

# Grassy Mountain Consolidated Permit Application - December 2021 Revision

## Preliminary Evaluation of Applicant Response to Comments from February 2020 Completeness Review

### Comments Tables

SLR	Comment #	Source	Topic	Comment Category	CPA Reference	Comment	SLR Response	Comment Addressed as Indicated?	Preliminary Assessment – Sufficient Response?	TRT Response:	Agency	Preliminary Response to Comment (11/7/22)	Agency Comments	Response (2/1/23)
B	86	USFWS	3 Baseline Data Reports	2	Wildlife Baseline Report pg. 31	<p><b>Comment:</b> This comment was originally submitted as part of the November 2018 review. It does not appear to have been addressed in Version 3 of the Wildlife Resources Baseline Report, revised January 2019. Rather than addressing this comment, the authors of the Baseline Report appear to have simply removed information.</p> <p>The study work plan indicates that GOEA nest surveys "will be collected at two separate periods at least 30 days apart during the nesting season". The work plan does not indicate if these surveys are to occur within the same year, but it is assumed that the intent was to have a minimum of two surveys per year during the nesting season. In Version 2 of the Baseline Report, it was stated that nest surveys occurred only once in 2014 (4/27/14) and no replicate survey occurred during the same year at least 30 days from the initial survey. Four nest surveys occurred in April 2017, with no replicate 30 days apart from any of the April 2017 surveys. Some ground monitoring occurred in June 2017 (but outside of the survey window stated in the study work plan (surveys occurred June 21-23, stated window is April 15-June 15). Only one survey was conducted in 2018 (2/6/18) and this was outside of the nesting season (April 15-June 15).</p> <p>The Baseline Report V3 indicates that aerial nest surveys occurred 4/21/17 and 4/28/17. A ground survey of known eagle nest, OR GE 1327, occurred on 5/27/17. No eagles were observed and no follow-up survey occurred to meet the requirement of the study work plan. In 2018, this nest (OR GE 1327) was observed twice from the air, but the survey dates (1/24/18 and 2/6/18) are outside of the nesting season (April 15-June 15). Two additional eagle nests observed near Sagebrush Gulch were also observed on 1/24/18 and 2/6/18, but they were not surveyed during the nesting season.</p> <p><b>Proposed Resolution:</b> The golden eagle nests should be surveyed in accordance with the work plan, during the nesting season, to determine if they are active.</p>	<p>The TRT approved the BDR Ver. 4 (October 2020) as complete at their 02/20/2021 meeting.</p> <p>Partly. Additional nest surveying was performed and added.</p> <p>No. While 2020 nest surveys were performed aerially under the study work plan parameters, USFWS mentions in their comment that ground surveys that have not been performed. Need consistency among surveys.</p> <p>The additional 2020 surveys were performed according to the study plan parameters. Ground surveys are not required in addition to aerial surveys, but were noted in previous comments because when ground surveys occurred in the past, they did not occur during the timeframe required by the study plan.</p> <p>Because GOEA occupancy may shift during the timeframe since the 2020 survey, depending on when disturbance is scheduled to commence, we recommend re-surveying the wildlife study ascertain more recent nest and territory occupancy. These surveys should be conducted during courtship when the adults are mobile and conspicuous. Surveys of nests should also be conducted to assess nesting activity. The Service should be consulted to determine appropriate timeframes for both types of surveys.</p>	USFWS	Calico assumes this is resolved. It was approved by TRT on 2/2/2021 and the TRT indicated additional GOEA surveys could be completed prior to disturbance (a permit condition).	This comment can easily be resolved when the GIS layers for the most recent nest surveys are provided. Without nest location data, USFWS is unable to fully evaluate potential impacts of proposed activities and the potential effectiveness of proposed mitigation. The failure to submit these data to USFWS during the prior review period represents a data gap consistent with Category 2.	The Grassy Mountain Mine 2020 raptor survey shapefiles and nest database description file were uploaded to DOGAMI on January 4, 2023.			
D	90	DEQ	3 Baseline Data Reports	2	Geochemistry Baseline Geochemistry Section 7.4	<p><b>Comment:</b> Baseline Geochemistry Section 7.4 Cemented Rock Fill (CRF) – as determined by the geochemical testing results at section 000.000, a majority of the waste rock has potential to generate acid and leach metals. This section of the Geochemistry Baseline report proposes that 5% cement be added to waste rock to be used as backfill in the mine. However, Calico specifies 7% cement in CRF in 3.3.5.1 of the Consolidated Permit Application. There is no apparent resolution of this conflict and no geochemical assessment of it. Indeed, the text does not seem to be any geochemical characterization of CRF as proposed. These conflicts cloud the assessment of existing conditions.</p> <p>This section also states that CRF made from waste rock would be placed only in locations above the water table. How will pH in the underground workings (inclusive of material in situ and all backfill materials) be best managed to prevent acid generation and the mobilization of metals?</p> <p>In Section 3.3.5 of the Consolidated Application it is stated that waste rock would be used as backfill "to extent possible". In Section 4.6.2 of the Consolidated Application it is stated that "all 0.2 million tons of waste rock" would be added to the TSF. These contradictions need to be resolved – the proposed volumetric range of the TSF is 1.76 to 3.2 million tons, and the TSF volume is dedicated to the Grassy Mountain project. Does recording of the above mean that there is a total of 200,000 tons, only of waste rock? Due to the potential for acid generation and leaching of metals, none of the waste rock should be placed in underground workings. These conflicts cloud the assessment of existing conditions.</p> <p><b>Proposed Resolution:</b> (a) Determine if 5% or 7% cement will be added to waste rock, and make consistent in the CPA and the BDR. (b) Explain how pH in the underground workings will be best managed to prevent acid generation and the mobilization of metals. (c) Clarify how waste rock will be disposed of, and make consistent throughout the CPA.</p>	See response to comment 56.	<p>a) Yes, consistent with 7%</p> <p>b) No, doesn't address how waste rock will affect pH in geo chem report.</p> <p>c) Yes, indicates how waste rock is disposed of.</p>	<p>Partially. DEQ to evaluate sufficiency of response and BDR revision.</p> <p>Geochemistry Baseline Data Report as meeting the requirements of the 2017 Environmental Baseline Data Work Plans.</p> <p>Not adequate. The Cemented Rock Fill plan design and details are not complete and its content cannot be reviewed in its current form (section 2.6.2.4). From the CPA text DEQ notes that the CRF purpose as expressed is to provide stability for the production drifts by blending Portland cement with all of the waste rock generated. The CRF plan section 2.6.2.4 makes no reference to how the CRF design will prevent Acid rock Drainage by providing acid neutralizing potential confirmed by monitoring data.</p>	DEQ	<p>The referenced section of the CPA (Section 2.6.2.4) describes how there is additional testing being performed to determine the geochemical characteristics of CRF made with waste rock. The results of the additional testing will be used to establish backfill plans to mitigate potential impacts (e.g., generation of acid in the underground). The text goes on to describe measures that may be included in the backfill plan such as not using waste rock in CRF, or placing CRF made with waste rock above or below the predicted post-closure phreatic surface.</p> <p>The measures described in the text explain how the CRF design will prevent Acid Rock Drainage. Further, the testing program has been completed and a report of results has been prepared. The results indicate that CRF made with waste rock and 5% to 7% binder (cement and/or fly ash) is very strongly not neutralizing so will not generate acidic leachate. Further, the binder in the CRF (made with either basalt or waste rock) provides a substantial amount of neutralization capacity and will reduce the potential for acidic groundwater in the mine area.</p> <p>Because the measures described in the CPA are effective for preventing CRF made with waste rock from generating acid, the comment is addressed.</p> <p>The report of results will be submitted to the TRT for review.</p>	<p>Additional geochemical characterization testing has been performed to determine the geochemical characteristics of CRF. The testing program and results are described in detail in <i>Grassy Mountain Cemented Rock Fill Characterization Report</i>, which will be included as an appendix to the next revision of the CPA. Briefly, the testing program included preparing a variety of samples representative of CRF using waste rock, basalt, and binder material (Portland Cement and Fly Ash), and then subjecting the samples to a number of geochemical characterization tests, including ABA, mineralogical analysis, whole rock metals analysis, and two specialized leaching tests. The binder content of CRF ranged from 5% to 7%.</p> <p>The results of geochemical characterization of the CRF can be summarized as follows:</p> <ul style="list-style-type: none"> <li>All the CRF samples have significant buffering capacity due to the addition of the binder material. Based on the test results, the CRF is not expected to generate acid.</li> <li>Cementation of the waste rock results in overall lower metal releases under higher pH conditions (in comparison to testing results of waste rock with no binders).</li> <li>There are no appreciable differences in the results for the types of binders or the amount mixed in: <ul style="list-style-type: none"> <li>Fly ash is comparable to cement, and</li> <li>Additional binder does not change the results in terms of potential for acid generation and/or metal leaching.</li> </ul> </li> <li>The concentrations of several constituents (i.e., arsenic, chloride, fluoride, mercury, and sulfate) are lower in leachate than in the lixiviant (groundwater from the site), indicating the potential for attenuation of some naturally-occurring constituents in groundwater due to interaction with CRF.</li> <li>Very low metal/sulfate was released from the CRF in the leach tests involving intact cemented aggregate (some of the leach tests are performed on crushed CRF).</li> <li>The reduction in the mobility of soluble constituents in the CRF occurs for several reasons: <ul style="list-style-type: none"> <li>The hydraulic conductivity and exposed surface area of the material is greatly diminished due to the solidification process.</li> <li>The alkaline nature of the binders reduces solubility of most metals.</li> <li>Some metals become less soluble due to their inclusion in the mineral structure of the calcium silicate hydrate gels resulting from cementation.</li> <li>The mobility of most trace constituents in water contacting CRF will be controlled by diffusion rather than solubility reactions.</li> </ul> </li> </ul> <p>Overall, based on the results of the CRF characterization program, the CRF made with basalt or waste rock does not show a significant potential to degrade groundwater quality, with most constituents leached at very low levels for all tests, and will be used to establish backfill plans to mitigate potential impacts, if necessary.</p>		
B	96	DEQ	3 Baseline Data Reports	3	Geochemistry	<p><b>Comment:</b> Assumptions that cement will encapsulate the potentially toxic and acidic waste rock. The cement in the CRF may buffer acidic conditions in the CRF, but there should be explicit analysis of this in a "pH Waste Rock and Tailings Facility Management Plan" to guarantee, not assume that Acid Generation is effectively mitigated. This Plan must also consider and incorporate pertinent DEQ Solid Waste Program requirements relative to CRF and basalt aggregate rock fill (RF) and CRF as backfill at all levels of the mine.</p> <p><b>Proposed Resolution:</b> Provide a pH Waste Rock and Tailings Facility Management Plan, including an analysis on how effectively cement would encapsulate the potentially toxic and acidic waste rock. Incorporate pertinent DEQ Solid Waste Program requirements relative to CRF and basalt aggregate rock fill (RF) and CRF as backfill at all levels of the mine</p>	Related to comment 56 (about the CRF material acidic analysis of this in a "pH Waste Rock and 48 (about managing high pH of treated tailings)).	No, no addition of Waste Rock and Tailings Facility Management Plan.	No; however, monitoring and adaptive management plans will theoretically provide further relevant information.	<p>Not adequate. The Cemented Rock Fill plan design and details are not complete and its regulatory responsiveness and purpose cannot be assessed in its current form (section 2.6.2.4). The application cites that additional CRF testing is being performed to determine the geochemical characteristics of CRF made with waste rock. No backfill plan is contained to evaluate CRF efficacy to mitigate potential impacts of acid rock drainage and the mobilization of metals. From the CPA text DEQ notes that the CRF purpose as expressed is to provide stability for the production drifts by blending Portland cement with all of the waste rock generated. This is an operator purpose statement, but does not adequately address core regulatory requirements. DEQ notes the generalized and preliminary statement of a Portland cement addition, in CRF, of between 5 and 7%.</p> <p><b>Proposed Resolution:</b> Develop a Backfill Plan that is sufficiently prescriptive to prevent any Acid Rock Drainage, in the short term and especially the long term. Provide details on monitoring specifications and technologies adequate to assure such mitigation at all levels of the mine. In addition, provide a detailed description of how pH conditions at depth will be managed to prevent any metals mobilization attributable to mining operations.</p>	DEQ	<p>1) Category 3 comment</p> <p>2) Geochemical tests on CRF are complete and the report of results will be submitted to the TRT for review.</p> <p>3) The results of the CRF testing indicate that the CRF made with waste rock has so much net neutralization potential that monitoring is unnecessary (i.e., CRF made with the goal of providing structural stability in the underground will not generate acid).</p>	Check comment 48 inorganic leaching potential & TSF stability issues. (Comment #90 – assigned to Stantec may also address this)	See the revised response to Comment 90.
B	108	DEQ	3 Baseline Data Reports	3	Groundwater	<p><b>Comment:</b> No facility is proposed to provide water storage generated during pumping of wells and dewatering of mine. Where will the water go when not needed for production? (such as when F352dedine is being constructed) Discharge will not be allowed without a discharge permit. The TSF facility is not a water storage facility.</p> <p><b>Proposed Resolution:</b> Explain how water generated during pumping of well and dewatering of the mine will be managed and stored. If excess water is anticipated and water discharge is planned, apply for appropriate discharge permit, e.g., NPDES.</p>	The discussion of water management systems in the CPA has been revised to be consistent with the information in the September 2020 Feasibility Study. The TSF stores tailings water. Please see Section 5.8.4.5 for details regarding water management.	Yes, mentions the raw water storage tank and how water will be pumped and stored.	Uncertain. DEQ may request additional information regarding the size and storage parameters of the storage.	<p>Comment: DEQ acknowledges there is uncertainty in the rate and volume of groundwater that may be encountered underground during construction and operations. The October 2020 Feasibility Report describes use of water from the Raw-water Storage Tank (process water, gland water, reagent mixing, and fire protection). The express purpose of the TSF is to dispose of spent ore tailings, received at the TSF as a slurry comprised of approximately 46% solids.</p> <p><b>Proposed Resolution:</b> Provide additional explanation on how water in excess of the raw-water storage tank capacity will be managed.</p>	DEQ	<p>Mine water management and the site water balance is described in detail in Section 3.10 of the CPA.</p> <p>The original comment was Category 2, and the comment has been addressed. The CPA describes how water generated by production wells and mine dewatering will be managed and stored. The Proposed Resolution in the TRT Response is to provide further information and project details on how water in excess of the raw water storage tank capacity will be managed, which appears to be a Category 3 or 4 comment.</p> <p>Further, production well water is used to fill the raw water storage tank. If the tank is full, no further well water would be produced. As explained in Section 3.1 of the CPA, excess mine dewatering water will be circulated into the mill processes.</p>	Complete for application: Require permittee to identify contingency plans for management of excess water production in the OGMW plan.	Calico will be working with the agency to resolve this issue during permitting (Category 3).
D	110	DEQ	Reclamation and Financial Security	2	Appendix J (starts on pdf page 1739)	<p><b>Comment:</b> The total estimated amount for remediation does not include all the elements required under OAR 340-043-0025. Examples: - There is no mention of a "credible accident" or costs to address this. - The cost for reclaiming (capping) the tailings disposal facility is estimated to be \$1,331 million (pdf page 1749). According to section 4.7.1 (main portion of application), capping elements include a liner bedding layer, geomembrane, a drainage layer (12-18 inches), and a growth medium layer (12-24 inches). The Appendix J cost estimate includes \$423,174 for regrading and \$575,963 for "cover and growth media" consisting of 159,397 cubic yards. This cover and growth media volume over a 99-acre TSF comes out to a 1-foot-thick cover layer. The other components, including the geomembrane, are not clearly included. Also, EPA guidance referred to in Div 43 rules requires a composite cap, consisting of a flexible membrane liner and a low-permeability soil liner. The proposed design does not include a composite cap.</p> <p>The cost estimate does not include post-closure groundwater monitoring and other site maintenance activities, which likely will be required for a minimum of 30 years or more following closure. This underestimate of reclamation costs would result in underfunding of the required financial assurance.</p>	The Reclamation Plan has been significantly updated. This includes all elements required.	Partially. More information is required.	Uncertain. DEQ to determine sufficiency of response and revision.	<p>Under a solid waste scenario, an engineer evaluates the costs associated with the activities and if FA is adequate.</p>		Credible Accidents are not included in the Reclamation Plan and associated RCE. The Reclamation Plan and RCE have been updated based on BLM comments and include exports from the SRCE model allowing for uses to vein unit, unit rates, etc. within the plan.	<p>Note: A joint bond is under definition between BLM and DOGAMI and not yet fully agreed upon. Because credible accidents are uncertain, Calico has proposed insurance coverage for the eventuality of an accident if Calico does not reclaim.</p> <p>We don't understand the comment at this stage.</p> <p>What additional information is required from Calico? DOGAMI will evaluate the costs and determine if the FA is adequate.</p> <p>"Partially. More information is required." Stantec</p> <p>"Uncertain. DEQ to determine sufficiency of response and revision." Stantec</p> <p>"Under a solid waste scenario, an engineer evaluates the costs associated with the activities and if FA is adequate." TRT</p>	
D	111	DEQ	Reclamation and Financial Security	3	Appendix L (entirely) Section 1 Div. 37 Permit Application; Appendix J (starts on pdf page 1739)	<p><b>Comment:</b> OAR 340-043-0025 requires that those persons or entities who control the permittee assume liability for environmental injuries, remediation expenses, and penalties. Instituting such liabilities are to assure continuing accountability.</p>	The Reclamation and Closure Plan is incorporated with the submittal.	Partially. More information is required.	Uncertain. DEQ to determine sufficiency of response and revision.	<p>Per OAR 340-043-0025, the applicant needs to identify those persons or entities who control the permittee and will assume liability for environmental injuries, remediation expenses, and penalties. The response should include the relationships to permittee and their capacity to fulfill the requirements. The applicant should also clearly indicate if the persons/entities will be co-permittees on the permit or if the assumption of liability will be enforced through another mechanism.</p>	See Response to 110. Credible accidents are not included in the Reclamation Plan.	<p>OAR 340-043-0025 "Permit Conditions on Assumption of Liability" is not related to the reclamation plan and RCE. ORS 517.987 "At the time of submitting a consolidated application under ORS 517.971 (Consolidated application), the applicant shall estimate the total cost of reclamation consistent with the standards imposed under ORS 517.702 (Legislative findings) to 517.989 (Rules applicable to consolidated application). Using the reclamation estimate and a credible accident analysis as a guide, the State Department of Geology and Mineral Industries shall make an initial determination as to the amount of the reclamation bond necessary to protect human health and the environment. The department shall distribute a bond proposal to all permitting and cooperating agencies. The amount of the bond that the department may require to cover the actual cost of reclamation shall not be limited." Based on OAR 632-037-0135 and ORS 517.987, The Credible Accident Analysis is to be performed by DOGAMI as part of the CPA review. Calico is not tasked with performing this analysis and it is not required to be performed for a CPA to be complete.</p> <p>OAR 340-043-0025(2) "Unless an exception is granted by the EQC pursuant to section (3) of this rule, and consistent with the provisions of section (4) of this rule, the Department shall require, prior to issuing or renewing a permit for a chemical mining facility, and as a condition of the permit, that those persons or entities who control the permittee assume liability for environmental injuries, remediation expenses, and penalties."</p> <p>OAR 340-043-0025(5) "As used in section (2) of this rule, "control" means the power to direct or exercise significant control over the management or policies of the permittee."</p> <p>Calico is the entity responsible for control and assume liability and environmental injuries, remediation expenses and penalties. Calico's President, who currently is Mr. van Treuk, is the responsible person; while in operation, the responsible person will be the Grassy Mountain Mine General Manager.</p>		
D	112	DEQ	Reclamation and Financial Security	2	Appendix J (Reclamation Plan)	<p><b>Comment:</b> The reclamation cost estimate does not include certain elements (e.g., a credible accident, most of the TSF cap components, post-closure groundwater monitoring).</p>	See response to comment 110.	Partially. More information is required.	Uncertain. DEQ to determine sufficiency of response and revision.	See 110		See Response to 110. Credible accidents are not included in the Reclamation Plan.		Credible Accident is not included the reclamation plan and RCE nor is it required to be. See response to comments 110 and 111.
B	119	DOGAMI	Reclamation and Financial Security	3	4.7.3	<p><b>Comment:</b> Plan for isolation or removal of waste is very general</p> <p><b>Proposed Resolution:</b> Provide detailed plan for isolation or removal of waste (sufficient for DOGAMI to evaluate reclamation costs associated with this task)</p>	See Response to comment 118.	No, still very general and difficult for DOGAMI to evaluate reclamation cost.	No, need more detail	Inadequate. Cross ref SRCE with CPA.	DOGAMI	Please clarify what details you wish to be included?		See response to comment #118
B	121	DOGAMI	Reclamation and Financial Security	3	Appendix J	<p><b>Comment:</b> Reclamation cost estimate does not provide sufficient information linking reclamation plan tasks with cost estimates.</p>	The Reclamation Plan has been significantly updated. This includes the cost estimate. The figures, GIS shapefiles, and SRCE Model in excel have been included in the Reclamation Plan.	Yes, added SRCE worksheets	Yes	Inadequate - Tied to other SRCE crossreference comments	DOGAMI			See response to comment #118
B	122	DOGAMI	Reclamation and Financial Security	3	4.11	<p><b>Comment:</b> Plan proposes a phased bonding approach but provides no detail on what reclamation tasks and costs would be associated with the proposed phases.</p> <p><b>Proposed Resolution:</b> Provide detailed breakdown of reclamation costs associated with each phase of bonding and separate cost estimate for each phase, with detailed explanation of how costs in Appendix J are associated with each task.</p>	The bonding is based on the entirety of the reclamation activities and are presented as such in the Reclamation Plan. The costs of reclamation by year are provided in the SRCE model.	No	No	Inadequate. Pending Stantec white paper.	DOGAMI	<p>The RCE is based on the completion of the project. The phase bonding is not proposed, it is a requirement by DOGAMI and will likely be annually following inspections as defined by DOGAMI.</p> <p>Calico recognizes that the bonding will be fluid. We are required to provide a RCE for the completion of the project for BLM and DOGAMI. There is no value in attempting to define annual bonding values for the duration of the project at this time, nor would it be accurate.</p>	<p>ORS 517.987(3) "The department shall assess annually the overall cost of reclamation. If changes in the operation or modifications to a permit cause the cost of reclamation to exceed the amount of the reclamation bond currently held by the state, the operator shall post an additional bond for the difference. All reclamation calculations shall be approved by the department. Incremental surety increases shall be provided for, with the level of surety consistent with the degree and forms of surface disturbance anticipated within a time period specified by the department. When the actual surface area to be disturbed approaches the level expected by the department, the operator shall notify the department sufficiently in advance of reaching the acreage limit specified to allow for a review of surety requirements and posting of additional surety by the operator prior to exceeding the acreage limit set by the department."</p> <p>The reclamation plan RCE meet BLM and DOGAMI requirements. There is no value in breaking the RCE down annually at this stage considering ORS 517.987. Calico can provide additional scenarios once the joint bond agreement between BLM and DOGAMI is well defined.</p>	

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B	128	DOGAMI	Reclamation and Financial Security	3	Appendix V, Section 4c, pdf pg 15	Comment: According to Figure 4i5 (pdf pg 26)37, reclamation will include out slopes but Section 4c (pg 15) states final excavated slopes will not be constructed, nor a continuous slope constructed.  Proposed Resolution: Check "yes" on final excavated slopes and constructed continuous slope in 4c. Fill out the average dimensions of the benching to match 1.5	The Aggregate Application has been updated. Reclamation of the slopes will not occur.	Yes	Yes	Inadequate: -Comments: Benches not proposed to be revegetated. Quarry plan inconsistent with CPA re plans. -Proposed Resolution: benches need to be ripped, growth medium spread and revegetated per the reclamation plan much the same the quarry floor will be reclaimed.	DOGAMI	Calico is not required to rip or place growth media on benches per Oregon regulations nor would this activity be feasible.		Inadequate: -Comments: Benches not proposed to be revegetated. Quarry plan inconsistent with CPA re plans. -Proposed Resolution: benches need to be ripped, growth medium spread and revegetated per the reclamation plan much the same the quarry floor will be reclaimed.  OAR 632-030-0027 does not require the revegetation of benches, nor is the revegetation of benches feasible, safe, or beneficial. The closure requirements for the quarry and the proposed closure plan for the quarry was discussed and agreed upon during a meeting between Calico and DOGAMI on May 4, 2021.	
B	131	DOGAMI	Reclamation and Financial Security	3	Appendix V, Section 4c, pdf pg 18	Comment: Are the continuous excavated slopes proposed to be reclaimed and revegetated?  Proposed Resolution: Plan to revegetate the continuous excavated slopes	The Aggregate Application has been updated. The benches will not be revegetated. The floor of the quarry will be covered and revegetated. This is detailed in the Reclamation Plan.	No	No	Inadequate: -Comments: Benches not proposed to be ripped, growth medium spread and revegetated per the reclamation plan much the same the quarry floor will be reclaimed.	DOGAMI	Calico is not required to rip or place growth media on benches per Oregon regulations nor would this activity be feasible.		See response to comment #128	
B	133	DOGAMI	Reclamation and Financial Security	3	Appendix V, Section 4k, pdf pg 18	Comment: The plan to revegetate with a BLM-approved seed mixture and planted in the fall or per BLM recommendations is insufficient  Proposed Resolution: Fully detail planned planting methods	The seed mix is detailed in the Reclamation Plan and the application references the baseline study.	Yes	Yes	Inadequate: -Comments: Discrepancy between test plot evaluation of vegetation in the baseline study vs the application which states test plots not needed. -Proposed Resolution: Update to match for internal consistency.	DOGAMI	The application will be updated for consistency, however, test plots will not be created solely for the Quarry.		The Terrestrial Vegetation Baseline Report Section 5.7 states, "Vegetation test plots and chemical/physical soil and subsoil analysis may be required to ensure establishment feasibility."  The reclamation plan does not include test plots nor is it a requirement for the CPA per OAR 632-037-0130(4) "Revegetation shall be considered successful if it is consistent with the establishment of a self-sustaining ecosystem, comparable to undamaged ecosystems in the area of the mine. Vegetation test plots and chemical/physical soil and subsoil analysis may be required to ensure establishment feasibility."  There is no discrepancy between these two documents and the reclamation plan.	
B	147	DOGAMI	Reclamation and Financial Security	1	Appendix A, Page 2	Comment: The post reclamation topographic map does not include roads, the growth media stockpile, water lower, and numerous other facilities and/or their former footprints or locations. Most if not all of the facilities associated with this project will need to be reclaimed and as such, they need to be shown on one or more post reclamation topographic maps. Any facilities, such as access roads, settling basins, etc., that are not proposed to be reclaimed will need to be specifically identified on the post reclamation map(s).	The Reclamation Plan has been significantly updated including figures.	Yes	Uncertain; DOGAMI to evaluate sufficiency of response.	Inadequate: Proposed resolution: Post rec topo map needs to include everything that is not proposed to be reclaimed, including roads, etc.	DOGAMI			This comment has been addressed. Reference Figure 5 in the reclamation plan and note the approximate location of the roads within the PoO boundary. Figures 6 through 9 shows the phased road reclamation in the "revegetated layer". No roads remain within the PoO boundary in the final reclamation. Calico is not responsible for reclamation of the access roads leading to the PoO boundary.	
B	148	DOGAMI	Reclamation and Financial Security	3	Appendix J, Page 51	Comment: Only 10% of the 298 acres proposed to be disturbed are included in the SRCE reclamation cost estimate for revegetation. More than 10% of the site will need to be reclaimed and revegetated.  Proposed Resolution: Revise the SRCE reclamation cost estimate to include the cost of seeding and revegetating ALL areas that are proposed to be reclaimed. Include the cost of all equipment to be used.	See Response to Comment 137.	Yes	Partially; Reveg and cover mentioned for whole project, but not necessarily enough detail	Inadequate: -Additional detail is needed here. Based on the response it appears that the additional information has been added to the SRCE sheets, however the references to SRCE are not included in the text of the plans which makes accounting to ensure 100% of the facilities will be reclaimed very hard and time consuming. Note Stantec's comment here also. -Resolution: Include references in the CPA text to the specific SRCE sheets so a complete accounting of the proposed reclamation areas can occur.	DOGAMI	Need more clarification on what reference you require? All growth media and revegetation volumes and costs are included in the SRCE model by facility.		Every acre of disturbance, by facility, is accounted for in the RCE and detailed in Appendix B of the reclamation plan.	
B	149	DOGAMI	Reclamation and Financial Security	3	Appendix J	Comment: In the SRCE reclamation security estimate all facility descriptions should include the ID Code in parenthesis if there is not a separate ID Code column in the relevant table. This allows facility line items to be cross referenced with facilities shown on SRCE maps. If a line item captures multiple facilities, then all of the facility ID Codes captured under line item should be acknowledged in the parenthesis following the facility description.  Proposed Resolution: In SRCE, include ID codes in parenthesis for all facility descriptions for which there is no ID Code column.	See Response to Comment 137.	No	No	Inadequate -Based on the response it appears that the additional information has been added to the SRCE sheets. However, the cross references needed to ensure the plan elements are adequately captured in the SRCE sheets make a thorough review very challenging. Note Stantec's comment here. -Resolution: Include references in the CPA text to the specific SRCE sheets using the ID Codes so a complete accounting of the proposed reclamation areas can occur.	DOGAMI	We have no Stantec comments to see. Each facility ID is included in the GIS shapefiles and the SRCE model.		The use of SRCE for the development of the RCE has been discussed at length with DOGAMI including it's shortcomings. We can discuss a cross reference table to better associate SRCE with each facility, however, the coding in the GIS shapefiles aligns with SRCE and each item within SRCE are associated with a facility (TSP, TWRSF, Roads, etc.).  The RCE as submitted meets the requirements for the CPA to be accepted.	
B	150	DOGAMI	Reclamation and Financial Security	3	Appendix J	Comment: The SRCE reclamation security estimate includes exploration but exploration sites are not shown on the SRCE reclamation security estimate figures and maps. Presumably this is included based on the potential need to conduct additional exploration activities and the need and location for that exploration are unknown at this point. More information is needed regarding the potential for additional exploration and that information should be cross referenced to the exploration line items in the SRCE reclamation security estimate.  Proposed Resolution: Include references in the SRCE reclamation security estimate that cross reference to sources that provide more information on any potential future exploration activities.	Future exploration cannot be shown on maps, but it is included in the SRCE model and Reclamation Plan.	No; Future drill holes indicate that locations of exploration have not been determined yet.	No	No	Inadequate: -Not sure how to address this? Presumably the SRCE sheets can be updated as new exploration activities are proposed? -Resolution: A process for periodic updates to the reclamation plans and SRCE sheets may be needed if it is not already included in the plan.	DOGAMI	The future exploration activities are not defined at this time. We can modify the plan to state that future exploration will be presented to DOGAMI for approval prior to disturbance for approval. As inspections are conducted and the bond is modified at DOGAMI's request, the actual disturbance will be accounted for.		We don't understand the comment. Future exploration is not defined at this time; however it is included in the CPA and PoO to allow for future exploration without duplicative permitting efforts. The RCE includes costs for the reclamation of this disturbance, facility name "Exploration", includes drill pads, roads and hole abandonment.  SRCE can be updated and used as a tool to update the RCE annually following DOGAMI inspections. This process is described in OAR 632-037-0135.
B	163	DEQ	Tailings and Waste Rock	1	Section 3.1, page 106, Section 3.2, page 132, Section 3.3.4, page 139 and 140, Appendix C, Section 2.3, page 7, and Section 7, page 27	Comment: Waste rock volume and storage issues. Throughout much of the CPA, the waste rock volume appears to be consistently estimated to be 200,000 tons and the Waste Rock Dump (WRD) is designed to hold that volume. However, Appendix S of the CPA (Stability Analysis of the Portal Design) states that "The portal will have a waste rock excavation volume of 2,283,146 tons."  Proposed Resolution: Applicant should provide information regarding this apparent large discrepancy in waste rock volume and the effect on the waste rock dump size and volume. Applicant should provide information showing how the waste rock volume was calculated. Applicant should provide information concerning where and how the additional 2,000,000 tons of waste rock material be stored, how it will be treated to preclude acid generation and metals leaching, and the ultimate disposition of the material.	There is an error with former Appendix S that was corrected for the submittal of the CPA.	No; Appendix S – Portal Design Report (August 2019) appears to be the same version submitted with the November 2019 CPA, which maintains the waste rock excavation volume of >2 MT.	No.	No.	DEQ	On revisiting this issue, the 2,283 million tons quoted in Appendix S is correct, but it is not "waste rock" as that term is used everywhere else in the CPA. The 2,283 million tons is the spoils from excavation of the Portal. As shown in Figure 6-4 of Appendix S, the material being excavated consists of coltium, arsenic, and siltsone, and it is all above the sinter that generally represents the top of the mineralized zone where the rock is potentially acid-generating.  There are no corrections or clarifications necessary regarding this issue.		Calico will be working with the agency to resolve this issue during permitting (Category 3). Also, a revised version of the Portal Design Report was prepared in 2022 (to be included with the revised CPA) that has a corrected value for the waste rock generated by excavation of the mine portal.	
D	165	DEQ	Tailings and Waste Rock	1	Section 3.3.5.1, page 141, Section 2.5, page 42	Comment: Backfill Plant issues. Section 3.3.5.1 states the following: "A plant to produce the CRF will be built as part of the Project Infrastructure. The backfill plant will be located near the underground mine portal and will produce the CRF. No test work has been done for CRF at this time, so a standard mix with seven percent cement will be used pending further study."  Section 2.5 states that "an estimated mix of five percent cement will be added to neutralize the waste rock material."	The CPA will be revised to be consistent with the current plans and data regarding the CRF. See subsections in 3.1.2 of the CPA.	Yes, partially.	There is no section 3.1.2 in the CPA. Section 3.2.5 (Cemented Rockfill) indicates that 7 percent cement will be used; however, immediately below that bullet, it is stated that future work will be conducted including 3 percent and 5 percent cement depending on fly ash percentage. As initially requested, the applicant should provide further details any future testing. In addition, section 2.5.2.4 (Cemented Rock Fill) states that Portland cement will be added at 5-7 percent, so there are still inconsistencies in the CPA. Note, also seeing "tons" and "tonnes" in CPA.	See 90.		The original Category 1 comment requests further details concerning additional testing for geochemical characterization of the CRF. Section 2.5.2.4 of the CPA describes how there is additional testing being performed to determine the geochemical characteristics of CRF made with waste rock. The results of the additional testing will be used to establish backfill plans to mitigate potential impacts (e.g., generation of acid in the underground). The text goes on to describe measures that may be included in the backfill plan such as not using waste rock in CRF, or placing CRF made with waste rock above or below the predicted post-closure plastic surface.  The measures described in the text explain how the CRF design will prevent Acid Rock Drainage. Further, the testing program has been completed and a report of results has been prepared. The results indicate that CRF made with waste rock and 5% to 7% binder (cement and/or fly ash) is very strongly not neutralizing so will not generate acidic leachate. Further, the binder in the CRF (made with either basalt or waste rock) provides a substantial amount of neutralization capacity and will reduce the potential for acidic groundwater in the mine area. The report of results will be submitted to the TRT for review.  The original Category 1 comment also requests further details concerning the conceptual design and operation of the Backfill Plant. Section 3.2.2.5 describes the backfill plant and operations.  The original Category 1 comment also requests consistency in references to the amount of cement being used in the CRF. The binder (cement plus fly ash) is consistently presented as 5% to 7%. The reference to 3% to 5% cement is made with reference to a dependence on the amount of fly ash.  The information presented in the CRF addresses the proposed resolutions in the original Category 1 comment.  The original Category 1 comment also requests support on the selection of the percentage of cement being used. Section 3.2.2.5 of the CPA references laboratory test that were conducted to define CRF strength and also presents the CRF mix design.		See the revised response to Comment 90.	
D	167	DEQ	Tailings and Waste Rock	2	Consolidated Permit Application, Section 3.3.5, pg. 141 and 4.6.2, pg. 227	Comment: Acid generating waste rock must be stored in a lined cell. Cemented rock fill (CRF) is subject to cracking and degradation through erosion, therefore is not a viable option for backfilling in the mine shafts. (340-043-0140)  Section 3.3.5 of the consolidated application states that waste rock will be used to backfill the mine to "extent possible." Section 4.6.2 of the same application states "All 0.2 million tons of waste rock will be removed from the waste rock storage area and placed on the TSF." Most of the waste rock from the mine is expected to be acid generating and should be placed in a secure surface location and not be used as mine backfill.	The Temporary Waste Rock Storage Facility is a lined cell. The design of the liner system and leachate controls is the same as the TSF. Geochemical testing of CRF made with waste rock is underway and will help to determine if waste rock CRF can be used as mine backfill in an environmentally safe manner. The cement used to make CRF provides considerable neutralization potential, so it is anticipated that waste rock CRF would be not neutralizing (i.e., non acid generating).	Yes, partially. The liner system of the TWRSF appears to be ample and addresses the first part of the question. However, the results of the further testing as indicated in the SLR response should be reported as soon as it's available.	No. The CRF geochemical testing is ongoing, so this information was not available to be presented in the CPA.	See 90.			The original Category 2 comment requests resolution of conflicting statements regarding waste rock management and CRF in the CPA. This has been completed. The original comment also requests development of a tailings and waste rock management plan during the permitting phase. This appears to be a Category 3 or 4 issue.  Also see the response to comment 90.		See the revised response to Comment 90.
B	175	DOGAMI	Tailings and Waste Rock	4	4.7.1.5, pg. 231	Comment: It states: "As part of the design, the converted E-Cell will be covered with six inches of growth media and seeded." Because this is the former reclaim pond which will be double lined, how will the pond/E-cell ultimately be reclaimed?  Proposed Resolution: Fully detail how the E-Cell will be finally reclaimed.	The E cell will remain in perpetuity.	Uncertain. Is the lack of E-cell reclamation acceptable to the state?	Uncertain.	Inadequate. This does not address the comment, nor is it adequately addressed in D1. Additionally, nothing at the site can remain forever and D1 pg. 16 says "20 years".	DOGAMI			The E-cell will remain in perpetuity. It will not be reclaimed. D1, page 16 states, "For the purpose of the development of this Reclamation Plan, E-Cell maintenance monitoring is estimated to be 20 years."  The use of E-cells in this manner is a standard industry BMP.	
B	180	DEQ	Water Resources	3	Groundwater Quality Protection, Section 3.3.9, pg. 146	Comment: The Groundwater Baseline study is nearing completion and the permitting application process is underway. However, the groundwater monitoring network will need to be further developed as the site activities increase. Additional wells will be required to adequately monitor the site during development and post-closure.  Proposed Resolution: Develop groundwater monitoring plan during permitting and adapt it throughout project phases.	A groundwater monitoring plan will be developed during permitting for the WPCF.	Uncertain. Appendix D12 (Monitoring Proposal for Groundwater and Facilities) should not be considered comprehensive and complete?	Uncertain. Although D12 provides details regarding groundwater monitoring, the response indicates that yet another plan will be developed during permitting.	A detailed groundwater monitoring plan will be required in association with the WPCF permit.	DEQ	Original comment is Category 3. Comment says that the groundwater monitoring plan must be further developed during permitting. No action is necessary at this point.		Calico will be working with the agency to resolve this during permitting (Category 3).	
B	184	DEQ	Water Resources	3	Groundwater Quality Protection 2.8 Groundwater, Volume II, page 66	Comment: The CPA indicates that low hydraulic conductivity in the vicinity of the project is anticipated to significantly restrict groundwater flow into the mine workings. There is no discussion indication of how the decline, which is likely outside the highly sulfidated zone, will contribute water to the mine workings.  Proposed Resolution: Address during permitting phase.	See response to comment 107.	Uncertain. Do not see any instances of "groundwater quality protection" in the CPA.	Uncertain; however, DEQ's proposed resolution was to address the issue during the permitting phase.	The WPCF Permit must show the capacity to contain or adequately dispose of all water associated with mining activities.	DEQ	Original comment is Category 3. Comment says that there is no information about how the decline will contribute water to the mine workings, and to resolve the issue during permitting. No action is necessary at this point.		Calico will be working with the agency to resolve this during permitting (Category 3).	
D	206	DEQ	Water Resources	3	Groundwater Quality Protection 3.3.9.1 Dewatering, pg. 148	Comment: There appears to be a large amount of uncertainty regarding the amount of groundwater draw down and its possible effects on surface water springs in the proposed mine area. A plan for monitoring impacts to spring flow and minimizing/mitigating these impacts is needed.	See response to comment 180. The monitoring program developed during permitting can address spring flows as well as water quality. The assessment of impacts and mitigation will be performed as part of obtaining environmental approvals (e.g., NEPA).	Partially	Uncertain. Impacts to spring flows will be significant question in the EE and the NEPA EIS.	A plan for mitigation of significant spring impacts will need to be addressed in EIS process. If an adequate mitigation plan is not produced as part of the EIS process, the WPCF permit will have a requirement for a spring mitigation plan.	DEQ	Category 3 comment - not required for determination of completeness. Agree that monitoring and mitigation plans for springs will be needed and can be developed during permitting.		Calico will be working with the agency to resolve this issue during permitting.	
B	208	DEQ	Water Resources	1	Appendix C TSF Design Section 3.3.12.11.4, pg. 180	Comment: The application document identifies a truck wash station but does not identify how the wastewater will be treated or managed.  Proposed Resolution: Provide documentation of the treatment and management for all truck wash wastewater.	The FS NI 43 101 indicates that the truck wash will have a fluid collection sump and oil water separator. Sediment settles in the sump and the water is recirculated to the wash system. Hydrocarbons recovered in the O/W separator will be shipped off site for disposal.	Uncertain. Details in the response were not found in the CPA or appendices	Uncertain.	This comment has not been addressed. The SLR Response provides details that were not found in the CPA or supporting documents. 1200-Z permit may allow truck washing activities. Cross-check with Kendra	DEQ	Clarification needed. Are the design details of the truck wash treatment system necessary at this point for determination of completeness? (Is this really a Category 1 comment?)		CPA Section 3.9.7.1 (Page 132) and 3.9.7.7 (page 136) describe the truck wash wastewater treatment and management. (Comment references Section 3.3.12.11.4, which is about process water management and is not the appropriate place to describe the wastewater treatment).	

# Grassy Mountain Consolidated Permit Application - December 2021 Revision

## Preliminary Evaluation of Applicant Response to Comments from February 2020 Completeness Review

### Comments Tables

Comment #	Source	Topic	Comment Category	CPA Reference	Comment	SLR Response	Comment Addressed as Indicated?	Preliminary Assessment – Sufficient Response?	TRT Response:	Agency	Preliminary Response to Comment (11/7/22)	Agency Comments	Response (2/1/23)
208	DEQ	Water Resources	1	Appendix C TSF Design Section 3.3.13.3, pg. 188	<b>Comment:</b> The application discusses piping reuse water back to the plant but no discussion of how these reuse pipes will be identified. <b>Proposed Resolution:</b> Provide documentation of how pipes carrying reused water will be recognized and how the facility will ensure no cross connections with potable water lines during construction and operation/maintenance of the facility.	The reclaim water pipes are part of a closed circuit isolated from all other water service systems. As indicated in the water balance for the TSF, the flow of reclaim water back to the mill is substantial and dedicated pipes will be used.	Yes	Yes	This comment has not been addressed. Uniform building code requires all waterlines carrying nonpotable water are required to be marked as such.	DEQ			Sheet S1.0 of the Water and Wastewater System Design identifies the International Building Code as a design criteria for the water supply system.
231	DOGAMI	Water Resources	4		<b>Comment:</b> OAR requires "General design assumptions and plan profile, cross sections and capacities for mine facilities including ponds". <b>Proposed Resolution:</b> Provide a clear description of the site conditions and proposed design of the collection pond in the application document.	A more complete description of design criteria for the collection pond has been provided in Section 3.2.11 (Surface Contact Water). <b>Proposed Resolution:</b> Provide a clear description of the site conditions and proposed design of the collection pond in the application document.	Uncertain. Section 3.10.5 (Surface Contact Water) section of the CPA references collection pond details in Section 3.2.11; however, that section does not appear in the report. The collection pond is described to some degree in the Monitoring Well Plan, including in its Appendix B and drawing 101768-0000-G-1.	Uncertain if the design criteria and details are sufficient.	Inadequate. Need to correct the reference to a sect. that doesn't exist. However, the design description in the MW Plan and drawing in Append. B of the plan appears adequate.	DOGAMI	The reference in the response to the comment should be to 3.3.11. Section 3.3.11 describes the design details and criteria for the Collection Pond. No changes to the CPA are necessary.		CPA Section 3.10.5, Surface Contact Water, erroneously referenced Section 3.2.11. This has been corrected to reference Section 3.3.11.
238	WRD	Water Resources	3	4.2.5 Page 9	<b>Comment:</b> Recommend the ability to measure shut-in artesian pressure for any flowing wells, including MALH 2275. <b>Proposed Resolution:</b> Shut in the wellhead, rather than letting flow.	Noted, but we do not believe this is possible without major well head modifications.	Uncertain. No changes indicated in the application.	Uncertain. WRD to evaluate response to determine sufficiency.	This will need to be addressed in the wellfield design report and monitoring plan. The current setup is a well construction issue, in addition to a lost opportunity to improve understanding of the groundwater resource.	WRD	The comment is Category 3, which means it does not need to be addressed for completeness of the CPA (it can be addressed during draft permitting).		Calico will be working with the agency to resolve this issue during permitting.
241	WRD	Water Resources	3	4.4.8 Page 17	<b>Comment:</b> In estimates provided for well to well interference, early-time transmissivity numbers were used. <b>Proposed Resolution:</b> While early-time transmissivity values are appropriate for assessing aquifer properties, they may not be appropriate for this situation. Since affected wells appear to exist within the same compartment, with the same negative boundaries, considering extended pumping durations, the late-time transmissivity should be used in this analysis.	Noted. Further refinement of the well field design will be necessary as the project water demands are further refined and additional testing and data are generated. Needs to be addressed in a revision to the Well Field Design Report (SFF, July 2019) (during permitting)	To be addressed during permitting according to the applicant.	Yes	Unchanged at this point. Update in final report?	WRD	There is no disagreement on the comment or proposed resolution. The wellfield design is a plan that has been developed with all the information currently available. Given the heterogeneity and complexity of the aquifer, it is anticipated that the plans will change during implementation (i.e., alternative well locations and designs may be needed). This cannot be known until wells are installed as planned.	look forward to reviewing any further wellfield design plans and working with the applicant on monitoring well design and locations.	Calico commissioned Lorax Environmental Services to develop a more comprehensive, calibrated groundwater flow model using all the hydrogeologic data that has been gathered through 2021. The model was used to further evaluate the potential effects of the mine on groundwater conditions in the area, including drawdown of the aquifer in the vicinity of the proposed production wellfield and near the underground mine. The recovery of the aquifer after closure is also evaluated. The projections are based on updated estimates of water usage for mining. A description of the model, its calibration, and the results of projections and sensitivity analyses are presented in Lorax Environmental Services 2022. The results of this model supersede all previous groundwater modeling results.
243	WRD	Water Resources	4	4.4.9 Page 18	<b>Comment:</b> It is suggested that further development of Well 3 will result in much lower concentrations of harmful constituents for drinking water, possibly to within drinking water standards. <b>Proposed Resolution:</b> This may be a misleading hypothesis, especially considering all of the 15 wells sampled exceeded the MCL for arsenic, according to the Groundwater Baseline Data Report. Repeat this analysis considering the impact of levels above MCL in all wells.	Needs to be addressed in a revision to the Well Field Design Report (SFF, July 2019) (during permitting).	To be addressed during permitting according to the applicant.	To be determined.	Please clarify in final draft of wellfield design report.	WRD	The section of the wellfield design report that is referenced in the comment says that if Well 3 is used for potable water supply, treatment will be required to remove arsenic. We agree that there is elevated arsenic in all groundwater in the vicinity.  The statement about redevelopment pertains to elevated aluminum, iron, manganese and TDS, which exceed secondary standards at Well 3. Purge water from the well is black with trace of sand, suggesting the well has not been developed properly.  No changes necessary.	Minor consideration that only relates to employee health but would not impede permitting of mine operations.	Calico will be working with the agency to resolve this issue during permitting.
244	WRD	Water Resources	3	5.3.2 Page 24	<b>Comment:</b> Plan for well development and testing states "All nearby wells and springs will be monitored during the test..." but no details given. <b>Proposed Resolution:</b> Provide a list of sites, and the schedule and method in which they will be monitored.	Needs to be addressed in a revision to the Well Field Design Report (SFF, July 2019) (during permitting).	To be addressed during permitting according to the applicant.	To be determined.	Not addressed. Assessment of pumping impacts from Well 4 should include sites within the area of influence and may benefit from installation of more monitoring wells in the area of the production wells and into the target aquifer/	WRD	The technical details of the testing and monitoring during construction and development of the production wells need to be developed. These details can be developed as part of permit preparation.	Certainly these details should be part of permit preparation. Establishing parameters in the heterogeneous aquifer system while pumping from the productive portions of the aquifer is important for development of a monitoring plan.	Calico will be working with the agency to resolve this issue during permitting.
245	WRD	Water Resources	4	5.5.7 Page 31	<b>Comment:</b> In the third paragraph, "Well 4" is listed twice, pumping at two different rates. I believe the second instance is meant to be "Well 7". <b>Proposed Resolution:</b> Resolve the inconsistency.	Needs to be addressed in a revision to the Well Field Design Report (SFF, July 2019) (during permitting).	To be addressed during permitting according to the applicant.	To be determined.	Not addressed. Needs to be fixed in final draft.	WRD	Agree that there is a typo and the second instance should be Well 7. This is a Category 4 comment. This typo can be corrected during permit preparation.		Calico will be working with the agency to resolve this issue during permitting.
248	DEQ	Hazardous Materials, Safety, Accident Prevention, and Emergency Response	1	CPA, Petroleum-contaminated soils management plan: Section 2, pg. 4	<b>Comment:</b> No application or supporting materials received for an industrial solid waste landfill, which is referenced in the CPA documents. <b>PROJECT DESCRIPTION</b> Calico Resources USA Corp. (Calico) plans to construct, operate, reclaim, and close an underground mining and precious metal milling operation. In general, the proposed mining and precious metal processing operations will consist of an underground mine and ore processing facilities, including a conventional mill and tailings storage facility (TSF) and a waste rock storage area (WRSA), as well as other support facilities. The Project will include the following major components: - Ancillary facilities that include the following: haul, secondary, and exploration roads; truck workshop; warehouse; stormwater diversion; sediment control basins; reagent and fuel storage; storage and laydown yards; explosive magazines; fresh water storage; monitoring wells; meteorological station; an administration/security building; borrow areas; growth media stockpiles; a landfill; and solid and hazardous waste management facilities to manage wastes, and ....	No landfill is proposed for the site.	No. If a landfill and solid and haz waste facilities are not proposed for the project, the management plan should be revised accordingly.	No. If a landfill and solid and haz waste facilities are not proposed for the project, the management plan should be revised accordingly.	The project includes four solid waste disposal facility elements: - the TSF (a captive industrial solid waste landfill, intended as a permanent solid waste disposal facility that also functions as a wastewater containment facility). - the waste rock dump (a captive industrial solid waste landfill, intended as a temporary solid waste storage facility). - concrete neutralization of the waste rock (a solid waste treatment facility). , and - the underground backfill (a solid waste land disposal facility).  ORS 459.215 provides facilities operated under a permit issued under ORS 468B.050 are not required to obtain a permit from the Department of Environmental Quality pursuant to ORS 459.205. However, exclusion from the permit requirements of ORS 459.205 does not relieve any person from compliance with other requirements of ORS 459.005 to 459.105 and 459.205 to 459.385 and the rules and regulations adopted pursuant thereto. The application must submit to DEQ all the required elements for a solid waste permit as required by OAR 340-093, 340-095, 340-096, and 097. Where the requirements have been substantively been met under the WPCF permit application, please clearly indicate.	DEQ	The Petroleum-Contaminated Soils Management Plan was edited to remove reference to a solid waste landfill and solid/hazardous waste management facility as neither of these are planned for the facility.	The Petroleum-Contaminated Soils Management Plan (CPA Appendix D9) was edited to remove reference to a solid waste landfill and solid/hazardous waste management facility as the solid waste activity onsite would not be used to dispose of petroleum-contaminated soils. ORS 459.215 provides those facilities that operate under a permit issued under ORS 468B.050 are not required to obtain a permit from the DEQ pursuant to ORS 459.205. However, compliance with ORS 459.005 to 459.105 and 459.205 to 459.385 as well as OAR 340-093, -095, -096 and -097 is required. A cross-reference to the OAR 340-093, -095, -096, and -097 rules was developed and shared as a response to Comment 353. This cross-reference demonstrates compliance with rules that are applicable to the TSF and the THRSF. The underground backfill meets the definition of "Clean Fill" per OAR-340-093-0030(16) and therefore is not a regulated solid waste activity. The concrete rock material is exempt from the definition for "Disposal Site" per OAR-340-093-0030(38) and therefore is not a regulated solid waste activity.	
270	DEQ	Hazardous Materials, Safety, Accident Prevention, and Emergency Response	2	Consolidated Permit Application, Section 3.4.2, Page #199 and 3.6.6, Page #217	<b>Comment:</b> Section 3.4.2 first paragraph, states that the site is expected to be a CESQG (<100kg/month HW generation). Whereas, section 3.6.6 states that the facility anticipates they will be a SQG (>100kg - <1000kg/month of HW generation)	The Waste Management Plan identifies small quantity generator and large quantity generator requirement (Section 6). See Appendix D3 of the CPA.	Yes; however, the category is not indicated for the mine operator.	Uncertain. The lack of a category assignment (e.g., SQG, LQG, VLOG) and definitions only may not be sufficient according to the comment. To be determined.		DEQ	CPA Section 3.4.2 will be edited to indicate Small Quantity Generator status is anticipated.		Our preliminary response referred to Section 3.4.2, which does not exist in the current CPA. Sections 3.8.3 and 3.9.8 both state that the Mine is expected to be in the "small quantity generator" category as defined by the EPA. The Waste Management Plan (CPA Appendix D3) assumes an SQG status. LQG requirements are provided in the event the Mine becomes an LQG; however, this is not expected nor planned.
322	USFWS	Wildlife and Vegetation	1	Cyanide Management Plan, Page 5	<b>Comment:</b> The CMP cites the Wildlife Mitigation Plan in reference to "Standard of Practice 4.4 Implement measures to protect birds, other wildlife and livestock from adverse effects of cyanide process solutions." and "Standard of Practice 4.5 Implement measures to protect fish and wildlife from direct and indirect discharges of cyanide process solutions to surface water." No mention of cyanide management is included in the Wildlife Mitigation Plan. <b>Proposed Resolution:</b> The cyanide management plan and wildlife mitigation plan must address measures to protect fish and wildlife from exposure to cyanide.	Updated the Cyanide Management Plan to include wildlife protection measures. See Appendix D6 of the CPA for the Cyanide Management Plan. The Wildlife Protection Plan, also provided in Appendix D to the CPA, discusses cyanide storage in relation to wildlife protection.	Yes. Technically, the cyanide management plan references the wildlife protection plan. However, Cyanide storage is not discussed relative to wildlife protection.	Yes	On page 6, the CMP states that the project will "...satisfy the more stringent Oregon standard" of 30 mg/L, but then reverts to the Code guideline of 50 mg/L in this statement. "There are no open waters where WAD cyanide will exceed the Code guidance of 50 mg/L in the Grassy Mountain process plant design." So it is unclear which concentration will be used for the standard	USFWS	The cyanide concentration must be clarified so that USFWS can accurately evaluate potential impacts of proposed activities and potential effectiveness of proposed mitigation. The discrepancy in information presented presents a major data gap consistent with Category 1.	The CMP text has been updated to indicate that the concentration of WAD cyanide in discharge to the TSF will have an operating target of less than 15 mg/L. This is lower than the maximum concentration allowed by the Code (50 mg/L), and half of the not-to-exceed value that is allowed by Oregon Administrative Rules (30 mg/L).  Please note that the Cyanide Management Plan (Appendix D6) edits are tracked in the document submitted for review on 1/30/2023. The finalized plan will be stamped and hyperlinked with the CPA submission.	
355	WRD	General	4	4.2.1 Page 5	<b>Comment:</b> "MALH 227" is a typo, referring to the OWRD logid of Well 1.	An errata sheet has been prepended to Appendix C5, Well Field Design Report, to identify the typo in Section 4.2.1, Well Construction.	No	No	Not addressed in report, only listed in errata. Needs to be fixed within text of document	WRD	The errata sheet is the solution to correcting the typographical error because the author is no longer available.		Calico will be working with the agency to resolve this issue during permitting.
356	WRD	General	4	4.4.10 Page 19	<b>Comment:</b> The word "casing" appears twice in the same sentence, "If the casing has excessive mineralization on the casing..."	Left as is in consideration of the effort to revise, identify, and resubmit this report to address the poor wording, and also considering that the poor wording does not detract from document completeness and does not affect the context of the statement.	No	No	Not addressed. Truly does not affect the understanding of the report. Fix upon final draft.	WRD			Calico will be working with the agency to resolve this issue during permitting.
363	DEQ	Land Use	2	General	<b>Comment:</b> OAR 340-093-0130 requires that the site characterization report includes, among other things, a list of adjacent landowners and a map showing the boundaries of those adjacent properties. This was not found in the application.	OAR 340 093 0130 is not applicable. The Site Characterization report as required by OAR 340 093 007003 is applicable for a new disposal site permit. This project is not applying for a disposal permit. This application does include a list of adjacent landowners and a map showing the boundaries of those adjacent properties. See Table 1 and Map 3.	Yes	Yes	The project includes four solid waste disposal facility elements: - the TSF (a captive industrial solid waste landfill, intended as a permanent solid waste disposal facility that also functions as a wastewater containment facility). - the waste rock dump (a captive industrial solid waste landfill, intended as a temporary solid waste storage facility). - concrete neutralization of the waste rock (a solid waste treatment facility). , and - the underground backfill (a solid waste land disposal facility).  ORS 459.215 provides facilities operated under a permit issued under ORS 468B.050 are not required to obtain a permit from the Department of Environmental Quality pursuant to ORS 459.205. However, exclusion from the permit	DEQ		ORS 459.215 provides those facilities that operate under a permit issued under ORS 468B.050 are not required to obtain a permit from the DEQ pursuant to ORS 459.205. However, compliance with ORS 459.005 to 459.105 and 459.205 to 459.385 as well as OAR 340-093, -095, -096 and -097 is required. A cross-reference to OAR 340-093, -095, -096, and -097 rules was developed and submitted for agency review on February 1, 2023, and will be incorporated into the CPA. This cross-reference demonstrates compliance with rules that are applicable to the TSF and the THRSF. The underground backfill meets the definition of "Clean Fill" per OAR-340-093-0030(16) and therefore is not a regulated solid waste activity. The concrete rock material is exempt from the definition for "Disposal Site" per OAR-340-093-0030(38) and therefore is not a regulated solid waste activity.	

## New CPA Review Comments

Topic	Comment Category	CPA Reference	Comment	Agency	SLR-assigned Comment #	Preliminary Response to Comment (11/7/22)	Agency Comment	Response (2/1/23)
B	Reclamation of past exploration drill holes, pads, and roads.	3 SRCE et al	Any past disturbance related to exploration drilling (drill holes, roads, and pads) within the footprint of the Consolidated Permit Application area needs to be reclaimed and addressed under this CPA and SRCE reclamation cost estimate. There is a lot of ground disturbance from previous exploration that needs to be accounted for in these plans (see available aerial imagery) and that needs to be accounted for in the SRCE sheets. Ask: Accounting of all past exploration activity and proposed reclamation with the CPA Permit Area	DOGAMI	373	The past disturbance related to exploration are covered under a bond with the BLM. The exploration that was conducted on private land where you likely see current disturbance were permitted and have the associated reclamation requirements defined in OAR 632-033-0025.  All previous exploration have been reclaimed and released by state or have its owns bond with State and BLM.	I agree that OAR 632-033-0025 applies to the existing exploration disturbance within the CPA boundary, however, there are no exploration permits still covering the existing un-reclaimed disturbance so it must be reclaimed under the CPA.	All previous exploration have been reclaimed and released by state or have its owns bond with State and BLM.
C	Basalt Quarry	2 Basalt Borrow Quarry OPA 2021-10.pdf	Department of State Lands (DSL) concurrence letter (WD #2018-0115). Was this letter submitted with the application and if so where in the application materials is it? The concurrence letter needs to be in the CPA materials if it is not already. If it is already in the CPA material, there needs to be a clear reference to the location of the document in the text of the CPA.	DOGAMI	374			CPA Section 2.20, Wetlands, states the following: "The Grassy Mountain Mine Project Draft Wetland Delineation Report (Appendix B20) was submitted to the Oregon Department of State Lands (DSL) on March 1, 2018, and DSL concurrence was received May 3, 2018."  Appendix B20 has been prepended to include the DSL concurrence letter and attachments.
	File naming	4 Entire Application Package	The individual files need to be named per the table of contents to support an efficient review by the regulatory agencies. This includes the appendices. The example is: The table of contents for appendices refers to the "Basalt Borrow Quarry OPA 2021-10.pdf" as "E2. Abbreviated Operating Permit Application – Grassy Mountain Basalt Borrow Quarry" which makes it harder for reviewers to find information.	DOGAMI	375	Hyperlinks are used per DOGAMI's request so relevant documents could be opened from the CPA, and file names and their locations would not have to be known. The directory structure groups appendices by subfolder categories and file names match report titles (Baseline Studies, Design Reports, Management, Plans, and Permit Applications; stand-alone appendices are saved outside of these subfolders). Appendix alpha-numbers have changed in some cases through the review/response process. Responses to comments will include references to both appendix alpha-numbers and titles.		Appendix files will be renamed to include the alpha-numeric designation in the CPA's table of contents.
	Soil cover on basalt quarry	3 Soil Borrow plan set	The plan set for the soil borrow sites notes that "Closure Cover Area", which includes the basalt quarry, will have two feet of soil/growth medium placed. That is inconsistent with the Reclamation plan for the basalt quarry which only proposes to place one foot of soil/growth medium on the reclaimed Basalt Quarry impact area.	DOGAMI	376	The Quarry permit application will be modified to state 12" of growth media will be placed.		The Quarry permit application will be modified to state 12" of growth media will be placed.
	Cross section notation labeling	4 Soil Borrow plan set	The labeling of cross sections is confusing in the plan set. The maps note the following cross section labels: "A/4", "B/4" and "C/4" on figures 2 and 3 but the cross sections are labeled "A/2", "B/2", and "C3/3" on figure 4. It is not clear to the reviewer if the cross sections on figure 4 are the same as depicted on figures 2, and 3.	DOGAMI	377			Figures will be updated.
	Closure Cover Borrow Area	4 Sect. 3e of the OPA app.	States no perimeter fence around the PB. However, sect. 3.6 of the CPA describes fencing installation at the site. Should probably reference this in the OPA app. for consistency.	DOGAMI	378	There is no perimeter fence around the Quarry, there is a perimeter fence around the entire project site. We can update the permit application, but this is not completeness.		The quarry application, section 3e states a fence will be installed along the permit boundary for safety or visual screening and that the fence will be maintained for the life of the surface mine.  This fence is not specific to the quarry, but is surrounding the entire project area as presented in the figures.
B	General	2 General	Appendices are not identified in directory structure as they are in CPA Index. For example, there is no Appendix D1 in the directory structure, instead there is a file named Reclamation Plan 2021-11 in the Management Plans Directory in the 040 Appendices directory, this leaves the reviewer to infer the document to review and does not make it explicitly clear which file is appendix D1. There is no indicator in the document that it is appendix D1.	DOGAMI	379	See response to comment #375.		Appendix files will be renamed to include the alpha-numeric designation in the CPA's table of contents.
	Appendix D1 [Reclamation Plan]	4 Disturbance_Polygons_20211201.shp	Field = "Type" Attribute = "Concrete Pad". Misspelled word Concrete	DOGAMI	380	Spelling error has been corrected.		Shapefiles were updated with an additional description column, and revegetated and disturbance polygons are now separate files. Updated files include the following: •Reclamation Polygons Revised 20221212.zip •Reclamation Contours Revised 20221212.zip •Disturbance Polygons Revised 20221212.zip
C	Appendix D1 [Reclamation Plan]	2 Figures 3-9	Reclamation contours not present in GIS data.	DOGAMI	381	Topography will be added to the zip file.		Shapefiles were updated with an additional description column, and revegetated and disturbance polygons are now separate files. Updated files include the following: •Reclamation Polygons Revised 20221212.zip •Reclamation Contours Revised 20221212.zip •Disturbance Polygons Revised 20221212.zip
C	Appendix D1 [Reclamation Plan]	2 Figures 4-9	Revegetated areas not present in GIS data.	DOGAMI	382	These are found in the shapefile in the "Reclaim" field.		Shapefiles were updated with an additional description column, and revegetated and disturbance polygons are now separate files. Updated files include the following: •Reclamation Polygons Revised 20221212.zip •Reclamation Contours Revised 20221212.zip •Disturbance Polygons Revised 20221212.zip
A	Appendix D1 [Reclamation Plan]	1 Quarry Stormwater Diversion Channel	What hazard exists requiring permanent exclusion fencing and does that hazard align with final reclamation	DOGAMI	383	Permanent exclusion fencing is not proposed nor is it required by the state of Oregon or the BLM. The project perimeter fence will be removed at reclamation. However, the stormwater diversion ditch will remain in place, also unfenced. One of the reasons we have elected to leave the stormwater ditch to continued protection of the benches and as a deterrent for the public following fence removal.		Permanent exclusion fencing is not proposed nor is it required by the state of Oregon or the BLM. The project perimeter fence will be removed at reclamation. However, the stormwater diversion ditch will remain in place, also unfenced. One of the reasons we have elected to leave the stormwater ditch to continued protection of the benches and as a deterrent for the public following fence removal.
C	Well Field Design Report	2 Production and Monitoring Wells Shapefile 20211221.shp	Well name attributes do not match Well Field Design Report.	DOGAMI	384	The shapefile has been updated to include the matching names.		Wells have been renamed in the "WellName" column of the attribute table to match figures 8 and 9 of the "Well Field Design Report 2019-07." The updated shapefile has been added to the deliverables folder under "Production and Monitoring Wells Shapefile Revised 20230119.zip."
C	CPA Consistency	2 Maps or Figures	In line all maps are referred to as Map 1, 2; however, maps 1,2, & 6 are identified as figures on the map.	DOGAMI	385	Text in title blocks have been updated to maps instead of figures.		Text in title blocks have been updated to maps instead of figures. Revised shapefiles were submittal on 1/23/2023.
B	CPA Figures	4 Map/Figure 6	The symbology(line width) used for estimated flood hazard area misrepresents the presence of flood areas in the vicinity of the project. Outline width obscures small features.	DOGAMI	386	The flood area is not made up of a line feature where the width can be adjusted. The area is based on two polygon layers (FEMA's 2017 Estimated Flood Hazard Area and 1984, 86, and 87 Effective Flood Hazard Area)		The following edits have been made to help increase the legibility of the flood area within the figure: •The Flood Area's outline has been turned off so only the polygon fill can be seen. •The Flood Area's color has been changed to a darker blue to help it stand out more in the figure. •The transparency of the base map has been increased from 0% to 20% to help contrast with the features being shown.
	Shapefile Review	4 Land Claims Shapefile 20211221.shp	Two polygons are not attributed	DOGAMI	388	The two polygons were duplicates of a lode mining claim already accounted for. The two polygons were deleted.		The two un-attributed polygons designated were duplicates of a lode mining claim already accounted for. The two polygons were deleted and the updated shapefile has been saved under "Land Claims Shapefile Revised 20221101.zip".
B	General	2 General	Hyperlinks in text are helpful but there is no information as to what file in what location is being opened.	DOGAMI	389	See response to comment #375.		Appendix files will be renamed to include the alpha-numeric designation in the CPA's table of contents.
C	General	2 General	Through-out the CPA there are bold portions of text reading "Error! Reference source not found." I suspect these are supposed to be hyperlinks to appendices, figures, tables, or maps that are not working.	DOGAMI	390	Six erroneous cross-references to maps and figures have been corrected.		No update to preliminary response given.

**New CPA Review Comments**

t a b l e	Topic	Comment Category	CPA Reference	Comment	Agency	SLR- assigned Comment #	Preliminary Response to Comment (11/7/22)	Agency Comment	Response (2/1/23)
						391			
B	Groundwater/spring impacts	1	Section 2.9.3.2 Groundwater production	The conclusion that only Lowe spring may be impacted by well production does not align with conclusions from the Groundwater Report that states Poison Spring, the Tank East of Negro Rock, and Lowe Spring may be impacted (Vol. II pg. 94 Groundwater Report). Please clarify.	ODFW	391	Section 2.9.3.2 does not conclude that only Lowe Spring is impacted by well production. The text states that "Drawdown effects are observed up to approximately 2 miles from the current highest producing well (PW-4), using a threshold of 0.5 ft of drawdown." It also says that Lowe Spring, the spring closest to the wellfield, indicated the maximum drawdown of 12 feet.	There needs to be increased clarity on the estimated impacts to other area springs. What will the impact be at the other springs. Category 1 and 2 "issue with consistency".	The text in Section 2.9.3.2 will be revised to be consistent with the results of the Lorax groundwater modeling report recently submitted to the TRT.
	Reclamation seeding	4	Reclamation Plan, Section 5.1, Pg 13, Table 5	Reclamation should result in a self-sustaining ecosystem comparable to undamaged ecosystems in the immediate area (OAR635-420-0060(5)). This means there is a greater requirement to provide a holistic approach when reestablishing vegetative communities for wildlife habitat, which includes perennial grasses, sagebrush, and annual forb species. ODFW requests the addition of Wyoming big sagebrush (seeds or plugs) and native forbs to the proposed seed mix. It will be important to consult with BLM and ODFW on proposed forb species.	ODFW	421	Understood and discussed previously with the BLM. The seed mix can be altered during the permitting process following acceptance of the application and Calico welcomes input from ODFW and the BLM as this permitting progresses.		Understood and discussed previously with the BLM. The seed mix can be altered during the permitting process following acceptance of the application and Calico welcomes input from ODFW and the BLM as this permitting progresses.
B	Post-Closure Monitoring	1	Reclamation Plan, Section 7.2, Pg 24, Bullet # 2	The vegetation reclamation component of the monitoring section is vastly incomplete and provides little information to gauge compliance with state fish and wildlife policies. ODFW requests that reclamation success criteria be derived to identify and measure habitat percent vegetation characteristics, species composition, structural components, and address noxious and invasive weeds. Vegetation growth in arid locations of southeast Oregon can take several years to become established and several decades to mature. There is significant risk in reclamation failure. To reduce risk, ODFW requests monitoring occur frequent and iterative after reclamation actions have taken place. ODFW requests that reclamation monitoring criteria be derived and designed for long term implementation with adaptive management measures and process identified. These criteria should consider mitigation contingencies for if reclamation success cannot be achieved. Reaching the above suggested success criteria would release the reclamation burden and achieve the standard of a self-sustaining ecosystem as established in state policy.	ODFW	422	What we proposed meets state requirements, specifically OAR 632-037-0070 and OAR 632-030-0027. Additionally, Section 7 of the Reclamation Plan states, "A detailed post-closure monitoring plan, including monitoring methodology, parameters, and frequencies, will be submitted to the BLM and DOGAMI prior to execution. The details of the monitoring to gauge success will be defined in the plan that will be submitted to DOGAMI for approval prior to execution. We did not want to get into a high level of detail at this time considering the execution of this monitoring will not occur for 13-15 years from the submittal of this application.	Reclamation must also adhere to OAR 635-420-0055. Details of the monitoring to gauge success must also be submitted as part of the Mitigation Plan per OAR 635-420-030(5). Comments regarding the future execution of reclamation monitoring do not excuse the applicant from addressing the above OARs. This remains a category 1 comment.	We cannot find OAR 635-420-0055.  OAR 635-420-030(5) states "Access to a chemical process mine by mine employees and the public shall be controlled to minimize harassment of wildlife and collisions between vehicles and wildlife. On publicly owned lands, these controls shall be developed in conjunction with, and shall be subject to the approval of, the applicable public land management agency."  Perhaps there is a typo here. As it relates to the post-closure monitoring and certification of self-sustaining ecosystems, OAR 635-420-0110 details the requirements and we can define those in the reclamation plan.  If ODFW prefers, the reclamation plan can be updated to provide the quantitative measures, based on the baseline report, in the closure plan at this time; however, we prefer not to include methodology at this time considering the monitoring activities will not occur for nearly 20 years. Again, if ODFW prefers we can detail the methodology make the necessary demonstrations post-closure for bond release. Please advise on how to proceed.  OAR 632-030-0027 states, "Generally, final revegetation with native species of all disturbed areas consistent with future use is required unless the Department finds it unreasonable. The Department will, in most instances, consider revegetation successful if it provides a similar plant density in terms of ground or canopy cover and it is comparable to undisturbed areas in similar landscape positions. In arid or semi-arid regions, the Department may allow three years of growth prior to a revegetation evaluation. Otherwise, revegetation will be evaluated after one growing season. Vegetation test plots may be required to ensure establishment feasibility and/or long-term habitat goals in the reclamation plan. Vegetation monitoring may also be required to insure success of the approved plan."  OAR 632-037-0070 states, "Monitoring systems by which the success of the proposed reclamation and closure can be measured for bond release."
B	Post-Closure Monitoring	1	Reclamation Plan, Section 7.2, Pg 24, Bullet # 5	Noxious weed treatment should not be bound by a set number of years as indicated in bullet # 5. ODFW requests that reclamation success criteria be derived and used to govern how long noxious weed treatment is required. The target for reclamation is a self-sustaining ecosystem comparable to undamaged ecosystems in the immediate area. Noxious weed treatment should occur accordingly to achieve this standard or provide additional mitigation if reclamation success is unattainable.	ODFW	423	Noxious weed monitoring and potential treatment aligns with the vegetation monitoring schedule and state requirements. We cannot have an open ended post-closure monitoring schedule for the purposes of the plan and the RCE. The target is stated and we propose meeting that criteria within 5 years of revegetation, which is 2 years longer than OAR 632-030-0027.	Information that addresses how reclamation will adhere to OAR 635-420-0055 is still missing. This is upgraded to a category 1 comment. Necessary information not present for agencies to draft permits that meet statutory requirements.	We cannot find OAR 635-420-0055. See response to comment #422.
	Wildlife Receptors	1	Wildlife Protection Plan, pg. 6	Potential wildlife receptor list is incomplete. For example, Pronghorn antelope, elk, grey partridge, various other waterfowl and mourning dove are missing but species that should be included.	ODFW	424	Can ODFW please provide a complete list of species they would like to address?		The revised ERA cites Appendix E of the Wildlife Resources Baseline Report (EMS, 2020) as the list of wildlife that may be present near the TSF. This appendix lists the wildlife observed during field studies near the site. This list includes 62 birds, 26 mammals, 11 reptiles, and 1 amphibian.  The ecological screening values used in the updated ERA were the lowest of several values from different bird and mammal indicator species representing multiple feeding guilds (e.g., herbivores, invertivores, and carnivores). In general, indicator species were selected to conservatively represent a guild. For example, many of the indicator species have small body sizes relative to other members of the guild, and small-bodied organisms tend to have relatively high food and water ingestion rates when normalized by body mass. The ecological screening values used in the revised ERA are expected to be protective of non-T&E birds and mammals at the site.
B	Ecological risk to wildlife	1	Ecological Risk Assessment (p.1 Section 2.1)	It appears that the reclaim pond is considered the only area at the facility that could pose ecological risk. Provide more detail as why the tailings storage and waste rock storage areas will not pose risk over time (will leachate from the waste rock be covered and lined and only drain to the reclaim pond? Will the liner completely prevent leachate from entering surface or groundwater, and how long with the liner last?) Is there expected to be any maintenance concerns with the liner, and has this process been used successfully at other sites to prevent groundwater and surface water contamination from tailings leachate?	USFWS	457a	The tailings supernatant pond (the pool on top of the tailings impoundment) is the focus of the ecological risk assessment. The reclaim pond will contain generally the same water, but is much smaller. There is no water stored in the waste rock storage facility; what water falls on the TWRSF drains to the reclaim pond. The design of the containment systems (liners, drains, etc.) for the TSF, TWRSF, and Reclaim Pond have been the focus of review by ODEQ engineers and they are largely satisfied that the designs are protective in the long and short term.	While it is encouraging that ODEQ engineers have been focusing on this concern, insufficient information has been provided to allow USFWS to assess ecological risk. The risk assessment appears to focus only on the drinking water pathway, whereas waterfowl such as mallards would use the ponds and feed on aquatic plants and invertebrates. Therefore, the dietary pathway should also be considered in the risk assessment. In addition, ecological risk assessment is needed for wildlife receptors (ex. amphibians) in contact with potentially leaked reclaim and supernatant pond waters hydrologically connected to local groundwater/springs. FWS has not had an opportunity to review the TSF and Reclaim Design plans in detail and would welcome reviewing these in collaboration with ODEQ and/or other subject matter experts.	The ecological risk assessment has been revised to include more detail on the dietary pathway. The revised ecological risk assessment will be included with the next submittal of the Consolidated Permit Application.  There is no hydrologic connection between waste containment facilities (i.e., the TSF, TWRSF, and Reclaim Pond) and local groundwater/springs, therefore this pathway is incomplete.

New CPA Review Comments

Topic	Comment Category	CPA Reference	Comment	Agency	SLR-assigned Comment #	Preliminary Response to Comment (11/7/22)	Agency Comment	Response (2/1/23)
Ecological risk to wildlife		2 Ecological Risk Assessment (p.4 Section 2.3)	Acid mine drainage would be expected to result from this operation. Acid mine drainage has had adverse effects to fish and other aquatic resources, as well as to wildlife, at other mine sites. Please indicate more specifically how acid mine drainage will be managed at this site (specifically how drainage will be treated, including how long lime will be needed to be added to wastewater to maintain a more neutral solution and the source of the lime (e.g., were will the lime be sourced, and will it be stored on site in sufficient quantities to maintain a more neutral solution?)	USFWS	458	The Geochemistry BDR (Appendix B6 of the CPA) indicates that the tailings and waste rock generated by this project are potentially acid-generating. The mine design, operations plans, and closure/reclamation plans have been developed on the basis that the environment must be protected from acidic drainage and leaching metals. Section 3 of the CPA describes the design and operations, including underground mining and backfilling (Section 3.2.2), mine drainage/seepage (Section 3.2.3), cyanide detoxification and tailings deposition (Section 3.3.9), surface contact water (Section 3.3.11), tailings storage facility design (Section 3.6), waste rock management (Section 3.7), chemical storage and use (including lime storage; Section 3.8), water supply and management (Section 3.9.3), water management (Section 3.10), monitoring (Section 3.12) and reclamation and closure (Section 4). Together, this information indicates very specifically how acid mine drainage will be managed at this site.	Section 3 of the CPA does address specific concerns regarding how acid mine drainage will be handled at the site. A key concern remains as to how long after closure acid waste waters will need to be treated with lime, and how will this be managed after closure (this also applies to maintenance of the tailings supernatant pond). FWS has not had time to review the Geochemistry BDR Appendix mentioned in Calico's comment in detail at this point and would welcome the opportunity to review this with other subject matter experts.	Lime is being added to the tailings to meet the requirements of OAR 340-043-0130(2), which require adjusting the Net Neutralization Potential and the Neutralization Potential Ratio of the tailings to levels that render the tailings non-acid generating (i.e., net neutralizing). There is no treatment of wastewater with lime. Also, as described in the Reclamation and Closure Plans, the supernatant pond is removed as part of closure of the TSF. The TSF is then closed with an impermeable cover so no further water infiltrates the tailings. The Reclaim Pond is used for a period of time to manage residual drawdown from the tailings mass after TSF closure, then the Reclaim Pond is converted to an evaporation cell (a lined pond full of moist/wet soil). All other process equipment will be decommissioned, so no other wastewater will be generated following closure.
Ecological risk to wildlife		1 Ecological Risk Assessment (p.5 Section 3.2)	Please confirm that the source of all the water required to operate the facility will be from precipitation and make-up water, with no surface water or groundwater to be required. Clarify what is the source of the "fresh make-up water", as it appears from Figure 3-1 to be completely from the reclaim pond.	USFWS	459	The water sources for the mine are groundwater from mine dewatering and from production wells, precipitation, and storm runoff. Water recycling is a key component of the mine design and operating procedures. Section 3.10 of the CPA describes the water management plan and presents a site water balance that presents a quantitative description of the routing and storage of water for the mine.	Per the information provided in the applicant's response (and section 3.9 and 3.10 in the CPA), Figure 3-1 in the Ecological Risk Assessment appears somewhat misleading as per the previous comment. Please revise Figure 3-1 and description in section 3.2 for clarity, adding or identifying the groundwater component.	The ecological risk assessment has been revised to include more detail on the sources of water for the mine. The revised ecological risk assessment will be included with the next submittal of the Consolidated Permit Application.
Ecological risk to wildlife		1 Wildlife Protection Plan (p.6), Ecological Risk Assessment (p.14)	There is insufficient detail included in both of these documents to assess the ecological risk to wildlife from the reclaim pond and supernatant waters. To sufficiently assess wildlife risk, the assessment must produce an exposure profile for species present (EPA 2018). Because the exposure (in terms of intensity, space, and time) may vary depending on each species, a single profile is insufficient. The document states it uses an exposure assumption that 100% of the ecological receptor's water needs is obtained from the supernatant water and reclaim pond, but it is unclear from this approach if this evaluates only consumption of the water or if other pathways of exposure were considered (e.g. physical contact). It is also unclear what duration of exposure was assessed (e.g., one day's worth of water needs vs. multiple consecutive days).	USFWS	460a		As mentioned in the response to Comment #424, the ecological screening values were calculated using exposure assumptions for indicator species of several different feeding guilds (LANL, 2017). These screening levels were calculated assuming that bird and mammal indicator species have an area use factor (AUF) of 1. This exposure assumption means that the entire exposure (i.e., water supply) of an indicator species was from the same location (typically a single contaminated site). The water screening levels are calculated assuming only drinking exposures. Although wildlife may also have dermal contact with water while drinking, dermal exposures are expected to be insignificant relative to assumed drinking. SLR is aware of no established EPA guidance for incorporating chemical uptake via dermal contact with water by wildlife in conventional ecological risk assessments.  Please clarify what guidance document is being referenced with the "EPA, 2018" reference. Insufficient information is available in the comment to identify this reference."	
					460b		The revised ERA includes a table with the ecological screening levels used in the evaluation. The source of the screening values was the Oregon DEQ. The DEQ cites LANL 2017 as a source of many screening values. Because default DEQ screening values were adopted in the revised ERA, a detailed description of their derivation is not provided (it is assumed DEQ has developed appropriate screening levels). Details regarding the toxicity data (e.g., LOAEL, NOAEL, etc.) used to develop Toxicity Reference Values (TRVs) should be available in the sources cited by DEQ (e.g., LANL, 2017).	
					460c		The revised ERA describes how chemical-specific hazard quotients were calculated.	
					460d		The revised ERA includes a CSM and other details of a screening-level risk assessment.	
Ecological risk to wildlife		1 Ecological Risk Assessment (p.145 Section 5)	Please expand the ecological risk assessment and at the very least prepare a complete conceptual site model for this site. This will help better identify which pathways would be complete and significant. For instance, only wildlife receptors are listed in Table 5-1 and used in the brief ecological risk screening. Why would the pathway for aquatic receptors be incomplete or insignificant? Other receptors should be addressed in this evaluation. The Oregon guidelines for conducting ecological risk assessments at <a href="https://www.oregon.gov/deq/hazards-and-cleanup/env-cleanup/pages/era.aspx">https://www.oregon.gov/deq/hazards-and-cleanup/env-cleanup/pages/era.aspx</a> may be helpful in this regard.	USFWS	461		The TSF will be an engineered feature designed to temporarily manage materials used in proposed mining operations. When mining operations end, this feature will be appropriately decommissioned. By design, the TSF will not be operated in a manner that would promote the establishment of a natural or semi-natural aquatic system. For example, tailings will be regularly discharged into the TSF, and water from the supernatant pool and other areas of the TSF will be regularly extracted via pumping and removed from the pond. These regular disturbances to media within the engineered TSF are likely to preclude development of a semi-natural aquatic system.  The TSF will not be connected to natural surface waters, and fish or other wholly aquatic organism will not be able to colonize the TSF through water. Although it is possible that the volant life stage of invertebrates with a separate aquatic life stage (e.g., mosquitos) could fly into the pond, the TSF will not represent good breeding habitat for aquatic insects. Similarly, seeds of aquatic plants could potentially migrate into the TSF, but again, disturbances to media within the TSF are likely to prevent the establishment of a semi-natural aquatic plant community.  The CSM in the revised Ecological Risk Assessment assumes that wildlife (local birds and mammals) may contact chemicals in supernatant of the TSF via drinking. Under this assumed exposure, chemicals in supernatant are not expected to cause unacceptable adverse effects to wildlife populations.	
Groundwater drawdown		1 CPA p.44, Groundwater Baseline Report (Vol. III, p. 51)	The CPA only describes impacts to Lowe Spring, but the Groundwater Baseline Report indicates that Poison Spring and the Tank East of Negro Rock will also be impacted. Vol III of the Groundwater Report estimates drawdown effects up to 2 miles from the pumping well PW-4, which would appear to impact up to four named springs. This inconsistency should be clarified/corrected.	USFWS	463a	See response to comment #391.	Response to comment #391 does not address this comment. In order to address this comment, the applicant should clarify and/or add additional information that clearly describes the impacts to all springs. Section 2.9.3.2 lacks summarization of potential impacts to 16 of the 17 baseline springs mapped in the study area. The omission confers a sense that no impacts to these springs are anticipated based on pumping study.	The text in Section 2.9.3.2 will be revised to be consistent with the results of the Lorax groundwater modeling report recently submitted to the TRT.

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						463c			
B		1		The extent of impact may be exacerbated by climate change, yet the Groundwater Baseline report does not include climate change effects in its projections.		463c	The Groundwater Baseline Report has been accepted.	The conclusions drawn in CPA p. 44 do not consider impacts resulting from drought and climate change. This is a major data gap. At minimum, adaptive management to respond to negative impacts to ground water in light of drought/climate change should be incorporated in to the permit.	Section 2.9.3.2 on page 44 of the CPA summarizes the results of the baseline characterization studies for groundwater that are defined in the Environmental Baseline Study Work Plans (CPA Appendix B23) that were approved by the Technical Review Team. The baseline studies are a characterization of existing conditions, not impacts. The Technical Review Team has accepted the Groundwater Baseline Data Report.  Perhaps the potential environmental effects that could result from the project in consideration of possible climate change scenarios will be assessed as part of the environmental impact assessment that must be performed by the Bureau of Land Management.
B	Collection pond lining system	2	Reclamation Plan (p. 17)	What is the collection pond lining system made of? The Reclamation Plan states that it will be buried in place. What is the potential for soil contamination as the lining system degrades underground?	USFWS	465	The design of the containment systems (liners, drains, etc.) for the TSF, TWRSF, and Reclaim Pond have been the focus of review by ODEQ engineers and they are largely satisfied that the designs are protective in the long and short term. The closure and reclamation plans have been the focus of DOGAMI and ODEQ engineers, and they are generally satisfied that the closure and reclamation plans are protective of the environment (although there are outstanding comments and requests for information on details of the plans).	While it is encouraging that ODEQ engineers have been focusing on this concern, insufficient information regarding the potential for leakage and the design life span of methods/products in the containment system have been provided. This information should be included in the TSF Design Report. FWS would welcome the opportunity to review these plans with ODEQ and other subject matter experts.	Response acknowledged.
	Post-closure monitoring	3	Reclamation Plan (p. 24)	Post-closure monitoring of the fence to prevent wildlife access from the reclaim pond and E-cell is not specific. The plan states that it will be "inspected routinely". The monitoring should be conducted quarterly at minimum and be consistent with the frequency of monitoring specified in the Wildlife Protection Plan.	USFWS	467	The Reclamation Plan will be updated to state the fence surrounding the E-Cell will be inspected quarterly for Phase 1, 1st 5 years, Semi-annually, following 5 years, and annually, following 10 years, to align with groundwater monitoring. This aligns with the post-closure monitoring proposed.		The Reclamation Plan will be updated to state the fence surrounding the E-Cell will be inspected quarterly for Phase 1, 1st 5 years, Semi-annually, following 5 years, and annually, following 10 years, to align with groundwater monitoring. This aligns with the post-closure monitoring proposed.
	Water Supply	3	Appendix C5 [Well Field Design Report]	Considering the repeated instances of tested wells encountering negative boundaries, the likelihood this will occur within the slated production wells appears likely. There should be a backup water supply plan in place should the wellfield prove unable to produce the volume of water necessary for operations. In the eventuality that a secondary water supply is needed, there are likely to be additional impacts to other resources (additional roadway traffic, excavation for pipelines, etc.) that should be considered before permit issuance.	WRD	477	Category 3 comment. Alternatives that can be considered for backup/alternative water supply include construction of a second wellfield in another location (which would require analysis of additional impacts), modifying operations to recycle more water (e.g., dewatering or thickening tailings before deposition in the TSF), or processing at a lower rate that matches available water supply.	During the draft permit phase, contingency plans should be outlined for water supply issues.	Calico will be working with the agency to resolve this issue during permitting.
	Monitoring wells	3	Appendix C5 [Well Field Design Report]	The biggest ecologic concern that OWRD has are impacts to local springs by increased pumping of groundwater in the area. There are monitoring wells planned to assess changes to the water table around the TSF but none listed as part of the wellfield design. Existing wells are not positioned to observe changes in head elevations in the areas of nearby spring discharge such as Lowe Spring, for which drawdown is predicted to be between 0-12 feet (section 2.9.3.2) as a result of proposed groundwater production. The monitoring plan should identify the likely source aquifer for nearby springs (Lowe Spring, Poison Spring, Government Corral Spring) and propose the construction of monitoring wells which target this aquifer and that of the production wells in the projected area of influence of the production wells (between production wells and local springs). The monitoring plan should also include a schedule for measurement and reporting, no less frequent than quarterly.	WRD	478	Category 3 comment. There should be monitoring of water levels at new wells/piezometers installed in the vicinity of the production wellfield, and also monitoring of springs in the local vicinity of the wellfield. A detailed plan can be prepared during permit preparation.	Required mitigation measures put in place in the case of observed decreases in spring flow, or indications of declines in monitoring wells in the source aquifer(s) of nearby springs.	Calico will be working with the agency to resolve this issue during permitting.
B	Land Use	2		Please provide a complete, full-color, text-searchable copy of all materials (including exhibits) submitted to Malheur County as part of the CUP application.	DOGAMI	479			The Malheur County LUCS was submitted as Appendix E1 in our CPA submittal package in 2021. With the addition of the air permit, the LUCS is now Appendix E2. Appendix E2 is now searchable and in color but note that the signature on pdf page 6 became obscured during the conversion.  In addition, Calico submitted the Malheur County Land Use Decision and Exhibits to DOGAMI on May 16, 2022. This document includes figures and text from the 2019 Conditional Use Application (CUP). The decision document is provided as a searchable PDF file, but its figures are black and white. The figures and related text can be found in color in the 2019 CUP, which is also provided as part of this document submittal.
B	Land Use	2		Please provide a general description of surface alterations on the BLM parcel. The CUP application provides a description for the Patent parcel but not the BLM parcel.	DOGAMI	480			The Project Access Area is located on public land administered by BLM, and private land controlled by others. The main access to the Mine and Process Plant Area will utilize an upgrade of the existing BLM road and County easements across private land. This road will need to be upgraded to include straightening and widening in portions of the road and have a gravel roadbed. The Road Design Report (Appendix C1) describes the alterations with the road design.  The existing powerline will be upgraded, and a new power line will be constructed along the BLM and county roads. New power poles will be constructed for approximately 25.2 miles from the connection to the existing powerline to the Mine and distribution powerlines within the Permit Area. Details of the power line work are described in HDR's report, Calico – Grassy Mountain, 34.5kV Line (Appendix C6).  In general, the proposed mining and metal processing operations will consist of an underground mine, located in the private parcel, and ore processing facilities, including a conventional mill and TSF, a TWRSF, and other support facilities on BLM-administrated land.  The Project as described in Section 1.3 of the CPA, will include the following major components:

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					480 (cont'd)			<p><b>On Private Parcel</b></p> <ul style="list-style-type: none"> <li>An underground mine, with Mine portal, decline, and ventilation shaft;</li> </ul> <p><b>On BLM Parcel</b></p> <ul style="list-style-type: none"> <li>TF with Tailings Embankment, Tailings Impoundment, and Reclaim Pond;</li> <li>TWRSF;</li> <li>Process Plant Area, which includes the Process Plant building, control room, crushing facilities,</li> <li>conveyors, ore bins, control rooms, CIL processing plant, reagent storage building (including</li> <li>chemical and reagent storage), gold room, and Collection Pond;</li> <li>Infrastructure and ancillary facilities that include Project site main gate and guard house,</li> <li>administration office and change house, assay laboratory and sample preparation area, truck</li> <li>workshop and warehouse, wash pads, Process Plant workshop and warehouse, meteorological</li> <li>station, explosive magazines, parking areas, ore stockpiles, solid and liquid hazardous waste</li> <li>storage, and fuel storage and dispensing area;</li> <li>Roads, including upgrades to the Twin Springs and Cow Hollow roads, and construction of the</li> <li>Mine access, internal access, and Mine haul roads;</li> <li>Yards and laydown areas;</li> <li>Growth Media Stockpiles;</li> <li>Water supply, including Production Wellfield, water pipeline, raw water storage tank, and</li> <li>Potable Water Treatment Plant;</li> <li>Power supply that includes a power substation (on Idaho Power land), upgraded 14.4 kilovolt (kV) overland power</li> <li>transmission system, new 14.4 kV overland power transmission system, onsite power lines, and generators;</li> <li>Permanent and temporary stormwater diversion channels;</li> <li>Other areas, including the exploration areas, septic system, and perimeter fence;</li> <li>Quarry; and</li> <li>Reclamation Borrow Areas.</li> </ul> <p>The proposed surface disturbance for the project is approximately 487.9 acres and is described by surface component in the approved Plan of Operations (Table 3) as filed with the BLM as public acres.</p>
B	Land Use	2	Please describe whether any of the land within the BLM parcel could be characterized as forest land, such that Goal 4 would apply.	DOGAMI	481			There is no land within the BLM parcel characterized as forest land (Bureau of Land Management's Geospatial Business Platform [HUB]) with the parcel or vicinity. Goal 4 is not applicable.
B	Land Use	2	Have any of the BLM lands been classified by NRCS as soil type 1-6 or as high-value farmlands? The CUP application states that NRCS has not categorized the Patent parcel, but no information is provided for the BLM parcel.	DOGAMI	482			The BLM lands have not been classified by the U.S. NRCS as having Type 1 through Type VI soils. The only soil in the Geology and Soils Baseline Report study area that qualifies as prime farmland is the Powder series located at the north end of Twin Springs Road, just south of the Bishop Road intersection. The soil is located on an actively irrigated agricultural field. All other soils mapped are not considered prime farmland since there is no developed irrigation (Geology and Soils Baseline Report, Appendix B7).
B	Land Use	2	Please describe whether the part of the new utility line located on the BLM parcel is a "utility transmission line" within the meaning the County's Goal 3, Policy 9. If so please describe the effects of this part of the line on grazing operations.	DOGAMI	483			The estimated 25-mile distribution and transmission line has two distinct portions. The first six miles of the distribution and transmission line is currently installed and run from Hope Substation in Vale, Oregon are owned by Idaho Power. The remaining 19 miles are designated as a new construction 34.5kV distribution line. The new construction is not a utility transmission line and thus Goal 3: Agricultural Lands, Policy 9 is not applicable.
B	Land Use	2	Please provide a noise analysis consistent with the requirements of the DEQ noise rules (OAR Chapter 340, Division 35), and assess how modeled noise levels comply with Goal 6, Policy 12.	DOGAMI	484			<p>Noise Control is covered under ORS 467 and OAR 340-035. The portion applicable to mining is 467.120 below: Mining is exempt from the provisions of 467 except as noted (<a href="#">see red text</a>)</p> <p><b>467.120 Agricultural and forestry operations; mining or rock processing. (1) Except as provided in subsection (3) of this section, agricultural operations and forestry operations are exempt from the provisions of this chapter.</b></p> <p>(2) As used in this section:</p> <p>(a) "Agricultural operations" means the current employment of land and buildings on a farm for the purpose of obtaining a profit in money by raising, harvesting and selling crops or by the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals, vermiculture products or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural operations or any combination thereof including the propagation and raising of nursery stock and the preparation and storage of the products raised for human use and animal use and disposal by marketing or otherwise by a farmer on such farm.</p> <p>(b) "Forestry operations" means an activity related to the growing or harvesting of forest tree species on forestland as defined in ORS 526.324 (1).</p> <p>(3) The following operations are not exempt from the provisions of subsections (1) and (2) of this section:</p> <p>(a) The mining or processing of rock, aggregate or minerals within one-half mile of a noise sensitive area, <b>if:</b></p> <p>(A) The operation operates more than nine hours per day during the period subject to the daytime standards established by the Environmental Quality Commission under ORS 467.030; <b>or</b></p> <p>(B) The operation operates more than five days per week.</p> <p>(b) Any mining or processing of rock, aggregate or minerals within one-half mile of a noise sensitive area during the period subject to the nighttime noise emission standards established by the Environmental Quality Commission under ORS 467.030. [1979 c.413 §2; 1983 c.730 §2; 1985 c.681 §1; 2005 c.657 §6]</p>

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						484 cont'd			<p>The <i>Noise Baseline Report</i> (Appendix B11) approved by the TRT as a part of the Consolidated Permit Application identifies two noise sensitive areas. These are noted as Site B to the SE corner of the PoO where mining operations will occur is approximately 6.1 miles. From Site D to the NE corner of the PoO where mining operations will occur is approximately 15.9 miles. Thus, the mining is exempt with the distance criteria above as it relates to the ORS 467 (more than one-half mile).</p> <p>A <i>Noise Baseline Report</i> (Appendix B11), was prepared for the project as a part of the Consolidated Permit Application and approved by the TRT. Maximum permissible environmental noise levels for noise sensitive properties, quiet areas, and impulsive noise levels are identified for the project. Determining the pre-existing ambient noise levels will be used to demonstrate compliance. Two sites were identified as noise sensitive properties, at Lake Owyhee State Park and a residential site along Russell Road. The baseline report proposed ambient noise limits for the Project consistent with OAR 340 Division 35. OAR 340 Division 35 also restricts blasting and impulse sounds.</p> <p>Goal 6, Policy 12 requires the effects of transportation, industry and other sources of excessive noise will be considered in evaluating proposed uses and development. The County has considered the effects of noise with the approval of the land use application and staff findings for the project. As noted in the approved land use application, after construction the blasting and drilling activities will occur underground. This will minimize noise associated with the mine. Ongoing noise would be associated with trucks and vehicles using the haul road and mechanical sounds associated with the processing plant.</p> <p>Project construction will create a substantial amount of noise due to blasting for the mine portal, and construction machinery. This has been considered in the land use application and staff findings. As noted in the land use application, the nearest population center, Vale, is approximately 22 miles to the north and the nearest cultivated farmland, outside of Owyhee is approximately 10 miles to the east. A single farm is located approximately five miles away on the other side of Grassy Mountain.</p>
B	Land Use	2		Please describe the proposed road improvements on the BLM parcel, and describe how these proposed improvements comply with the County's Goal 12, Transportation Policy 2.	DOGAMI	485			The road design is included in the CPA application as Appendix C1 which includes proposed road improvements. Goal 12, Policy 2 requires that all country road activities will comply with the Malheur County road design, construction, and improvement standards. The road design figures specify as a part of the general notes, that all construction material and workmanship shall comply with the latest Malheur County, State of Oregon and Bureau of Land Management requirements. All construction shall be performed in accordance with the most current standards for public works construction and the Oregon DEQ standards. This satisfies the County's Goal 12, Transportation Policy 2.
B	Land Use	2		Consistent with MCC 6-6-7.C., please provide the distance from the <i>project</i> boundary to the nearest residence.	DOGAMI	486			MCC 6.6-7.C requires the consideration of the existing development and viewpoints of property owners in the surrounding area. The Project Area is separated from the nearest home, a small farm on the Owyhee River by five miles and numerous hills and ridges. The closest residence to the fence and gate entering the operation is approximately 15.3 miles on a straight line alongside Russell Road. This residence is located about 60 feet from the existing Russell Road, which also serves as its access. Another residence area is around 10 miles from the operation on the Snake river Valley that is separated by the Grassy mountain Range and the Owyhee reservoir and Owyhee ridges east of the proposed operation. See reference image.
B	Land Use	2		Consistent with MCC 6-6-7.G., please provide an assessment of the potential impacts of project lighting on fish and wildlife and recreation on the BLM parcel.	DOGAMI	487			<p><i>In considering the suitability of proposed conditional uses, the planning commission shall base its decision upon the following criteria:</i></p> <p><i>G. General Criteria:</i></p> <p><i>1. Increasing setbacks of structures to reduce possibilities of overshadowing adjoining property, noise, odor or night lighting nuisances.</i></p> <p>A code provision that lists additional conditional use restrictions that a county may impose to protect certain resources is an approval standard only in the sense that it authorizes the county to impose additional conditions <i>if</i> found to be necessary. <i>Western Land &amp; Cattle, Inc. v. Umatilla County</i>, 58 Or LUBA 295 (2009). Malheur County Code (MCC) 6-6-7(G)(1) is not an approval criterion, rather it is one of six (6) provisions which the Commission must weigh in determining whether conditions of approval are necessary to enhance the suitability of the proposed use based on surrounding uses. Similar to the other criteria in Subsection G – lighting, driveway placement, and landscaping – the Planning Commission may, but is not required to, utilize increased setbacks to enhance the suitability of the proposed use. However, until setbacks are determined as necessary conditions of approval to “reduce possibilities of overshadowing adjoining property, noise, odor or night lighting nuisances,” the additional restriction remains discretionary and Applicant does not need to propose a site plan with increased setbacks. Notably, Subsection G does not indicate exactly how far the potential increased setbacks must be, indicating a discretionary assessment by the Commission effectuated via a condition of approval.</p>
B	Land Use	2		Consistent with MCC 6-6-7.H. and MCC 6-6-8-4.C., please describe how the DEQ fugitive dust control plan will prevent changes in grazing practices and significant grazing cost increases that could result from project dust emissions.	DOGAMI	488			<p><i>H. Allowance Of Certain Uses: A use allowed under section 6-3A-3 of this title shall be approved only where it is found that the use will not:</i></p> <p><i>1. Force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; or</i></p> <p><i>2. Significantly increase cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use. (Ord. 86, 12-7-1993)</i></p> <p>Applicant is not required to address how the DEQ fugitive dust control plan will prevent changes in grazing practices or prevent significant grazing cost increases because there was no evidence in the Record that there would be a change in grazing practices/costs. The scope and depth of the Farm Impacts Analysis that Applicant is held to address depends on the scope and depth of the farm impact issues brought into the Record. The Board in <i>Gutoski v. Lane County</i>, in assessing farm impacts test, recognized that not all applications require the same level of farm impact searching inquiry: it qualified the inquiry to situations “when the parties dispute whether a nonfarm use will force a significant change to a particular accepted farm practice or significantly increase the cost of that practice <i>Gutoski v. Lane County</i>, 34 Or LUBA 219 (1998). Applicant is not required to expand its analysis to issues not raised in the Record.</p> <p><i>C. Equipment and access roads shall be constructed, maintained and operated in such a manner as to eliminate, as far as is practicable, noise, vibration or dust that is injurious or substantially annoying to livestock being raised in the vicinity. (Ord. 86, 12-7-1993)</i></p> <p>Performance standards are not necessary prerequisites to issuance of a conditional use permit. <i>Simonsen v. Marion County</i>, 21 Or LUBA 313 (1991). The above requirement is a performance standard, not a condition of approval, and compliance with it can be required through a condition of approval.</p>

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B	Land Use	2	Consistent with MCC 6-6-7.H. and MCC 6-6-8-4.C., please provide a noise analysis consistent with the requirements of the DEQ noise rules and describe the effects of project noise on grazing practices, including the costs of grazing.	DOGAMI	489			<p>Noise Control is covered under ORS 467 and OAR 340-035. The portion applicable to mining is 467.120 below: Mining is exempt from the provisions of 467 except as noted (see red text)</p> <p><b>467.120 Agricultural and forestry operations; mining or rock processing. (1) Except as provided in subsection (3) of this section, agricultural operations and forestry operations are exempt from the provisions of this chapter.</b></p> <p>(2) As used in this section:</p> <p>(a) "Agricultural operations" means the current employment of land and buildings on a farm for the purpose of obtaining a profit in money by raising, harvesting and selling crops or by the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals, vermiculture products or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural operations or any combination thereof including the propagation and raising of nursery stock and the preparation and storage of the products raised for human use and animal use and disposal by marketing or otherwise by a farmer on such farm.</p> <p>(b) "Forestry operations" means an activity related to the growing or harvesting of forest tree species on forestland as defined in ORS 526.324 (1).</p> <p>(3) The following operations are not exempt from the provisions of subsections (1) and (2) of this section:</p> <p>(a) The mining or processing of rock, aggregate or minerals within one-half mile of a noise sensitive area, <i>if</i>:</p> <p>(A) The operation operates more than nine hours per day during the period subject to the daytime standards established by the Environmental Quality Commission under ORS 467.030; <i>or</i></p> <p>(B) The operation operates more than five days per week.</p> <p>(b) Any mining or processing of rock, aggregate or minerals within one-half mile of a noise sensitive area during the period subject to the nighttime noise emission standards established by the Environmental Quality Commission under ORS 467.030. [1979 c.413 §2; 1983 c.730 §2; 1985 c.681 §1; 2005 c.657 §6]</p>
					489 cont'd			<p>The <i>Noise Baseline Report</i> (Appendix B11) approved by the TRT as a part of the Consolidated Permit Application identifies two noise sensitive areas. These are noted as Site B to the SE corner of the PoO where mining operations will occur is approximately 6.1 miles. From Site D to the NE corner of the PoO where mining operations will occur is approximately 15.9 miles. Thus, the mining is exempt with the distance criteria above as it relates to the ORS 467 (more than one-half mile).</p> <p><i>6-6-8.4.C. Equipment and access roads shall be constructed, maintained and operated in such a manner as to eliminate, as far as is practicable, noise, vibration or dust that is injurious or substantially annoying to livestock being raised in the vicinity. (Ord. 86, 12-7-1993)</i></p> <p>Performance standards are not necessary prerequisites to issuance of a conditional use permit. <i>Simanson v. Marion County</i>, 21 Or LUBA 313 (1991). The above requirement is a performance standard, not a condition of approval, and compliance with it can be required through a condition of approval.</p> <p><i>MCC 6-6-7.H. Allowance Of Certain Uses: A use allowed under section 6-3A-3 of this title shall be approved only where it is found that the use will not:</i></p> <ol style="list-style-type: none"> <li>1. Force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; or</li> <li>2. Significantly increase cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use. (Ord. 86, 12-7-1993)</li> </ol>
					489 cont'd			<p>Applicant is not required to address how the DEQ fugitive dust control plan will prevent changes in grazing practices or prevent significant grazing cost increases because there was no evidence in the Record that there would be a change in grazing practices/costs. The scope and depth of the Farm Impacts Analysis that Applicant is held to address depends on the scope and depth of the farm impact issues brought into the Record. The Board in <i>Gutoski v. Lane County</i>, in assessing farm impacts test, recognized that not all applications require the same level of farm impact searching inquiry: it qualified the inquiry to situations "when the parties dispute whether a nonfarm use will force a significant change to a particular accepted farm practice or significantly increase the cost of that practice <i>Gutoski v. Lane County</i>, 34 Or LUBA 219 (1998). Applicant is not required to expand its analysis to issues not raised in the Record.</p>
B	Land Use	2	Consistent with MCC 6-6-8-4.A., please provide a noise analysis consistent with the requirements of the DEQ noise rules and describe the effects of project noise on recreation within the BLM parcel.	DOGAMI	490			<p>Noise Control is covered under ORS 467 and OAR 340-035. The portion applicable to mining is 467.120 below: Mining is exempt from the provisions of 467 except as noted (see red text)</p> <p><b>467.120 Agricultural and forestry operations; mining or rock processing. (1) Except as provided in subsection (3) of this section, agricultural operations and forestry operations are exempt from the provisions of this chapter.</b></p> <p>(2) As used in this section:</p> <p>(a) "Agricultural operations" means the current employment of land and buildings on a farm for the purpose of obtaining a profit in money by raising, harvesting and selling crops or by the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals, vermiculture products or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural operations or any combination thereof including the propagation and raising of nursery stock and the preparation and storage of the products raised for human use and animal use and disposal by marketing or otherwise by a farmer on such farm.</p> <p>(b) "Forestry operations" means an activity related to the growing or harvesting of forest tree species on forestland as defined in ORS 526.324 (1).</p> <p>(3) The following operations are not exempt from the provisions of subsections (1) and (2) of this section:</p> <p>(a) The mining or processing of rock, aggregate or minerals within one-half mile of a noise sensitive area, <i>if</i>:</p> <p>(A) The operation operates more than nine hours per day during the period subject to the daytime standards established by the Environmental Quality Commission under ORS 467.030; <i>or</i></p> <p>(B) The operation operates more than five days per week.</p> <p>(b) Any mining or processing of rock, aggregate or minerals within one-half mile of a noise sensitive area during the period subject to the nighttime noise emission standards established by the Environmental Quality Commission under ORS 467.030. [1979 c.413 §2; 1983 c.730 §2; 1985 c.681 §1; 2005 c.657 §6]</p>

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						490 cont'd			<p>The <i>Noise Baseline Report</i> (Appendix B11) approved by the TRT as a part of the Consolidated Permit Application identifies two noise sensitive areas. These are noted as Site B to the SE corner of the PoO where mining operations will occur is approximately 6.1 miles. From Site D to the NE corner of the PoO where mining operations will occur is approximately 15.9 miles. Thus, the mining is exempt with the distance criteria above as it relates to the ORS 467 (more than one-half mile).</p> <p><b>6-6-8-4: MINERAL, AGGREGATE OR GEOTHERMAL RESOURCE EXPLORATION, MINING AND PROCESSING:</b>  A. Submitted plans and specifications shall contain sufficient information to allow the planning commission to set standards pertaining to:</p> <ol style="list-style-type: none"> <li>1. Noise, dust, traffic and visual screening.</li> <li>2. Setbacks from property lines.</li> <li>3. Location of vehicular access points.</li> <li>4. Fencing needs.</li> <li>5. Prevention of the collection and stagnation of water at all stages of the operation.</li> <li>6. Rehabilitation of the land upon termination of the operation.</li> </ol> <p>The items listed in MCC 6-6-8-4(A) are not standards or criteria because MCC 6-6-8-4(A) is a list of submittal requirements. "[S]ubmittal or pre-application requirements . . . do not constitute 'criteria.'" <i>Knapp v. City of Jacksonville</i>, 70 Or LUBA 259, (2014). Here, the list in MCC 6-6-8-4(A) provides context for guiding Applicant is the type of content to provide in its submittal plans but does not create isolated approval criteria.</p>
B	Land Use		2	Consistent with MCC 6-6-8-4.A., please assess the visual impacts of the facility on recreational uses on the BLM parcel and whether visual screening is required to mitigate impacts.	DOGAMI	491			<p><b>6-6-8-4: MINERAL, AGGREGATE OR GEOTHERMAL RESOURCE EXPLORATION, MINING AND PROCESSING:</b>  A. Submitted plans and specifications shall contain sufficient information to allow the planning commission to set standards pertaining to:</p> <ol style="list-style-type: none"> <li>1. Noise, dust, traffic and visual screening.</li> <li>2. Setbacks from property lines.</li> <li>3. Location of vehicular access points.</li> <li>4. Fencing needs.</li> <li>5. Prevention of the collection and stagnation of water at all stages of the operation.</li> <li>6. Rehabilitation of the land upon termination of the operation.</li> </ol> <p>The items listed in MCC 6-6-8-4(A) are not standards or criteria because MCC 6-6-8-4(A) is a list of submittal requirements. "[S]ubmittal or pre-application requirements . . . do not constitute 'criteria.'" <i>Knapp v. City of Jacksonville</i>, 70 Or LUBA 259, (2014). Here, the list in MCC 6-6-8-4(A) provides context for guiding Applicant is the type of content to provide in its submittal plans but does not create isolated approval criteria.</p>
B	Land Use		2	Consistent with MCC 6-6-8-4.A., please assess the effects of project dust emissions on recreational uses on the BLM parcel, and whether the DEQ fugitive dust control plan will adequately address these effects.	DOGAMI	492			<p><b>6-6-8-4: MINERAL, AGGREGATE OR GEOTHERMAL RESOURCE EXPLORATION, MINING AND PROCESSING:</b>  A. Submitted plans and specifications shall contain sufficient information to allow the planning commission to set standards pertaining to:</p> <ol style="list-style-type: none"> <li>1. Noise, dust, traffic and visual screening.</li> <li>2. Setbacks from property lines.</li> <li>3. Location of vehicular access points.</li> <li>4. Fencing needs.</li> <li>5. Prevention of the collection and stagnation of water at all stages of the operation.</li> <li>6. Rehabilitation of the land upon termination of the operation.</li> </ol> <p>The items listed in MCC 6-6-8-4(A) are not standards or criteria because MCC 6-6-8-4(A) is a list of submittal requirements. "[S]ubmittal or pre-application requirements . . . do not constitute 'criteria.'" <i>Knapp v. City of Jacksonville</i>, 70 Or LUBA 259, (2014). Here, the list in MCC 6-6-8-4(A) provides context for guiding Applicant is the type of content to provide in its submittal plans but does not create isolated approval criteria.</p>
B	Land Use		2	Consistent with MCC 6-6-8-4.C., please provide the location of vehicular access points within the BLM parcel.	DOGAMI	493			Vehicular access points have been identified on the Vicinity and Access Map (CPA Map 2).
B	Land Use		2	Please identify any proposed signs located on the BLM parcel and demonstrate compliance with MCC 6-7-2.	DOGAMI	494			Signage following MSHA standards will be posted on gate signs. Any signage will be consistent with MCC 6-7-2 and the MSHA standards.