018, but soils were no longer inundated or saturated during the May 31, 2018 field survey.

The other seasonal wetland abuts the western bank of the onsite drainage channel. Dominant herbaceous vegetation observed in this wetland included common rush and narrowleaf cattail (*Typha angustifolia*). Red willow (*Salix laevigata*) trees and saplings also occur within the wetland boundary. This wetland receives water from direct precipitation, overbank flow from the drainage, and overland flow from the topographically elevated hillslope above, but inundation appears to be very shallow.

Approximately 1.3 acres of riparian forest occurs along the banks of the onsite drainage. This habitat is characterized by open to continuous tree canopy cover that typically ranges from approximately 40 to 80 feet wide and is dominated by black willow (*Salix gooddingii*), red willow, interior live oak (*Quercus wislizeni*), Oregon ash (*Fraxinus latifolia*), Fremont cottonwood (*Populus fremontii*), and box elder (*Acer negundo*). Sandbar willow (*S. exigua*), arroyo willow (*S. lasiolepis*), Himalayan blackberry (*Rubus armeniacus*), and poison oak (*Toxicodendron*

diversilobum) occur in the sub-canopy, and the herbaceous layer includes mugwort (*Artemisia douglasiana*), common rush, Bermuda grass (*Cynodon dactylon*), and spring vetch.

Sensitive Biological Resources

Sensitive biological resources addressed in this section include those that are afforded consideration or protection under CEQA, the California Fish and Game Code (FGC), the California Endangered Species Act, the Federal Endangered Species Act, CWA, and the Porter-Cologne Water Quality Control Act (Porter-Cologne Act).

Special-status Species

For purposes of this analysis, special-status species include plants and animals in one or more of the following categories:

- taxa (i.e., taxonomic categories or groups) officially listed by the State or Federal government as endangered, threatened, or rare;
- candidates for State or Federal listing as endangered or threatened;
- taxa that meet the criteria for listing, even if not currently included on any list, as described in State CEQA Guidelines California Code of Regulations Section 15380;
- species identified by the California Department of Fish and Wildlife (CDFW) as species of special concern;
- species listed as Fully Protected under the FGC; and
- plants considered by CDFW to be “rare, threatened, or endangered in California.”

The California Natural Diversity Database (CDFW 2019) and online Inventory of Rare and Endangered Vascular Plants of California (CNPS 2019) were reviewed for information on special-status plants and animals that occur in the project vicinity. These reviews were centered on the San Andreas U.S. Geologic Survey 7.5-minute quadrangle and included the eight surrounding quadrangles. Lists of resources under jurisdiction of the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) that could occur in the project vicinity were obtained from the Information for Planning and Conservation website (USFWS 2019) and online California Species List Tools (NMFS 2019), respectively. Database search results and USFWS and NMFS resource lists are provided in Appendix B, “Biological Resources Information.”

Plants

Fourteen special-status plants included in the CNDDDB and/or CNPS search results were evaluated for their potential to occur on the project site. Most of the project site has no potential to support special-status plants because it is unvegetated or very sparsely vegetated waste material. Based on elevation ranges that do not overlap the project area, lack of suitable habitat types (e.g., vernal pools, chaparral), and lack of suitable microhabitat conditions (e.g., serpentine and other specific native soil types), no special-status plants were determined to have reasonable potential to occur in the remainder of the project site. In addition, the wetland

delineation was conducted when most of the special-status plants that were evaluated would have been blooming and readily identifiable, but no special-status plants were observed.

Fish and Wildlife

Twelve special-status fish and wildlife taxa included in the CNDDDB search results and/or on the USFWS or NMFS resource lists were evaluated for their potential to occur on or adjacent to the project site. As with the plant species, most of these were determined to have little or no potential to occur, because of restricted distribution (i.e., fish that do not occur above New Hogan Dam) and/or lack of suitable habitat (e.g., vernal pools). Wildlife for which at least marginally suitable habitat occurs on or adjacent to the project site were evaluated in further detail and are discussed below.

Invertebrates

One isolated elderberry (*Sambucus nigra* ssp. *caerulea*) shrub, which is the host plant for the Federally threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), was observed in the southern portion of the project site during the field surveys. Although this shrub could be considered suitable habitat for the beetle, it and other elderberry shrubs that may occur on the project site are very unlikely to be occupied by the beetle. Onsite elevation is approximately 900 feet, and most valley elderberry longhorn beetle occurrences are from less than 500 feet (USFWS 2017); the nearest known occurrence is approximately 15 miles west of the project site. In addition, the shrub found during field surveys was examined for exit holes indicative of valley elderberry longhorn beetle occupation and none were observed.

Reptiles and Amphibians

Several special-status aquatic reptiles and amphibians are known to occur in the region, including western pond turtle (*Emys marmorata*), California tiger salamander (*Ambystoma californiense*), California red-legged frog (*Rana draytonii*), and foothill yellow-legged frog (*Rana boylei*). California tiger salamander is Federally and State-listed as threatened; California red-legged frog is Federally listed as threatened, and foothill yellow-legged frog is a candidate or State listing as threatened; the two frogs and western pond turtle are California species of special concern. Although the project site supports aquatic habitat, these species are unlikely to occur onsite, due to elevation, current distribution, and/or marginal habitat conditions, potentially including poor water quality resulting from CKD. No pond turtles or amphibians, including common species such as bullfrog (*Lithobates catesbeianus*) and Sierran tree frog (*Pseudacris sierra*), were detected during the field surveys.

Pond turtles require permanent or near-permanent water of a reasonable depth; onsite flows become very low and portions of the drainage likely dry up in summer, and seasonal wetland habitats are shallow and appear to dry up in late spring. Most CNDDDB occurrences of pond turtle in the region are from permanent ponds and larger, perennial creeks and rivers; the shallow seasonal drainage and wetlands on the project site provide poor habitat for this species.

CNDDDB occurrences of California tiger salamander in the region are from large vernal pools, stock ponds, and other natural and artificial pools that provide much higher quality habitat for

this species than that present on the project site. In addition, the known range of this species does not appear to extend as far east as the project site (USFWS 2017). Only one CNDDDB occurrence in the region is from below 500 feet in elevation, and this occurrence was nearly 35 miles south of the project site, where the species range extends farther east. CNDDDB occurrences nearest to the project site are more than 10 miles to the west.

Foothill yellow-legged frog is known from numerous perennial creeks and rivers in the region, but many occurrences are from much higher elevations (2,000-4,000 feet), and most of the lower elevation occurrences have been extirpated. The few CNDDDB occurrences below 1,200 feet and presumed to be extant are primarily from relatively large rivers, such as the Tuolumne River and South Fork of the Stanislaus River. Given the hydrology and very small size of the onsite drainage, elevation of the site, and presence of a nearly 600-foot culvert at the drainage's downstream end, foothill yellow-legged frog is very unlikely to disperse into seasonal aquatic habitat on the project site. Only one presumed extant CNDDDB occurrence of California red-legged frog is known to have been documented in the region in the past 60 years. This occurrence is from Youngs Creek, north of New Hogan Reservoir and approximately 7 miles from the project site. Although the project site may provide suitable non-breeding aquatic habitat during part of the year, this habitat does not persist long enough to allow for juvenile development and is unsuitable for breeding. In addition, this species has not been documented in the Calaveras River drainage upstream of New Hogan Reservoir. If California red-legged frog occurs in the project vicinity, it is likely restricted to perennial creeks and stock ponds outside the project site.

Birds

Only two special-status birds, bald eagle (*Haliaeetus leucocephalus*) and tricolored blackbird (*Agelaius tricolor*) (State-listed as endangered and threatened, respectively), have CNDDDB occurrences within the project vicinity. In addition, white-tailed kite (*Elanus leucurus*) and loggerhead shrike (*Lanius ludovicianus*) have been documented in nearby areas (eBird 2019); white-tailed kite is fully protected by the FGC, and loggerhead shrike is a California species of special concern. Bald eagle is known to have nested at New Hogan Lake in the early 1990s and has been observed at the lake during the breeding season in recent years. However, the project site does not provide suitable nesting or foraging habitat for this species, and it is unlikely to occur onsite on a regular basis.

Several tricolored blackbird nest colonies have been documented historically and more recently in the project vicinity. These colonies are associated with large Himalayan blackberry or cattail and hardstem bulrush (*Schoenoplectus acutus*) patches, typically at ponds and reservoirs. The project site provides marginally suitable nesting habitat for this species, though the blackberry patches are smaller and less isolated than preferred conditions, and onsite wetland areas dry up during the nesting season; these conditions make the habitat more accessible to predators and less suitable for nesting.

Riparian habitat on the project site provides potential nesting habitat for white-tailed kite and loggerhead shrike, though these species are more likely to nest and forage in adjacent oak woodland areas.

Mammals

Two special-status bats, pallid bat (*Antrozous pallidus*) and Townsend's big-eared bat (*Corynorhinus townsendii*), have been documented in the project vicinity. However, these CNDDDB occurrences are more than 50 and 100 years old, respectively. In addition, the project site does not provide suitable roosting structures for Townsend's big-eared bat, and the relatively few onsite riparian trees provide poor roosting habitat for pallid bat. If these bats occur in the project vicinity, use of the project site would likely be limited to foraging, and the species are very unlikely to roost onsite.

Sensitive Habitats

The onsite drainage is a water of the U.S. and water of the State, protected under Sections 404 and 401 of the CWA and the Porter-Cologne Act. The seasonal wetland abutting the drainage channel is also a water of the U.S., and both seasonal wetlands are waters of the State. The drainage and associated riparian vegetation are also regulated under FGC Section 1602, and the riparian habitat is considered a natural community of special concern.

3.4.2 Discussion

This impact discussion focuses on resources with reasonable potential to be affected by implementing remediation activities. Therefore, plant and wildlife species that are unlikely to occur on or adjacent to the project site (because of poor or unsuitable habitat conditions, known extant range of the species, and/or lack of occurrence records) are not addressed in this discussion.

- a) **Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or National Marine Fisheries Service?**

Four special-status bird species—bald eagle, tricolored blackbird, white-tailed kite, and loggerhead shrike—have potential to occur on or adjacent to the project site. The project site does not provide foraging habitat for bald eagle and foraging quality for the remaining species is poor; therefore, any potential disruption of foraging activities would be very minor. The project site also does not provide suitable nesting habitat for bald eagle. Tricolored blackbird, white-tailed kite, and loggerhead shrike are not known to nest onsite, but riparian vegetation provides suitable nesting habitat for these species; white-tailed kite and loggerhead shrike could also nest in adjacent oak woodland. Less than 1 acre of riparian habitat would potentially be removed by project activities.

Tri-Colored Blackbird

Loss of less than 1 acre of riparian habitat would not result in loss of a known tricolored blackbird nesting area and would not substantially reduce the amount of nesting habitat in the region, which is known to support habitat at many active and historic nest colony sites. However, if tricolored blackbirds nest on the project site, nests could be destroyed during vegetation removal. In addition, if active nests of tricolored blackbird, white-tailed kite, or loggerhead shrike are present near the project site during project activities, nesting activity could be disturbed by heavy equipment operation and construction personnel, potentially resulting in nest abandonment, reduced care of eggs or young, or premature fledging. Destruction or failure of a tricolored blackbird colony could result in loss of hundreds or thousands of eggs or young. This could have a substantial adverse effect on the local population and would be a **potentially significant** impact. The following mitigation measure has been identified to address this impact:

Mitigation Measure BIO-1a: Avoid Failure of Tricolored Blackbird Nest Colony.

Lehigh and its construction contractor(s) will implement the following measures to avoid potential failure of a tricolored blackbird nest colony during project implementation:

- Vegetation removal shall be conducted between September 1 and March 1, to the extent feasible, to avoid vegetation removal during the tricolored blackbird nesting season.
- If project activities (including vegetation removal) are required during the tricolored blackbird nesting season (March 1 through August 31), surveys for nesting activities shall be conducted by a qualified biologist in areas of suitable nesting vegetation on and within 500 feet of the project site. A minimum of one survey shall be conducted no more than 7 days before project activities begin.
- If nesting activity is observed, an appropriate buffer shall be established and maintained around the outer edge of the nesting colony to avoid nest failure from project activities. The appropriate size and shape of the buffer shall be determined by a qualified biologist and may vary depending on the nest location, nest stage, construction activity, and existing disturbance levels. The buffer may be adjusted if a qualified biologist determines it would not be likely to adversely affect the nest. Monitoring shall be conducted to confirm that project activities are not resulting in detectable adverse effects on nesting birds or their young. No project activities shall occur within the buffer areas until a qualified biologist determines that the young have fledged or the colony site is otherwise no longer in use.

Timing: Before and during project construction activities

Responsibility: Lehigh

Implementing Mitigation Measure BIO-1a would reduce the potentially significant impact associated with project-related failure of a tricolored blackbird nest colony to a less-than-significant level, because a buffer would be implemented around an active nest colony to

minimize potential for nest failure. Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated**.

Other Special-Status Birds

Because the project site is relatively small, and less than 1 acre of potential nesting habitat for white-tailed kite and loggerhead shrike would potentially be removed, potential for project activities to result in direct nest removal or nest failure from project disturbance is minimal and would affect a very small number of individuals, if any. Such an impact is unlikely to have a substantial adverse effect on local populations and would be a **less-than-significant** impact.

Project activities could result in removal of active nests of common bird species, if trees, shrubs, or ground vegetation removal occurs during the bird nesting season. Loss of active nests of common species would not substantially reduce their abundance or cause any species to drop below self-sustaining levels and would be a **less-than-significant** impact.

However, destroying an active bird nest during project activities could violate FGC Section 3513, and destroying an active white-tailed kite nest could result in take of a fully protected species, which would also violate FGC Section 3511. Although FGC violation is not in itself a significant impact under CEQA, take of a fully protected species would be a **potentially significant** impact. The following mitigation measure has been identified to address this impact:

Mitigation Measure BIO-1b: Minimize Potential to Destroy Active Bird Nests.

Lehigh and its construction contractor(s) will implement the following measures to minimize potential to destroy an active bird nests during project implementation:

- Vegetation removal shall be conducted between September 1 and March 1, to the extent feasible, to avoid vegetation removal during the bird nesting season.
- If project activities (including vegetation removal) are required during the nesting season (March 1 through August 31), a qualified biologist shall conduct surveys of suitable nesting habitat that would be directly disturbed by project activities (including vegetation removal). A minimum of one survey shall be conducted no more than 7 days before project activities begin.
- If any active bird nests are documented, protective buffers shall be established by a qualified biologist and implemented until the nests are no longer active, to ensure that known active nests are not accidentally destroyed during project activities.

Timing: Before and during project construction activities

Responsibility: Lehigh

Implementing Mitigation Measure BIO-1b would reduce the potentially significant impact associated with take of a fully protected species to a **less-than-significant** level, because a buffer would be implemented around an active nest to avoid take.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Up to approximately 1 acre of riparian habitat would potentially be removed by project activities, including at least 30 cottonwood and willow trees. This habitat is regulated by CDFW under Section 1602 of the FGC and is considered a sensitive natural community. Because the habitat to be removed constitutes a considerable proportion of riparian vegetation along this drainage, its loss could have a substantial adverse local effect. Therefore, this impact would be a **potentially significant** impact. The following mitigation measure has been identified to address this impact:

Mitigation Measure BIO-2: Protect Riparian Habitat, Obtain and Comply with Necessary State Permits/Authorizations, and Develop and Implement a Mitigation Plan, if Necessary.

Lehigh will implement the measures described below to minimize impacts on riparian habitat and compensate for loss of riparian habitat, such that there is no net loss of riparian functions and values:

- Before beginning project construction activities (including vegetation removal), high-visibility fencing shall be installed to protect riparian habitat maintained during project construction activities. Fencing shall be installed adjacent to the construction area to preclude encroachment of personnel and equipment. The fencing shall be inspected before the start of each work day and shall be removed when construction is completed. Sensitive habitat information shall be incorporated into project bid specifications, along with a requirement for contractors to avoid these areas.
- Prior to removal of riparian vegetation, a California Department of Fish and Wildlife (CDFW) streambed alteration agreement shall be obtained under Section 1602 of the California Fish and Game Code, and riparian habitat mitigation resulting in no-net-loss of riparian functions and values shall be provided. Mitigation may be accomplished through habitat replacement, enhancement of degraded habitat, offsite mitigation at an established mitigation bank, contribution of in-lieu fees, or other methods acceptable to CDFW. Conditions of issuance of the streambed alteration agreement, including minimization and compensation measures, shall be implemented as part of the project, such that there is no net loss of riparian functions and values.
- If compensation is provided through permittee-responsible mitigation, a mitigation plan shall be developed to detail appropriate compensation measures determined through consultation with CDFW, methods for implementation, success criteria, monitoring and reporting protocols, and contingency measures to be implemented if the initial mitigation fails.

Timing: During project activities
Responsibility: Lehigh

Implementing Mitigation Measure BIO-2 would reduce the significant impact associated with loss of riparian habitat to a less-than-significant level, because impacts to riparian habitat would be minimized and mitigated, such that there is no net loss of riparian functions and values. Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated**.

- c) **Have a substantial adverse effect on state or Federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

The drainage and seasonal wetlands on the project site qualify as jurisdictional waters of the U.S. and/or waters of the State subject to regulation under Sections 404 and 401 of the CWA and the Porter-Cologne Act. Approximately 0.2 acre of seasonal wetland and 0.04 of the drainage are anticipated to be permanently affected by project construction. Temporary impacts to these features would potentially occur during construction. The entire 0.14-acre seasonal wetland closest to the CKD pile would be graded, recontoured, and covered with the LLDPE geomembrane, and a small portion of the wetland immediately adjacent to the drainage would be filled. Approximately 400 feet of the existing drainage channel would be excavated, graded, and realigned. The realigned channel course and capacity would be similar to existing channel conditions, and the new channel would be created in the same construction season and immediately following excavation and grading the existing channel. Because the channel would be recreated within the same construction season and provide similar capacity, it is anticipated to provide similar functions and values, with minimal temporal habitat loss. Therefore, this impact would be **less than significant**.

However, the seasonal wetland habitat that would be permanently removed constitutes a considerable proportion of such habitat along this drainage, and its loss could have a substantial adverse local effect. In addition, downstream portions of the drainage and seasonal wetland habitat adjacent to the construction area could be substantially adversely affected by erosion and sedimentation during and following project construction. These impacts would be **potentially significant**. The following mitigation measures have been identified to address this impact:

Mitigation Measure BIO-3: Protect Jurisdictional Waters, Obtain and Comply with Necessary Federal and State Permits/Authorizations, and Develop and Implement a Mitigation Plan, if Necessary.

Lehigh will implement the measures described below to minimize impacts on jurisdictional waters, including wetlands, and compensate for loss of seasonal wetland, such that there is no net loss of seasonal wetland functions and values:

- Before beginning project activities, high-visibility fencing shall be installed to protect the drainage and wetland habitat maintained during project activities. Fencing shall be installed adjacent to the construction area to preclude encroachment of personnel and equipment. The fencing shall be inspected before

the start of each work day and shall be removed when construction is completed. Sensitive habitat information shall be incorporated into project bid specifications, along with a requirement for contractors to avoid these areas.

- Prior to disturbing jurisdictional waters, authorization for impacts on jurisdictional waters shall be secured – a Clean Water Act (CWA) Section 404 permit from the United States Army Corps of Engineers (USACE) and a water quality certification pursuant to CWA Section 401 from the Central Valley RWQCB – before starting project activities. Any measures determined necessary during the 404 and 401 permitting processes shall be implemented, such that there is no net loss of functions and values of jurisdictional waters.
- Mitigation may be accomplished through habitat replacement, enhancement of degraded habitat, offsite mitigation at an established mitigation bank, contribution of in-lieu fees, or other method acceptable to the regulatory agencies, such that there is no net loss of wetland functions and values. If compensation is provided through permittee-responsible mitigation, a mitigation plan shall be developed to detail appropriate compensation measures determined through consultation with USACE and Central Valley RWQCB, methods for implementation, success criteria, monitoring and reporting protocols, and contingency measures to be implemented if the initial mitigation fails.

Timing: During project activities
Responsibility: Lehigh

Mitigation Measure GEO-1: Continue to Implement a Storm Water Pollution Prevention Plan (SWPPP) and Associated Best Management Practices (BMPs) as Required Under Existing General Permit for Stormwater Discharges Associated with Industrial Activities (NPDES No. CAS000001) and Obtain Coverage and Comply with Requirements of the General Construction Stormwater Permit 2009-0009-DWQ.

Please *refer to* Impact GEO-1 in Section 3.7, “Geology and Soils,” for the full text of this mitigation measure.

Implementing Mitigation Measures BIO-3 and GEO-1 would reduce the potentially significant impacts associated with loss or degradation of jurisdictional waters to a less-than-significant level, because direct and indirect impacts to jurisdictional waters would be minimized and compensated, such that there is no net loss of their functions and values. Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated.**

- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

The project site is at the upper end of a minor riparian corridor that does not connect to upstream riparian habitats. This narrow corridor is not a primary route for wildlife or fish movement and is

not known or anticipated to serve as a nursery site for any wildlife species. Therefore, implementing the proposed project would not substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. This impact would be **less than significant**.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Calaveras County does not have any ordinances prescribing specific requirements for tree preservation or protection of other biological resources. The Conservation and Open Space Element of the Calaveras County Draft General Plan (Calaveras County 2019) identifies a goal and supporting policies designed to promote a diversity of native plants, fish, and wildlife species and their habitats. Some policies generally address biological resource protection, while others specifically mention special-status species, oak woodland, wetlands, riparian habitat, and other aquatic resources. In addition, the Calaveras County Voluntary Oak Woodland Management Plan (Calaveras County 2007) provides a set of voluntary oak protection guidelines for oak conservation planning and use of oak woodland habitats throughout the County. The proposed project would not conflict with policies or guidelines presented in these County plans, and **no impact** related to such conflict would occur.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

There is no Habitat Conservation Plan, Natural Community Conservation Plan, or other conservation plan applicable to the project location. Therefore, there would be **no impact**.

3.5 Cultural Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
V. CULTURAL RESOURCES –					
Would the project:					
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.5.1 Environmental Setting

Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historic, architectural, archaeological, cultural, or scientific importance. CEQA defines a “historical resource” as any resource listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR).

Prehistoric Setting

This brief overview of the prehistory of the region is adapted from synthesis and analysis of the archaeology of central California (Rosenthal et al. 2007). It expands and refines earlier chronological schemes developed for central California and includes references specifically for the Sierra Nevada foothills.

The Paleo-Indian (11,500 to 8550 cal Before Common Era [B.C.E.]) is the earliest accepted period for human occupation in California. Archaeological evidence dating to this period, however, is extremely rare or of dubious association. Landforms dating to this period are more common in some areas, but generally are in areas that would not have been attractive for early groups to visit.

The Lower Archaic (8550 to 5550 cal B.C.E.) period is nearly as bereft of evidence as the Paleo-Indian primarily because of two large depositional events in 9050 cal B.C.E. and again in 5550 cal B.C.E. Artifacts dating to this period are usually found as isolated finds and include stemmed points, crescent-shaped flaked stone tools, as well as early concave base points. Despite this limited data set, however, marine shell from California found in the Great Basin and obsidian from sources in the Great Basin indicate that regional interaction was well established by this archaeological period.

Middle Archaic (5550 to 550 cal B.C.E.) period sites are still rare in most of central California, but not in the Sierra Nevada foothills. Sites dating to this period are relatively common in buried contexts in the foothills, including Calaveras County. Archeological assemblages are characterized by expedient, cobble-based tools used for chopping, pounding, scraping, and mulling tools. Archaeobotanical studies have shown a heavy reliance on acorns and pine nuts. Few bone or shell artifacts have been identified to this period although tabular pendants, incised slate, and perforated stone plummets have been found over wide areas if in few numbers. Material sources tend to be from local sources with few imported obsidian artifacts.

The Upper Archaic (550 cal B.C.E. to cal C.E. 1100) corresponds roughly to the beginning of the Late Holocene, a time characterized by a shift from a relatively warm, dry climate to a wetter, cooler, and more stable climate. This archaeological period is better represented and understood than previous periods, with evidence indicating that while economies varied by region, the overall emphasis was on resources that could be harvested and processed in bulk. These included acorn, rabbit, salmon, shellfish, and deer. Specialized technologies including new types of bone tools, various bead types, ceremonial blades, and polished and ground stone plummets appear in the archaeological record. The Lower Sierra Foothills, based on similar burial patterns, may have been occasionally occupied by groups from the valley floor.

The Emergent (cal C.E. 1100 to Historic) period archaeological record is the most substantial and comprehensive of any period and likewise its assemblages and adaptations are also the most diverse. Many earlier archaic technologies and traditions are no longer represented while arguably the most distinctive technological aspect of the Emergent period, bow and arrow technology, appears. More complex social forms also emerged as evidenced by increased variation in burial types and furnishings. Other changes included shifts in obsidian use/production, decentralization of bead manufacture, a unique arrow type form in some areas, changes in burial practices, and possibly a monetized system of exchange. The Emergent is usually split into two broad phases, the Lower and Upper Emergent; the phases are defined on the appearance or increase in frequency of specific artifact types.

Ethnographic Setting

The project is situated in the traditional territory of Central Valley Miwok speakers, part of the Eastern Miwok, a subgroup of one of two major divisions of Miwok, itself a part of the Utian language family. Linguistic analysis indicates that Miwok speakers have been present in the central California Delta region for a long period of time, possibly thousands of years, though

presence in the foothills of the Sierra Nevada is likely much more recent, approximately 600 years (Barrett 1908; Bennyhof 1977; Kroeber 1925; Levy 1978).

The Central Sierra Miwok lived in small villages throughout the foothills, mostly situated on ridges or terraces above streams for a nearby water supply, though smaller specialized camp locations were established farther from water sources. Like much of central California, the political organization of the Central Sierra Miwok revolved around the tribelet. In general, the tribelet system was typified by a single, relatively large village, usually containing one or more ceremonial structures and the home base for a chief and possibly several assistants. This central, large village had one or more satellite villages associated with it; together the central village and its satellites were the largest political unit that was recognized by Miwok speakers, the tribelet. Associated villages within an individual tribelet cooperated with each other for ceremonial purposes as well as group activities such as game drives (Kroeber 1925; Levy 1978; Merriam 1967).

The subsistence staple of the Central Sierra Miwok, again as in much of California west of the Sierra Nevada mountains, was the acorn. Acorns were processed using the mortar and pestle to reduce nutmeats to meal followed by a leaching process to remove tannins from the acorns. Bread and mush were made from the processed meal. Acorn was supplemented with other seeds, berries, nuts, and edible roots. Animals that were used for food resources include small game such as rabbit and quail. Larger game such as mule deer, tule elk, black bear, and grizzly bear were also hunted. Fishing was also important in the plains and in the foothills along major water ways (Levy 1978).

The Miwok tool kit was varied and efficient. Ground stone tools included cobble pestles used with several different types of bedrock mortars, acorn anvils, and hammer stones. Several types of flaked stone hunting and butchering tools, made of chert and imported obsidian, were also used such as knives, scrapers, and arrow and spear points. The Miwok made excellent and varied types of baskets and while pottery was not made, they did fashion stone bowls. Types of basketry made include seed beaters, burden baskets, rackets for games, cradle baskets, as well as others for cooking and serving foods. Fishing nets were also crafted as were fishing hooks, seines, and harpoons (Levy 1978).

The Central Sierra Miwok also built several different types of structures. These included surface and semi-subterranean conical dwelling houses, a public assembly house, and sweat houses. Less substantial structures included acorn granaries, brush-covered ceremonial structures, shades, and hunting blinds (Barrett and Gifford 1933).

Historic Setting

Calaveras County

Calaveras County (County) was one of California's original 27 counties. The County seat was relocated several times before finally settling in San Andreas in 1866 (Kyle 1990:41). The County is part of California's southern mines and is one of eight counties that is encompassed by the Mother Lode (Raney 2018:4.5-2). Historically mining is one of the three major industries in the

County, the other two being lumber and agriculture. Drift mining was introduced to the County in 1855, followed by quartz mining in the 1860s. This developed into deep rock mining by the late 1880s. The peak years for gold mining in the County was between the mid-1880s and the early 1900s. By the end of World War I, gold mining in the County had ended because there was a stronger need for other materials like copper and there was a shortage of labor available for mining (Raney 2018:4.5-3–4.5-4).

Calaveras Cement Company

The Calaveras Cement Company started operating in 1926 and was financed by William Wallace Mein and a group of investors from Stockton (PMC 2006:1; *Madera Daily Tribune and Madera Mercury* 1926:4). Mein was born in Nevada City, California, in 1873. He learned mining techniques from his father who mined in California, Alaska, and South Africa. He earned a B.S. from the University of California, Berkeley and after graduation returned to South Africa to manage the Durban Roddeport Deep Mines (*Pit & Quarry* 1947:106). Mein returned to California and opened an office in San Francisco. In 1922, Mein learned of a large limestone deposit at Kentucky House and quickly started the process to construct the Plant for the Calaveras Cement Company. He brokered a deal with the Southern Pacific Railroad to have its Lodi branch extended so that Mein could construct a standard-gauge rail line to Kentucky House and his new plant (Taylor 2005).

The company was successful not only for its large limestone deposits, but also the shale and silica that were needed for its cement production (Taylor 2005). The company used a “wet process” and in 1952 the company’s plant underwent a large expansion program that increased its barrel of cement to 3,500,000 a year. The company produced a white cement and was the only manufacturer of this in California (Division of Mines 1955:7). The company’s cement was used in the construction of the East Bay Municipal Utility District’s Pardee Dam, the center anchorage of the Oakland Bay Bridge at Mare Island, Hunter’s Point, and at northern California air force bases. By the mid-20th century, Calaveras Cement was being used in large infrastructure projects like Oroville Dam and the Altamont Pass. The cement Plant operated until it closed in 1983 and in 2005 Lehigh began the process of demolishing the Plant (Taylor 2005).

Methods

The cultural resources investigations carried out for the proposed project included a Sacred Lands Files database search with the Native American Heritage Commission (NAHC) (See Section 3.18, “Tribal Cultural Resources” for additional information on NAHC search), background research conducted at the Central California Information Center (CCIC) of the California Historical Resources Information System, review of historic maps and ethnographic documents, archival research at local repositories, and an archaeological survey of the construction area.

Historic-era topographical maps dating to 1892 and aerial photographs dating to 1998 were examined to see if there were any indications of possible cultural resources. Additional archival research was conducted at the California History Room, California Digital Newspaper Collection, and GEI’s extensive cultural resources library. A remote survey of the construction area was

done by Patricia Ambacher in October 2018 and found no historic resources in the construction area.

GEI archaeologist Jesse Martinez, RPA, M.A., conducted an archaeological pedestrian survey of the Project area of potential effect (APE) on October 31, 2018. Transects were spaced 49 feet apart to meet intensive standards of survey. A Trimble GPS unit capable of submeter accuracy loaded with the Project APE was carried to ensure adequate survey coverage as well as to record any cultural resources that might be encountered. Representative photographs were taken to document conditions of the APE.

Findings

The Sacred Lands Database searches for the project site had negative results. The California Historical Resources Information System records searches, USFS records searches, and background research found no previously identified historical resources within the construction area. No cultural resources were identified during the pedestrian survey. Surface visibility was generally excellent though poorer in the wetland area in the southern extreme of the Project. The estimated 430,000 cy of highly alkaline CKD that has been placed in the Construction area essentially covers most of the project site.

3.5.2 Discussion

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

Under CEQA, public agencies must consider the effects of their actions on “historical resources.” The CRHR includes resources listed in or formally determined eligible for listing in the National Register of Historic Places, as well as some California Historical Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be significant resources for purposes of CEQA unless a preponderance of evidence indicates otherwise (California PRC Section 5024.1, 14 CCR Section 4850). The eligibility criteria for listing in the CRHR are similar to those for National Register of Historic Places listing but focus on importance of the resources to California history and heritage.

A cultural resource may be eligible for listing on the CRHR if it:

1. is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage
2. is associated with the lives of persons important in our past
3. embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of an important creative individual or possesses high artistic values
4. or has yielded, or may be likely to yield, information important in prehistory or history

In addition to meeting one or more of the above criteria, resources eligible for listing in the CRHR must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association (OHP 1999).

No historical resources were identified during the records search or pedestrian survey. Though very unlikely, the possibility remains that a resource meeting CRHR significance criteria for a historical resource may be discovered during project-related ground-disturbing activities. Therefore, this impact would be **potentially significant**. The following mitigation measure has been identified to address this impact:

Mitigation Measure CR-1: Address Previously Undiscovered Historic Properties, Archaeological Resources, and Tribal Cultural Resources.

Lehigh shall implement the following measures to reduce or avoid impacts on undiscovered historic properties, archaeological resources, and tribal cultural resources. If buried or previously unidentified historic properties or archaeological resources are discovered during project construction activities, all work within a 100-foot-radius of the find shall cease. Lehigh shall retain a professional archaeologist meeting the Secretary of the Interior’s Professional Standards for Archaeologists to assess the discovery and recommend what, if any, further treatment or investigation is necessary for the find. Interested Native American Tribes will also be contacted. Any necessary treatment/investigation shall be developed with interested Native American Tribes providing recommendations and shall be coordinated with the State Historic Preservation Officer and U.S. Army Corps of Engineers, if necessary, and shall be completed before project activities continue in the vicinity of the find.

Timing:	During project construction activities
Responsibility:	Lehigh

Implementing Mitigation Measure CR-1 would reduce the potential impact related to discovery of unknown historic resources to a less-than-significant level because the find would be assessed by an archaeologist and the treatment or investigation would be conducted in accordance with Section 106 (CFR 800.13- Post-review discoveries). Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated**.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

The State CEQA Guidelines require consideration of unique archaeological resources (CCR Section 15064.5). As used in California PRC Section 21083.2, the term “unique archaeological resource” refers to an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information,
- has a special and particular quality such as being the oldest of its type or the best available example of its type, or
- is directly associated with a scientifically recognized important prehistoric or historic event or person

No archaeological resources were found during identification efforts for the construction area. Given that current plans do not include disturbing natural soils the Project has very little potential for inadvertent discovery of buried cultural resources. Nevertheless, the possibility remains that a resource meeting CRHR significance criteria for a historical resource may be discovered during project-related ground-disturbing activities. Therefore, this impact would be **potentially significant**. The following mitigation measure has been identified to address this impact:

Mitigation Measure CR-1: Address Previously Undiscovered Historic Properties, Archaeological Resources, and Tribal Cultural Resources.

Please *refer to* Mitigation Measure CR-1 in cultural resources impact a) above for the full text of this mitigation measure.

Implementing Mitigation Measure CR-1 would reduce the potential impact related to discovery of unknown historic resources because the find would be assessed by an archaeologist and the treatment or investigation would be conducted in accordance with Section 106 (CFR 800.13-Post-review discoveries). Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated**.

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

No human remains have been discovered in the construction area and it is not anticipated that human remains, including those interred outside of dedicated cemeteries, would be discovered during ground-disturbance activities with the proposed project. There is no indication from the records searches or pedestrian survey that human remains are present within the project site. However, in the event that human remains, including those interred outside of formal cemeteries and including associated items and materials, are discovered during subsurface activities, the human remains and associated items and materials could be inadvertently damaged. Therefore,

a **potentially significant impact** would occur. The following mitigation measure has been identified to address this impact:

Mitigation Measure CR-2: Avoid Potential Effects on Undiscovered Burials.

Lehigh shall implement the following measures to reduce or avoid impacts related to undiscovered burials. In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, all potentially damaging ground-disturbance in the area of the burial and within a 100-foot-radius, shall halt and the Calaveras County Coroner shall be notified immediately. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, then Federal laws governing the disposition of those remain would come into effect. Specifically, the Native American Graves Protection and Repatriation Act, Pub L. 101-601, 25 U.S.C. 3001 et seq., 104 Stat. 3048 requires Federal agencies and institutions that receive Federal funding to return Native American cultural items to lineal descendants and culturally affiliated Indian Tribes and Native Hawaiian organizations. Cultural items include human remains, funerary objects, sacred objects, and objects of cultural patrimony. the Native American Graves Protection and Repatriation Act also has established procedures for the inadvertent discovery of Native American cultural items on Federal or Tribal lands, which includes consultation with potential lineal descendants or Tribal officials as part of their compliance responsibilities.

California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. Lehigh shall ensure that the procedures for the treatment of Native American human remains contained in California Health and Safety Code Sections 7050.5 and 7052 and Public Resources Code Section 5097 are followed.

Timing: During construction activities

Responsibility: Lehigh

Implementing Mitigation Measure CR-2 would reduce the potentially significant impact related to discovery of human remains to a less-than-significant level because the find would be assessed by an archaeologist and treated or investigated in accordance with State and Federal laws. Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated.**

3.6 Energy

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
VI. ENERGY.					
Would the project:					
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.6.1 Environmental Setting

Current energy usage at the site is negligible, since the site has not been used for CKD or waste rock disposal for many years and includes only periodic driving of onsite personnel to monitor onsite piezometers and groundwater wells.

3.6.2 Discussion

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

The proposed project would consume energy during the construction phase from use of fuels in construction equipment and vehicles for grading, hauling, and installing project components, and potentially temporary use of nighttime lighting. Operational and maintenance activities would not include permanent lighting or other sources of energy use, except for minimal use of vehicles for monitoring activities and pumping subsurface drainage from the CKD into a storage tank on a periodic basis for transport to the CKD-1 site for treatment at an existing treatment facility. Pumping is completed manually (by truck and temporary pumping), which would not substantially contribute to energy usage at the project site. Equipment and vehicle use would occur as specified in the Section 2, "Project Description," and is typical of similar earthmoving

projects and monitoring/maintenance of leachate systems, would be necessary for the project, and would not be wasteful or inefficient. Furthermore, the project has been designed to use onsite waste rock to develop project components, thereby reducing construction trips for sourcing material at locations farther away or offsite. Energy use and associated emissions are analyzed in Section 3.3, "Air Quality," and Section 3.8, "Greenhouse Gas Emissions." Therefore, energy use from the project would result in a **less-than-significant impact**.

b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

Implementation of the proposed project would not result in any developed land uses or construction of temporary or permanent structures or facilities that could conflict with State or local plans for renewable energy or efficiency. There would be **no impact**.

3.7 Geology and Soils

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
VII. GEOLOGY AND SOILS – Would the project:					
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (<i>Refer to California Geological Survey Special Publication 42.</i>)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or offsite landslide, lateral	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Issue	Less-than-Significant				
	Potentially Significant Impact	Mitigation Incorporated	Impact with Less-than-Significant Impact	No Impact	Beneficial Impact
spreading, subsidence, liquefaction or collapse?					
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.7.1 Environmental Setting

Soils at the project site are classified as mined land with little native soil remaining due to past CKD and waste rock disposal activities (NRCS 2019). Nearby faults include two unnamed pre-Quaternary faults and one Quaternary fault (Poorman Gulch). The faults are within the Foothills Fault System, which is a part of the larger Melones Fault Zone and are contiguous with the project site (CGS 2010a). There are no Alquist-Priolo Earthquake Fault Zones near the project site. Additionally, the project site is not within an area at risk for landslides or within a known liquefaction zone (CGS 2019).

3.7.2 Discussion

- a) **Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:**
- i) **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)**

The project site is not within an Alquist-Priolo Earthquake Fault Zone. The Poorman Gulch fault is classified as a late Quaternary fault which has experienced displacement within the last 700,000 years. The Poorman Gulch fault is not considered active by the California Geologic Survey (CGS) because surface fault rupture is most likely to occur on active faults (i.e., faults showing evidence of displacement within the last 11,700 years). Therefore, there would be **no impact**.

- ii, iii, iv) **Strong seismic ground shaking, or seismic-related ground failure, including liquefaction or landslide?**

Strong earthquakes generally create ground shaking, including liquefaction and landslides, with reduced effects as distance increases from the earthquake's epicenter. The area affected by ground shaking in any given earthquake would vary depending on the earthquake's intensity, duration, distance from the project site, and the underlying material. Although there are no active faults within 50 miles of the project site, ground shaking could occur from distant earthquakes. However, project designs would comply with California Uniform Building Code (UBC), which is based on the Federal UBC but is more detailed and stringent. Chapter 18 of the California UBC regulates the excavation and geotechnical considerations, and Appendix J addresses grading, excavation, fill, drainage, and erosion control considerations. UBC Appendix Chapter A33 regulates grading activities, including drainage and erosion control, and construction on unstable soils (California Building Standards Commission [BSC] 2016). The project would be designed in accordance with UBC requirements. Additionally, the project site is not located within a known liquefaction or landslide zone (CGS 2019). The proposed project would not expose people or structures to potential substantial adverse effects from strong seismic ground shaking. Therefore, this impact would be **less than significant**.

- b) **Result in substantial soil erosion or the loss of topsoil?**

Grading on most of the project site would be necessary to ensure proper drainage and stability of the CKD deposits after site closure. Grading and other construction activities could result in the temporary and short-term disturbance of soil and could expose disturbed areas if a storm event were to occur during project implementation. Rainfall of sufficient intensity could dislodge soil particles from the soil surface. Once particles are dislodged and the storm is large enough to generate runoff, substantial localized erosion could occur. In addition, soil disturbance could result in substantial loss of topsoil because of wind erosion. Therefore, this impact would be

potentially significant. The following mitigation measure has been identified to address this impact:

Mitigation Measure GEO-1: Continue to Implement a SWPPP and Associated BMPs as Required Under Existing General Permit for Stormwater Discharges Associated with Industrial Activities Industrial Activities (NPDES No. CAS000001) and Obtain Coverage and Comply with Requirements of the General Construction Stormwater Permit 2009-0009-DWQ.

Lehigh shall continue to implement the appropriate SWPPP, or Stormwater Management Plan (SWMP), to prevent and control pollution and to minimize and control runoff and erosion in compliance with State and local laws, as detailed in the project site's existing General Permit for Stormwater Discharges Associated with Industrial Activities (NPDES No. CAS000001) and Obtain Coverage and Comply with Requirements of the General Construction Stormwater Permit 2009-0009-DWQ. The SWPPP or SWMP shall identify the activities that may cause pollutant discharge (including sediment) during storms or strong wind events and the BMPs that will be employed to control pollutant discharge. Construction techniques that will be identified and implemented to reduce the potential for runoff may include minimizing site disturbance, controlling water flow over the construction site, stabilizing bare soil, and ensuring proper site cleanup. In addition, the SWPPP or SWMP shall include an erosion control plan and BMPs that specify the erosion and sedimentation control measures to be implemented, which may include silt fences, staked straw bales/wattles, silt/sediment basins and traps, geofabric, trench plugs, terraces, water bars, soil stabilizers re-seeding with native species and mulching to revegetate disturbed areas. If suitable vegetation cannot reasonably be expected to become established, non-erodible material will be used for such stabilization. The SWPPP shall also include dust control practices to prevent wind erosion, sediment tracking, and dust generation by construction equipment.

The SWPPP or SWMP shall also include a spill prevention, control, and countermeasure plan, and applicable hazardous materials handling plans, and shall identify the types of materials used for equipment operation (including fuel and hydraulic fluids), and measures to prevent, and materials available to clean up, hazardous material and waste spills. The SWPPP or SWMP shall also identify emergency procedures for responding to spills.

The BMPs presented in either document shall be clearly identified and maintained in good working condition throughout the construction process. The construction contractor shall retain a copy of the approved SWPPP or SWMP on the construction site and modify it as necessary to suit specific site conditions through amendments approved by the SWRCB and/or Central Valley RWQCB, if necessary.

Timing:	Before and during construction activities
Responsibility:	Lehigh and Construction Contractor(s)

Implementing Mitigation Measure GEO-1 would reduce the potentially significant impact from construction-related erosion to a less-than-significant level because a SWPPP or SWMP would be implemented consistent with permit requirements that would prevent and control pollution and minimize and control runoff and erosion. Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated**.

- c) **Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?**

See response to Question “a)” above. Therefore, this impact would be **less than significant**.

- d) **Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?**

The project site contains waste rock and CKD deposits and is not located on expansive soils (NRCS 2019). There would be **no impact**.

- e) **Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?**

There are no septic tanks planned for the proposed project. Connection to a sewage system is not available at the project site and site workers would be served by regularly serviced portable toilets during construction. Potential impacts resulting from collection and disposal of wastewater from the LCRS is discussed in Section 3.9, “Hazards and Hazardous Materials,” and Section 3.10, “Hydrology and Water Quality.” There would be **no impact**.

- f) **Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

The project site is underlain by pre-Cenozoic metavolcanic rock, including latite, dacite, tuff, and greenstone (CGS 2010b). Because the bedrock underlying the site is volcanic in origin, paleontological resources, which are found almost exclusively in sedimentary rocks, are not likely to be encountered. There would be **no impact**.

3.8 Greenhouse Gas Emissions

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
VIII. GREENHOUSE GAS EMISSIONS – Would the project:					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.8.1 Environmental Setting

Calaveras County has not adopted a local plan for reducing greenhouse gas (GHG) emissions.

3.8.2 Discussion

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The CCAPCD has not established CEQA thresholds of significance for GHG emissions. However, the Sacramento Metropolitan Air Quality Management District (SMAQMD) has adopted a CEQA threshold of 1,100 metric tons (MT) of carbon dioxide equivalents (CO₂e) per year for construction GHG emissions (SMAQMD 2015). In the absence of a local threshold, the SMAQMD threshold was used to evaluate the significance of GHG emissions.

Project construction would temporarily generate GHG emissions from exhaust associated with equipment operation, hauling truck trips, and worker vehicle trips. GHG emissions from project construction were modeled using CalEEMod. Modeling results are presented in Appendix A, “Air Quality Modeling Results.” The project is estimated to generate 590.82 MT of CO₂e per year during construction, an amount below the SMAQMD significance threshold.

As discussed in Section 3.3, “Air Quality,” Impact a), it is estimated up to five truck trips per month would be made to the CKD-3 site for operations and maintenance activities and a net increase in operational truck trips would result from the project compared to existing maintenance activities. Emissions of GHGs from operational truck trips would be intermittent when maintenance activities occur and substantially less than daily trips generated during construction. Accordingly, emissions would be substantially less than the 590.82 MT of CO₂e estimated for construction activities and below the SMAQMD significance threshold. The project also would not result in increased population or employment growth. Therefore, the project would not generate GHG emissions, either directly or indirectly, that would have a significant impact on the physical environment. Therefore, this impact would be **less than significant**.

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The proposed project would not conflict with plans, policies, or regulations prepared or established to reduce GHG emissions. The proposed project’s incremental contribution to the cumulative impact of increasing atmospheric levels of GHGs would be less than cumulatively considerable. The impact would be **less than significant**.

3.9 Hazards and Hazardous Materials

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
IX. HAZARDS AND HAZARDOUS MATERIALS – Would the project:					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Issue	Less-than-Significant				
	Potentially Significant Impact	Mitigation Incorporated	Impact with Less-than-Significant Impact	No Impact	Beneficial Impact
been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?					
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.9.1 Environmental Setting

A database search included all data sources included in the Cortese List (enumerated in PRC Section 65962.5). These sources include the GeoTracker database, a groundwater information management system that is maintained by the State Water Resources Control Board; the Hazardous Waste and Substances Site List (i.e., the EnviroStor database) maintained by the California Department of Toxic Substances Control; and EPA’s Superfund Site database (DTSC 2019, SWRCB 2019a and 2019b, CalEPA 2018, EPA 2019). There were no hazardous materials sites identified from these databases within 0.25 mile of the project site. There are also no known naturally occurring asbestos hazards in the vicinity of the project site (DOC 2000). However, the project site currently exceeds water quality protection standards (WQPS) under WDR No. R5-2017-0077 for the following constituents of concern: total dissolved solids (TDS), pH, electrical conductivity, chemical oxygen demand, aluminum, total chromium, hexavalent chromium, and molybdenum concentrations in groundwater in compliance well MW-8. Historical surface water monitoring data indicated periodic WQPS exceedances at SW-6 for electrical conductivity (EC), TDS, molybdenum, and manganese (Central Valley RWQCB 2017).

EPA classifies CKD as non-hazardous industrial waste. In 1995, EPA determined that some additional CKD research was needed, but that regulating CKD as a hazardous waste was not

appropriate. CKD becomes a regulated hazardous waste only if significant violations of the management standards occur (EPA 2016).

There are no schools within 0.25 mile of the project site. The nearest schools to the project site are the Calaveras River Academy and Mountain Oaks School, located approximately 1.75 miles to the northwest of the project site (Calaveras County 2019). The nearest park, Alex Quinones Community Park, is approximately 1 mile from the project site.

Title 27, CCR, Division 2: Consolidated Regulations for Treatment, Storage, Processing or Disposal of Solid Waste

Title 27 specifications detail requirements for disposal sites, like the CKD-3, including: ensuring the stability of constructed facilities to the maximum extent practicable, including incorporating: design features to withstand strong seismic ground shaking, liquefaction, subsidence, shrink-swell, and other soils and geologic hazards; water quality monitoring, response programs, and the development of WDRs and solid waste facility permits; and special considerations for mining waste units. As stated in Chapter 2, "Project Description," the design of CKD-3 design would conform to CCR Title 27 requirements for design and construction.

3.9.2 Discussion

a), b) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

The project site contains CKD disposed of from historic mining activities at the Plant. The project would not generate new CKD or transport CKD offsite and involves re-grading and consolidating CKD material onsite under a low-permeability cover. Project-related construction activities would entail the use and storage of small amounts of hazardous substances necessary for the operation of construction equipment, such as fuels, lubricants, and oils. In addition, a small amount of leachate would be periodically pumped from the CKD-3 riser pipes and transported by truck to CKD-1 for treatment at an existing facility, per the specification detailed in WDR No. R5-2017-0077-01. None of the proposed project activities would involve the use of acutely hazardous materials and the leachate constituents of concern are not acutely toxic. However, long-term uncontrolled leachate migration from the existing site has contributed to WQPS exceedances at downgradient surface and groundwater monitoring locations. Thus, any uncontrolled release or spillage during leachate pumping and/or transport activities could further contribute to WQPS exceedances at the project site. Therefore, this impact would be **potentially significant**.

Mitigation Measure GEO-1: Continue to Implement a SWPPP and Associated BMPs as Required Under Existing General Permit for Stormwater Discharges Associated with Industrial Activities Industrial Activities (NPDES No. CAS000001) and Obtain Coverage and Comply with Requirements of the General Construction Stormwater Permit 2009-0009-DWQ .

Please *refer to* Mitigation Measure GEO-1 in Section 3.7 “Geology and Soils,” for the full text of this mitigation measure.

Implementing Mitigation Measure GEO-1 would reduce the potentially significant impact from accidental spill of or exposure to hazardous materials during routine use, transport, or disposal to a less-than-significant level because a SWPPP would be implemented. The SWPPP would include a spill prevention, control, and countermeasure plan, and would identify the types of materials used for equipment operation (including fuel and hydraulic fluids), along with measures to prevent and materials available to clean up hazardous material and waste spills. The SWPPP would also identify emergency procedures for responding to spills. Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated**.

- c) **Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

There are no schools within 0.25 mile of the project site. There would be **no impact**.

- d) **Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

The project site is not identified on lists compiled pursuant to Government Code Section 65962.5. There would be **no impact**.

- e) **For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?**

The nearest active airport to the project site is Calaveras County Airport, also known as Maury Rasmussen Field, located approximately 1.75 miles southeast. The Calaveras County Airport Land Use Compatibility Plan (ALUCP) was updated and adopted in June 2010 (Calaveras County 2010). The project site is within Airport Influence Area and Compatibility Zone D. Since the project site has acted as a disposal site for mineral resource extraction, it is compatible with the allowed Zone D land uses in the ALUCP. The project site is not located within the Approach Surface for the airport runway (Calaveras County 2010). In addition, construction and operation of the proposed project would not expose site workers to excessive airport noise. Therefore, this impact would be **less than significant**.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The project would include excavating clean waste rock stockpiles; consolidating, re-grading, and covering CKD piles; constructing the LCRS and new drainage facilities; and revegetating portions of the project site. Since project construction would facilitate final closure of CKD piles disposed of at the project site, there would be no permanent increase in the number of employees at the project site or future use of the project site that would impair emergency response or evacuation. The project would not require road closures or other changes which could result in inadequate emergency access. The temporary increase in construction-related trucks transporting materials to and from the project site during construction activities would be small, intermittent, and limited at any time, and would not affect emergency access. Therefore, this impact would be **less than significant**.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

A small amount of vegetation is present in areas where construction activities would occur (as is evident on the photograph in Figure 2-3). This vegetation may be removed during clearing and grubbing activities or protected in place. No structures would be built as part of the proposed project. Earthmoving activities on the project site would be short-term and temporary, and construction equipment is equipped with standard spark-arresting devices. Therefore, the potential for increased exposure of people or structures to wildfire risk due to the proposed project would not substantially increase beyond existing conditions at the project site. Therefore, this impact would be **less than significant**. Wildland fire risk associated with the project site is discussed in depth in Section 3.20, "Wildfire."

3.10 Hydrology and Water Quality

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
X. HYDROLOGY AND WATER QUALITY – Would the project:					
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) result in substantial erosion or siltation on- or offsite;	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Issue	Less-than-Significant				
	Potentially Significant Impact	Mitigation Incorporated	Impact with Less-than-Significant Impact	No Impact	Beneficial Impact
drainage systems or provide substantial additional sources of polluted runoff; or					
iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.10.1 Environmental Setting

Surface Water

The project site drains to Calaveritas Creek and the South Fork of the Calaveras River, which flows to the Calaveras River, through New Hogan Reservoir. Below New Hogan Dam, the Calaveras River joins the San Joaquin River to the west. The project site is not located within a 100-year flood zone. The project site is mapped as Zone X (areas of minimal flood hazard) (FEMA 2010). The project site is not currently mapped in a dam inundation zone (DWR 2019d, Calaveras County 2015). The project site is not in a coastal area and is outside of a tsunami hazard zone and there are no water bodies on or near the project site large enough to be subjected to a seiche, as a result of an earthquake.

The project site is in the San Joaquin Hydrologic Basin Planning Area, the Upper Calaveras Hydrologic Unit, and the South Fork Calaveras Hydrologic Unit Subarea, as designated by the Central Valley RWQCB (Central Valley RWQCB 2018). In accordance with CWA Section 303, water quality standards for this basin are contained in the Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin. There are no water bodies on or near the project site that appear on the 303(d) list as an impaired water (SWRCB 2016).

As discussed in Section 3.9, “Hazards and Hazardous Materials,” the project site currently exceeds WQPS under WDR No. R5-2017-0077 for the following constituents of concern: TDS, pH, electrical conductivity, chemical oxygen demand, aluminum, total chromium, hexavalent chromium, and molybdenum concentrations in groundwater in compliance well MW-8. Historical surface water monitoring data indicated periodic WQPS exceedances at SW-6 for EC, TDS, molybdenum, and manganese (Central Valley RWQCB 2017).

Groundwater

The project site is not within a Bulletin 118 designated groundwater basin or within a groundwater basin designated as “High Priority” or “Critically Overdrafted” (DWR 2003, 2019). The project site is within the boundaries of the Calaveras County Local Agency Groundwater Protection Program, and the Mokelumne/Amador/Calaveras Integrated Regional Water Management Plan Update (Calaveras County 2014, MAC 2018).

As detailed in the WDRs, the canyon where CKD-3 is located forms a small groundwater sub-basin with a drainage area of approximately 130 acres. The valley does not appear to be hydraulically connected to areas east, west, and north of CKD-3. Depths to groundwater range between 4.4 feet below ground surface along the southern toe of CKD-3 to 91.6 feet below ground surface on top of CKD-3.

No known municipal, domestic, industrial, or agricultural groundwater supply wells are near the project site (DWR 2019a, 2019b, Central Valley RWQCB 2017). The existing groundwater monitoring network for CKD-3 consists of upgradient background monitoring well MW-7, a downgradient detection/corrective action monitoring well MW-8, and seven piezometers to monitor groundwater elevations (PZ-1 to PZ-7), which are screened in alluvium, CKD, or underlying bedrock, depending on their location in relation to the unit. Groundwater elevation measurements from the piezometers and wells in the vicinity of CKD-3 indicate the groundwater gradient in the vicinity is generally to the south (Central Valley RWQCB 2017).

Groundwater downgradient of CKD-3 exists in two chemically different aquifers. A shallow aquifer, approximately 20 feet deep and apparently ending just downgradient from MW-8, shows influence from CKD-3. Sample results from a discrete hydro-punch sample identified a deeper water bearing zone below 20 feet, which apparently extends down the CKD-3 valley shows no sign of impact from CKD-3. Groundwater is present on the project site with evidence of a seepage area at the southern toe of CKD-3. The small amount of seepage flows into the unnamed drainage channel in the canyon in which CKD-3 is situated (Central Valley RWQCB 2017).

3.10.2 Discussion

- a) **Violate any water quality standards or waste discharge requirements? Otherwise substantially degrade surface or ground water quality?**

The project is required to be implemented in compliance with the provisions of WDR No. R5-2017-0077-01 under the regulatory authority of the Central Valley RWQCB. After project construction, surface water and groundwater would continue to be monitored for 30 years or until the site is no longer a threat to water quality at existing groundwater wells and piezometers, per the specifications of WDR No. R5-2017-0077-01.

Construction Impacts

During construction, both direct and indirect discharges associated with ground-disturbing activities for the proposed project could cause surface water to become contaminated by soil or construction-related substances. Project activities could temporarily impair water quality should disturbed material, petroleum products, or construction-related wastes be discharged into surface drainages or onto the ground where they could be carried into receiving waters. Accidental spills of construction-related substances such as oils and fuels could also contaminate both surface water and groundwater. The extent of potential impacts on water quality would depend on several factors: the tendency toward erosion of soil types encountered, soil chemistry, construction practices, extent of disturbed area, duration of construction activities, proximity to receiving water bodies, and sensitivity of those water bodies to construction-related contaminants.

During project implementation, bare soil, rock, and CKD could be exposed to wind and water erosion during excavation and grading activities. If precautions are not taken to contain these materials, construction activities could produce sediment-laden storm runoff that would degrade water quality. Exposure of construction materials to rain or wind could also result in adverse water quality impacts. Construction activities would generally take place during the dry season. Regardless of construction timing, direct and indirect impacts to water quality from erosion and stormwater runoff, and ponding during storm events, have the possibility to occur and result in a **potentially significant** impact. The following mitigation measure has been identified to address this impact:

Mitigation Measure GEO-1: Continue to Implement a SWPPP and Associated BMPs as Required Under Existing General Permit for Stormwater Discharges Associated with Industrial Activities Industrial Activities (NPDES No. CAS000001) and Obtain Coverage and Comply with Requirements of the General Construction Stormwater Permit 2009-0009-DWQ .

Please *refer to* Mitigation Measure GEO-1 in Section 3.7, "Geology and Soils," for the full text of this mitigation measure.

Implementation of Mitigation Measure GEO-1 would include measures to prevent, manage, and respond to accidental spills or exposure to hazardous materials, if they occur. Therefore,

potential impacts to surface water quality from the proposed project would be a **less-than-significant impact with mitigation incorporated**.

As described in Section 2, "Project Description," dewatering of excavations may be required during construction activities. Since shallow groundwater is currently present at CKD-3, construction activities could accidentally bring construction-related contaminants such as oil and grease in contact with the water table. Trenching and excavation associated with installation of LCRS components could extend to a depth that would contact onsite groundwater, creating an immediate and direct path to groundwater that could allow construction-related contaminants (i.e. sediment, oils, grease, etc.) to enter the groundwater system and indirectly affect water quality in the basin. This would be a **potentially significant** impact. If onsite testing of dewatering effluent shows that only construction-related substances are contained in the dewatering water, then the following mitigation measure has been identified to address this impact:

Mitigation Measure GEO-1: Continue to Implement a SWPPP and Associated BMPs as Required Under Existing General Permit for Stormwater Discharges Associated with Industrial Activities Industrial Activities (NPDES No. CAS000001) and Obtain Coverage and Comply with Requirements of the General Construction Stormwater Permit 2009-0009-DWQ.

Please *refer to* Mitigation Measure GEO-1 in Section 3.7, "Geology and Soils," for the full text of this mitigation measure.

Implementation of Mitigation Measure GEO-1 would include BMPs to manage construction dewatering effluent containing construction-related contaminants. Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated**.

As described previously, shallow groundwater is currently present at CKD-3, and groundwater encountered during dewatering activities could contain any of the contaminants identified in WDR No. R5-2017-0077-01 (i.e. TDS, pH, electrical conductivity, chemical oxygen demand, aluminum, total chromium, hexavalent chromium, and molybdenum). Untreated disposal of this contaminated dewatering effluent could directly or indirectly affect water quality in the basin. Contaminated dewatering effluent would be transported and disposed of at the existing CKD-1 treatment facility. The current treatment system at CKD-1 filters fines, adjusts the pH of leachate collected, and discharges the treated water into Calaveritas Creek under RWQCB Order No. R5-2016-0076-01. Construction dewatering would only occur over a limited timeframe during short-term construction activities. However, the ability of the CKD-1 treatment system to accommodate additional effluent from construction activities at CKD-3, in full compliance with Order No. R5-2016-0076-01, is unknown. This would be a **potentially significant** impact. If onsite testing of dewatering effluent shows that contaminants identified in WDR No. R5-2017-0077-01 are present, then the following mitigation measure has been identified to address this impact:

Mitigation Measure HYD-1: Evaluate CKD-1 Treatment System Adequacy and Apply for Revision of Notice of Applicability (NOA) Under RWQCB Order No. R5-2016-0076-01, if needed.

Before discharging effluent from CKD-3 into Calaveritas Creek under RWQCB Order No. R5-2016-0076-01, Lehigh shall evaluate the adequacy of the CKD-1 treatment system to accommodate construction effluent and/or leachate collected from CKD-3, as necessary. Per the provisions of RWQCB Order No. R5-2016-0076-01, II.C.3, Lehigh shall demonstrate that that the proposed discharge meets the criteria in section II.C.1 of the General Order and the following criteria:

- 1) A representative sample of the discharge has been analyzed for the constituents with effluent limitations specified in the NOA; and
- 2) The concentrations of constituents in the discharge do not exceed the Effluent Limitations listed in section V of the Order, as specified in the NOA.

If the existing system cannot accommodate the CKD-3 leachate, then Lehigh shall:

- 1) dispose CKD-3 leachate at an approved, offsite facility; or
- 2) Modify the CKD-1 treatment facility to accommodate the additional leachate to ensure discharge remains in compliance with RWQCB Order No. R5-2016-0076-01; and/or
- 3) Revise the NOA under RWQCB Order No. R5-2016-0076-01, as needed:
 - a. Under the existing Order (R5-2016-0076-01), Lehigh must ensure that the discharge shall not exceed the final effluent limitations for the constituents and parameters identified in the Discharger's (Lehigh) NOA from the SWRCB Executive Officer. The Executive Officer indicates the applicable Effluent Limitations in the NOA when a Discharger is enrolled under this General Order. The NOA will contain applicable final effluent limitations for each specific Discharger and shall be based on the effluent limitations shown in the General Order. Note: The CKD-1 site is classified as a Tier 2 discharge site under the General Order (due to the need for effluent treatment, prior to discharge to Calaveritas Creek).
 - b. Lehigh shall abide by the provisions of Section II.B.3 of the Order.

Timing: After project construction activities and before discharge into Calaveritas Creek

Responsibility: Lehigh

Implementation of Mitigation Measure HYD-1 would reduce potential water quality impacts associated with non-compliance with SWRCB Order No. R5-2016-0076-01 from discharges of construction dewatering water because implementation of the provisions would decrease the potential for release of contaminants into Calaveritas Creek. Therefore, potential impacts to

surface water quality from construction of the project would be a **less-than-significant impact with mitigation incorporated.**

Operational Impacts

As described in Chapter 2, "Project Description," leachate would periodically be pumped from the riser pipes at CKD-3 and treated at an existing treatment facility at CKD-1. The current treatment system at CKD-1 filters fines, adjusts the pH of leachate collected, and discharges the treated water into Calaveritas Creek under RWQCB Order No. R5-2016-0076-01. Leachate from CKD-3 would be treated in combination with existing leachate generated from CKD-1. No improvements to the treatment system at CKD-1 are needed to treat additional leachate from CKD-3 or to ensure continued compliance with RWQCB Order No. R5-2016-0076-01. However, until the LCRS and cover system has been installed and becomes fully operational, the volume of expected leachate originating from CKD-3 is unknown. Additionally, the ability of the CKD-1 treatment system to accommodate the CKD-3 leachate, in full compliance with Order No. R5-2016-0076-01, is unknown. Therefore, there is the possibility of non-compliance with Order No. R5-2016-0076-01 which would be a **potentially significant** impact. The following mitigation measure has been identified to address this impact:

Mitigation Measure HYD-1: Evaluate CKD-1 Treatment System Adequacy and Apply for Revision of the Notice of Applicability (NOA) Under RWQCB Order No. R5-2016-0076-01, if needed.

Please *refer to* Mitigation Measure HYD-1 above in this section for the full text of this mitigation measure.

Implementation of Mitigation Measure HYD-1 would reduce potential water quality impacts associated with non-compliance with SWRCB Order No. R5-2016-0076-01 from discharge of leachate from operation of the project because implementation of the provisions would decrease the potential for release of contaminants into Calaveritas Creek. Therefore, potential impacts to surface water quality from operation of the project would be a **less-than-significant impact with mitigation incorporated.**

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

The project would not rely on consumptive groundwater use for construction, operation, or maintenance activities. The low-permeability cover would minimize percolation of runoff water from rainfall events over the approximately 8-acre cover area. This majority of water would instead be captured by the new drainage facilities and conveyed downslope south of the cover for discharge and the rip-rap outfall pads, where water could then percolate to groundwater. A small amount of runoff water could collect in the LCRS and would be periodically pumped from the riser pipes and transported offsite for treatment. Therefore, the project would potentially result in only minor alterations to existing recharge and potentially loss of a small amount of

recharge in the LCRS. The project not would impede sustainable management of the groundwater basin in the region. Therefore, this impact would be **less than significant**.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) Result in substantial erosion or siltation on- or offsite?

Existing CKD disposal piles at the project site may experience erosion during rainfall events. The project would alter the drainage pattern of the site through the addition of less pervious surfaces from the low-permeability cover, installation of new drainage channels (including concrete-lined, grouted rip-rap, and rip-rap channels), and rip-rap outfall pads. Surface runoff would be collected in the new drainage channels and discharged at the rip-rap outfall pads at the south end of the project site. Erosion from the approximately 8-acre cover area is not anticipated because of the drainage features installed above the cover membrane and below the cover soil layer. Use of rip-rap in the channels and outfall is intended to reduce erosion.

As discussed previously in Section 3.7, "Geology and Soils," grading and other construction activities could result in the temporary and short-term disturbance of soil and could expose disturbed areas if a storm event were to occur during construction activities, resulting in on or offsite erosion or siltation. This impact would be **potentially significant**. The following mitigation measure has been identified to address this impact:

Mitigation Measure GEO-1: Continue to Implement a SWPPP and Associated BMPs as Required Under Existing General Permit for Stormwater Discharges Associated with Industrial Activities Industrial Activities (NPDES No. CAS000001) and Obtain Coverage and Comply with Requirements of the General Construction Stormwater Permit 2009-0009-DWQ.

Please *refer to* Mitigation Measure GEO-1 in Section 3.7, "Geology and Soils," for the full text of this mitigation measure.

Implementation of Mitigation Measure GEO-1 would include BMPs to manage erosion and siltation during construction. Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated**.

ii, iii, iv) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite? Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? Impede or redirect flood flows?

Drainage at the project site currently allows infiltration of runoff into the CKD pile and transport of contaminants offsite and into groundwater, potentially effecting surface water quality downstream and groundwater quality downgradient of the project site. As discussed in above in

Impact c), the project would alter the drainage pattern of the site. Collection of surface water runoff in the new drainage channels before contact with CKD (under the new cover) would improve the quality of water transported downslope and south of the project site. Subsurface drainage, and potentially runoff water, encountering CKD material would collect in the LCRS and would be periodically pumped from the riser pipes and transported offsite for treatment. The reduction of pollutants in runoff is a **beneficial impact**.

The project would not impede or redirect floodflows in a manner which would affect flood risk at the project site or offsite or that would exceed the capacity of existing or planned stormwater drainage systems. The project components including new drainage facilities and LCRS would be designed to meet the provisions of the WDR and would be sized to accommodate expected surface runoff from storm events at the project site and direct runoff into the LCRS, as needed. As detailed in "Section D. Design and Construction Specification" of WDR No. R5-2017-0077-01, containment structures and precipitation and drainage control systems would be constructed and maintained to prevent, to the greatest extent possible, inundation, erosion, slope failure, and washout under 100-year, 24-hour precipitation conditions. Additionally, mining units would be designed, constructed, and operated to prevent inundation or washout due to flooding events with a 100-year return period. Also, the LCRS would be designed, constructed, and maintained to collect twice the anticipated daily volume of leachate generated by CKD-3, and the LCRS extraction system would be capable of removing this volume of leachate. Therefore, this impact would be **less than significant**.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

The project site is not within a mapped 100-year flood hazard area, tsunami, or seiche hazard area and the proposed project would not expose people or structures to additional danger from such an event. There would be **no impact**.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Refer to the discussion above under Impacts a), b), and c). The project would not result in other effects that would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Therefore, this impact would be **less than significant**.

3.11 Land Use and Planning

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XI. LAND USE AND PLANNING					
– Would the project:					
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.11.1 Environmental Setting

The project site is located on private lands designated as Natural Resources Lands: Timber/MRA-2a/Dam Inundation Area and is outside of any County-designated proposed Community Areas (Calaveras County 1996a, 1996b).

3.11.2 Discussion

a) Physically divide an established community?

The project site is located several miles from the town of San Andreas and although there are scattered rural residences nearby, the project consists of closing an existing mining/CKD disposal site and monitoring activities and would not physically divide an established community. Therefore, there would be **no impact**.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The project consists of closing an existing mining/CKD disposal site and monitoring activities. This land use is consistent with the zoning designation set forth by Calaveras County for this area (MR2-a) since this designation includes lands that are being or have been intensely mined. The eventual closure of a mine or mine-related site and ongoing maintenance and monitoring are consistent with the type of activities that would be expected to occur at a formerly mined site.

There would be no change in land use at the project site that would conflict with an adopted land use plan, policy, or regulation. Therefore, there would be **no impact**.

3.12 Mineral Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XII. MINERAL RESOURCES –					
Would the project:					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.12.1 Environmental Setting

In compliance with the Surface and Mining Reclamation Act, CGS has established a classification system for Mineral Resource Zones (MRZ) to denote both the location and significance of key extractive resources. The project site is classified in multiple ways, depending on mineral origin or formation processes (CGS 1993: Plates 2-6):

- Hydrothermal Processes: MRZ-2b(h-1), within the larger, regional Mother Lode Gold Belt, an area where geologic information indicates that significant inferred resources or demonstrated sub-economic resources are present. In these areas, the gold, along with associated silver, copper, lead, and zinc, typically is present in small, but rich, pockets in hydrothermally formed quartz veins that occupy faults, fissures, and joints which cut metamorphic and igneous rock of the region.
- Volcanogenic Processes: MRZ-4(v), areas where geologic information does not rule out the presence/absence of precious metal deposits, and unmapped or concealed marine rocks may occur.
- Industrial Mineral Deposits: MRZ-4(i), areas where geologic information does not rule out the presence or absence of industrial mineral resources.

- Magmatic Segregation: MRZ-1(m), areas where geologic information indicates there is a low likelihood of significant deposits formed by magmatic concentration – chromite-bearing ultramafic rocks are not present at the surface or reasonable depths.
- Placer Deposits: MRZ-4(p), areas where geologic information does not rule out the presence or absence of placer deposits.

The Calaveras County General Plan Conservation Element also designates the project site as Mineral Resources Area (MRA) 2a, which includes lands that are being, or have been intensely mined, and/or have the promise of further mineral production (Calaveras County 1996).

3.12.2 Discussion

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

As discussed in Section ,2 “Project Description,” the area immediately west of CKD-3 was used as a limestone quarry for several decades. Mining and processing activities ceased in 1982 and facilities have been decommissioned. CGS mineral classifications for the area, described above, indicate a low likelihood of mineral resources or are inconclusive. Although limestone was quarried from areas nearby the project site, it can be assumed that the project site was deemed unsuitable for quarrying or other mineral extraction during past mining operations, since this area was instead chosen for disposal of CKD and waste rock, rather than for quarrying or other mineral extraction. Additionally, the project site occupies only a very small portion of the overall County and associated mineral subregions (such as the Mother Lode Gold Belt). Therefore, implementation of the proposed project would not prohibit exploration and/or mining in nearby areas, including possible use of the adjacent East Rock Storage Area for future aggregate mining. Based on available information, there are no known mineral resources underlying the project site. Therefore, this impact would be **less than significant**.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

The current Calaveras County General Plan identifies the project area generally as an area that is currently mined, has been mined, and/or has the potential for mineral production. However, the project site has been a disposal site for CKD for many decades, and future mineral exploration or mining at the site is highly unlikely and would likely be environmentally prohibitive, due to the complexity that would be involved in attempting to conduct mining while ensuring compliance with WDR Order No. R5-2017-0077-01 for closure of the CKD disposal pile and long-term water quality monitoring. In addition, the project site has been recommended for industrial uses in the upcoming Calaveras County General Plan Update and is unlikely to be explored or be a viable source for mineral resources in the future (Calaveras County 2019). Therefore, this impact would be **less than significant**.

3.13 Noise

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XIII. NOISE – Would the project:					
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or Federal standards?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.13.1 Environmental Setting

The project site is in a rural area adjacent to open spaces, the decommissioned Plant to the northwest, and scattered rural residences over 600 ft east of the project site—the closest sensitive receptors. As discussed previously in Section 3.9, “Hazards and Hazardous Materials,” the project site is within the Calaveras County Airport ALUCP area.

The Calaveras County General Plan establishes a noise protection standard for residential receptors of 60 decibels (dB) between 7 a.m. and 10 p.m. and 50 dB between 10 p.m. and 7 a.m.

(Calaveras County 1996). However, sound from construction activity, is exempt from County noise standards, provided that all construction in or adjacent to residential areas shall be limited to the daytime hours between 7 a.m. and 6 p.m., unless otherwise subject to conditions in a valid discretionary land use permit that addresses construction noise associated with the project (Calaveras County 2012).

3.13.2 Discussion

- a) **Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable standards of other agencies?**

Following construction activities, operations and maintenance activities at CKD-3 would be similar to activities that occur now without the proposed project, except for periodic operation of a pump to extract leachate from the riser pipes. Operation of the pump would be short in duration for each use and would emit a very low-level of noise at a level well below County noise standards.

Construction noise impacts typically occur when construction activities take place during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), when construction activities occur immediately adjacent to noise sensitive land uses, or when construction durations last over extended periods of time. The project would generate construction noise from operation of construction equipment at the project site, and from the transport of construction workers, construction materials, and equipment to and from the project site. The list of construction equipment that may be used for project construction activities is shown in **Table 3-2** with typical noise levels generated at 50 feet from the equipment (reference levels). Since the closest sensitive noise receptors over 600 feet from the project site, construction noise levels at the sensitive noise receptors would be considerably lower and may not be perceptible.

Table 3-2. Construction Equipment and Typical Equipment Noise Levels

Type of Equipment	Typical Noise Levels (dB) L _{max} at 50 Feet
Backhoe	80
Dump Truck	76
Excavator with Hammer	81
Grader	85
Pick-up Truck	75

Notes: dB = decibels; L_{max} = maximum instantaneous sound level;

Source: Construction equipment list based on Federal Highway Administration 2006, adapted by GEI in 2019

Since all project-related construction activities would only occur within the hours specified in the Calaveras County code and General Plan, the proposed project would not violate County construction noise standards, and this impact would be **less than significant**.

b) Generation of excessive groundborne vibration or groundborne noise levels?

The project would generate temporary groundborne vibrations from construction activities and transient groundborne vibration from construction equipment use. **Table 3-3** presents groundborne vibration levels associated with various construction equipment and activities used during project construction. The Calaveras County General Plan (1996) limits the use of heavy-duty vibration-generating construction equipment, such as vibratory rollers, within close proximity of existing buildings, particularly buildings of weak structural integrity and/or historical significance to ensure that groundborne vibration shall not exceed 0.2 in/sec peak particle velocity (PPV) at the nearest sensitive receptor.

Table 3-3. Representative Vibration Source Levels for Construction Equipment

Type of Equipment	Peak Particle Velocity at 25 feet (inches per second)	Estimated PPV at Nearest Residential Structure
Large Bulldozer	0.089	0.003
Loaded Trucks	0.076	0.002
Small Bulldozer	0.003	0.000

Notes: Estimated peak particle velocity (ppv) at the nearest structure calculated using $PPV_{Equipment} = PPV_{Ref} (25/D)^n$ (inches/second), where D is the distance from the equipment to the receiver (in this case, 600 feet), and n is 1.1, a value related to the attenuation rate through ground. (Caltrans 2013 Equation 12).

Source: Federal Transit Administration 1995

Vibrations may be detectable at nearby sensitive receptors to noise for brief periods. Based on the vibration levels discussed above and presented in **Table 3-5**, and the project site being over 600 feet to the nearest sensitive noise receptors, predicted vibration levels are not anticipated to exceed the threshold of 0.2 inch per second PPV for continuous vibration sources at the nearest receptor structure. Therefore, this impact would be **less than significant**.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The project site is within 2 miles of a public airport or private airstrip. However, the proposed project would not expose construction workers to noise levels beyond what is experienced by personnel at the project site and surrounding areas under existing conditions. The project would not expose construction workers to excessive noise associated with nearby airports or airstrips. Therefore, this impact would be **less than significant**.

3.14 Population and Housing

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XIV. POPULATION AND HOUSING – Would the project:					
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.14.1 Environmental Setting

The project site is in unincorporated areas of Calaveras County. The population was estimated in 2018 to be 45,147 (DOF 2019).

3.14.2 Discussion

- a) **Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

The project would not develop any new roads or other infrastructure that would support or facilitate construction of new homes or businesses or extend roadways or other infrastructure that could increase population near the project site. The project also does not involve construction of temporary or permanent housing. Therefore, the project would have no potential to directly or indirectly induce population growth. There would be **no impact**.

- b) **Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?**

The project would not displace any houses or people. There would be **no impact**.

3.15 Public Services

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XV. PUBLIC SERVICES – Would the project:					
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:					
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.15.1 Environmental Setting

The project site is in a rural area of Calaveras County. The Calaveras County Sherriff's Department provides law enforcement and emergency response services through the Office of Emergency Services, the Marine Safety, Hazardous Materials Team, and the Explosives Ordnance Disposal Unit. These services are based out of the Calaveras County Airport.

In the event of a fire at the project site, the San Andreas Fire Protection District, which is responsible for Local Responsibility Areas in this part of the county and/or CalFire may respond due to an existing mutual aid agreement. CalFire provides protection against wildland fires, such

as forest and grassland fires on areas within the county designated as a State Responsibility Areas.

The nearest schools to the project site are the Calaveras River Academy and Mountain Oaks School, located approximately 1.75 miles northwest of the project site (Calaveras County 2019). The nearest park, Alex Quinones Community Park, is approximately 1 mile from the project site.

3.15.2 Discussion

- a) **Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for public services, including fire protection, police protection, schools, or other public facilities.**

The project involves construction activities for closure of CKD disposal piles and long-term monitoring activities and would not result in new or more intense uses or temporary or permanent population increases at the project site. There would be no increase in the need for public services as compared to existing conditions. Since the project would not develop buildings requiring public services or increase the number of users at the project site, the project would not impede or increase response times for fire protection, police protection, or other public services. Additionally, since the project does not involve new residential construction, no new schools would be needed. Therefore, there would be **no impact**.

3.16 Recreation

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XVI. RECREATION – Would the project:					
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.16.1 Environmental Setting

The project site is located on privately owned land and is a mine waste disposal site and does not support recreation activities. The project site is not designated as a recreation area by County, State, or Federal entities (Calaveras County 1996).

3.16.2 Discussion

a), b) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

The project does not involve the construction of new housing that would generate new residents who would increase the use of existing recreational facilities. The project would not affect existing recreational uses or recreational facilities. The project does not include or require the construction of new recreational facilities. Therefore, there would be **no impact**.

3.17 Transportation

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XVII. TRANSPORTATION – Would the project:					
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.17.1 Environmental Setting

Access to the project site is provided directly by Pool Station Road from SR 49. SR 49 extends through the region from north to south and connects the project site and nearby towns with other Sierra foothill communities. Both SR 49 and Pool Station Road are two-lane roads.

Calaveras County is currently updating the General Plan and vehicle miles travelled (VMT) thresholds of significance have not yet been established for the County. VMT information from existing conditions and the Market-Level Year 2035 and General Plan Buildout are shown in **Table 3-4**.

Table 3-4. Calaveras County Daily VMT Forecast

Scenario	VMT/Day¹	Population²
Existing	1,942,500	45,578
Market-Level Year 2035	2,778,500	60,413
General Plan Buildout (Growth Beyond 2035)	4,027,100	117,045

Notes: ¹ Includes travel from all vehicles. The allocation of vehicle miles travelled (VMT) includes 100 percent responsibility for all trips when both trips end in Calaveras County, and 50 percent responsibility for trips with only one trip in the County.

² Population estimates and forecasts based on Calaveras County travel forecasting model and a persons per household ratio of 2.41.

Source: Fehr and Peers 2017, adapted by GEI Consultants 2019.

3.17.2 Discussion

a), b) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

A small number of daily truck trips would be required for workers to commute to the project site and for transportation of cover material and associated pumps and site drainage equipment. These activities are unlikely to disrupt the existing transportation network in the project area. The project does not involve construction-related road closures, or permanent changes in transportation circulation patterns, and would not disrupt alternative transportation modes.

The project would generate temporary construction trips from commuting site workers, deliveries of LCRS components, geomembrane and other cover and monitoring materials, and off-hauling activities. Due to the site's rural location, this analysis assumes that worker commute trips and hauling materials to or from the site would require an approximately 40-mile round-trip for each offsite trip.

Worker vehicle commutes account for 10 trips per day. During the 135-day construction period, a total of approximately 1,350 worker commute trips would be generated. Since most material used for project construction would be taken from onsite (e.g., clean waste rock) material delivery and off-hauling account for an additional 10 trips over 8 days, at the beginning and end of the construction season (16 days total). Worker commutes and the use of any offsite fill material or off hauling of construction waste would require hauling on SR 49 and Pool Station Road. **Table 3-5** shows anticipated maximum daily and total VMT for construction activities. If the construction period were extended, daily VMT would not change (for worker commute trips) but the total would increase.

Table 3-5. VMT from Project Construction Activities

Construction Activity	VMT Maximum Daily	VMT Total
Worker Commute Trips ¹	400	54,000
Material Delivery and Offhauling ²	100	800
<i>Total Project Construction</i>	<i>500</i>	<i>54,800</i>

Note: ¹Construction duration, and thus expected worker commute days, is 135 days.

²Material delivery and off-hauling would only occur over 16 days of the construction period- 8 days at the beginning and end of construction; VMT = vehicle miles travelled.

VMT from materials deliveries have been minimized with use of clean waste rock stockpiled at the project site (instead of importing this material). No further reduction in construction VMT from the project is possible since trips would be generated for material delivery and off-hauling and worker vehicles. Construction VMT generated from the project would be limited to construction activities and temporary during the construction period. Therefore, this impact is **less than significant**.

Under existing conditions, monitoring of existing piezometers and wells periodically occurs in compliance with WDRs. Therefore, a portion of new monitoring and maintenance VMT includes truck trips for site monitoring that is already occurring. However, for simplicity of analysis, the monitoring VMT discussion includes all future expected monitoring truck trips, regardless of existing monitoring activities.

Per the requirements of WDR Order No. R5-2017-0077-01, monitoring activities would occur onsite for up to 30 years. In addition, the project requires periodic pumping of leachate from riser pipes at CKD-3 and transportation to CKD 1 for treatment. It is anticipated monitoring of the CKD-3 site would require up to five approximately 40-mile round trips per month. It is assumed pumping and transport of leachate during each monitoring site visit and an additional 3-mile round-trip for travel between CKD-3 and CKD-1 each of the five monthly site visits. **Table 3-6** shows estimated average daily, annual, and total VMT over the potential 30-year maintenance and monitoring period of the project.

Table 3-6. VMT from Project Maintenance and Monitoring (30-Year Monitoring Period)

Type of Activity	VMT Average Daily	VMT Annual	VMT Project Total (30 years)
Monitoring and Maintenance	7	2,580	77,400

Notes: VMT = vehicle miles travelled.

Since the provisions of WDR Order No. R5-2017-0077-01 require monitoring of the project site for a minimum of 30 years post-construction, no reduction in monitoring VMT from the proposed project is possible since trips must occur at an appropriate interval to ensure timely pumping of leachate and monitoring of the project site and wells. These activities are necessary to ensure protection of public health and the environment.

Although maintenance and monitoring VMT would occur over the long-term, VMT associated with these activities would involve travel by a single vehicle. Additionally, the average daily VMT associated with monitoring trips are equal to only 0.0002 percent of estimated future (beyond 2035) Calaveras County daily VMT of 4,027,100. Therefore, this impact would be **less than significant**.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The project would not involve construction or modification to any roads on or near the project site. Therefore, there would be **no impact**.

d) Result in inadequate emergency access?

The project would not require road closures or other changes which could result in inadequate emergency access. The increased number of construction-related trucks to and from the project site during construction activities would be small and would not affect emergency access. Therefore, there would be **no impact**.

3.18 Tribal Cultural Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
<p>KVIII. TRIBAL CULTURAL RESOURCES – Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resource Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:</p>					
<p>a) 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), or</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>b) 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. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Issue	Less-than- Significant Potentially Significant Impact	Impact with Mitigation Incorporated	Less-than- Significant Impact	No Impact	Beneficial Impact
agency shall consider the significance of the resource to a California Native American tribe.					

3.18.1 Environmental Setting

Refer to the “Ethnographic Setting” in Section 3.5, “Cultural Resources.”

GEI sent a request to the NAHC on November 19, 2018, asking for a search of their sacred lands file within the Project APE as well as a list of Native American representatives that might have knowledge of cultural resources within the Project APE. The NAHC responded on November 27, 2018 indicating that the search of the sacred lands file failed to indicate the presence of any Native American cultural resources within the APE. The letter received from the NAHC is presented in Appendix C, “Tribal Consultation.”

On September 4, 2019, the Central Valley RWQCB sent letters to 22 tribes in accordance with requirements of Assembly Bill 52 (PRC Section 21080.3.1). A full list of tribes consulted is provided in Appendix C, “Tribal Consultation.”

The Shingle Springs Band of Miwok Indians (SSR) responded in their October 8, 2019 letter that they are not aware of any known cultural resources on this site. However, SSR requested continued consultation through updates, as the project progresses. Central Valley RWQCB staff responded with an e-mail on 30 October 2019 confirming continued consultation through updates and offering in person or telephone meeting. SSR representative did not see the need to meet in 31 October 2019 e-mail.

No Tribal Cultural Resources are known to be present within the project area based on the negative results of the Sacred Lands File database search; the lack of previously identified Tribal Cultural Resources in the project area; and the absence of Native American archaeological sites, human remains, or other Native American cultural resources revealed during the background investigation, pedestrian survey, or by Tribal representatives. However, it is possible that further consultation with culturally affiliated Tribes could identify previously unidentified Tribal Cultural Resources.

Discussion

- a) **Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resource Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is 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)?**

- b) **Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resource Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is 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.**

Tribal Cultural Resources are either (1) sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that is either in or eligible for inclusion in the CRHR or a local historic register; or (2) a resource that the lead agency, at its discretion and supported by substantial evidence, chooses to treat as a Tribal Cultural Resource. In addition, a cultural landscape may also qualify as a Tribal Cultural Resource if it meets the criteria to be eligible for inclusion in the CRHR and is geographically defined in terms of the size and scope of the landscape. Other historical resources (as described in California PRC 21084.1), a unique archaeological resource (as defined in California PRC 21083.2[g]), or non-unique archaeological resources (as described in California PRC 21083.2[h]), may also be a Tribal Cultural Resource if it conforms to the criteria to be eligible for inclusion in the CRHR.

No Tribal Cultural Resources are known to be present within the project area. Though very unlikely, the possibility remains that a Tribal Cultural Resource may be revealed during project-related ground-disturbing activities or through further consultation with culturally affiliated Tribes. If this were to occur, then it would be a **potentially significant impact**. Implementation of Mitigation Measure CR-1 would address this potential impact:

Mitigation Measure CR-1: Address Previously Undiscovered Historic Properties, Archaeological Resources, and Tribal Cultural Resources.

Please *refer to* Mitigation Measure CR-1 in cultural resources impact a) above for the full text of this mitigation measure.

Implementing Mitigation Measure CR-1 would reduce the potential impact related to discovery of unknown Tribal Cultural Resources to a less-than-significant level because the find would be

assessed by Culturally affiliated Tribes and the identification and implementation of avoidance or minimization measures would be conducted in consultation with the Tribes. Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated**.

3.19 Utilities and Service Systems

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XIX. UTILITIES AND SERVICE SYSTEMS – Would the project:					
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Issue	Less-than-Significant				
	Potentially Significant Impact	Mitigation Incorporated	Impact with Less-than-Significant Impact	No Impact	Beneficial Impact
impair the attainment of solid waste reduction goals?					
e) Comply with Federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.19.1 Environmental Setting

The project site and vicinity are served by Pacific Gas & Electric Company for electrical power. Several companies provide telephone and internet service within the County; however, given the rural nature of the County, service and access may be scattered.

3.19.2 Discussion

- a) **Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?**

During operation of the project, leachate collected in the LCRS would be periodically pumped and transported offsite to CKD-1 for treatment in an existing treatment system. The existing treatment system at CKD-1 has sufficient capacity for leachate from CKD-3. Construction of the LCRS is part of the proposed project and potential environmental impacts are evaluated in this IS.

During construction, communication on the project site and with other entities is primarily via radio and cell phone. Implementation of the project would not require relocation or construction of new utilities or service systems that would be connected to the overall public services and utility infrastructure in the region. A Pacific Gas & Electric Company substation is located adjacent to the southeast boundary of the project site, but this facility would not be affected by project construction. Therefore, there would be **no impact**.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

The project would not require development of water supplies. Since no residences or other permanent structures would be constructed, potable water demand would not increase from the project. Therefore, there would be **no impact**.

c) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

The project would not generate new wastewater since it involves closure of CKD disposal piles and no permanent residential or other structures would be constructed. Connection to a sewage system is not available at the project site. Construction workers at the project site would be served by regularly serviced portable toilets during construction. Therefore, there would be **no impact**.

d), e) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? Comply with Federal, state, and local management and reduction statutes and regulations related to solid waste?

The project would generate a small amount of debris during the construction phase, primarily from clearing and grubbing activities, which would be disposed of in compliance with Federal, State, and local regulations related to solid waste. The most likely site for disposal of construction debris is the Calaveras County Rock Creek Landfill, located approximately 25 miles southwest of the project site. The Calaveras County Rock Creek Landfill is currently permitted through 2035, with a maximum capacity of 500 tons per day and has adequate capacity to meet the project's disposal needs (CalRecycle 2019). Therefore, this impact would be **less than significant**.

3.20 Wildfire

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XX. WILDFIRE.					
If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project:					
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.20.1 Environmental Setting

The project site is within a State Responsibility Area (SRA) designated as high hazard (CalFire 2007). CalFire provides wildland fire protection on SRA lands. A large swath of Very High Fire Hazard Severity Zone-designated land is immediately to the west of the project site (CalFire 2009). As of 2015, over 89 percent of the County was classified as being in a high or very high fire risk zone (Calaveras County 2018). The project site is also immediately adjacent to the southern boundary of the San Andreas Wildland Urban Interface area under the Calaveras County Community Wildfire Protection Plan (Calaveras County 2017).

3.20.2 Discussion

- a), c), d) **Substantially impair an adopted emergency response plan or emergency evacuation plan? Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?**

The project would facilitate closure of an existing CKD disposal site and maintenance and monitoring activities would require up to five trips per month after construction of the project. Therefore, there would be no permanent increase in the number of employees at the project site or future uses that could create an ongoing fire risk that may impair emergency response or evacuation. Hauling to and from the project site for materials deliveries and off-hauling would be minimal—a total of 10 trips over 8 days at the beginning and end of construction (16 days total), and worker vehicle commutes would account for 10 trips per day over the construction period. The short-term, temporary nature of construction would not pose a risk to emergency response or evacuation during a wildfire emergency. The project also would not require construction of infrastructure that would exacerbate fire risk or the risk of flooding, slope instability, or drainage changes. Therefore, there would be **no impact**.

- b) **Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?**

The project site is within a high-hazard SRA and immediately adjacent to a Very High Fire Hazard Severity Zone. A small amount of vegetation is present in areas where construction activities would occur (as is evident on the photograph in **Figure 2-3**). This vegetation may be removed during clearing and grubbing activities or protected in place. Earthmoving activities on the project site would be short-term and temporary, and construction equipment is equipped with standard spark-arresting devices. Additionally, completion of the project would not require permanent infrastructure, such as high-voltage powerlines, that would exacerbate fire risk. Therefore, this impact would be **less than significant**.

3.21 Mandatory Findings of Significance

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XXI. MANDATORY FINDINGS OF SIGNIFICANCE – Would the project:					
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Issue	Less-than- Significant Potentially Significant Impact	Impact with Mitigation Incorporated	Less-than- Significant Impact	No Impact	Beneficial Impact
effects on human beings, either directly or indirectly?					

Authority: Public Resources Code Sections 21083, 21083.5.

Reference: Government Code Sections 65088.4.

Public Resources Code Sections 21080, 21083.5, 21095; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

3.21.1 Discussion

- a) **Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?**

The analysis conducted in this IS concludes that implementing the proposed project would not have a significant impact on the environment. As evaluated in Section 3.4, “Biological Resources,” impacts on biological resources would be less than significant or less than-significant with mitigation incorporated. The proposed project would not substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or reduce the number or restrict the range of an endangered, rare, or threatened species. As discussed in Section 3.5, “Cultural Resources,” the proposed project would not eliminate important examples of the major periods of California history or prehistory. This impact would be **less than significant with mitigation incorporated**.

- b) **Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)**

As discussed in this IS, the proposed project would result in less-than-significant impacts with mitigation incorporated, less-than-significant impacts, or no impacts on aesthetics, agriculture and forestry resources, air quality, biological resources, cultural resources, energy, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, tribal cultural resources, utilities and service systems, and wildfire.

The temporary nature of the proposed project’s construction impacts (approximately 135 days), and the improvements to long-term operations and maintenance at the project site would result in no impacts, less-than-significant impacts, less-than-significant impacts with mitigation incorporated, or beneficial impacts on the physical environment. No projects would overlap with the proposed project at the project site. With incorporation of mitigation presented in this IS, none of the proposed project’s impacts make cumulatively considerable, incremental contributions to significant cumulative impacts. This impact would be **less than significant with mitigation incorporated**.

- c) **Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?**

The proposed project would result in less-than-significant impacts and would not cause substantial adverse effects on human beings, either directly or indirectly. The impact would be **less than significant**.

Chapter 4. References Cited

1. Introduction

No references cited.

2. Project Description

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3. Environmental Checklist

3.1 Aesthetics

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3.5 Cultural Resources

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Appendix A. Air Quality Modeling Data

Appendix B. Biological Resources Information

Appendix C. Tribal Consultation
