

Reed Mine and Upper Davis Creek Remediation Project

Draft Mitigation, Monitoring, and Reporting Program

March 4, 2019

Mitigation Measure	Date Due/ Timeframe	Responsibility	Agency with Oversight	Notes	Completion Dates
Air Quality					
<p>Air-1: The following basic control measures shall be implemented during construction:</p> <ul style="list-style-type: none"> ▪ All exposed surfaces (e.g., exposed soil piles and graded areas) shall be watered two times per day, as needed, to prevent windblown dust. ▪ All haul trucks transporting soil, sand, or other loose material to the site shall be covered. ▪ All inactive storage piles shall be covered if necessary to prevent fugitive dust emissions. ▪ All vehicle speeds on unpaved roads shall be limited to 15 miles per hour. Unpaved roads will be watered to prevent fugitive dust emissions as needed. ▪ Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure CCR Title 13, § 2485). Construction workers shall be informed of idling restrictions at the pre-construction kick-off meeting and monitored by the site inspector throughout the project. ▪ All construction equipment shall be properly maintained in accordance with manufacturer's specifications. ▪ Vegetative groundcover shall be planted in disturbed areas as soon as possible. 	Abide by during Construction	Homestake All site visitors and workers	Yolo-Solano Air Quality Management District		

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▪ Pavement adjacent to access points shall be swept of visible soil material, as needed, to prevent transport from the construction site.					
Air-2: Yolo-Solano Air Quality Management District (AQMD) shall be consulted and a permit obtained prior to commencing demolition or renovation work of asbestos-containing material, as required by District Rule 9.9.	Prior to construction	Homestake	Yolo-Solano AQMD		
Biological Resources					
Bio-1: Before construction activities are initiated, all on-site construction personnel shall receive instruction and sensitivity training regarding the presence of special status species and the importance of avoiding impacts to these species and their habitat. Crews shall be informed to stop work if any special-status species are encountered and contact the Project manager.	Prior to construction	Homestake Qualified biologist to perform training All on-site personnel to receive instruction	Homestake		
Bio-2: A work zone shall be identified on construction drawings, and/or shall be demarcated in the field to limit construction equipment and personnel to the minimum area necessary to perform the proposed work.	Set up prior to construction and remaining throughout duration of construction	Homestake and Contractors	Homestake		
Bio-3: Preconstruction wildlife and rare plant surveys shall be conducted by a qualified biologist. It is recommended	April to June bloom period for rare plants	Homestake Qualified biologist shall	California Department of Fish and	See biological resources survey report for details	

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<p>that rare plant surveys be conducted during the bloom season.</p> <p>In the event that a special-status plant is found, construction alignments shall be moved to avoid the special-status plant. The qualified biologist shall have the authority to stop work if there would be impacts to sensitive resources or protected special-status species.</p> <p>The preconstruction surveys for wildlife shall be conducted by a qualified biologist no more than 14 days prior to commencement of vegetation removal and ground disturbing activities are to commence. In the event that nesting birds are found during the preconstruction survey, the biologist shall establish species specific buffers as approved by California Department of Fish and Wildlife (CDFW). A qualified biologist (biological monitor) shall be present onsite as needed to inspect construction-related activities to ensure that neither unnecessary ground disturbance nor any take of special-status species occurs.</p>	<p>14 days prior to vegetation removal</p> <p>Monitor onsite during ground disturbance and for nesting birds</p>	<p>perform surveys and monitoring</p> <p>All work crews are responsible for notifying biologist on work schedules</p>	<p>Wildlife (CDFW)</p> <p>US Fish and Wildlife Service (USFWS)</p>	<p>about species on site, bloom periods for plants, probably locations and habitats</p>	
<p>Bio-4: Bats roosting in the rotary furnace at Remediation Area 6 shall be excluded from the furnace prior to its removal. The bats will be excluded by a qualified bat biologist using one-way gates at each end of the furnace. Once the bats have been excluded, the furnace can be sealed and removed. The exclusion should be conducted between March 31 and April 15 to avoid the breeding and hibernation seasons. No disturbance of the furnace site should occur during the bat breeding season (West 2018).</p>	March 1- April 15	<p>Homestake</p> <p>Qualified biologist to conduct exclusion</p>	CDFW	<p>See biological resources survey report for details about bats</p>	

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Bio-5: In the event any live mature tree must be removed, replacement trees shall be replaced with similar native tree species identified in the revegetation plan prepared for the remediation plan.	Track and keep a log of all trees removed and size. No net loss of trees	Homestake and Contractor	Homestake	See Revegetation Plan	
Bio-6: All trees to be removed shall be inspected by a qualified biologist for bird nests or roosting bats. If construction activities occur during the bird nesting season (estimated to be January through August), pre-construction surveys for the presence of special-status bird species or any nesting bird species within 300 feet of proposed construction areas shall be conducted by a qualified biologist. This survey shall be conducted within 14 days prior to the initiation of construction activities during the breeding season (raptors – February through August). During this survey, the biologist shall inspect all trees and grassland immediately adjacent to the impact area for nests. If active nests are found, a minimum 150 foot no-disturbance buffer shall be created around active nests and a minimum of 300 foot no-disturbance buffer shall be created around active nests of raptors. These buffers shall remain until a qualified biologist has determined that all young have fledged. Buffer zones may be modified in coordination with CDFW based on existing conditions at the Project Site.	14 days prior to the initiation of construction activities during the breeding season (Feb through August) – within 300 feet of construction site	Homestake and Qualified biologist	CDFW USFWS		
Bio-7: If vegetation would be removed by the proposed Project and all necessary approvals have been obtained, substrate (e.g., trees and shrubs) containing nests shall be removed between November 1 and February 28 to ensure that active (containing intact eggs, live chicks, or presence of	November 1 through February 28 for removal of	Homestake and Qualified biologist	USFWS CDFW		

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an adult) nests are not destroyed or disturbed as a result of Project construction activities.	trees with nests	Contractor abide by biologist			
<p>Bio-8: The following measures are recommended for incorporation into a proposed Project to avoid and minimize effects to valley elderberry longhorn beetle (VELB) and/or its habitat. However, agencies/applicants should coordinate with the U.S. Fish and Wildlife Service (USFWS) to determine if additional measures may be needed.</p> <p>Fencing. All areas to be avoided during construction activities shall be fenced and/or flagged as close to construction limits as feasible.</p> <p>Avoidance area. Activities that may damage or kill an elderberry shrub (e.g., trenching, paving, etc.) may need an avoidance area of at least 20 feet from the drip-line, depending on the type of activity.</p> <p>Worker education. A qualified biologist shall provide training for all contractors, work crews, and any onsite personnel on the status of the VELB, its host plant and habitat, the need to avoid damaging the elderberry shrubs, and the possible penalties for noncompliance.</p> <p>Construction monitoring. A qualified biologist shall monitor the work area at Project-appropriate intervals to assure that all mitigation measures are implemented. The amount and duration of monitoring would depend on the Project specifics and should be discussed with the USFWS biologist.</p>	<p>Before and during construction</p> <p>Activities that could occur within 165 feet of an elderberry shrub would be conducted August–February</p>	Homestake and Qualified biologist, all workers	USFWS	See biological resources report for location of elderberry bushes/trees	

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<p>Timing. As much as feasible, all activities that could occur within 165 feet of an elderberry shrub, would be conducted outside of the flight season of the VELB (March - July).</p> <p>Trimming. Trimming may remove or destroy VELB eggs and/or larvae and may reduce the health and vigor of the elderberry shrub. In order to avoid and minimize adverse effects to VELB when trimming, trimming shall occur between November and February and shall avoid the removal of any branches or stems that are ≥ 1 inch in diameter. Measures to address regular and/or large scale maintenance (trimming) should be established in consultation with the USFWS.</p> <p>Chemical Usage. Herbicides shall not be used within the drip-line of the shrub. Insecticides shall not be used within 100 feet of an elderberry shrub. All chemicals shall be applied using a backpack sprayer or similar direct application method.</p> <p>Mowing. Mechanical weed removal within the drip-line of the shrub shall be limited to the season when adults are not active (August - February) and shall avoid damaging the elderberry shrub.</p> <p>Erosion Control and Re-vegetation. Erosion control shall be implemented and the affected area shall be revegetated with appropriate native plants.</p> <p>All mitigation measures provided above have been developed by the Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (USFWS 2017).</p>					

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Bio-9: No pesticides or herbicides shall be used within 250 feet of riparian or wetland areas, including the area described as a potential wetland at the Reed Mine.	During construction	Homestake and All workers	CDFW		
Bio-10: All sensitive areas and areas with potential populations of rare plants shall be clearly marked and flagged prior to construction to avoid disturbance to these areas. These areas include the riparian area and potential wetland at the Reed Mine. Major construction should be performed in the dry season (approximately April 15 through October 15) if possible to reduce the likelihood of erosion in sensitive areas. All work in riparian areas and near streambeds shall comply with the grading plan, Storm Water Pollution Prevention Plan (SWPPP), and best management practices (BMP) to avoid impacts from erosion	Prior to construction and ground disturbance	Homestake and Qualified biologist All work crews are responsible for notifying biologist on work schedules	Yolo County for grading permit State Water Resources Control Board for SWPPP		
Cultural Resources and Tribal Cultural Resources					
Cul-1: Homestake shall seek to avoid cultural resources as the preferred mitigation measure. If avoidance of cultural resources during ground disturbing activities is infeasible, a qualified archaeologist shall be retained to evaluate the four documented cultural resources encountered according to State <i>California Environmental Quality Act (CEQA) Guidelines</i> to determine whether they are "significant" or "likely significant" based on the criteria listed in the Public Resources Code section 5024.1 (see California Code of Regulations (CCR) Title 14, § 4852.) or their potential eligibility to be listed on the California Register of Historical Resources (CRHR). The evaluations should consider the	During Construction	Archaeologist and all workers	State Office of Historic Preservation (SHPO)		

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<p>resources both as individual entities and as contributing elements to a broader Reed Mine Historic District.</p> <p>In the case of a prehistoric archaeological site, evaluation may be completed by examining existing records and reports, detailed recording and/or through excavation to determine the data potential of the site. Historical resource mitigation measures may include further study to evaluate the site, detailed recording, and/or excavation. Resources determined not to be historically significant would require no further management. If cultural resources are considered historically significant per CEQA or eligible for the CRHR, a data recovery program shall be implemented to reduce impacts to less-than-significant levels as required by State <i>CEQA Guidelines</i>. Data recovery could include excavation and detailed analysis and/or further research, depending on the nature and type of the resource. Excavated materials would be curated at an appropriate facility.</p>					
<p>Cul-2: Cultural and paleontological resource monitoring shall be conducted by a qualified archaeologist familiar with the types of prehistoric and historical resources that may be encountered within the Project Area. Monitoring shall occur in all areas of ground disturbing activity that occur within 30 meters of a cultural resource eligible or potentially eligible for the CRHR. A Native American monitor shall be required at culturally or traditionally sensitive locations, if identified.</p>	During construction	Archeologist and all workers	Native American representative		
<p>Cul-3: If any paleontological or cultural resources, such as buildings, structures, or objects over 50 years old (excluding buildings that have been previously evaluated as ineligible for the National or California Register), including human remains, are encountered during any Project development</p>	During Construction	Archaeologist and all workers	SHPO		

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activities, work shall be suspended and other applicable agencies would be immediately notified. Destruction of potentially significant cultural resources without mitigation constitutes a significant impact per §15064.5(b) of State CEQA Guidelines. Implementation of the procedures and provisions in Mitigation Measure Cul-1, however, reduces impacts to unanticipated archaeological discoveries to <i>less-than-significant</i> levels. At that time, Homestake shall coordinate any necessary investigations of the site with appropriate specialists, as needed.					
Cul-4: When Native American archaeological, ethnographic, or spiritual resources are involved, all identification and treatment shall be conducted by qualified archaeologists who meet Federal standards, as stated in the Code of Federal Regulations (36 C.F.R. § 61) and appurtenances (Senate Bill (SB) 18), and Native American representatives who are approved by the local Native American community as keepers of their cultural traditions. In the event that no such Native American is available, persons who represent tribal governments and/or organizations in the locale in which resources could be affected shall be consulted.	During construction	Archeologist and all workers	Native American representative		
Cul-5: Pursuant to Public Resources Code section 5097.98 and Health and Safety Code section 7050.5, if human remains or bones of unknown origin are found during construction, all work shall stop in the vicinity of the find and the Yolo County Coroner would be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission (NAHC) who would notify the person believed	During construction	Archeologist and all workers	Yolo County Coroner		

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to be the most likely descendant. The most likely descendant would work with the contractor to develop a program for re-interment of the human remains and any associated artifacts. No additional work shall take place within the immediate vicinity of the find until the identified appropriate actions have been implemented. If the Coroner determines that the remains are not related to a crime scene, then a qualified archaeologist who meets Federal standards (36 C.F.R. § 61) shall be retained to assess the find and make further recommendations.					
Geology					
Geo-1: Homestake shall obtain a grading permit (if not exempt), encroachment permit for road work, transportation permit, and prepare a construction and demolition debris diversion plan (to be determined) from Yolo County, as required	Prior to construction activity	Homestake	Yolo County		
Hazardous Materials and Wildfires					
Haz-1: All workers and visitors to the site shall be provided a copy of the Occupational Safety and Health Administration (OSHA) compliant Health and Safety Plan (HASP), and trained on proper procedures for working at the mining sites (including obtaining Hazardous Waste Operations and Emergency Response [HAZWOPER] certification), around the mining features, contaminated soils, adits, and directions to the nearest hospital, and emergency contact information. A Site Transportation Plan (see Mitigation TR-1) shall be prepared with procedures for scheduling and coordinating truck traffic on all the access and haul roads at the site.	Before and during any onsite activity	Homestake All field worker supervisors	Homestake OSHA	See HASP	

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Haz-2: If an accidental release or spill occurs during construction and maintenance of the Project, the release shall be cleaned up immediately and reported in accordance with applicable federal, state, and local requirements.	During construction	Homestake and Contractors	Homestake		
Haz-3: All excavated areas, the onsite repository, former processing area, and the banks of Upper Davis Creek shall be revegetated in accordance with the Revegetation Plan, to reduce the risk of exposure to metals-contaminated tailings.	After construction	Homestake Contractor will implement	RWQCB	See Revegetation Plan	
Haz-4: Fire safety and fire danger discussion shall be included in the HASP and fire and safety watch practices during periods of high fire danger, and during truck traffic activities and welding.	During construction	Homestake and Contractors	Homestake		
Hydrology and Water Quality					
Hyd-1: Homestake shall obtain a USACE Clean Water Act (CWA) Section 404 permit, CWA Section 401 Water Quality Certification from the Central Valley Regional Water Quality Control Board (RWQCB), and CDFG Section 1600 Streambed Alteration Agreement from CDFW prior to beginning work at remediation areas that affect jurisdictional wetlands and Davis Creek.	Prior to construction	Homestake	USACE RWQCB CFDW		
Hyd-2: Develop an operations, maintenance, and monitoring plan (OMMP), as a component of the Remediation Plan to measure the long-term sustainability and effectiveness of the Project treatment systems. The OMMP shall include schedules and maintenance activities for monitoring success of vegetation growth and monitoring mercury and other metals in Upper Davis Creek.	Prior to construction	Homestake	RWQCB		

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Hyd-3: Prepare and implement a SWPPP and implement BMPs. Prior to construction and issuance of grading permits, Homestake shall obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity from the State Water Resources Control Board. The SWPPP shall ensure the reduction of pollutants in storm water discharged from the site during construction. The SWPPP shall identify BMPs to control erosion, sediment discharge, and protect environmental sensitive areas and water quality.	Before and during construction	Homestake All workers for abiding by plan	State Water Resources Control Board		
Transportation					
TR-1: A Site Transportation Plan shall be prepared during pre-mobilization and would cover both on- and off-site transport of mining-related material and other material generated during site remediation and restoration activities. The transportation plan would identify procedures to minimize the environmental and health and safety risks associated with materials transportation, and provide location of the command post and staging areas. The plan would include procedures for scheduling and coordinating truck traffic on access and haul roads at the site.	Before and during construction	Homestake Contractor and All workers	Homestake		