

**EXHIBIT / FOOT NOTE**

**5**

NUMBER	TOPIC	QUESTION / COMMENT	DIVISION RESPONSE	PERMIT APPLICATION/ PERMIT SECTION / REGULATORY CITATION/ REFERENCE
9	Tailings Seepage	The Technical memo - revised September 21, 2021, "Clay Tailing Filter Stack (CTFS) Unsaturated Flow Modeling Revision 1, provides a range of water content for the filtered clay tailings. How was this handled in the analysis?"	The equilibrium seepage analysis is independent of the initial water content; however, the value utilized for modeling purposes represented the 45% initial water content of the tailings. The model was initiated using the initial water content and allowed to run for a period of 1,000 years to allow water content to reach equilibrium and generate seepage from the toe of the facility. When seepage from the facility began, (time x), the seepage volume was measured thru the end of the model run, 1,000 years (time y). This allowed for an equilibrium flux volume from the CTFS to be calculated. This iteration process removes the time component and allows various [moisture] designs to be compared independently.	Piteau CTFS
10	Tailings Seepage	Was there a particular value used?	Yes. The initial moisture content of 45% was used to start the analysis.	Piteau CTFS
11	Tailings Seepage	We also did not see any analysis that varied the moisture content to determine the effect on seepage.	That is correct. The model was run to equilibrium and steady-state conditions until breakthrough occurred and continued to the end of the model run. A range of moisture contents was not analyzed because the clay tailings is required to be dried, stockpiled at near optimal moisture content, and compacted by the approved engineered design, thus the materials are unsaturated upon placement and are not anticipated to produce any meaningful seepage.	Piteau CTFS
12	Tailings Seepage	During the analysis that was run for 1,000 years was same precipitation amount used for each year or was the precipitation varied from year to year in a statistically defensible way with an overall average of 12.2 in/year?	The precipitation data of 12.2 in/year was derived from the daily data, measured at the on-site meteorological station for the period from January 2012 to December 2018 (7 years), recycled over the 1,000-year model timeframe. The daily data was used as the model input and recycled over 1,000-years; therefore, periods of high precipitation (i.e. 35.7 in/year in 2014) are accounted for in the model. Additionally, the annual precipitation rates recorded in 2019 and 2020 were 14.33 and 6.11, which brings the average precipitation rate down to 11.8 inches, and makes the model more conservative.	Piteau CTFS
13	Tailings Seepage	The sensitivity analysis with double the precipitation, same question.	For this data set, all daily data from the on-site meteorological station between 2012 to 2018 was multiplied by a factor of 2 and recycled over the 1,000-year model timeframe.	Piteau CTFS
14	Tailings Seepage	Was the analysis done that combined the infiltration and drain down models?	No. Two similar, but separate models were utilized to estimate equilibrium infiltration and drain down. Both models consisted of the same cover design and were run for a period of 1,000 years – The infiltration rate through the store and release cover was minimal at approximately 0.02 gpm seepage and the drainage of initial water content (drain-down) was zero. Note: As migration of the wetting front through the CTFS at full buildout of phase 1, e.g. 58.5 meters, is an extremely long and slow process, the infiltration model utilized a thickness of 10-meters for the CTFS. The 10-meter depth is deep enough that surface evaporation and transpiration are not affected. The drain-down model utilized the Phase 1 full build-out height of 58.5 meters for 1,000 years. At the end of the model run, the wetting front had migrated approximately 20 meters, resulting in no seepage at 1,000 years.	Piteau CTFS
15	Tailings Seepage	Is the store and release cover the 24-inch layer on top of the tailings and will full vegetation?	Yes, that is correct. The cover will be vegetated using a seed mixture as previously described in unsaturated modeling for waste rock and coarse gangue facilities (Cedar Creek Associates 2019). Details of the cover design are provided on Pages 2 and 3 of the September 2021 Piteau technical memo.	Piteau CTFS
16	Permit Language	Letter from Edward Grand, VP of Legal and Regulatory Affairs, Lithium Nevada Corp., received 30 November 2021. On page 1, paragraph 1, change the sentence to, "The Permittee is authorized to process up to 7,640,000 dry tons of ore per year."	This sentence in the Permit has not been modified as suggested. The Division does not specify this level of detail and assumes the ore to be at a native moisture content.	NAC 445A.394.2(e)
17	Permit Language, Discharge Requirements	Page 2 Section 1A(3) change the sentence to, "Not release or discharge any process or non-process contaminants from the fluid management system that does not meet Profile 1 water quality criteria." It is our understanding that any water that meets Profile 1 water quality criteria can be discharged without prior approval.	Part 1A.2 is standard boilerplate language. This Permit is a zero-discharge Permit. It is incorrect that any water that meets Profile 1 reference values may be discharged without prior approval. Any discharge from the facility, other than that resulting from a storm event exceeding the design, requires Division approval through a separate discharge Permit. Part 1A.3 has not been modified as suggested.	NAC 445A.433.1(e)



NEVADA DIVISION OF  
**ENVIRONMENTAL  
PROTECTION**

Bureau of Mining Regulation and Reclamation  
Response to Comments Received During the Public Comment Period for Lithium Nevada Corporation's Thacker Pass Project  
WPCP NEV2020104  
25 February 2022

NUMBER	TOPIC	QUESTION / COMMENT	DIVISION RESPONSE	PERMIT APPLICATION/ PERMIT SECTION / REGULATORY CITATION/ REFERENCE
		analysis did not seem to be provided as stated above and the Piteau analyses are very short technical memos where many unaddressed questions remain.		
155	Tailings Facility Seepage	The Piteau analysis leaves many questions unanswered and Commenters view the results in serious question. The technical memo provides a target of residual water content in the tailings of 46%, but there was no analysis of the sensitivity of the seepage rate to the value of this residual or "in-situ" water content. It is highly likely that water content will vary and is a major source of uncertainty.	See Response 11. The tailings material is required to be stacked at the required moisture content and included for monitoring in the Permit under Part 1.G.7. Further, Permit limitations under Part 1.G.11 and 1.G.12 restricts the moisture content of the tailings material according to the specification in the design report.  An additional SOC item (Part 1.B.8) was added to the Permit requiring an additional sensitivity analyzing the effects of the water content in the tailings on the anticipated seepage rate.	WPCP NEV2020104 Parts 1.D.7, 1.G.11, 1.G.12, 1.B.8
156	Tailings Facility Seepage	In addition, the analysis did not examine the combined effects of varying, say, the precipitation with changes in the transpiration rate or the in-situ water content.	The purpose of a sensitivity analysis is to determine the robustness of an assessment by examining the extent to which results are affected by changes in values of estimated/unmeasured variables, with the aim of identifying results that are most dependent on those variables.  In the sensitivity analysis, all conditions are held steady, then one parameter is varied at a time to determine its impact potential. By varying multiple parameters concurrently, there would be no way to determine which variable resulted in a change to the model outcome.  Four sensitivity analyses were run for the infiltration model configuration to evaluate the potential variation that may be encountered during closure and included sensitivity analysis of "Alternate Clay Tailings", "No Transpiration", "Decreased Potential Evaporation/Transpiration", and "Precipitation X 2". Alternate Clay Tailings refers to the hydraulic conductivity being raised by 2 orders of magnitude, ultimately resulting in a lower saturated porosity (lower water content) as compared to the proposed in-place CTS material.	Piteau CTS
157	Tailings Facility Seepage	The analysis is also a 1-D (one-dimensional) analysis, so lateral flow effects are ignored. It is unlikely (but not impossible) that cracking could occur from the top to the bottom of the facility. However, cracking could occur that could convey water from the interior to the exterior of the facility. This horizontal transport is not considered in the 1-D analysis.	Due to the thickness and stacking of clay tailings, the material itself is not expected to develop desiccation cracks that would penetrate the full 190 ft profile. Composite soil/clay tailings materials were tested to have even lower hydraulic conductivity values than unmined clay tailings (1.2 x 10 <sup>-7</sup> cm/s) owing to the hydration of salts.  Hydrus 1D is listed on the BMR guidance document titled "LISTING OF ACCEPTED CODES FOR GROUNDWATER AND GEOCHEMICAL MODELING AT MINE SITES" and is the preferred draindown model in analyzing draindown from tailings impoundment.	BMR GUIDANCE DOCUMENT: LISTING OF ACCEPTED CODES FOR GROUNDWATER AND GEOCHEMICAL MODELING AT MINE SITES
158	Tailings Facility Seepage	There are planned layers of more coarse waste rock material in the tailings, and water could flow laterally along these layers and seep out the sides of the dump. Furthermore, if some drainage is anticipated during mining operations, then the Piteau conclusion of 1,000 years of no seepage is not supported as discussed above. The assumed initial state of the tailings dump in the Piteau analysis is based on the "in-situ" moisture content (which is also variable) of the tailings as it is dispatched from the processing facility. However, during mining, the developing tailings dump will be infiltrated by precipitation, which would increase the moisture content, and the hydraulic conductivity at closure. If this is so, then the initial state of the tailings dump as modeled by Piteau is incorrect and the results are incorrect.	Any waste rock placed within the tailings stock will not impact the meteoric water infiltration since the waste rock will be compacted between layers of low permeability tailings. The overall vertical permeability of the stock should not be impacted by isolated roadways of rock. However, monitoring for ions of waste rock placed in the CTS has been added to the Permit under Part 1.D.7 in order to track placement, if it is apparent that more waste rock is being placed than anticipated, revision to stability and seepage analysis will be required.  The CTS is to be graded to shed precipitation and limit infiltration throughout operations. With the moisture requirements, required compaction, and a compacted permeability of 10 <sup>-5</sup> cm/s that must be achieved prior to the placement of additional lifts of tailings material, very minimal draindown is expected as described in the Piteau memo. Draindown reporting to the Reclaim Pond will primarily be precipitation runoff from the CTS.	WPCP NEV2020104 Part 1.D.7