# K4.16 SURFACE WATER HYDROLOGY

This appendix contains average annual flow balance tables and water balance flow schematics for the following project phases (Knight Piésold 2018d, 2019s):

- Operations Phase End of Mine—Base Case
- Closure Phase 1—Reclamation of quarries and bulk tailings storage facility (TSF), backfilling of open pit (complete Closure Year 15)
- Closure Phase 2—Bulk TSF and quarries reclaimed, backfilling of open pit complete, reclamation of pyritic TSF and Main Water Management Pond (WMP). No water treatment (Closure Year 16 to maximum management groundwater level in open pit, approximately Closure Year 20)
- Closure Phase 3—Pyritic TSF and Main WMP reclaimed, ongoing treatment of surplus water in open pit (Closure Year 20 through complete closure in Year 50)
- Closure Phase 4—Post-Closure (long-term conditions).

## K4.16.1 Streamflow Change

### K4.16.1.1 Description of the Evaluation

Knight Piésold estimated the mine-affected streamflow in the North Fork Koktuli (NFK), South Fork Koktuli (SFK), and Upper Talarik Creek (UTC) at three different stages of mine development: baseline (i.e. pre-mine), end of mine, and post-closure (Knight Piésold 2019r,q, u, v). Streamflow estimates for the end of mine and post-closure include estimates of the streamflow with and without water treatment plant (WTP) discharge. Estimates with and without WTP discharge were made to quantify the impact WTP discharge could have on streamflow change. Several stream reaches were evaluated for each of the streams (Figure K4.16-6 for the NFK; Figure K4.16-7 for the SFK; and Figure K4.16-8 for the UTC). The reach designations (i.e., A, B, and C) increase in alphabetical order in the upstream direction, with Reach A always being the most downstream reach considered.

For end of mine and post-closure phases, streamflow and streamflow change were estimated. For each reach of each stream, three scenarios and three exceedance probabilities were also evaluated. The three scenarios are (BGC 2019j):

- Scenario S0—Base Case Scenario with in-pit and perimeter dewatering wells resulting in a total withdrawal rate of 1,540 gallons per minute (gpm) during mining. Base case refers to values used for bedrock hydraulic conductivity (K) in the groundwater model.
- Scenario S7—High K Scenario (i.e., base case bedrock K × 10) resulting in a total pit withdrawal of 4,320 gpm during mining.
- Scenario S8—Low K Scenario (i.e., base case bedrock K × 0.1) resulting in a total pit withdrawal rate of 600 gpm during mining.

The pumping rate during post-closure is based on estimates of the bulk TSF seepage rates and groundwater inflows to the pit lake (Knight Piésold 2019q). Scenario S7 and Scenario S8 were used to estimate the possible magnitude of the differences in the streamflow at the end of mine and at post-closure that could occur if the actual bedrock K varied from the base case value (the value the Applicant considers to be most probable). For the purpose of computing streamflow change, the baseline streamflow estimates are the same for all three K scenarios listed above. The variability of K was only considered (PLP 2020c) in terms of the inflows to the open pit,

seepage under the bulk TSF, and groundwater discharge into the drainage system under the bulk TSF.

The three exceedance probabilities evaluated were 10 percent, 50 percent, and 90 percent, as described below. The three different probabilities of exceedance were evaluated to quantify the differences in streamflow that would occur due to the natural variation in rainfall and temperature based on the 76-year synthetic record developed for the project.

- 10 percent probability of exceedance—There is a 10 percent chance the stated flow would be equaled or exceeded. It is representative of a once in 10-year flow on average (i.e., a relatively high-flow condition).
- 50 percent probability of exceedance—There is a 50 percent chance the stated flow would be equaled or exceeded. It is representative of a flow that would be exceeded every other year on average (i.e., a median flow condition).
- 90 percent probability of exceedance—There is a 90 percent chance the stated flow would be equaled or exceeded. It is representative of a once in 10-year low-flow condition on average.

### K4.16.1.2 Results

Knight Piésold (2019r) provides a description of the streamflow change evaluation for the end of mine condition. Knight Piésold (2019q) provides a description of the streamflow change evaluation for the post-closure condition. Tables in the appendices of both reports provide estimates of the change in both surface water and groundwater associated with the NFK, SFK, and UTC at selected reaches. The estimates are for average annual conditions, based on the 76-year synthetic record. The results of the Knight Piésold (2019v) monthly streamflow change computations are reproduced in Table K4.16-20 through Table K4.16-37. Graphs (more than 200) showing the magnitude of the streamflow change in percent and cubic feet per second (cfs) are provided in Knight Piésold 2019u.

The WTPs would discharge water to the NFK, SFK, and UTC at both the end of mine and at post-closure (Knight Piésold 2019r, q). The WTP discharge would enter the NFK in Reach D, the SFK in Reach E, and the UTC in Reach F (Knight Piésold 2019s) (Figure K4.16-6 through Figure K4.16-8). Table K4.16-37 through Table K4.16-42 list the total amount of water Knight Piésold anticipates discharging from the WTPs during each month of the year, for each scenario associated with both the end of mine and post-closure conditions, and the amount anticipated to be discharged to each stream in each month (Knight Piésold 2019r, q). These values represent the 50 percent exceedance probability WTP discharge (PLP 2020c).

Knight Piésold (2019r, q) states that the monthly distribution of the total WTP discharge between the NFK, SFK, and UTC for the Base Case Scenario (S0) was determined by R2 Resource Consultants (2019a). The base case monthly distribution was then prorated for the High K Scenario (S7) and the Low K Scenario (S8). The total WTP discharges for other probabilities of exceedance are presented in Knight Piésold (2019s, Appendix C1 Base Case, Appendix C2 High Bedrock K Sensitivity [S7], and Appendix C3 Low Bedrock K Sensitivity [S8]).

A summary of the percent change in monthly streamflow by exceedance probability and scenario is presented in Table K4.16-44 through Table K4.16-55. A summary of the range in percent monthly streamflow change and percent annual average monthly streamflow change is presented for the most upstream and most downstream reach analyzed in each stream in Table K4.16-56 through Table K4.16-61. Table K4.16-56 through Table K4.16-61 are particularly useful in providing a summary view of the percent change in streamflow due to the three scenarios, the three exceedance probabilities, and with and without WTP discharge conditions.

## NFK End of Mine

In general, the impacts of the mine on streamflow decrease downstream from the mine site. On the NFK, the most upstream reach evaluated was Reach C; the most downstream reach evaluated was Reach A (Figure K4.16-6). The WTP discharge would enter the NFK roughly 1.1 miles upstream of the downstream point of Reach D. Tributary 1.19 (Figure K4.16-6) would be removed during mining and would not be replaced. Therefore, surface water flow in Tributary 1.19 would cease during mining and would not be re-established.

The following provides a summary of the streamflow results for Reaches A and C. Additional information regarding streamflows and streamflow change on the NFK is provided in Table K4.16-20, Table K4.16-23, Table K4.16-26, Table K4.16-29, Table K4.16-32, Table K4.16-35, and Table K4.16-38 through Table K4.16-56. Summary computations similar to those prepared for Reaches A and C could be prepared for Reach B using the tables listed above.

### *NFK Reach C*

The NFK Reach C baseline annual average monthly streamflow with a 50 percent exceedance probability is 113.5 cfs (Table K4.16-20). The Base Case Scenario (S0) end of mine annual average monthly streamflow with a 50 percent exceedance probability and without a WTP discharge is 76 cfs (Table K4.16-20). The Base Case Scenario (S0) end of mine annual average monthly streamflow with a 50 percent exceedance probability and with a 50 percent exceedance probability WTP discharge is 100.4 cfs (Table K4.16-29). Streamflows on NFK Reach C, associated with the High K (S7) and the Low K (S8) Scenarios, are provided in Table K4.16-23, Table K4.16-26, Table K4.16-32, and Table K4.16-35.

Percent streamflow change estimates for NFK Reach C (Figure K4.16-6) at end of mine are presented in Table K4.16-36 and are summarized below. Reach C, the most upstream reach evaluated, is the main-stem reach most likely to experience the greatest change in streamflow as a result of mining.

For the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 110.2 percent more to 20.4 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 12.3 percent more to 25.1 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 385.2 percent more to 6.9 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 9.2 percent more, 9.7 percent less, and 57.5 percent more, respectively.

For the Base Case Scenario (S0) with no WTP discharge, the streamflow change between end of mine and baseline conditions would be greater. The average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 26.0 percent less to 100.0 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 20.5 percent less to 38.3 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 22.1 percent less to 100.0 percent less than the baseline streamflow, depending on the month. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 46.5 percent less, 29.2 percent less, and 54.0 percent less, respectively.

For the High K Scenario (S7) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from

154.4 percent more to 17.7 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 22.2 percent more to 24.1 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 522.8 percent more to 2.8 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 20.4 percent more, 6.0 percent less, and 84.6 percent more, respectively. According to the analyses, the High K Scenario (S7) with a 50 percent exceedance probability WTP discharge results in more water in the stream at Reach C than the Base Case Scenario (S0), with a 50 percent exceedance probability WTP discharge. For the High K Scenario (S7) with no WTP discharge, the percent change in streamflow is predicted to be the same as the Base Case Scenario (S0) with no WTP discharge. It is predicted to be the same for the 50, 10, and 90 percent exceedance probability streamflows.

For the Low K Scenario (S8) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 103.3 percent more to 20.9 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 10.7 percent more to 25.3 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 363.4 percent more to 7.7 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 7.5 percent more, 10.3 percent less, and 53.3 percent more, respectively. According to the analyses, the Low K Scenario (S8) with a 50 percent exceedance probability WTP discharge results in somewhat less water in the stream at Reach C than the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge. For the Low K Scenario (S8) with no WTP discharge, the percent change in streamflow is predicted to be the same as the Base Case Scenario (S0) with no WTP discharge. It is predicted to be the same for the 50, 10, and 90 percent exceedance probability streamflows.

### *NFK Reach A*

The NFK Reach A baseline annual average monthly streamflow with a 50 percent exceedance probability is 194.1 cfs (Table K4.16-20). The Base Case Scenario (S0) end of mine annual average monthly streamflow with a 50 percent exceedance probability and without a WTP discharge is 157.0 cfs (Table K4.16-20). The Base Case Scenario (S0) end of mine annual average monthly streamflow with a 50 percent exceedance probability and with a 50 percent exceedance probability WTP discharge is 182.2 cfs (Table K4.16-29). Streamflows on NFK Reach A, associated with the High K (S7) and the Low K (S8) Scenarios, are provided in Table K4.16-23, Table K4.16-26, Table K4.16-32, and Table K4.16-35.

Percent streamflow change estimates for NFK Reach A (Figure K4.16-6) at end of mine are presented in Table K4.16-56 and are summarized below. Reach A is the most downstream reach that was evaluated; and of the reaches evaluated, is the reach most likely to experience the smallest change in streamflow as a result of mining.

For the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 23.5 percent more to 12.1 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 7.7 percent more to 15.9 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 36.6 percent more to 4.0 percent less than the baseline streamflow. The annual

average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 0.2 percent less, 6.7 percent less, and 8.1 percent more, respectively.

For the Base Case Scenario (S0) with no WTP discharge, the streamflow change between end of mine and baseline conditions would be greater. The average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 15.3 percent less to 30.7 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 11.4 percent less to 22.3 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 11.5 percent less to 36.9 percent less than the baseline streamflow, depending on the month. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 21.7 percent less, 16.7 percent less, and 22.8 percent less, respectively.

For the High K Scenario (S7) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 34.1 percent more to 10.3 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 12.0 percent more to 15.2 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 51.3 percent more to 0.9 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 3.8 percent more, 4.7 percent less, and 14.0 percent more, respectively. According to the analyses, the High K Scenario (S7) with a 50 percent exceedance probability WTP discharge results in somewhat more water in the stream at Reach A than the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge.

For the High K Scenario (S7) with no WTP discharge, the percent change in streamflow is predicted to be the same as the Base Case Scenario (S0) with no WTP discharge. It is predicted to be the same for the 50, 10, and 90 percent exceedance probability streamflows.

For the Low K Scenario (S8) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 21.9 percent more to 12.4 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 7.1 percent more to 16.3 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 34.3 percent more to 4.5 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 0.9 percent less, 7.0 percent less, and 7.2 percent more, respectively. According to the analyses, the Low K Scenario (S8) with a 50 percent exceedance probability WTP discharge has nearly the same range in average monthly streamflow change (in percent) and nearly the same annual average monthly streamflow change (in percent) as the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge at Reach A.

For the Low K Scenario (S8) with no WTP discharge, the percent change in streamflow is predicted to be the same as the Base Case Scenario (S0) with no WTP discharge. It is predicted to be the same for the 50, 10, and 90 percent exceedance probability streamflows.

## NFK Post-Closure

In general, the impact of the mine on streamflow decreases downstream from the mine site. On the NFK, the most upstream reach evaluated was Reach C, and the most downstream reach evaluated was Reach A (Figure K4.16-6). The WTP discharge would enter the NFK roughly

1.1 miles upstream of the downstream point of Reach D. Tributary 1.19 (Figure K4.16-6) would be removed during mining and would not be replaced. Therefore, surface water flow in Tributary 1.19 would cease during mining and would not be re-established.

The following provides a brief summary of the results for Reaches A and C. Additional information regarding the NFK is provided in Table K4.16-20, Table K4.16-23, Table K4.16-26, Table K4.16-29, Table K4.16-32, Table K4.16-35, Table K4.16-38 through Table K4.16-55, and Table K4.16-57. Summary computations similar to those prepared for Reaches A and C could be prepared for Reach B using the tables listed above.

### *NFK Reach C*

The NFK Reach C baseline annual average monthly streamflow with a 50 percent exceedance probability is 113.5 cfs (Table K4.16-20). The Base Case Scenario (S0) post-closure annual average monthly streamflow with a 50 percent exceedance probability and without a WTP discharge is 104.3 cfs (Table K4.16-20). The Base Case Scenario (S0) post-closure annual average monthly streamflow with a 50 percent exceedance probability and with a 50 percent exceedance probability WTP discharge is 109.4 cfs (Table K4.16-29). Streamflows on NFK Reach C, associated with the High K (S7) and the Low K (S8) Scenarios, are provided in Table K4.16-23, Table K4.16-26, Table K4.16-32, and Table K4.16-35.

Percent streamflow change estimates for NFK Reach C (Figure 4.16-6) at post-closure are presented in Table K4.16-57 and are summarized below. Reach C, the most upstream reach evaluated, is the reach most likely to experience the greatest change in streamflow as a result of mining.

For the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 45.7 percent more to 7.7 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 6.9 percent more to 7.9 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 159.6 percent more to 9.2 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 3.4 percent more, 2.2 percent less, and 17.5 percent more, respectively.

For the Base Case Scenario (S0) with no WTP discharge, the streamflow change between post-closure and baseline conditions would be greater. The average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 5.0 percent less to 45.9 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 4.4 percent less to 13.3 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 4.5 percent less to 96.6 percent less than the baseline streamflow, depending on the month. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 16.0 percent less, 8.1 percent less, and 28.8 percent less, respectively.

For the High K Scenario (S7) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 60.1 percent more to 7.6 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 11.1 percent more to 7.2 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 203.3 percent more to 7.8 percent less than the baseline streamflow. The annual average monthly

streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 6.6 percent more, 1.1 percent less, and 24.9 percent more, respectively. According to the analyses, the High K Scenario (S7) with a 50 percent exceedance probability WTP discharge results in somewhat more water in the stream at Reach C than the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge.

For the High K Scenario (S7) with no WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 4.0 percent less to 47.6 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 3.9 percent less to 13.1 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 3.7 percent less to 100.0 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 16.3 percent less, 8.0 percent less, and 29.8 percent less, respectively. According to the analyses, the High K Scenario (S7) with no WTP discharge has nearly the same range in average monthly streamflow change (in percent), and nearly the same annual average monthly streamflow change (in percent) as the Base Case Scenario (S0) with no WTP discharge at Reach C.

For the Low K Scenario (S8) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 44.3 percent more to 7.3 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 7.6 percent more to 7.7 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 156.8 percent more to 8.5 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 3.6 percent more, 1.9 percent less, and 17.4 percent more, respectively. According to the analyses, the Low K Scenario (S8) with a 50 percent exceedance probability WTP discharge has nearly the same range in average monthly streamflow change (in percent) and nearly the same annual average monthly streamflow change (in percent) as the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge at Reach C.

For the Low K Scenario (S8) with no WTP discharge, the percent change in streamflow is the same as for the Base Case Scenario (S0). For the Low K Scenario (S8) with no WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 26.0 percent less to 100.0 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 20.5 percent less to 38.3 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 22.1 percent less to 100.0 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 46.5 percent less, 29.2 percent less, and 54.0 percent less, respectively. According to the analyses, the Low K Scenario (S8) with no WTP discharge results in lower streamflows at Reach C than the Base Case Scenario with no WTP discharge.

### *NFK Reach A*

The NFK Reach A baseline annual average monthly streamflow with a 50 percent exceedance probability is 194.1 cfs (Table K4.16-20). The Base Case Scenario (S0) post-closure annual average monthly streamflow with a 50 percent exceedance probability and without a WTP discharge is 185.5 cfs (Table K4.16-20). The Base Case Scenario (S0) post-closure annual average monthly streamflow with a 50 percent exceedance probability and with a 50 percent

exceedance probability WTP discharge is 190.6 cfs (Table K4.16-29). Streamflows on NFK Reach A, associated with the High K (S7) and the Low K (S8) Scenarios, are provided on Table K4.16-23, Table K4.16-26, Table K4.16-32, and Table K4.16-35.

Estimates of percent streamflow change for NFK Reach A (Figure K4.16-6) at post-closure are presented in Table K4.16-57 and are summarized below. Reach A is the most downstream reach that was evaluated, and of the reaches evaluated, is the reach most likely to experience the smallest change in streamflow as a result of mining.

For the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 10.0 percent more to 5.6 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 4.6 percent more to 4.8 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 15.0 percent more to 5.2 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 0.0 percent less, 1.2 percent less, and 1.6 percent more, respectively.

For the Base Case Scenario (S0) with no WTP discharge, the streamflow change between post-closure and baseline conditions would be greater. The average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 2.7 percent less to 11.6 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 2.4 percent less to 7.5 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 1.9 percent less to 14.1 percent less than the baseline streamflow, depending on the month. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 6.5 percent less, 4.0 percent less, and 7.3 percent less, respectively.

For the High K Scenario (S7) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 13.1 percent more to 5.6 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance is predicted to vary from 6.5 percent more to 4.3 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 18.9 percent more to 4.7 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 1.0 percent more, 0.7 percent less, and 3.0 percent more, respectively. According to the analyses, the High K Scenario (S7) with a 50 percent exceedance probability WTP discharge results in somewhat more water in the stream at Reach A than the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge.

For the High K Scenario (S7) with no WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 2.1 percent less to 12.3 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 2.1 percent less to 7.5 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 1.6 percent less to 15.4 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 6.6 percent less, 4.0 percent less, and 7.5 percent less, respectively. According to the analyses, the High K Scenario (S7) with no WTP discharge has nearly the same range in average monthly streamflow change (in percent) and nearly the

same annual average monthly streamflow change (in percent) as the Base Case Scenario (S0) with no WTP discharge at Reach A.

For the Low K Scenario (S8) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 9.7 percent more to 5.4 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 5.0 percent more to 4.6 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 14.5 percent more to 4.7 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 0.1 percent more, 1.1 percent less, and 1.8 percent more, respectively. According to the analyses, the Low K Scenario (S8) with a 50 percent exceedance probability WTP discharge has nearly the same range in average monthly streamflow change (in percent) and nearly the same annual average monthly streamflow change (in percent) as the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge at Reach A.

For the Low K Scenario (S8) with no WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 2.1 percent less to 11.4 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 2.1 percent less to 7.2 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 1.5 percent less to 13.7 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 6.2 percent less, 3.8 percent less, and 6.9 percent less, respectively. According to the analyses, the Low K Scenario (S8) with no WTP discharge has nearly the same range in average monthly streamflow change (in percent) and nearly the same annual average monthly streamflow change (in percent) as the Base Case Scenario (S0) with no WTP discharge at Reach A.

## SFK End of Mine

In general, the impact of the mine on streamflow decreases downstream from the mine site. On the SFK, the most upstream reach evaluated was Reach E, and the most downstream reach evaluated was Reach A (Figure K4.16-7). Tributaries 1.19 and 1.24 (Figure K4.16-7) were also evaluated.

The following provides a brief summary of the results for Reaches A and E. Additional information regarding streamflows and streamflow changes on the SFK is provided in Table K4.16-21, Table K4.16-24, Table K4.16-27, Table K4.16-30, Table K4.16-33, Table K4.16-36, Table K4.16-38 through Table K4.16-55, and Table K4.16-58. Summary computations similar to those prepared for Reaches A and E could be prepared for Reaches B, C, and D using the tables listed above. Summary computations could also be prepared for Tributaries 1.19 and 1.24 using the tables listed above.

### *SFK Reach E*

The SFK Reach E baseline annual average monthly streamflow with a 50 percent exceedance probability is 12.6 cfs (Table K4.16-21). The Base Case Scenario (S0) end of mine annual average monthly streamflow with a 50 percent exceedance probability and without a WTP discharge is 7.8 cfs (Table K4.16-21). The Base Case Scenario (S0) end of mine annual average monthly streamflow with a 50 percent exceedance probability and with a 50 percent exceedance probability WTP discharge is 7.8 cfs (Table K4.16-30). Streamflows on SFK Reach E, associated

with the High K (S7) and the Low K (S8) Scenarios, are provided on Table K4.16-24, Table K4.16-27, Table K4.16-33, and Table K4.16-36.

Estimates of percent streamflow change for SFK Reach E (Figure K4.16-7) at end of mine are presented in Table K4.16-58 and are summarized below. Reach E is the most upstream reach that was evaluated, and of the reaches evaluated, is the reach most likely to experience the greatest change in streamflow as a result of mining.

For the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 32.1 percent less to 53.0 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 25.1 percent less to 44.7 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 37.7 percent less to 61.2 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 42.8 percent less, 37.0 percent less, and 50.7 percent less, respectively.

The Base Case Scenario (S0) with no WTP discharge is predicted to have the same range of average monthly streamflow change (in percent) and the same annual average monthly streamflow change (in percent) as the Base Case Scenario (S0) with 50 percent exceedance probability WTP discharge at Reach E.

For the High K Scenario (S7) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 34.1 percent less to 68.6 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 26.5 percent less to 53.2 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 41.7 percent less to 79.3 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 51.3 percent less, 42.4 percent less, and 62.0 percent less, respectively. According to the analyses, the High K Scenario (S7) with a 50 percent exceedance probability WTP discharge results in less water in the stream at Reach E than the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge.

The High K Scenario (S7) with no WTP discharge is predicted to have the same range of average monthly streamflow change (in percent) and the same annual average monthly streamflow change (in percent) as the Base Case Scenario (S0) with a 50 percent exceedance WTP discharge at Reach E.

For the Low K Scenario (S8) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 29.0 percent less to 38.9 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 23.8 percent less to 38.4 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 32.8 percent less to 40.8 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 34.4 percent less, 33.1 percent less, and 37.5 percent less, respectively. According to the analyses, the Low K Scenario (S8) with a 50 percent exceedance probability WTP discharge results in somewhat more water in the stream at Reach E than the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge.

The Low K Scenario (S8) with no WTP discharge is predicted to have the same range of average monthly streamflow change (in percent) and the same annual average monthly streamflow change (in percent) as the Base Case Scenario (S0) with a 50 percent exceedance WTP discharge at Reach E.

### *SFK Reach A*

The SFK Reach baseline annual average monthly streamflow with a 50 percent exceedance probability is 153.6 cfs (Table K4.16-21). The Base Case Scenario (S0) end of mine annual average monthly streamflow with a 50 percent exceedance probability and without a WTP discharge is 147.6 cfs (Table K4.16-21). The Base Case Scenario (S0) end of mine annual average monthly streamflow with a 50 percent exceedance probability and with a 50 percent exceedance probability WTP discharge is 150.3 cfs (Table K4.16-30). Streamflows on SFK Reach A, associated with the High K (S7) and the Low K (S8) Scenarios, are provided on Table K4.16-24, Table K4.16-27, Table K4.16-33, and Table K4.16-36.

Estimates of percent streamflow change for SFK Reach A (Figure K4.16-7) at end of mine are presented in Table K4.16-58 and are summarized below. Reach A is the most downstream reach that was evaluated, and of the reaches evaluated, is the reach most likely to experience the smallest change in streamflow as a result of mining.

For the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 0.8 percent less to 2.8 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 0.6 percent less to 2.4 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 3.6 percent more to 2.9 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 2.2 percent less, 1.9 percent less, and 1.6 percent less, respectively.

For the Base Case Scenario (S0) with no WTP discharge, the streamflow change between end of mine and baseline conditions would be greater. The average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 2.4 percent less to 11.9 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 2.2 percent less to 5.6 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 2.6 percent less to 15.6 percent less than the baseline streamflow, depending on the month. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 5.4 percent less, 1.9 percent less, and 6.8 percent less, respectively.

For the High K Scenario (S7) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 2.4 percent less to 8.0 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 2.0 percent less to 4.6 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 2.1 percent less to 11.5 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 5.0 percent less, 3.3 percent less, and 6.0 percent less, respectively. According to the analyses, the High K Scenario (S7) with a 50 percent exceedance probability WTP discharge results in somewhat less

water in the stream at Reach A than the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge.

For the High K Scenario (S7) with no WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 3.6 percent less to 18.9 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 2.8 percent less to 8.8 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 4.7 percent less to 29.3 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 8.7 percent less, 5.3 percent less, and 12.2 percent less, respectively. According to the analyses, the High K Scenario (S7) with no WTP discharge results in somewhat less water in the stream at Reach A than the Base Case Scenario (S0) with no WTP discharge.

For the Low K Scenario (S8) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 0.7 percent more to 2.3 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 0.2 percent less to 2.0 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 5.8 percent more to 2.3 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 1.6 percent less, 1.6 percent less, and 0.6 percent less, respectively. According to the analyses, the Low K Scenario (S8) with a 50 percent exceedance probability WTP discharge has nearly the same range in average monthly streamflow change (in percent) and nearly the same annual average monthly streamflow change (in percent) as the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge at Reach A.

For the Low K Scenario (S8) with no WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 2.6 percent less to 10.2 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 2.3 percent less to 5.0 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 3.1 percent less to 13.1 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 5.2 percent less, 3.5 percent less, and 6.2 percent less, respectively. According to the analyses, the Low K Scenario (S8) with no WTP discharge has nearly the same range in average monthly streamflow change (in percent) and nearly the same annual average monthly streamflow change (in percent) as the Base Case Scenario (S0) with no WTP discharge at Reach A.

## SFK Post-Closure

In general, the impact of the mine on streamflow decreases downstream from the mine site. On the SFK, the most upstream reach evaluated was Reach E, and the most downstream reach evaluated was Reach A (Figure K4.16-7). Tributary 1.19 and Tributary 1.24 (Figure K4.16-7) were also evaluated.

The following provides a brief summary of the results for Reaches A and E. Additional information regarding streamflows and streamflow changes on the SFK is provided in Table K4.16-21, Table K4.16-24, Table K4.16-27, Table K4.16-30, Table K4.16-33, Table K4.16-36, Table K4.16-38 through Table K4.16-55, and Table K4.16-59. Summary computations similar to those prepared for

Reaches A and E could be prepared for Reaches B, C, and D using the tables listed above. Summary computations could also be prepared for Tributary 1.19 and Tributary 1.24 using the tables listed above.

### *SFK Reach E*

The SFK Reach E baseline annual average monthly streamflow with a 50 percent exceedance probability is 12.6 cfs (Table K4.16-21). The Base Case Scenario (S0) post-closure annual average monthly streamflow with a 50 percent exceedance probability and without a WTP discharge is 8.9 cfs (Table K4.16-21). The Base Case Scenario (S0) post-closure annual average monthly streamflow with a 50 percent exceedance probability and with a 50 percent exceedance probability WTP discharge is 8.9 cfs (Table K4.16-30). Streamflows on SFK Reach E, associated with the High K (S7) and the Low K (S8) Scenarios, are provided on Table K4.16-24, Table K4.16-27, Table K4.16-33, and Table K4.16-36.

Estimates of percent streamflow change for SFK Reach E (Figure K4.16-7) at post-closure are presented in Table K4.16-59 and are summarized below. Reach E is the most upstream reach that was evaluated, and of the reaches evaluated, is the reach most likely to experience the greatest change in streamflow as a result of mining.

For the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 24.4 percent less to 40.3 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 18.5 percent less to 35.1 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 28.8 percent less to 46.4 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 32.8 percent less, 28.6 percent less, and 39.0 percent less, respectively.

For the Base Case Scenario (S0) with no WTP discharge, the streamflow change between post-closure and baseline conditions would be greater. The average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 24.4 percent less to 40.3 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 18.5 percent less to 35.1 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 28.8 percent less to 46.4 percent less than the baseline streamflow, depending on the month. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 32.8 percent less, 28.6 percent less, and 39.0 percent less, respectively.

For the High K Scenario (S7) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 25.4 percent less to 46.5 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 19.1 percent less to 30.7 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 30.9 percent less to 53.2 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 36.2 percent less, 30.7 percent less, and 43.1 percent less, respectively. According to the analyses, the High K Scenario (S7) with a 50 percent exceedance probability WTP discharge results in somewhat less water in the stream at Reach E than the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge.

The High K Scenario (S7) with no WTP discharge is predicted to have the same range of average monthly streamflow change (in percent) and the same annual average monthly streamflow change (in percent) as the Base Case (S0) scenario with a 50 percent exceedance WTP discharge at Reach E.

For the Low K Scenario (S8) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 23.7 percent less to 35.6 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 18.1 percent less to 33.0 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 27.0 percent less to 39.5 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 30.0 percent less, 37.2 percent less, and 34.5 percent less, respectively. According to the analyses, the Low K Scenario (S8) with a 50 percent exceedance probability WTP discharge results in somewhat more water in the stream at Reach E than the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge.

The Low K Scenario (S8) with no WTP discharge is predicted to have the same range of average monthly streamflow change (in percent) and the same annual average monthly streamflow change (in percent) as the Base Case (S0) scenario with a 50 percent exceedance WTP discharge at Reach E.

### *SFK Reach A*

The SFK Reach A baseline annual average monthly streamflow with a 50 percent exceedance probability is 153.6 cfs (Table K4.16-21). The Base Case Scenario (S0) post-closure annual average monthly streamflow with a 50 percent exceedance probability and without a WTP discharge is 147.2 cfs (Table K4.16-21). The Base Case Scenario (S0) post-closure annual average monthly streamflow with a 50 percent exceedance probability and with a 50 percent exceedance probability WTP discharge is 155.4 cfs (Table K4.16-30). Streamflows on SFK Reach A, associated with the High K (S7) and the Low K (S8) Scenarios, are provided on Table K4.16-24, Table K4.16-27, Table K4.16-33, and Table K4.16-36.

Estimated percent streamflow changes for SFK Reach A (Figure K4.16-7) at post-closure are presented in Table K4.16-59 and are summarized below. Reach A is the most downstream reach that was evaluated, and of the reaches evaluated, is the reach most likely to experience the smallest change in streamflow as a result of mining.

For the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 5.8 percent more to 0.3 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 0.9 percent more to 1.1 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 16.3 percent more to 1.5 percent more than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 1.7 percent more, 0.0 percent less, and 5.3 percent more, respectively.

For the Base Case Scenario (S0) with no WTP discharge, the streamflow change between post-closure and baseline conditions would be greater. The average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 2.7 percent less to 10.8 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 2.5 percent less to 5.2 percent less

than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 3.2 percent less to 14.2 percent less than the baseline streamflow, depending on the month. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 5.4 percent less, 0.0 percent less, and 6.6 percent less, respectively.

For the High K Scenario (S7) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 5.9 percent more to 0.3 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 0.9 percent more to 1.2 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 16.4 percent more to 1.7 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 1.9 percent more, 0.1 percent more, and 5.6 percent more, respectively. According to the analyses, the High K Scenario (S7) with a 50 percent exceedance probability WTP discharge has nearly the same range in average monthly streamflow change (in percent) and nearly the same annual average monthly streamflow change (in percent) as the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge at Reach A.

For the High K Scenario (S7) with no WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 25.4 percent less to 46.5 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 19.1 percent less to 37.9 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 30.9 percent less to 53.2 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 36.2 percent less, 0.1 percent more, and 43.1 percent less, respectively. According to the analyses, the High K Scenario (S7) with no WTP discharge results in less water in the stream at Reach A than the Base Case Scenario (S0) no WTP discharge.

For the Low K Scenario (S8) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 5.9 percent more to 0.2 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 0.9 percent more to 1.1 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 16.7 percent more to 1.6 percent more than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 1.7 percent more, 0.0 percent less, and 5.3 percent more, respectively. According to the analyses, the Low K Scenario (S8) with a 50 percent exceedance probability WTP discharge has nearly the same range in average monthly streamflow change (in percent) and nearly the same annual average monthly streamflow change (in percent) as the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge at Reach A.

For the Low K Scenario (S8) with no WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 23.7 percent less to 35.6 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 18.1 percent less to 33.0 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 27.0 percent less to 39.5 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent

exceedance probabilities are estimated to be 30.0 percent less, 27.2 percent less, and 34.5 percent less, respectively. According to the analyses, the Low K Scenario (S7) with no WTP discharge results in less water in the stream at Reach A than the Base Case Scenario (S0) with no WTP discharge.

## UTC End of Mine

In general, the impact of the mine on streamflow decreases downstream from the mine site. On the UTC the most upstream reach evaluated was Reach F, and the most downstream reach evaluated was Reach A (Figure K4.16-8). Tributary 1.19 (Figure K4.16-8) was also evaluated.

The following provides a brief summary of the results for Reaches A and F. Additional information regarding streamflows and streamflow changes on the UTC is provided in Table K4.16-22, Table K4.16-25, Table K4.16-28, Table K4.16-31, Table K4.16-32, Table K4.16-39, Table K4.16-38 through Table K4.16-55, and Table K4.16-60. Summary computations similar to those prepared for Reaches A and F could be prepared for Reaches B, C, D, and E using the tables listed above. Summary computations could also be prepared for Tributary 1.19 using the tables listed above.

### *UTC Reach F*

The UTC Reach F baseline annual average monthly streamflow with a 50 percent exceedance probability is 17.0 cfs (Table K4.16-22). The Base Case Scenario (S0) end of mine annual average monthly streamflow with a 50 percent exceedance probability and without a WTP discharge is 16.5 cfs (Table K4.16-22). The Base Case Scenario (S0) end of mine annual average monthly streamflow with a 50 percent exceedance probability and with a 50 percent exceedance probability WTP discharge is 17.1 cfs (Table K4.16-31). Streamflows on SFK Reach E, associated with the High K (S7) and the Low K (S8) Scenarios, are provided on Table K4.16-25, Table K4.16-28, Table K4.16-34, and Table K4.16-37.

Percent streamflow change estimates for UTC Reach F (Figure K4.16-8) at end of mine are presented in Table K4.16-60 and are summarized below. Reach F is the most upstream reach that was evaluated, and of the reaches evaluated, is the reach most likely to experience the greatest change in streamflow as a result of mining.

For the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 8.6 percent more to 1.3 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 4.7 percent more to 0.6 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 11.4 percent more to 2.3 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 2.0 percent more, 1.2 percent more, and 2.6 percent more, respectively.

For the Base Case Scenario (S0) with no WTP discharge, the streamflow change between end of mine and baseline conditions would be greater. The average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 1.0 percent less to 6.6 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 0.5 percent less to 3.9 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 2.4 percent less to 8.9 percent less than the baseline streamflow, depending on the month. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 4.1 percent less, 2.3 percent less, and 6.2 percent less, respectively.

For the High K Scenario (S7) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 5.7 percent more to 3.9 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 3.1 percent more to 1.7 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 7.6 percent more to 6.8 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 0.5 percent less, 0.2 percent less, and 1.3 percent less, respectively. According to the analyses, the High K Scenario (S7) with a 50 percent exceedance probability WTP discharge results in somewhat less water in the stream at Reach F than the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge.

For the High K Scenario (S7) with no WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 2.0 percent less to 12.6 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 1.0 percent less to 7.5 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 4.6 percent less to 17.1 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 7.8 percent less, 4.4 percent less, and 11.9 percent less, respectively. According to the analyses, the High K Scenario (S7) with no WTP discharge results in somewhat less water in the stream at Reach F than the Base Case Scenario (S0) with no WTP discharge.

For the Low K Scenario (S8) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 12.8 percent more to 0.3 percent more than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 6.9 percent more to 0.1 percent more than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 16.8 percent more to 0.4 percent more than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 4.7 percent more, 2.7 percent more, and 6.7 percent more, respectively. According to the analyses, the Low K Scenario (S8) with a 50 percent exceedance probability WTP discharge results in somewhat more water in the stream at Reach F than the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge.

For the Low K Scenario (S8) with no WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 0.3 percent less to 2.0 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 0.2 percent less to 1.2 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 0.7 percent less to 2.7 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 1.2 percent less, 0.7 percent less, and 1.8 percent less, respectively. According to the analyses, the High K Scenario (S7) with no WTP discharge results in somewhat more water in the stream at Reach F than the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge.

### *UTC Reach A*

The UTC Reach A baseline annual average monthly streamflow with a 50 percent exceedance probability is 266.5 cfs (Table K4.16-22). The Base Case Scenario (S0) end of mine annual average monthly streamflow with a 50 percent exceedance probability and without a WTP discharge is 265.3 cfs (Table K4.16-22). The Base Case Scenario (S0) end of mine annual average monthly streamflow with a 50 percent exceedance probability and with a 50 percent exceedance probability WTP discharge is 266.7 cfs (Table K4.16-31). Streamflows on SFK Reach A, associated with the High K (S7) and the Low K (S8) Scenarios, are provided on Table K4.16-25, Table K4.16-28, Table K4.16-34, and Table K4.16-37.

Percent streamflow change estimates for UTC Reach A (Figure K4.16-8) at end of mine are presented in Table K4.16-60 and are summarized below. Reach A is the most downstream reach that was evaluated, and of the reaches evaluated, is the reach most likely to experience the smallest change in streamflow as a result of mining.

For the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 0.8 percent more to 0.2 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 0.5 percent more to 0.1 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 0.9 percent more to 0.3 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 0.2 percent more, 0.1 percent more, and 0.2 percent more, respectively.

For the Base Case Scenario (S0) with no WTP discharge, the streamflow change between end of mine and baseline conditions would be greater. The average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 0.2 percent less to 0.9 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 0.1 percent less to 0.6 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 0.4 percent less to 1.0 percent less than the baseline streamflow, depending on the month. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 0.6 percent less, 0.3 percent less, and 0.8 percent less, respectively.

For the High K Scenario (S7) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 0.4 percent more to 0.6 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 0.2 percent more to 0.3 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 0.4 percent more to 0.8 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 0.2 percent less, 0.1 percent less, and 0.3 percent less, respectively. According to the analyses, the High K Scenario (S7) with a 50 percent exceedance probability WTP discharge results in somewhat more water in the stream at Reach A than the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge.

For the High K Scenario (S7) with no WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 0.3 percent less to 1.7 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 0.2 percent less to 1.1 percent less

than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 0.8 percent less to 2.0 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 1.1 percent less, 0.7 percent less, and 1.5 percent less, respectively. According to the analyses, the High K Scenario (S7) with no WTP discharge has nearly the same range in average monthly streamflow change (in percent) and nearly the same annual average monthly streamflow change (in percent) as the Base Case Scenario (S0) no WTP discharge at Reach A.

For the Low K Scenario (S8) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 1.3 percent more to 0.2 percent more than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 1.3 percent more to 0.2 percent more than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 1.3 percent more to 0.2 percent more than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are all estimated to be 0.9 percent more. According to the analyses, the Low K Scenario (S8) with a 50 percent exceedance probability WTP discharge results in somewhat more water in the stream at Reach A than the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge.

For the Low K Scenario (S8) with no WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 0.1 percent less to 0.4 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 0.0 percent less to 0.2 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 0.2 percent less to 0.4 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 0.2 percent less, 0.1 percent less, and 0.3 percent less, respectively. According to the analyses, the High K Scenario (S7) with no WTP discharge has nearly the same range in average monthly streamflow change (in percent) and nearly the same annual average monthly streamflow change (in percent) as the Base Case Scenario (S0) no WTP discharge at Reach A.

## UTC Post-Closure

In general, the impact of the mine on streamflow decreases downstream from the mine site. On the UTC the most upstream reach evaluated was Reach F, and the most downstream reach evaluated was Reach A (Figure K4.16-8). Tributary 1.19 (Figure K4.16-8) was also evaluated.

The following provides a brief summary of the results for Reaches A and F. Additional information regarding streamflows and streamflow changes on the UTC is provided in Table K4.16-22, Table K4.16-25, Table K4.16-28, Table K4.16-31, Table K4.16-34, Table K4.16-37, Table K4.16-38 through Table K4.16-55, and Table K4.16-61. Summary computations similar to those prepared for Reaches A and F could be prepared for Reaches B, C, D, and E using the tables listed above. Summary computations could also be prepared for Tributary 1.19 using the tables listed above.

### *UTC Reach F*

The UTC Reach F baseline annual average monthly streamflow with a 50 percent exceedance probability is 17.0 cfs (Table K4.16-22). The Base Case Scenario (S0) post-closure annual average monthly streamflow with a 50 percent exceedance probability and without a WTP discharge is 16.9 cfs (Table K4.16-22). The Base Case Scenario (S0) post-closure annual

average monthly streamflow with a 50 percent exceedance probability and with a 50 percent exceedance probability WTP discharge is 17.1 cfs (Table K4.16-31). Streamflows on SFK Reach E, associated with the High K (S7) and the Low K (S8) Scenarios, are provided on Table K4.16-25, Table K4.16-28, Table K4.16-34, and Table K4.16-37.

Estimates of percent streamflow change for UTC Reach F (Figure K4.16-8) at post-closure are presented in Table K4.16-61 and are summarized below. Reach F is the most upstream reach that was evaluated, and of the reaches evaluated, is the reach most likely to experience the greatest change in streamflow as a result of mining.

For the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 4.5 percent more to 0.7 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 2.5 percent more to 0.4 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 6.0 percent more to 1.0 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 0.9 percent more, 0.5 percent more, and 1.2 percent more, respectively.

For the Base Case Scenario (S0) with no WTP discharge, the streamflow change between post-closure and baseline conditions would be greater. The average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 0.3 percent less to 1.8 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 0.1 percent less to 1.0 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 0.6 percent less to 2.4 percent less than the baseline streamflow, depending on the month. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 1.1 percent less, 0.6 percent less, and 1.7 percent less, respectively.

For the High K Scenario (S7) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 2.1 percent more to 4.1 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 1.2 percent more to 2.2 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 2.7 percent more to 5.3 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 0.9 percent less, 0.5 percent less, and 5.0 percent less, respectively. According to the analyses, the High K Scenario (S7) with a 50 percent exceedance probability WTP discharge results in somewhat less water in the stream at Reach F than the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge.

For the High K Scenario (S7) with no WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 0.8 percent less to 5.3 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 0.4 percent less to 3.1 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 1.9 percent less to 7.1 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 3.3 percent less, 1.8 percent less, and 5.0 percent less, respectively. According to the analyses, the High K Scenario (S7) with no WTP discharge

results in somewhat less water in the stream at Reach F than the Base Case Scenario (S0) with no WTP discharge.

For the Low K Scenario (S8) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 4.2 percent more to 0.9 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 2.4 percent more to 0.5 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 5.5 percent more to 1.2 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 0.7 percent more, 0.4 percent more, and 0.9 percent more, respectively. According to the analyses, the Low K Scenario (S8) with a 50 percent exceedance probability WTP discharge has nearly the same range in average monthly streamflow change (in percent) and nearly the same annual average monthly streamflow change (in percent) as the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge at Reach F.

For the Low K Scenario (S8) with no WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 0.3 percent less to 1.9 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 0.2 percent less to 1.1 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 0.7 percent less to 2.6 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 1.2 percent less, 1.7 percent less, and 1.8 percent less, respectively. According to the analyses, the High K Scenario (S7) with no WTP discharge has nearly the same range in average monthly streamflow change (in percent) and nearly the same annual average monthly streamflow change (in percent) as the Base Case Scenario (S0) no WTP discharge at Reach F.

### *UTC Reach A*

The UTC Reach A baseline annual average monthly streamflow with a 50 percent exceedance probability is 266.5 cfs (Table K4.16-22). The Base Case Scenario (S0) post-closure annual average monthly streamflow with a 50 percent exceedance probability and without a WTP discharge is 266.0 cfs (Table K4.16-22). The Base Case Scenario (S0) post-closure annual average monthly streamflow with a 50 percent exceedance probability and with a 50 percent exceedance probability WTP discharge is 266.8 cfs (Table K4.16-31). Streamflows on SFK Reach A, associated with the High K Scenario (S7) and the Low K Scenario (S8), are provided on Table K4.16-25, Table K4.16-28, Table K4.16-34, and Table K4.16-37.

Estimates of percent streamflow change for UTC Reach A (Figure K4.16-8) at post-closure are presented in Table K4.16-61 and are summarized below. Reach A is the most downstream reach that was evaluated, and of the reaches evaluated, is the reach most likely to experience the smallest change in streamflow as a result of mining.

For the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 0.6 percent more to 0.0 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 0.4 percent more to 0.0 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 0.7 percent more to 0.0 percent less than the baseline streamflow. The annual average monthly

streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 0.2 percent more, 0.1 percent more, and 0.2 percent more, respectively.

For the Base Case Scenario (S0) with no WTP discharge, the streamflow change between post-closure and baseline conditions would be greater. The average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 0.1 percent less to 0.3 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 0.0 percent less to 0.2 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 0.2 percent less to 0.4 percent less than the baseline streamflow, depending on the month. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 0.2 percent less, 0.1 percent less, and 0.3 percent less, respectively.

For the High K Scenario (S7) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 0.4 percent more to 0.6 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 0.2 percent more to 0.3 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 0.4 percent more to 0.8 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 0.2 percent less, 0.1 percent less, and 0.3 percent less, respectively. According to the analyses, the High K Scenario (S7) with a 50 percent exceedance probability WTP discharge results in somewhat less water in the stream at Reach A than the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge.

For the High K Scenario (S7) with no WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 0.2 percent less to 0.8 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 0.1 percent less to 0.5 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 0.4 percent less to 0.9 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 0.5 percent less, 0.3 percent less, and 0.7 percent less, respectively. According to the analyses, the High K Scenario (S7) with no WTP discharge results in somewhat less water in the stream at Reach A than the Base Case Scenario (S0) with no WTP discharge.

For the Low K Scenario (S8) with a 50 percent exceedance probability WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 0.6 percent more to 0.0 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 0.4 percent more to 0.0 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 0.7 percent more to 0.0 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 0.2 percent more, 0.1 percent more, and 0.2 percent more, respectively. According to the analyses, the Low K Scenario (S8) with a 50 percent exceedance probability WTP discharge has same range in average monthly streamflow change (in percent) and the same annual average monthly streamflow change (in percent) as the Base Case Scenario (S0) with a 50 percent exceedance probability WTP discharge at Reach A.

For the Low K Scenario (S8) with no WTP discharge, the average monthly streamflow with a 50 percent exceedance probability is predicted to vary from 0.1 percent less to 0.3 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 10 percent exceedance probability is predicted to vary from 0.0 percent less to 0.2 percent less than the baseline streamflow, depending on the month. The average monthly streamflow with a 90 percent exceedance probability is predicted to vary from 0.2 percent less to 0.4 percent less than the baseline streamflow. The annual average monthly streamflow with 50, 10, and 90 percent exceedance probabilities are estimated to be 0.2 percent less, 0.1 percent less, and 0.3 percent less, respectively. According to the analyses, the Low K Scenario (S8) with no WTP discharge has the same range in average monthly streamflow change (in percent) and the same annual average monthly streamflow change (in percent) as the Base Case Scenario (S0) no WTP discharge at Reach A.

### K4.16.1.3 Additional Considerations

This section discusses several issues that should be considered when reviewing the results. It should be noted that the exceedance probability streamflows (i.e., 50, 10, and 90 percent) are based on the 76-year synthetic record and are calculated by month, and on an annual basis. An annual average monthly streamflow with a 90 percent exceedance probability would not be made up of months that all had 90 percent exceedance probability average monthly streamflows. Similarly, it would be improbable (not impossible) to experience multiple months with average monthly streamflows equal to the 90 percent exceedance probability streamflow.

The WTP discharge shown in Knight Piésold (2019s) is not exactly the same as that used in the Knight Piésold (2019r and 2019q) streamflow change analyses. The total WTP average monthly discharge used in the streamflow change computations for the base case at end of mine is 28.4 cfs. The total WTP average monthly discharge associated with the base case at the end of mine reported in the water balance report (Knight Piésold 2019s) is 30 cfs. The total WTP average monthly discharge used in the streamflow change computations for the base case at post-closure is 13.9 cfs; while the total WTP average monthly discharge associated with the base case at post-closure reported in the water balance report (Knight Piésold 2019s) is 13.0 cfs.

The watershed model used for the streamflow change computations considers both surface water and groundwater and the exchange between the two. This makes it difficult to do a simple check of the surface water results to make sure the WTP discharge has been included. In response to a question regarding the WTP discharge, PLP provided the following response (PLP 2020c). The response is presented here to provide more insight on the workings of the watershed model:

> Groundwater storage in the model causes the model to be non-linear, and the effects of this non-linearity is particularly evident in areas where streamflows go very low or to zero during some months, such as at NFK-C. Not all WTP treated water that is discharged in a particular month contributes immediately to surface water flow. Some of the water goes into groundwater storage, with that amount varying according to the amount of water in the stream and the volume of groundwater stored of the groundwater system at the time. Rather than just looking at 50th percentile values for a particular month, it is useful to look at the range of the 76 different values that were generated to get a sense of how much the recharge and discharge of groundwater can influence the difference between EOM flows with and without WTP discharge. The difference between modeled streamflows with and without WTP discharge is shown in Table 1 below for location NFK-C. For example, the WTP discharge to the NFK in June was modeled as 27.9 cfs every year, but the corresponding change in surface flows in any one year as a result of that release combined with the effects of releases in all the preceding months in all the preceding years ranged

from 23.5 cfs to 42.7 cfs, with an average change of 34.3 cfs and a 50th percentile change of 33.5 cfs.

The EIS team does not understand the inner workings of the model well enough to confirm that the values presented are all correct. The following list notes some apparent anomalies—which might be attributable to typographic errors or errors in computations or assumptions.

- NFK Reach A and NFK Reach C—The end of mine analyses (Table K4.16-56) predict that Scenarios S0, S7, and S8 all have the same range in average monthly streamflow change (in percent) and the same annual average monthly streamflow change (in percent).
- SFK Reach E—The end of mine analyses (Table K4.16-58) predict that the range in average monthly streamflow change (in percent) and annual average monthly streamflow change (in percent) are the same with and without a WTP discharge.
- UTC Reach A—The end of mine analyses (Table K4.16-60) predict that the streamflows with WTP discharge have the same range in average monthly streamflow change (in percent) and the same annual average monthly streamflow change (in percent) for the 10, 50, and 90 percent streamflow exceedance probabilities.

### K4.16.1.4 Uncertainty

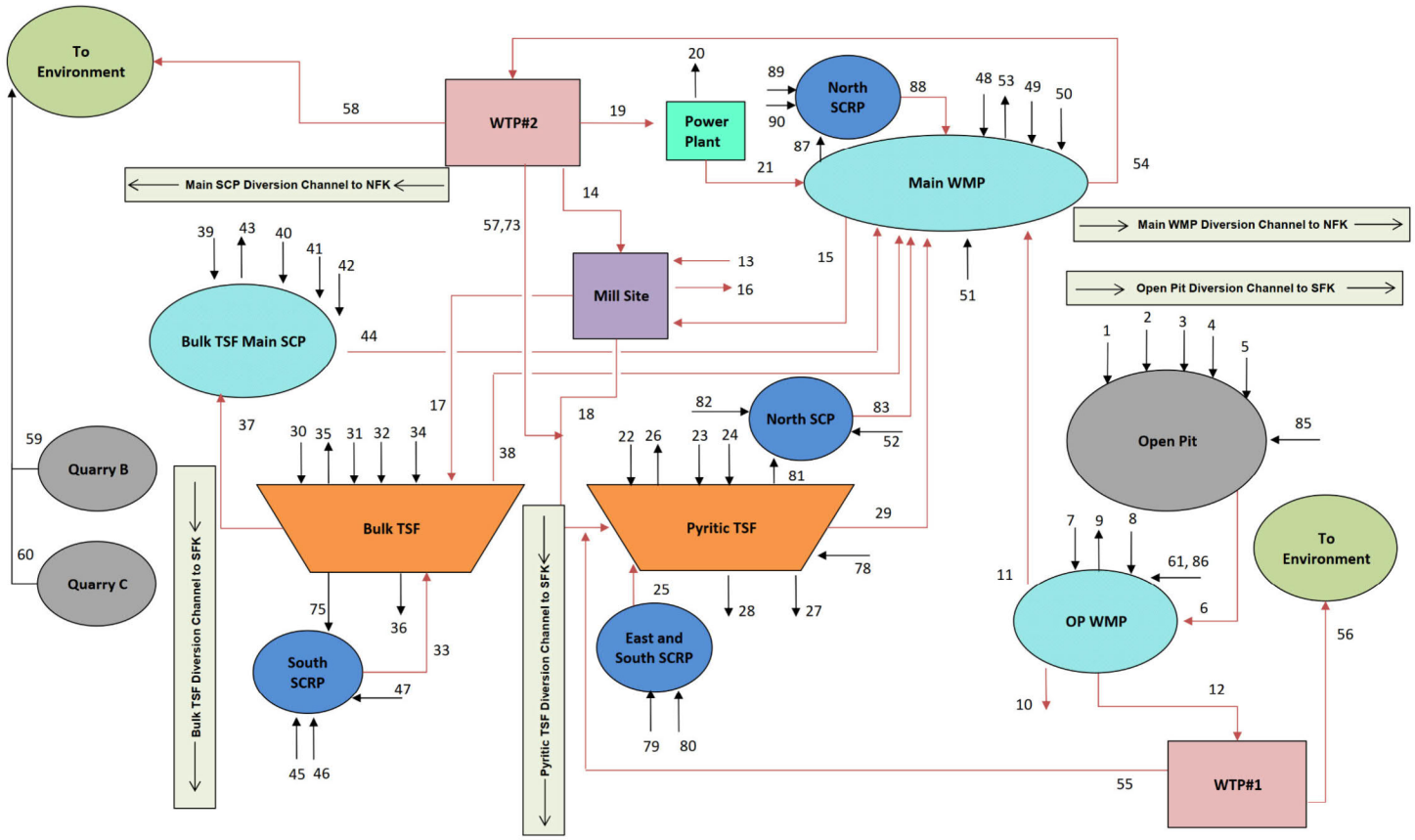
Uncertainty is the result of partially observable events, stochastic environments, and/or unknowns. There is uncertainty associated with the magnitude of the impact of the mine on streamflow in the NFK, SFK, and UTC. Some of the uncertainty can be quantitatively expressed and evaluated; some cannot. The following is a brief description of the uncertainty associated with the streamflow estimates.

- There is a certain level of uncertainty regarding how the project-specific Baseline Watershed Model (BWM) works and is being used. The project-specific model was specifically designed for this project as a tool for understanding the connection between climate, surface water, and groundwater systems in the area, but only limited documentation is available concerning the model. The BWM was then used to establish long-term baseline streamflow conditions, and assess potential changes in streamflow associated with project development.
- There is uncertainty due to the planning-level nature of the computations. A detailed design is not currently available, and assumptions made for these computations could change later in the design process.
- Although the BWM has been calibrated and validated, the model is at best a “best fit” of the data. It does not exactly predict the flows used to calibrate or validate the model. The model was adjusted to fit the measured data by visual inspection using several criteria (Knight Piésold 2019g). Additionally, the statistical Nash-Sutcliffe efficiency (1970) coefficient (NSE), in combination with the Morisi et al. (2006) performance rating, was also used to evaluate the fit (Knight Piésold 2019g). In the BWM, the NFK, SFK, and UTC watersheds are each made up of multiple sub-watersheds, a total of 22 sub-watersheds. Using the NSE and the Morisi et al. (2006) performance rating, both the calibration and the validation streamflow predictions were rated very good at 17 of the sub-watersheds (Knight Piésold 2019g). The calibration and validation streamflow predictions were rated unsatisfactory on one sub-watershed, and rated either satisfactory or good on the other four sub-watersheds (Knight Piésold 2019g).
- A quantitative measure of the uncertainty associated with streamflow predictions made with the BWM when used to predict streamflows on the undisturbed watersheds (i.e., the condition for which the model was calibrated) is the magnitude of the

difference between the computed streamflows and the measured streamflows. The results of the model calibration and validation process are discussed in Appendix K3.16 (Table K3.16-18 and Table K3.16-19), and provide a quantitative evaluation of the model.

- There is uncertainty regarding how well the watershed model predicts streamflow during operations and closure. This is not uncommon with such models, because it is not possible to calibrate on a future condition. However, it appears that this model has not been used for similar mining projects that have reached the end of mine condition, which would provide at least qualitatively assurance that the model provided satisfactory results at another location with similar conditions.
- There is uncertainty regarding the hydraulic conductivity. To quantitatively evaluate the magnitude of the uncertainty associated with the possibility that the actual hydraulic conductivity might vary from the assumed (i.e., Base Case) hydraulic conductivity, streamflow change estimates were made assuming a Base Case K, a High K (i.e., Base Case K × 10) and a Low K (i.e., Base Care K × 0.1). Because of the interaction between groundwater and surface water in the model, the results are not simply “more” or “less” surface water. Nevertheless, the magnitude of this source of uncertainty can be evaluated by reviewing the results presented in this section.
- There is uncertainty regarding the actual WTP discharge and how that might vary from the assumptions made for this analysis. As part of the streamflow change evaluation, streamflow change estimates were made twice: once assuming there would be a WTP discharge; and once assuming there was no WTP discharge. This provides an estimate of the change in streamflow that might occur if the WTP was not working for a period of time, or if the WTP discharge was significantly less than anticipated at this time. Comparing the streamflow change calculations for the “with” and “without” WTP discharge provides a quantitative measure of this uncertainty.
- There is natural variability in rainfall and temperature, and this results in streamflow changes from year to year. These analyses attempted to quantify this uncertainty by using a 76-year synthetic record based on data collected on and near the site, and then computing the streamflow with a 10, 50, and 90 percent exceedance probability.
- There is also uncertainty regarding what future rainfalls and temperatures might be as a result of climate change.

It is important to note that if all the uncertainties could be quantified, they would not usually be strictly additive; some would cancel or partially cancel each other in all but the least likely combination of outcomes. It is also worth noting that although the streamflow predictions are presented to one-tenth of a cfs, they are probably not that accurate. They are presented to that level of accuracy to minimize rounding errors in calculations using the numbers.




**LEGEND:**

3 FLOW PATH NUMBER

RUNOFF, GROUNDWATER, AND SEEPAGE PATHWAY

PUMPED FLOW

Source: Knight Piesold 2019s

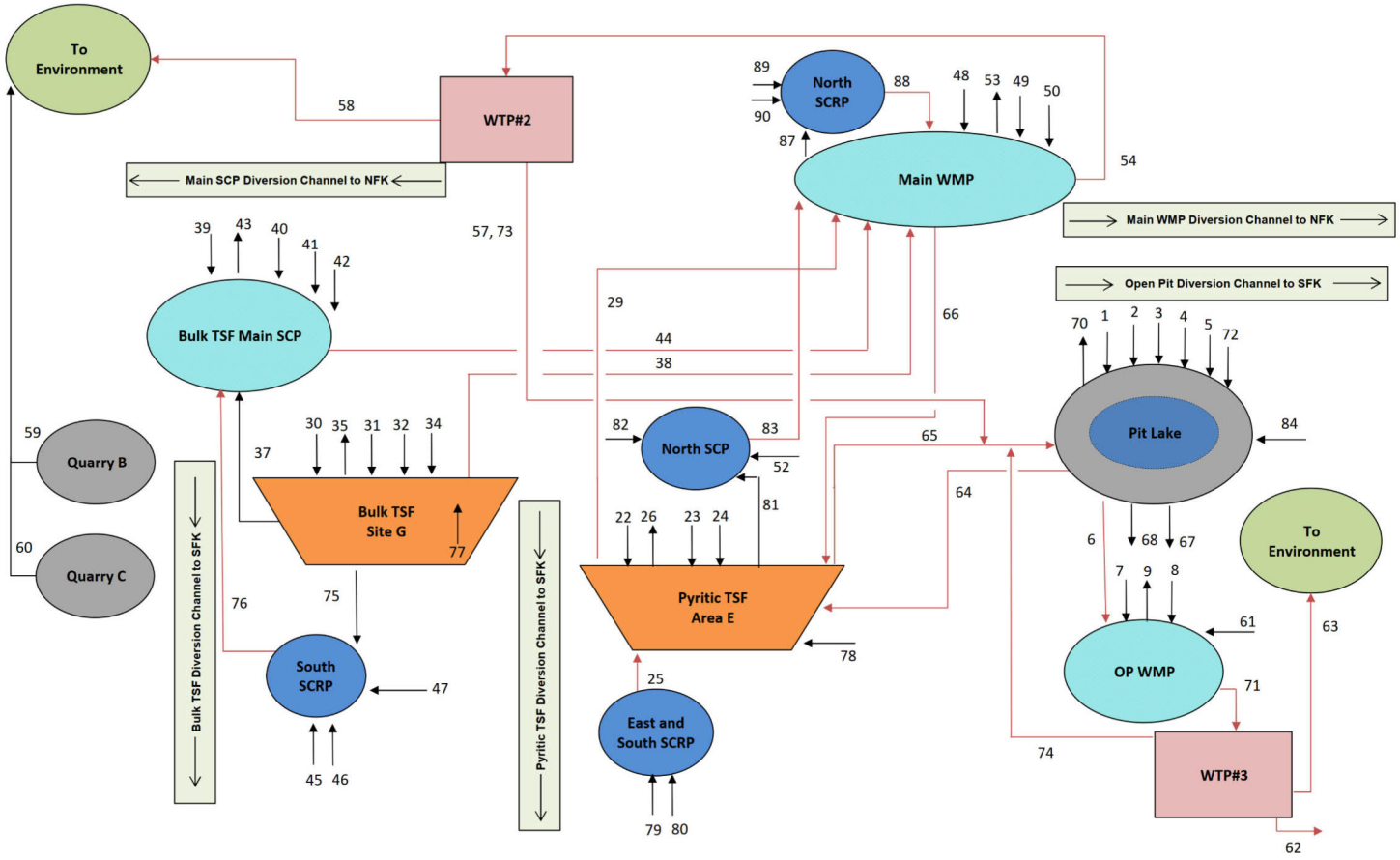
US Army Corps of Engineers®

Note: Flow path numbers correspond with flow values listed in Table K4.16-1.

## WATER BALANCE FLOW SCHEMATIC - END OF MINE

**PEBBLE PROJECT EIS**

**FIGURE K4.16-1**

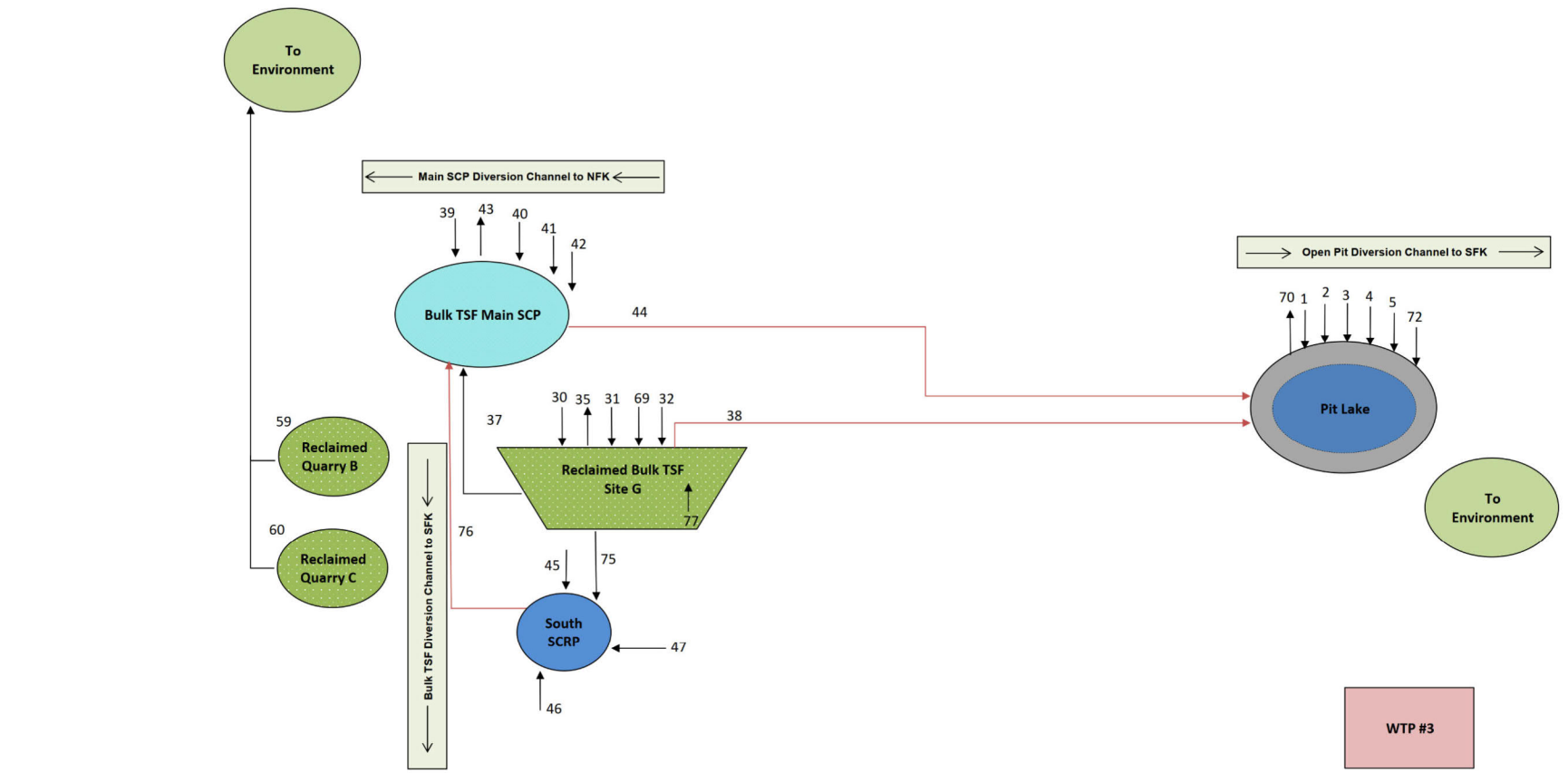



Source: Knight Piesold 2019s

US Army Corps of Engineers®

Note: Flow path numbers correspond with flow values listed in Table K4.16-5.

**WATER BALANCE FLOW SCHEMATIC, CLOSURE - PHASE 1**




Source: Knight Piesold 2019s

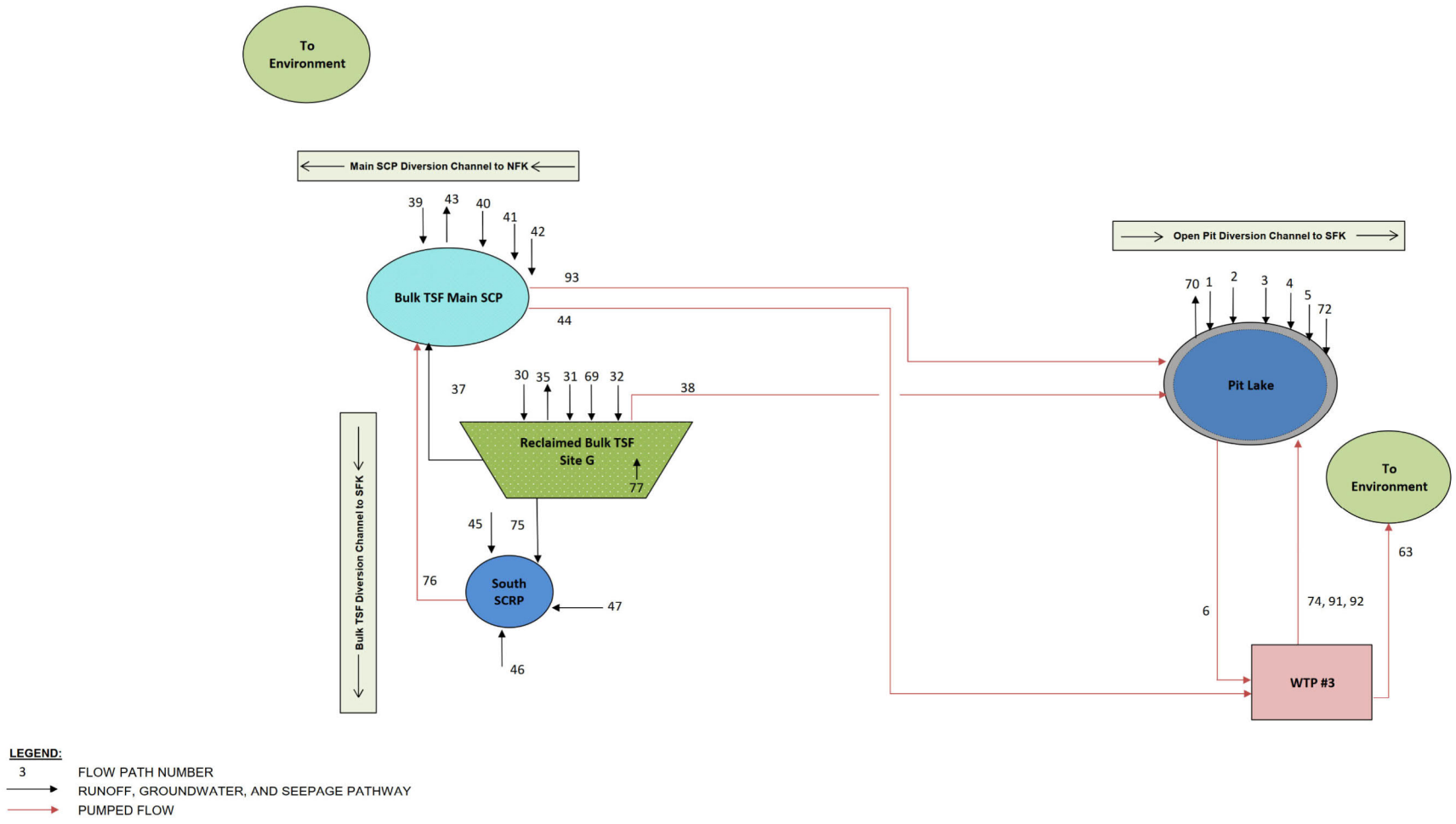
US Army Corps of Engineers®

Note: Flow path numbers correspond with flow values listed in Table K4.16-8.

**WATER BALANCE FLOW SCHEMATIC, CLOSURE - PHASE 2**

**PEBBLE PROJECT EIS**

**FIGURE K4.16-3**




Source: Knight Piesold 2019s

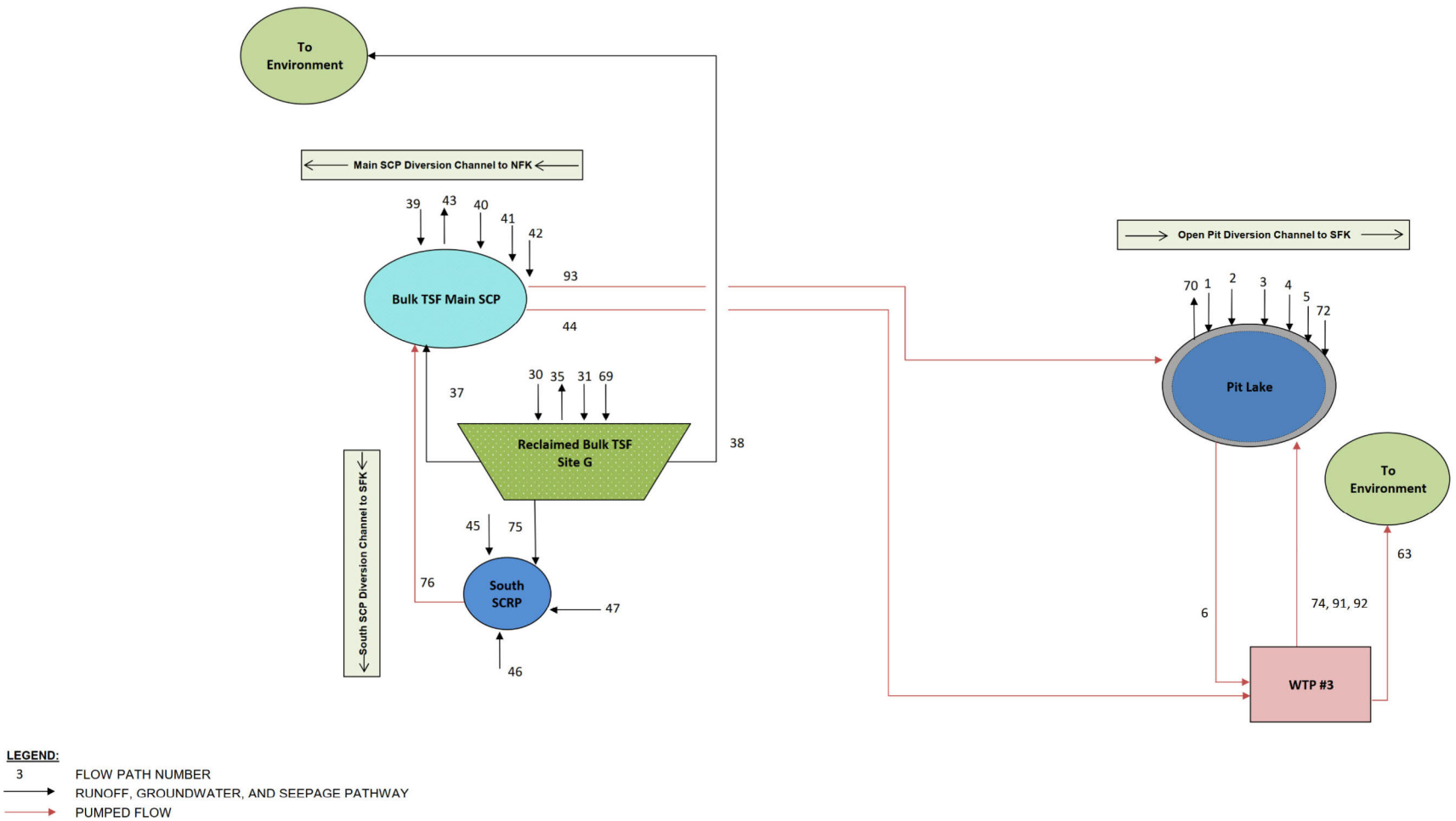
US Army Corps of Engineers®

Note: Flow path numbers correspond with flow values listed in Table K4.16-11.

**WATER BALANCE FLOW SCHEMATIC, CLOSURE - PHASE 3**

**PEBBLE PROJECT EIS**

**FIGURE K4.16-4**




Source: Knight Piesold 2019s

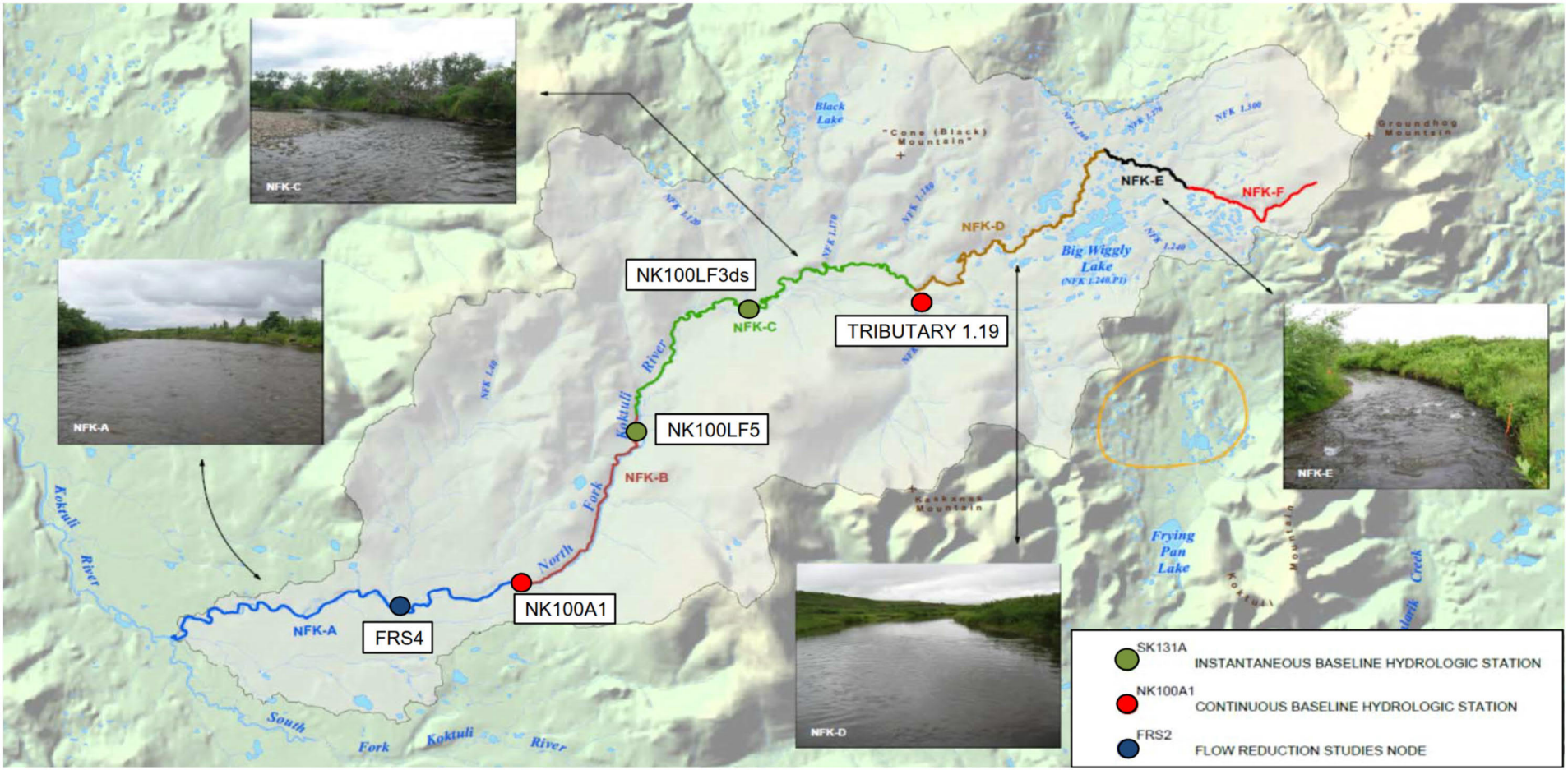
US Army Corps of Engineers®

Note: Flow path numbers correspond with flow values listed in Table K4.16-14.

**WATER BALANCE FLOW SCHEMATIC, CLOSURE - PHASE 4 (POST-CLOSURE)**

**PEBBLE PROJECT EIS**

**FIGURE K4.16-5**



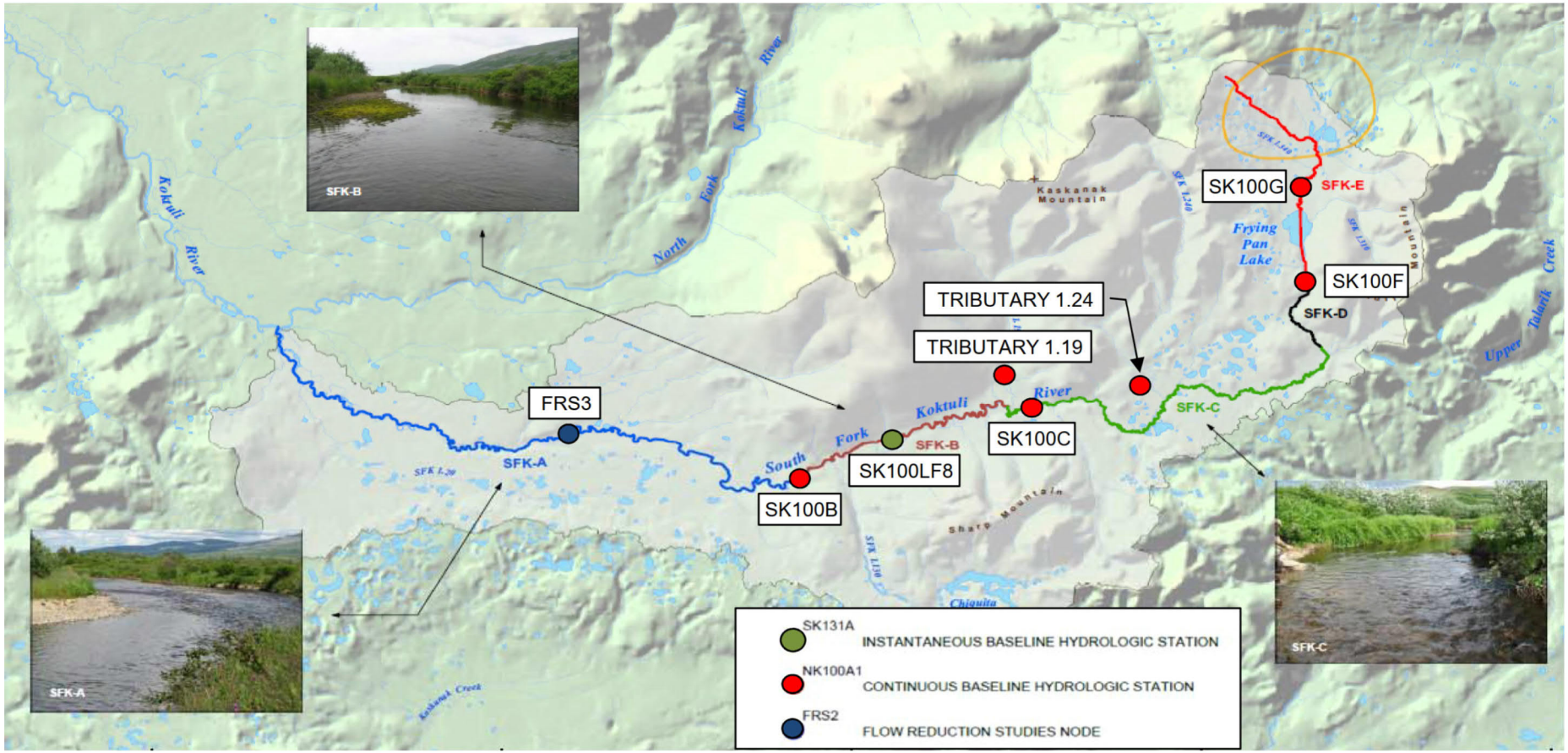

Source: Knight Piesold 2019r

US Army Corps of Engineers®

**NORTH FORK KOKTULI RIVER REACHES AND HYDROLOGY STATIONS**

**PEBBLE PROJECT EIS**

**FIGURE K4.16-6**



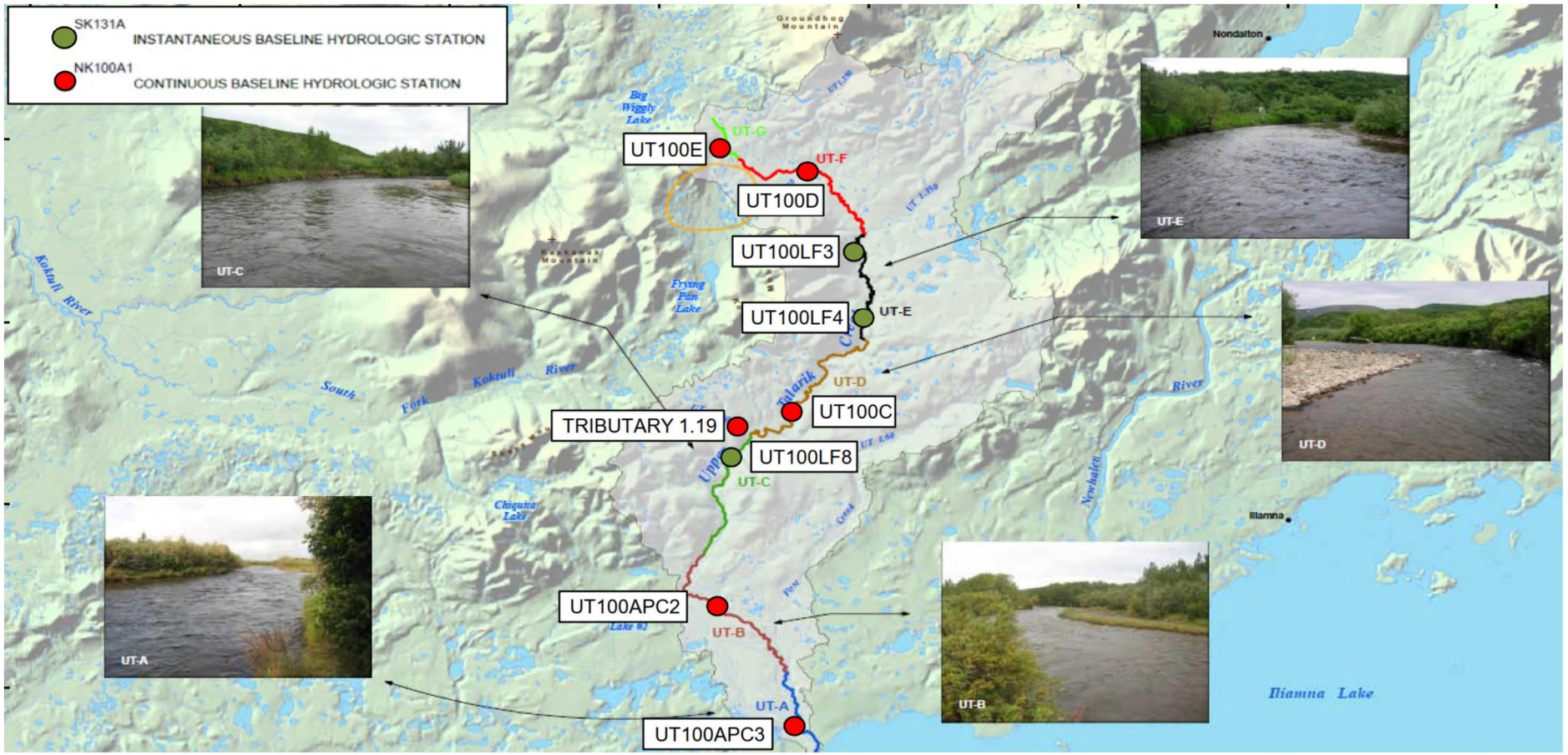

Source: Knight Piesold 2019r

US Army Corps of Engineers®

**SOUTH FORK KOKTULI RIVER REACHES AND HYDROLOGY STATIONS**

**PEBBLE PROJECT EIS**

**FIGURE K4.16-7**




Source: Knight Piesold 2019r

US Army Corps of Engineers®

**UPPER TALARIK CREEK REACHES AND HYDROLOGY STATIONS**

**PEBBLE PROJECT EIS**

**FIGURE K4.16-8**

**Table K4.16-1: Average Annual Water Balance, End of Mine—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Open Pit** | | | | |
| Open Pit Inflows | | | | |
| 1 | Open Pit Wall Runoff | 2 | 4 | 6 |
| 2 | Undisturbed Surface Runoff | <1 | 1 | 2 |
| 3 | Diversion Channel Leakage | <1 | <1 | 0 |
| 4 | Groundwater | <1 | <1 | <1 |
| 5 | Additional Snowblow on Pit Lake | 0 | 0 | 0 |
| 85 | Runoff from Temporary In-Pit Stockpile | <1 | <1 | <1 |
| | **Subtotal Inflows** | **2** | **5** | **9** |
| Open Pit Outflows | | | | |
| 6 | Open Pit Sump and/or Dewatering Wells | 2 | 6 | 9 |
| | **Subtotal Outflows** | **2** | **6** | **9** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows – Outflows – Change in Storage)** | **0** | **0** | **0** |
| **Open Pit Water Management Pond (OP WMP)** | | | | |
| OP WMP Inflows | | | | |
| 6 | Open Pit Sump and/or Dewatering Wells | 2 | 6 | 9 |
| 7 | Direct Precipitation | <1 | <1 | <1 |
| 8 | Undisturbed Surface Runoff | <1 | 1 | 2 |
| 61 | Water Collected in Open Pit Perimeter Wells | 2 | 2 | 2 |
| 86 | Water Collected in In-Pit Wells | 1 | 1 | 1 |
| | **Subtotal Inflows** | **6** | **10** | **14** |
| OP WMP Outflows | | | | |

**Table K4.16-1: Average Annual Water Balance, End of Mine—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 9 | Pond Evaporation | <1 | <1 | <1 |
| 10 | Dust Suppression | <1 | <1 | <1 |
| 11 | Surplus to Main WMP | <1 | <1 | 1 |
| 12 | Surplus to WTP #1 | 6 | 9 | 10 |
| | **Subtotal Outflows** | **6** | **9** | **11** |
| | **Change in Storage** | **-1** | **1** | **2** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Mill/Process** | | | | |
| Process Inflows | | | | |
| 13 | Water in Ore | 2 | 2 | 2 |
| 14 | Treated Water to Mill/Process | 3 | 3 | 3 |
| 15 | Reclaim Water from Main WMP | 48 | 48 | 48 |
| | **Subtotal Inflows** | **54** | **54** | **54** |
| Process Outflows | | | | |
| 16 | Water in Concentrate | <1 | <1 | <1 |
| 17 | Bulk Tailings Slurry Water | 47 | 47 | 47 |
| 18 | Pyritic Tailings Slurry Water | 7 | 7 | 7 |
| | **Subtotal Outflows** | **54** | **54** | **54** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Power Plant** | | | | |
| Power Plant Inflows | | | | |
| 19 | Treated Water for Cooling Towers | 3 | 3 | 3 |
| | **Subtotal Inflows** | **3** | **3** | **3** |

**Table K4.16-1: Average Annual Water Balance, End of Mine—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| Power Plant Outflows | | | | |
| 20 | Cooling Tower Evaporation | 2 | 2 | 2 |
| 21 | Blowdown Water to Main WMP | 1 | 1 | 1 |
| | **Subtotal Outflows** | **3** | **3** | **3** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Pyritic Tailings and PAG Waste Rock Management Facility (Pyritic TSF)** | | | | |
| Pyritic TSF Inflows | | | | |
| 18 | Pyritic Tailings Slurry Water | 7 | 7 | 7 |
| 22 | Direct Precipitation on Supernatant Pond | 2 | 5 | 7 |
| 23 | Undisturbed Surface Runoff | <1 | 1 | 1 |
| 24 | Diversion Channel Leakage | <1 | <1 | <1 |
| 25 | Surplus from East/South SCRFs | <1 | 1 | 2 |
| 55 | Waste Stream from WTP #1 | <1 | <1 | <1 |
| 57 | Reject Brine from WTP #2 | <1 | <1 | <1 |
| 73 | Reject Sludge Flows from WTP #2 | <1 | <1 | <1 |
| 78 | Runoff/Infiltration from Temporarily Exposed Waste Rock | <1 | <1 | <1 |
| | **Subtotal Inflows** | **8** | **13** | **17** |
| Pyritic TSF Outflows | | | | |
| 26 | Pond Evaporation | 1 | 1 | 1 |
| 27 | Pyritic Tailings Void Losses | 2 | 2 | 2 |
| 28 | Waste Rock Void Losses | <1 | <1 | <1 |
| 29 | Surplus Water from Pyritic TSF | 8 | 8 | 4 |
| 81 | Liner Leakage Reporting to Basin Underdrains | <1 | <1 | <1 |

**Table K4.16-1: Average Annual Water Balance, End of Mine—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| | **Subtotal Outflows** | **12** | **12** | **8** |
| | **Change in Storage** | **-3** | **2** | **9** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Pyritic TSF North Seepage Collection Pond (Pyritic TSF North SCRP)** | | | | |
| Pyritic TSF North SCRP Inflows | | | | |
| 52 | Pyritic TSF Main Embankment Runoff | <1 | 1 | 1 |
| 82 | Undisturbed Surface Runoff to Pyritic TSF North SCP | <1 | <1 | <1 |
| | **Subtotal Inflows** | **<1** | **1** | **1** |
| Pyritic TSF North SCRP Outflows | | | | |
| 83 | Surplus from Pyritic TSF North SCP | <1 | 1 | 1 |
| | **Subtotal Outflows** | **0** | **1** | **1** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Pyritic TSF East/South Seepage Collection Pond (Pyritic TSF East/South SCRP)** | | | | |
| Pyritic TSF East/South SCRP Inflows | | | | |
| 79 | Pyritic TSF East/South Embankment Runoff | <1 | 1 | 1 |
| 80 | Undisturbed Surface Runoff | <1 | <1 | <1 |
| | **Subtotal Inflows** | **0** | **1** | **2** |
| Pyritic TSF East/South SCRP Outflows | | | | |
| 25 | Surplus from East/South SCRPs | <1 | 1 | 2 |
| | **Subtotal Outflows** | **0** | **1** | **2** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |

**Table K4.16-1: Average Annual Water Balance, End of Mine—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Bulk Tailings Management Facility (Bulk TSF)** | | | | |
| Bulk TSF Inflows | | | | |
| 17 | Bulk Tailings Slurry Water | 47 | 47 | 47 |
| 30 | Direct Precipitation on Supernatant Pond | 1 | 3 | 7 |
| 31 | Undisturbed Surface Runoff | 2 | 6 | 10 |
| 32 | Diversion Channel Leakage | <1 | <1 | 1 |
| 33 | Surplus from South Seepage Collection Recycle Pond | 1 | 3 | 5 |
| 34 | Bulk Tailings Beach Runoff | 4 | 12 | 18 |
| | **Subtotal Inflows** | **55** | **71** | **88** |
| Bulk TSF Outflows | | | | |
| 35 | Pond Evaporation from Supernatant Pond | 1 | 1 | 1 |
| 36 | Bulk Tailings Void Losses | 18 | 18 | 18 |
| 37 | Seepage Reporting to Main Embankment and Basin Underdrains | 9 | 9 | 9 |
| 38 | Surplus Water from Bulk TSF | 33 | 42 | 50 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| | **Subtotal Outflows** | **60** | **68** | **78** |
| | **Change in Storage** | **-5** | **3** | **10** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk TSF Main Embankment Seepage Collection Pond (Bulk TSF Main SCP)** | | | | |
| Bulk TSF Main SCP Inflows | | | | |
| 37 | Seepage Reporting to Main Embankment and Basin Underdrains | 9 | 9 | 9 |
| 39 | Direct Precipitation | <1 | <1 | <1 |

**Table K4.16-1: Average Annual Water Balance, End of Mine—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 40 | Undisturbed Surface Runoff | 1 | 4 | 7 |
| 41 | Diversion Channel Leakage | <1 | <1 | 1 |
| 42 | Bulk TSF Main Embankment Runoff | 1 | 2 | 3 |
| | **Subtotal Inflows** | **11** | **15** | **21** |
| Bulk TSF Main SCP Outflows | | | | |
| 43 | Pond Evaporation | <1 | <1 | <1 |
| 44 | Surplus Water from Bulk TSF Main SCP | 11 | 15 | 21 |
| | **Subtotal Outflows** | **11** | **15** | **21** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk TSF South Seepage and Recycle Collection Pond** | | | | |
| Seepage Pond Inflows | | | | |
| 45 | Undisturbed Surface Runoff | 1 | 2 | 3 |
| 46 | Diversion Channel Leakage | <1 | 1 | 2 |
| 47 | Bulk TSF South Embankment Runoff | <1 | <1 | 1 |
| 75 | Seepage Reporting to Bulk TSF South SCP | <1 | <1 | <1 |
| | **Subtotal Inflows** | **1** | **3** | **5** |
| Seepage Pond Outflows | | | | |
| 33 | Surplus from South Seepage Collection Recycle Pond | 1 | 3 | 5 |
| | **Change Outflows** | **1** | **3** | **5** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Main Water Management Pond (Main WMP)** | | | | |
| Main WMP Inflows | | | | |

**Table K4.16-1: Average Annual Water Balance, End of Mine—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 11 | Surplus to Main WMP from OP WMP | <1 | <1 | 1 |
| 21 | Blowdown Water | 1 | 1 | 1 |
| 29 | Surplus Water from Pyritic TSF | 8 | 8 | 4 |
| 38 | Surplus from Bulk TSF | 33 | 42 | 50 |
| 44 | Surplus Water from Bulk TSF Main SCP | 11 | 15 | 21 |
| 48 | Direct Precipitation | 1 | 3 | 5 |
| 49 | Undisturbed Surface Runoff | 3 | 7 | 12 |
| 50 | Diversion Channel Leakage | <1 | 1 | 1 |
| 51 | Mill Site Runoff | <1 | <1 | 1 |
| 83 | Surplus from Pyritic TSF North SCP | <1 | 1 | 1 |
| 88 | Surplus from Main WMP North SCRP | 1 | 2 | 2 |
| | **Subtotal Inflows** | **58** | **80** | **100** |
| Main WMP Outflows | | | | |
| 15 | Reclaim Water from Main WMP for Mill/Process | 48 | 48 | 48 |
| 53 | Pond Evaporation | 1 | 1 | 1 |
| 54 | Main WMP to WTP #2 | 9 | 26 | 30 |
| 87 | Main WMP Liner Leakage Reporting to Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Outflows** | **58** | **75** | **79** |
| | **Change in Storage** | **0** | **6** | **21** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Main WMP North Seepage Collection Pond (Main WMP North SCRP)** | | | | |
| Main WMP North SCRP Inflows | | | | |
| 87 | Main WMP Liner Leakage Reporting to Basin Underdrains | <1 | <1 | <1 |

**Table K4.16-1: Average Annual Water Balance, End of Mine—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 89 | Main WMP Main Embankment Runoff | <1 | 1 | 1 |
| 90 | Undisturbed Surface Runoff to Main WMP North SCP | <1 | 1 | 1 |
| | **Subtotal Inflows** | **1** | **1** | **2** |
| Main WMP North SCRP Outflows | | | | |
| 88 | Surplus from Main WMP North SCRP | 1 | 2 | 2 |
| | **Subtotal Outflows** | **1** | **2** | **2** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Water Treatment Plan #1 (WTP #1)** | | | | |
| WTP #1 Inflows | | | | |
| 12 | Surplus to WTP #1 from OP WMP | 6 | 9 | 10 |
| | **Subtotal Inflows** | **6** | **9** | **10** |
| WTP #1 Outflows | | | | |
| 55 | Waste Stream from WTP #1 | <1 | <1 | <1 |
| 56 | Flows Released to Environment from WTP #1 | 6 | 9 | 10 |
| | **Change Outflows** | **6** | **9** | **10** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Water Treatment Plan #2 (WTP #2)** | | | | |
| WTP #2 Inflows | | | | |
| 54 | Main WMP to WTP #2 | 9 | 26 | 30 |
| | **Subtotal Inflows** | **9** | **26** | **30** |
| WTP #2 Outflows | | | | |
| 14 | Treated Water to Mill/Process | 3 | 3 | 3 |

**Table K4.16-1: Average Annual Water Balance, End of Mine—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 19 | Treated Water for Cooling Towers | 3 | 3 | 3 |
| 57 | Reject Brine from WTP #2 | <1 | <1 | <1 |
| 73 | Reject Sludge Flows from WTP #2 | <1 | <1 | <1 |
| 58 | Flows Released to Environment from WTP #2 | 3 | 19 | 24 |
| | **Change Outflows** | **9** | **26** | **30** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Flows Released from WTPs to Downstream Environment** | | | | |
| 56 | Flows Released to Environment from WTP #1 | 6 | 9 | 10 |
| 58 | Flows Released to Environment from WTP #2 | 3 | 19 | 24 |
| | **Total Flows Released to Downstream Environment** | **9** | **28** | **34** |

Notes:

cfs = cubic feet per second
OP = open pit
PAG = potentially acid-generating
SCP = seepage collection pond
SCRP = seepage collection and recycle pond
TSF = tailings storage facility
WMP = water management pond
WTP = water treatment plant

Source: Knight Piésold 2019s

**Table K4.16-2: Average Annual Water Balance, End of Mine—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Open Pit** | | | | |
| Open Pit Inflows | | | | |
| 1 | Open Pit Wall Runoff | 2 | 4 | 6 |
| 2 | Undisturbed Surface Runoff | <1 | 1 | 2 |
| 3 | Diversion Channel Leakage | <1 | <1 | 0 |
| 4 | Groundwater | 0 | 0 | 0 |
| 5 | Additional Snowblow on Pit Lake | 0 | 0 | 0 |
| 85 | Runoff from Temporary In-Pit Stockpile | <1 | <1 | <1 |
| | **Subtotal Inflows** | **3** | **6** | **9** |
| Open Pit Outflows | | | | |
| 6 | Open Pit Sump and/or Dewatering Wells | 3 | 6 | 9 |
| | **Subtotal Outflows** | **3** | **6** | **9** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Open Pit Water Management Pond (OP WMP)** | | | | |
| OP WMP Inflows | | | | |
| 6 | Open Pit Sump and/or Dewatering Wells | 3 | 6 | 9 |
| 7 | Direct Precipitation | <1 | <1 | <1 |
| 8 | Undisturbed Surface Runoff | <1 | 1 | 2 |
| 61 | Water Collected in Open Pit Perimeter Wells | 3 | 3 | 3 |
| 86 | Water Collected in In-Pit Wells | 6 | 6 | 6 |
| | **Subtotal Inflows** | **12** | **17** | **20** |
| OP WMP Outflows | | | | |

**Table K4.16-2: Average Annual Water Balance, End of Mine—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 9 | Pond Evaporation | <1 | <1 | <1 |
| 10 | Dust Suppression | <1 | <1 | <1 |
| 11 | Surplus to Main WMP | <1 | 3 | 5 |
| 12 | Surplus to WTP #1 | 12 | 14 | 14 |
| | **Subtotal Outflows** | **12** | **17** | **19** |
| | **Change in Storage** | **0** | **0** | **1** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Mill/Process** | | | | |
| Process Inflows | | | | |
| 13 | Water in Ore | 2 | 2 | 2 |
| 14 | Treated Water to Mill/Process | 3 | 3 | 3 |
| 15 | Reclaim Water from Main WMP | 48 | 48 | 48 |
| | **Subtotal Inflows** | **54** | **54** | **54** |
| Process Outflows | | | | |
| 16 | Water in Concentrate | <1 | <1 | <1 |
| 17 | Bulk Tailings Slurry Water | 47 | 47 | 47 |
| 18 | Pyritic Tailings Slurry Water | 7 | 7 | 7 |
| | **Subtotal Outflows** | **54** | **54** | **54** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Power Plant** | | | | |
| Power Plant Inflows | | | | |
| 19 | Treated Water for Cooling Towers | 3 | 3 | 3 |
| | **Subtotal Inflows** | **3** | **3** | **3** |

**Table K4.16-2: Average Annual Water Balance, End of Mine—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| Power Plant Outflows | | | | |
| 20 | Cooling Tower Evaporation | 2 | 2 | 2 |
| 21 | Blowdown Water to Main WMP | 1 | 1 | 1 |
| | **Subtotal Outflows** | **3** | **3** | **3** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Pyritic Tailings and PAG Waste Rock Management Facility (Pyritic TSF)** | | | | |
| Pyritic TSF Inflows | | | | |
| 18 | Pyritic Tailings Slurry Water | 7 | 7 | 7 |
| 22 | Direct Precipitation on Supernatant Pond | 2 | 5 | 7 |
| 23 | Undisturbed Surface Runoff | <1 | 1 | 1 |
| 24 | Diversion Channel Leakage | <1 | <1 | <1 |
| 25 | Surplus from East/South SCRFs | <1 | 1 | 2 |
| 55 | Waste Stream from WTP #1 | <1 | <1 | <1 |
| 57 | Reject Brine from WTP #2 | <1 | <1 | <1 |
| 73 | Reject Sludge Flows from WTP #2 | <1 | <1 | <1 |
| 78 | Runoff/Infiltration from Temporarily Exposed Waste Rock | <1 | <1 | <1 |
| | **Subtotal Inflows** | **8** | **13** | **17** |
| Pyritic TSF Outflows | | | | |
| 26 | Pond Evaporation | 1 | 1 | 1 |
| 27 | Pyritic Tailings Void Losses | 2 | 2 | 2 |
| 28 | Waste Rock Void Losses | <1 | <1 | <1 |
| 29 | Surplus Water from Pyritic TSF | 4 | 8 | 13 |
| 81 | Liner Leakage Reporting to Basin Underdrains | <1 | <1 | <1 |

**Table K4.16-2: Average Annual Water Balance, End of Mine—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| | **Subtotal Outflows** | **8** | **13** | **17** |
| | **Change in Storage** | **1** | **1** | **1** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Pyritic TSF North Seepage Collection Pond (Pyritic TSF North SCRP)** | | | | |
| Pyritic TSF North SCRP Inflows | | | | |
| 52 | Pyritic TSF Main Embankment Runoff | <1 | 1 | 1 |
| 82 | Undisturbed Surface Runoff to Pyritic TSF North SCP | <1 | <1 | <1 |
| | **Subtotal Inflows** | **<1** | **1** | **1** |
| Pyritic TSF North SCRP Outflows | | | | |
| 83 | Surplus from Pyritic TSF North SCP | <1 | 1 | 1 |
| | **Subtotal Outflows** | **0** | **1** | **1** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Pyritic TSF East/South Seepage Collection Pond (Pyritic TSF East/South SCRP)** | | | | |
| Pyritic TSF East/South SCRP Inflows | | | | |
| 79 | Pyritic TSF East/South Embankment Runoff | <1 | 1 | 1 |
| 80 | Undisturbed Surface Runoff | <1 | <1 | <1 |
| | **Subtotal Inflows** | **0** | **1** | **2** |
| Pyritic TSF East/South SCRP Outflows | | | | |
| 25 | Surplus from East/South SCRPs | <1 | 1 | 2 |
| | **Subtotal Outflows** | **0** | **1** | **2** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |

**Table K4.16-2: Average Annual Water Balance, End of Mine—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Bulk Tailings Management Facility (Bulk TSF)** | | | | |
| Bulk TSF Inflows | | | | |
| 17 | Bulk Tailings Slurry Water | 47 | 47 | 47 |
| 30 | Direct Precipitation on Supernatant Pond | 1 | 3 | 7 |
| 31 | Undisturbed Surface Runoff | 2 | 6 | 10 |
| 32 | Diversion Channel Leakage | <1 | <1 | 1 |
| 33 | Surplus from South Seepage Collection Recycle Pond | 1 | 3 | 5 |
| 34 | Bulk Tailings Beach Runoff | 4 | 12 | 18 |
| | **Subtotal Inflows** | **55** | **71** | **88** |
| Bulk TSF Outflows | | | | |
| 35 | Pond Evaporation from Supernatant Pond | 1 | 1 | 1 |
| 36 | Bulk Tailings Void Losses | 18 | 18 | 18 |
| 37 | Seepage Reporting to Main Embankment and Basin Underdrains | 9 | 9 | 9 |
| 38 | Surplus Water from Bulk TSF | 33 | 37 | 50 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| | **Subtotal Outflows** | **60** | **63** | **78** |
| | **Change in Storage** | **-5** | **8** | **10** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk TSF Main Embankment Seepage Collection Pond (Bulk TSF Main SCP)** | | | | |
| Bulk TSF Main SCP Inflows | | | | |
| 37 | Seepage Reporting to Main Embankment and Basin Underdrains | 9 | 9 | 9 |
| 39 | Direct Precipitation | <1 | <1 | <1 |

**Table K4.16-2: Average Annual Water Balance, End of Mine—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 40 | Undisturbed Surface Runoff | 1 | 4 | 7 |
| 41 | Diversion Channel Leakage | <1 | <1 | 1 |
| 42 | Bulk TSF Main Embankment Runoff | 1 | 2 | 3 |
| | **Subtotal Inflows** | **11** | **15** | **21** |
| Bulk TSF Main SCP Outflows | | | | |
| 43 | Pond Evaporation | <1 | <1 | <1 |
| 44 | Surplus Water from Bulk TSF Main SCP | 11 | 15 | 21 |
| | **Subtotal Outflows** | **11** | **15** | **21** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk TSF South Seepage and Recycle Collection Pond** | | | | |
| Seepage Pond Inflows | | | | |
| 45 | Undisturbed Surface Runoff | 1 | 2 | 3 |
| 46 | Diversion Channel Leakage | <1 | 1 | 2 |
| 47 | Bulk TSF South Embankment Runoff | <1 | <1 | 1 |
| 75 | Seepage Reporting to Bulk TSF South SCP | <1 | <1 | <1 |
| | **Subtotal Inflows** | **1** | **4** | **5** |
| Seepage Pond Outflows | | | | |
| 33 | Surplus from South Seepage Collection Recycle Pond | 1 | 3 | 5 |
| | **Change Outflows** | **1** | **3** | **5** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Main Water Management Pond (Main WMP)** | | | | |
| Main WMP Inflows | | | | |

**Table K4.16-2: Average Annual Water Balance, End of Mine—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 11 | Surplus to Main WMP from OP WMP | <1 | 3 | 5 |
| 21 | Blowdown Water | 1 | 1 | 1 |
| 29 | Surplus Water from Pyritic TSF | 4 | 8 | 13 |
| 38 | Surplus from Bulk TSF | 33 | 37 | 50 |
| 44 | Surplus Water from Bulk TSF Main SCP | 11 | 15 | 21 |
| 48 | Direct Precipitation | 1 | 3 | 5 |
| 49 | Undisturbed Surface Runoff | 3 | 7 | 12 |
| 50 | Diversion Channel Leakage | <1 | 1 | 1 |
| 51 | Mill Site Runoff | <1 | <1 | 1 |
| 83 | Surplus from Pyritic TSF North SCP | <1 | 1 | 1 |
| 88 | Surplus from Main WMP North SCRP | 1 | 2 | 2 |
| | **Subtotal Inflows** | **53** | **80** | **112** |
| Main WMP Outflows | | | | |
| 15 | Reclaim Water from Main WMP for Mill/Process | 48 | 48 | 48 |
| 53 | Pond Evaporation | 1 | 1 | 1 |
| 54 | Main WMP to WTP #2 | 10 | 26 | 33 |
| 87 | Main WMP Liner Leakage Reporting to Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Outflows** | **60** | **75** | **82** |
| | **Change in Storage** | **-7** | **4** | **30** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Main WMP North Seepage Collection Pond (Main WMP North SCRP)** | | | | |
| Main WMP North SCRP Inflows | | | | |
| 87 | Main WMP Liner Leakage Reporting to Basin Underdrains | <1 | <1 | <1 |

**Table K4.16-2: Average Annual Water Balance, End of Mine—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 89 | Main WMP Main Embankment Runoff | <1 | 1 | 1 |
| 90 | Undisturbed Surface Runoff to Main WMP North SCP | <1 | 1 | 1 |
| | **Subtotal Inflows** | **1** | **1** | **2** |
| Main WMP North SCRP Outflows | | | | |
| 88 | Surplus from Main WMP North SCRP | 1 | 2 | 2 |
| | **Subtotal Outflows** | **1** | **2** | **2** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Water Treatment Plan #1 (WTP #1)** | | | | |
| WTP #1 Inflows | | | | |
| 12 | Surplus to WTP #1 from OP WMP | 12 | 14 | 14 |
| | **Subtotal Inflows** | **12** | **14** | **14** |
| WTP #1 Outflows | | | | |
| 55 | Waste Stream from WTP #1 | <1 | <1 | <1 |
| 56 | Flows Released to Environment from WTP #1 | 11 | 14 | 14 |
| | **Change Outflows** | **11** | **14** | **14** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Water Treatment Plan #2 (WTP #2)** | | | | |
| WTP #2 Inflows | | | | |
| 54 | Main WMP to WTP #2 | 10 | 26 | 33 |
| | **Subtotal Inflows** | **10** | **26** | **33** |
| WTP #2 Outflows | | | | |
| 14 | Treated Water to Mill/Process | 3 | 3 | 3 |

**Table K4.16-2: Average Annual Water Balance, End of Mine—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 19 | Treated Water for Cooling Towers | 3 | 3 | 3 |
| 57 | Reject Brine from WTP #2 | <1 | <1 | <1 |
| 73 | Reject Sludge Flows from WTP #2 | <1 | <1 | <1 |
| 58 | Flows Released to Environment from WTP #2 | 4 | 20 | 26 |
| | **Change Outflows** | **10** | **26** | **33** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Flows Released from WTPs to Downstream Environment** | | | | |
| 56 | Flows Released to Environment from WTP #1 | 11 | 14 | 14 |
| 58 | Flows Released to Environment from WTP #2 | 4 | 20 | 26 |
| | **Total Flows Released to Downstream Environment** | **15** | **34** | **40** |

Notes:

cfs = cubic feet per second
OP = open pit
PAG = potentially acid-generating
SCP = seepage collection pond
SCRP = seepage collection and recycle pond
TSF = tailings storage facility
WMP = water management pond
WTP = water treatment plant

Source: Knight Piésold 2019s

**Table K4.16-3: Average Annual Water Balance, End of Mine—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Open Pit** | | | | |
| Open Pit Inflows | | | | |
| 1 | Open Pit Wall Runoff | 2 | 4 | 6 |
| 2 | Undisturbed Surface Runoff | <1 | 1 | 2 |
| 3 | Diversion Channel Leakage | <1 | <1 | 0 |
| 4 | Groundwater | <1 | <1 | <1 |
| 5 | Additional Snowblow on Pit Lake | 0 | 0 | 0 |
| 85 | Runoff from Temporary In-Pit Stockpile | <1 | <1 | <1 |
| | **Subtotal Inflows** | **2** | **5** | **9** |
| Open Pit Outflows | | | | |
| 6 | Open Pit Sump and/or Dewatering Wells | 3 | 6 | 9 |
| | **Subtotal Outflows** | **3** | **6** | **9** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Open Pit Water Management Pond (OP WMP)** | | | | |
| OP WMP Inflows | | | | |
| 6 | Open Pit Sump and/or Dewatering Wells | 3 | 6 | 9 |
| 7 | Direct Precipitation | <1 | <1 | <1 |
| 8 | Undisturbed Surface Runoff | <1 | 1 | 2 |
| 61 | Water Collected in Open Pit Perimeter Wells | 2 | 2 | 2 |
| 86 | Water Collected in In-Pit Wells | <1 | <1 | <1 |
| | **Subtotal Inflows** | **5** | **9** | **13** |
| OP WMP Outflows | | | | |
| 9 | Pond Evaporation | <1 | <1 | <1 |
| 10 | Dust Suppression | <1 | <1 | <1 |
| 11 | Surplus to Main WMP | <1 | <1 | 1 |

**Table K4.16-3: Average Annual Water Balance, End of Mine—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 12 | Surplus to WTP #1 | 5 | 9 | 11 |
| | **Subtotal Outflows** | **5** | **9** | **12** |
| | **Change in Storage** | **0** | **0** | **1** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Mill/Process** | | | | |
| Process Inflows | | | | |
| 13 | Water in Ore | 2 | 2 | 2 |
| 14 | Treated Water to Mill/Process | 3 | 3 | 3 |
| 15 | Reclaim Water from Main WMP | 48 | 48 | 48 |
| | **Subtotal Inflows** | **54** | **54** | **54** |
| Process Outflows | | | | |
| 16 | Water in Concentrate | <1 | <1 | <1 |
| 17 | Bulk Tailings Slurry Water | 47 | 47 | 47 |
| 18 | Pyritic Tailings Slurry Water | 7 | 7 | 7 |
| | **Subtotal Outflows** | **54** | **54** | **54** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Power Plant** | | | | |
| Power Plant Inflows | | | | |
| 19 | Treated Water for Cooling Towers | 3 | 3 | 3 |
| | **Subtotal Inflows** | **3** | **3** | **3** |
| Power Plant Outflows | | | | |
| 20 | Cooling Tower Evaporation | 2 | 2 | 2 |
| 21 | Blowdown Water to Main WMP | 1 | 1 | 1 |
| | **Subtotal Outflows** | **3** | **3** | **3** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |

**Table K4.16-3: Average Annual Water Balance, End of Mine—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Pyritic Tailings and PAG Waste Rock Management Facility (Pyritic TSF)** | | | | |
| Pyritic TSF Inflows | | | | |
| 18 | Pyritic Tailings Slurry Water | 7 | 7 | 7 |
| 22 | Direct Precipitation on Supernatant Pond | 2 | 5 | 7 |
| 23 | Undisturbed Surface Runoff | <1 | 1 | 1 |
| 24 | Diversion Channel Leakage | <1 | <1 | <1 |
| 25 | Surplus from East/South SCRFs | <1 | 1 | 2 |
| 55 | Waste Stream from WTP #1 | <1 | <1 | <1 |
| 57 | Reject Brine from WTP #2 | <1 | <1 | <1 |
| 73 | Reject Sludge Flows from WTP #2 | <1 | <1 | <1 |
| 78 | Runoff/Infiltration from Temporarily Exposed Waste Rock | <1 | <1 | <1 |
| | **Subtotal Inflows** | **8** | **13** | **17** |
| Pyritic TSF Outflows | | | | |
| 26 | Pond Evaporation | 1 | 1 | 1 |
| 27 | Pyritic Tailings Void Losses | 2 | 2 | 2 |
| 28 | Waste Rock Void Losses | <1 | <1 | <1 |
| 29 | Surplus Water from Pyritic TSF | 4 | 8 | 13 |
| 81 | Liner Leakage Reporting to Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Outflows** | **8** | **13** | **17** |
| | **Change in Storage** | **0** | **1** | **1** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Pyritic TSF North Seepage Collection Pond (Pyritic TSF North SCRP)** | | | | |
| Pyritic TSF North SCRP Inflows | | | | |
| 52 | Pyritic TSF Main Embankment Runoff | <1 | 1 | 1 |
| 82 | Undisturbed Surface Runoff to Pyritic TSF North SCP | <1 | <1 | <1 |
| | **Subtotal Inflows** | **<1** | **1** | **1** |

**Table K4.16-3: Average Annual Water Balance, End of Mine—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| Pyritic TSF North SCRP Outflows | | | | |
| 83 | Surplus from Pyritic TSF North SCP | <1 | 1 | 1 |
| | **Subtotal Outflows** | **0** | **1** | **1** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Pyritic TSF East/South Seepage Collection Pond (Pyritic TSF East/South SCRP)** | | | | |
| Pyritic TSF East/South SCRP Inflows | | | | |
| 79 | Pyritic TSF East/South Embankment Runoff | <1 | 1 | 1 |
| 80 | Undisturbed Surface Runoff | <1 | <1 | <1 |
| | **Subtotal Inflows** | **0** | **1** | **2** |
| Pyritic TSF East/South SCRP Outflows | | | | |
| 25 | Surplus from East/South SCRPs | <1 | 1 | 2 |
| | **Subtotal Outflows** | **0** | **1** | **2** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk Tailings Management Facility (Bulk TSF)** | | | | |
| Bulk TSF Inflows | | | | |
| 17 | Bulk Tailings Slurry Water | 47 | 47 | 47 |
| 30 | Direct Precipitation on Supernatant Pond | 1 | 3 | 7 |
| 31 | Undisturbed Surface Runoff | 2 | 6 | 10 |
| 32 | Diversion Channel Leakage | <1 | <1 | 1 |
| 33 | Surplus from South Seepage Collection Recycle Pond | 1 | 3 | 5 |
| 34 | Bulk Tailings Beach Runoff | 4 | 12 | 18 |
| | **Subtotal Inflows** | **55** | **71** | **88** |

**Table K4.16-3: Average Annual Water Balance, End of Mine—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| Bulk TSF Outflows | | | | |
| 35 | Pond Evaporation from Supernatant Pond | 1 | 1 | 1 |
| 36 | Bulk Tailings Void Losses | 18 | 18 | 18 |
| 37 | Seepage Reporting to Main Embankment and Basin Underdrains | 9 | 9 | 9 |
| 38 | Surplus Water from Bulk TSF | 33 | 42 | 50 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| | **Subtotal Outflows** | **60** | **68** | **78** |
| | **Change in Storage** | **-5** | **3** | **10** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk TSF Main Embankment Seepage Collection Pond (Bulk TSF Main SCP)** | | | | |
| Bulk TSF Main SCP Inflows | | | | |
| 37 | Seepage Reporting to Main Embankment and Basin Underdrains | 9 | 9 | 9 |
| 39 | Direct Precipitation | <1 | <1 | <1 |
| 40 | Undisturbed Surface Runoff | 1 | 4 | 7 |
| 41 | Diversion Channel Leakage | <1 | <1 | 1 |
| 42 | Bulk TSF Main Embankment Runoff | 1 | 2 | 3 |
| | **Subtotal Inflows** | **11** | **15** | **21** |
| Bulk TSF Main SCP Outflows | | | | |
| 43 | Pond Evaporation | <1 | <1 | <1 |
| 44 | Surplus Water from Bulk TSF Main SCP | 11 | 15 | 21 |
| | **Subtotal Outflows** | **11** | **15** | **21** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |

**Table K4.16-3: Average Annual Water Balance, End of Mine—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Bulk TSF South Seepage and Recycle Collection Pond** | | | | |
| Seepage Pond Inflows | | | | |
| 45 | Undisturbed Surface Runoff | 1 | 2 | 3 |
| 46 | Diversion Channel Leakage | <1 | 1 | 2 |
| 47 | Bulk TSF South Embankment Runoff | <1 | <1 | 1 |
| 75 | Seepage Reporting to Bulk TSF South SCP | <1 | <1 | <1 |
| | **Subtotal Inflows** | **1** | **3** | **5** |
| Seepage Pond Outflows | | | | |
| 33 | Surplus from South Seepage Collection Recycle Pond | 1 | 3 | 5 |
| | **Change Outflows** | **1** | **3** | **5** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Main Water Management Pond (Main WMP)** | | | | |
| Main WMP Inflows | | | | |
| 11 | Surplus to Main WMP from OP WMP | <1 | <1 | 1 |
| 21 | Blowdown Water | 1 | 1 | 1 |
| 29 | Surplus Water from Pyritic TSF | 4 | 8 | 13 |
| 38 | Surplus from Bulk TSF | 33 | 42 | 50 |
| 44 | Surplus Water from Bulk TSF Main SCP | 11 | 15 | 21 |
| 48 | Direct Precipitation | 1 | 3 | 5 |
| 49 | Undisturbed Surface Runoff | 3 | 7 | 12 |
| 50 | Diversion Channel Leakage | <1 | 1 | 1 |
| 51 | Mill Site Runoff | <1 | <1 | 1 |
| 83 | Surplus from Pyritic TSF North SCP | <1 | 1 | 1 |
| 88 | Surplus from Main WMP North SCRP | 1 | 2 | 2 |
| | **Subtotal Inflows** | **53** | **79** | **108** |

**Table K4.16-3: Average Annual Water Balance, End of Mine—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| Main WMP Outflows | | | | |
| 15 | Reclaim Water from Main WMP for Mill/Process | 48 | 48 | 48 |
| 53 | Pond Evaporation | 1 | 1 | 1 |
| 54 | Main WMP to WTP #2 | 10 | 26 | 30 |
| 87 | Main WMP Liner Leakage Reporting to Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Outflows** | **60** | **75** | **79** |
| | **Change in Storage** | **-7** | **5** | **29** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Main WMP North Seepage Collection Pond (Main WMP North SCRP)** | | | | |
| Main WMP North SCRP Inflows | | | | |
| 87 | Main WMP Liner Leakage Reporting to Basin Underdrains | <1 | <1 | <1 |
| 89 | Main WMP Main Embankment Runoff | <1 | 1 | 1 |
| 90 | Undisturbed Surface Runoff to Main WMP North SCP | <1 | 1 | 1 |
| | **Subtotal Inflows** | **1** | **1** | **2** |
| Main WMP North SCRP Outflows | | | | |
| 88 | Surplus from Main WMP North SCRP | 1 | 2 | 2 |
| | **Subtotal Outflows** | **1** | **2** | **2** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Water Treatment Plan #1 (WTP #1)** | | | | |
| WTP #1 Inflows | | | | |
| 12 | Surplus to WTP #1 from OP WMP | 5 | 9 | 11 |
| | **Subtotal Inflows** | **5** | **9** | **11** |
| WTP #1 Outflows | | | | |
| 55 | Waste Stream from WTP #1 | <1 | <1 | <1 |
| 56 | Flows Released to Environment from WTP #1 | 4 | 9 | 10 |

**Table K4.16-3: Average Annual Water Balance, End of Mine—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| | **Change Outflows** | **5** | **9** | **11** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Water Treatment Plan #2 (WTP #2)** | | | | |
| WTP #2 Inflows | | | | |
| 54 | Main WMP to WTP #2 | 10 | 26 | 30 |
| | **Subtotal Inflows** | **10** | **26** | **30** |
| WTP #2 Outflows | | | | |
| 14 | Treated Water to Mill/Process | 3 | 3 | 3 |
| 19 | Treated Water for Cooling Towers | 3 | 3 | 3 |
| 57 | Reject Brine from WTP #2 | <1 | <1 | <1 |
| 73 | Reject Sludge Flows from WTP #2 | <1 | <1 | <1 |
| 58 | Flows Released to Environment from WTP #2 | 4 | 19 | 24 |
| | **Change Outflows** | **10** | **26** | **30** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Flows Released from WTPs to Downstream Environment** | | | | |
| 56 | Flows Released to Environment from WTP #1 | 4 | 9 | 10 |
| 58 | Flows Released to Environment from WTP #2 | 4 | 19 | 24 |
| | **Total Flows Released to Downstream Environment** | **8** | **28** | **33** |

Notes:

cfs = cubic feet per second
OP = open pit
PAG = potentially acid-generating
SCP = seepage collection pond
SCRP = seepage collection and recycle pond
TSF = tailings storage facility
WMP = water management pond
WTP = water treatment plant

Source: Knight Piésold 2019s

**Table K4.16-4: Flow Path Numbers and Descriptions**

| Flow Path Number and Description | |
|---|---|
| 1 | Open Pit Wall Runoff |
| 2 | Undisturbed Surface Runoff to Open Pit |
| 3 | Diversion Channel Leakage to Open Pit |
| 4 | Groundwater to Open Pit |
| 5 | Additional Snowblow to Open Pit |
| 6 | Open Pit Sump and/or Dewatering Wells |
| 7 | Direct Precipitation on OP WMP |
| 8 | Undisturbed Surface Runoff to OP WMP |
| 9 | Pond Evaporation from OP WMP |
| 10 | Dust Suppression |
| 11 | Surplus to Main WMP from OP WMP |
| 12 | Surplus to WTP #1 from OP WMP |
| 13 | Water in Ore |
| 14 | Treated Water to Mill/Process |
| 15 | Reclaim Water from Main WMP for Mill/Process |
| 16 | Water in Concentrate |
| 17 | Bulk Tailings Slurry Water |
| 18 | Pyritic Tailings Slurry Water |
| 19 | Treated Water for Cooling Towers |
| 20 | Cooling Tower Evaporation |
| 21 | Blowdown Water to Main WMP |
| 22 | Direct Precipitation on Pyritic TSF Supernatant Pond |
| 23 | Undisturbed Surface Runoff to Pyritic TSF |
| 24 | Diversion Channel Leakage to Pyritic TSF |
| 25 | Surplus from East/South SCRPs to Pyritic TSF |
| 26 | Pond Evaporation from Pyritic TSF |
| 27 | Pyritic Tailings Void Losses in the Pyritic TSF |
| 28 | Waste Rock Void Losses in the Pyritic TSF |
| 29 | Surplus Water from Pyritic TSF |
| 30 | Direct Precipitation on Bulk TSF Supernatant Pond |
| 31 | Undisturbed Surface Runoff to Bulk TSF |
| 32 | Diversion Channel Leakage to Bulk TSF |
| 33 | Surplus from South Seepage Collection Recycle Pond to Bulk TSF |
| 34 | Bulk Tailings Beach Runoff |
| 35 | Pond Evaporation from Bulk TSF Supernatant Pond |
| 36 | Bulk Tailings Void Losses |
| 37 | Seepage (and non-contact groundwater for Closure phases 3 and 4 only) reporting to Main Embankment and Basin Underdrains |
| 38 | Surplus Water from Bulk TSF |
| 39 | Direct Precipitation on Bulk TSF Main SCP |
| 40 | Undisturbed Surface Runoff to Bulk TSF Main SCP |
| 41 | Diversion Channel Leakage to Bulk TSF Main SCP |
| 42 | Bulk TSF Main Embankment Runoff |
| 43 | Pond Evaporation from Bulk TSF Main SCP |
| 44 | Surplus Water from Bulk TSF Main SCP |
| 45 | Undisturbed Surface Runoff to Bulk TSF South Embankment SCP |
| 46 | Diversion Channel Leakage to Bulk TSF South Embankment SCP |
| 47 | Bulk TSF South Embankment Runoff |
| 48 | Direct Precipitation on Main WMP |
| 49 | Undisturbed Surface Runoff to Main WMP |
| 50 | Diversion Channel Leakage to Main WMP |

| Flow Path Number and Description (Cont.) | |
|---|---|
| 51 | Mill Site Runoff |
| 52 | Pyritic TSF Main Embankment Runoff |
| 53 | Pond Evaporation from Main WMP |
| 54 | Main WMP Water to WTP #2 |
| 55 | Waste Stream from WTP #1 |
| 56 | Flows Released to Environment from WTP #1 |
| 57 | Reject Brine from WTP #2 |
| 58 | Flows Released to Environment from WTP #2 |
| 59 | Diverted Runoff from Quarry B |
| 60 | Diverted Runoff from Quarry C |
| 61 | Water Collected in Open Pit Perimeter Wells |
| 62 | Reject Brine from WTP #3 Open Pit Stream |
| 63 | Flows Released to Environment from WTP #3 |
| 64 | Pyritic Tailings Re-Slurry Make-up Water from Open Pit |
| 65 | Pyritic Tailings Re-Slurry Water to Open Pit |
| 66 | Pyritic Tailings Re-Slurry Make-up Water from Main WMP |
| 67 | Pyritic Tailings Void Losses in the Open Pit |
| 68 | PAG Waste Rock Void Losses in the Open Pit |
| 69 | Reclaimed Bulk Tailings Beach Runoff |
| 70 | Pond Evaporation from Open Pit |
| 71 | Surplus to WTP #3 from OP WMP |
| 72 | Direct Precipitation on Pit Lake |
| 73 | Reject Sludge Flows from WTP #2 |
| 74 | Reject Sludge Flows from WTP #3 Open Pit Stream |
| 75 | Seepage (and non-contact groundwater for Closure Phases 3 and 4 only) Reporting to Bulk TSF South SCRP |
| 76 | Surplus from South SCRP to Bulk TSF Main SCP |
| 77 | Bulk Tailings Consolidation Seepage |
| 78 | Runoff/Infiltration from Temporarily Exposed Waste Rock in Pyritic TSF |
| 79 | Pyritic TSF East/South Embankment Runoff |
| 80 | Undisturbed Surface Runoff to Pyritic TSF East/South SCRPs |
| 81 | Pyritic TSF Liner Leakage Reporting to Basin Underdrains |
| 82 | Undisturbed Surface Runoff to Pyritic North SCP |
| 83 | Surplus from Pyritic TSF North SCP |
| 84 | Runoff/Infiltration from Temporarily Exposed Waste Rock in Open Pit |
| 85 | Runoff from Temporary In-Pit Stockpile |
| 86 | Water Collected in In-Pit Wells |
| 87 | Main WMP Liner Leakage Reporting to Basin Underdrains |
| 88 | Surplus from Main WMP North SCRP |
| 89 | Main WMP Main Embankment Runoff |
| 90 | Undisturbed Surface Runoff to Main WMP North SCRP |
| 91 | Reject Brine from WTP #3 Seepage Stream |
| 92 | Reject Sludge Flows from WTP #3 Seepage Stream |
| 93 | Surplus from Bulk TSF Main SCP to Pit Lake |

Notes:

OP = open pit
PAG = potentially acid-generating
SCP = seepage collection pond
SCRP = seepage collection and recycle pond
TSF = tailings storage facility
WMP = water management pond
WTP = water treatment plant

Source: Knight Piésold 2019s

**Table K4.16-5: Average Annual Water Balance, Closure Phase 1—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Open Pit** | | | | |
| Open Pit Inflows | | | | |
| 1 | Open Pit Wall Runoff | 1 | 2 | 4 |
| 2 | Undisturbed Surface Runoff | <1 | 1 | 1 |
| 3 | Diversion Channel Leakage | <1 | <1 | <1 |
| 4 | Groundwater | <1 | <1 | <1 |
| 5 | Additional Snowblow on Pit Lake | <1 | <1 | <1 |
| 65 | Pyritic Tailings Re-Slurry Water to Open Pit | 33 | 33 | 33 |
| 72 | Direct Precipitation on Pit Lake | <1 | 1 | 1 |
| 57 | Reject Brine from WTP #2 | <1 | <1 | <1 |
| 73 | Reject Sludge Flows from WTP #2 | <1 | <1 | <1 |
| 62 | Reject Brine from WTP #3 Open Pit Stream | <1 | <1 | <1 |
| 74 | Reject Sludge Flows from WTP #3 Open Pit Stream | <1 | <1 | <1 |
| 84 | Runoff/Infiltration from Temporarily Exposed Waste Rock | <1 | <1 | <1 |
| | **Subtotal Inflows** | **34** | **37** | **40** |
| Open Pit Outflows | | | | |
| 6 | Open Pit Sump and/or Dewatering Wells | 3 | 8 | 13 |
| 64 | Pyritic Tailings Re-Slurry Make-up Water from Open Pit | 30 | 28 | 22 |
| 67 | Pyritic Tailings Void Losses | 3 | 3 | 3 |
| 68 | Waste Rock Void Losses | 1 | 1 | 1 |
| 70 | Pond Evaporation | <1 | <1 | <1 |
| | **Subtotal Outflows** | **37** | **39** | **40** |
| | **Change in Storage** | **-3** | **-2** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Open Pit Water Management Pond (OP WMP)** | | | | |
| OP WMP Inflows | | | | |
| 6 | Open Pit Sump and/or Dewatering Wells | 3 | 8 | 13 |

**Table K4.16-5: Average Annual Water Balance, Closure Phase 1—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 7 | Direct Precipitation | <1 | <1 | <1 |
| 8 | Undisturbed Surface Runoff | <1 | 1 | 2 |
| 61 | Water Collected in Open Pit Perimeter Wells | 2 | 2 | 2 |
| | **Subtotal Inflows** | **5** | **11** | **17** |
| OP WMP Outflows | | | | |
| 9 | Pond Evaporation | <1 | <1 | <1 |
| 71 | Surplus to WTP #3 from OP WMP | 8 | 10 | 16 |
| | **Subtotal Outflows** | **8** | **10** | **16** |
| | **Change in Storage** | **-3** | **0** | **1** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Pyritic Tailings and PAG Waste Rock Management Facility (Pyritic TSF)** | | | | |
| Pyritic TSF Inflows | | | | |
| 22 | Direct Precipitation on Supernatant Pond | 1 | 2 | 5 |
| 23 | Undisturbed Surface Runoff | <1 | 1 | 2 |
| 24 | Diversion Channel Leakage | <1 | <1 | <1 |
| 25 | Surplus from East/South SCRPs | <1 | 1 | 2 |
| 64 | Pyritic Tailings Re-Slurry Make-up Water from Open Pit | 30 | 28 | 22 |
| 66 | Make-up Re-Slurry Water from Main WMP | 0 | 0 | 0 |
| 78 | Runoff/Infiltration from Temporarily Exposed Waste Rock | <1 | 1 | 1 |
| | **Subtotal Inflows** | **31** | **32** | **33** |
| Pyritic TSF Outflows | | | | |
| 26 | Pond Evaporation | 1 | 1 | 1 |
| 29 | Surplus Water from Pyritic TSF | 0 | 0 | 4 |
| 65 | Pyritic Tailings Re-Slurry Water to Open Pit | 33 | 33 | 33 |
| 81 | Pyritic TSF Liner Leakage Reporting to Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Outflows** | **34** | **34** | **38** |
| | **Change in Storage** | **-2** | **-2** | **-5** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |

**Table K4.16-5: Average Annual Water Balance, Closure Phase 1—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Pyritic TSF North Seepage Collection Pond (Pyritic TSF North SCRP)** | | | | |
| Pyritic TSF North SCRP Inflows | | | | |
| 52 | Pyritic TSF Main Embankment Runoff | <1 | 1 | 1 |
| 82 | Undisturbed Surface Runoff to Pyritic TSF North SCP | <1 | <1 | <1 |
| 81 | Pyritic TSF Liner Leakage Reporting to Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Inflows** | **<1** | **1** | **1** |
| Pyritic TSF North SCRP Outflows | | | | |
| 83 | Surplus from Pyritic TSF North SCP | <1 | 1 | 1 |
| | **Subtotal Outflows** | **0** | **1** | **1** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Pyritic TSF East/South Seepage Collection Ponds (Pyritic TSF East/South SCRPs)** | | | | |
| Pyritic TSF East/South SCRPs Inflows | | | | |
| 79 | Pyritic TSF East/South Embankment Runoff | <1 | 1 | 1 |
| 80 | Undisturbed Surface Runoff | <1 | <1 | <1 |
| | **Subtotal Inflows** | **<1** | **1** | **2** |
| Pyritic TSF East/South SCRPs Outflows | | | | |
| 25 | Surplus from East/South SCRPs | 1 | 1 | 2 |
| | **Subtotal Outflows** | **<1** | **1** | **2** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk Tailings Management Facility (Bulk TSF)** | | | | |
| Bulk TSF Inflows | | | | |
| 30 | Direct Precipitation on Supernatant Pond | <1 | 1 | 3 |
| 31 | Undisturbed Surface Runoff | 2 | 4 | 10 |
| 32 | Diversion Channel Leakage | <1 | <1 | 1 |
| 34 | Bulk Tailings Beach Runoff | 4 | 10 | 22 |

**Table K4.16-5: Average Annual Water Balance, Closure Phase 1—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 77 | Bulk Tailings Consolidation Seepage | 2 | 2 | 2 |
| | **Subtotal Inflows** | **9** | **18** | **38** |
| Bulk TSF Outflows | | | | |
| 35 | Pond Evaporation | <1 | <1 | <1 |
| 37 | Seepage Reporting to Main Embankment and Basin Underdrains | 2 | 2 | 2 |
| 38 | Surplus Water from Bulk TSF | 8 | 17 | 25 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| 85 | Seepage Reporting to Bulk TSF Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Outflows** | **10** | **18** | **27** |
| | **Change in Storage** | **-1** | **-1** | **11** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Buk TSF Main Embankment Seepage Collection Pond (Bulk TSF Main SCP)** | | | | |
| Bulk TSF Main SCP Inflows | | | | |
| 39 | Direct Precipitation | <1 | <1 | 7 |
| 40 | Undisturbed Surface Runoff | 1 | 3 | 7 |
| 41 | Diversion Channel Leakage | <1 | 1 | 2 |
| 42 | Bulk TSF Main Embankment Runoff | <1 | 1 | 2 |
| 37 | Seepage Reporting to Main Embankment and Basin Underdrains | 2 | 2 | 2 |
| 76 | Surplus from South SCRP to Bulk TSF Main SCP | 1 | 2 | 5 |
| | **Subtotal Inflows** | **4** | **9** | **24** |
| Bulk TSF Main SCP Outflows | | | | |
| 43 | Pond Evaporation | <1 | <1 | <1 |
| 44 | Surplus Water from Bulk TSF Main SCP | 5 | 9 | 21 |
| | **Subtotal Outflows** | **5** | **9** | **21** |
| | **Change in Storage** | **-1** | **0** | **4** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |

**Table K4.16-5: Average Annual Water Balance, Closure Phase 1—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Bulk TSF South and East Seepage and Recycle Collection Pond** | | | | |
| Seepage Pond Inflows | | | | |
| 45 | Undisturbed Surface Runoff | 1 | 1 | 3 |
| 46 | Diversion Channel Leakage | <1 | 1 | 2 |
| 47 | Bulk TSF South Embankment Runoff | <1 | <1 | 1 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| | **Subtotal Inflows** | **1** | **2** | **6** |
| Seepage Pond Outflows | | | | |
| 76 | Surplus from South SCRP to Bulk TSF Main SCP | 1 | 2 | 6 |
| | **Subtotal Outflows** | **1** | **2** | **6** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Main Water Management Pond (Main WMP)** | | | | |
| Main WMP Inflows | | | | |
| 29 | Surplus Water form Pyritic TSF | 0 | 0 | 4 |
| 38 | Surplus Water from Bulk TSF | 8 | 17 | 25 |
| 44 | Surplus Water from Bulk TSF Main SCP | 5 | 9 | 21 |
| 48 | Direct Precipitation | <1 | 3 | 4 |
| 49 | Undisturbed Surface Runoff | 4 | 6 | 15 |
| 50 | Diversion Channel Leakage | <1 | <1 | 1 |
| 83 | Surplus from Pyritic TSF North SCP | <1 | 1 | 1 |
| 88 | Surplus from Main WMP North SCRP | 1 | 1 | 2 |
| | **Subtotal Inflows** | **17** | **36** | **73** |
| Main WMP Outflows | | | | |
| 53 | Pond Evaporation | <1 | 1 | <1 |
| 54 | Main WMP Water to WTP #2 | 20 | 45 | 51 |
| 66 | Make-up Re-Slurry Water from Main WMP | 0 | 0 | 0 |
| 87 | Main WMP Liner Leakage Reporting to Basin Underdrains | <1 | <1 | <1 |

**Table K4.16-5: Average Annual Water Balance, Closure Phase 1—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| | **Subtotal Outflows** | **20** | **46** | **52** |
| | **Change in Storage** | **-3** | **-10** | **21** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Main WMP North Seepage Collection Pond (Main WMP North SCRP)** | | | | |
| Main WMP North SCRP Inflows | | | | |
| 89 | Main WMP Main Embankment Runoff | <1 | 1 | 1 |
| 90 | Undisturbed Surface Runoff to Main WMP North SCP | <1 | 1 | 1 |
| | **Subtotal Inflows** | **<1** | **2** | **2** |
| Main WMP North SCRP Outflows | | | | |
| 88 | Surplus from Main WMP North SCRP | 1 | 2 | 2 |
| | **Subtotal Outflows** | **1** | **2** | **2** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Water Treatment Plant #2 (WTP #2)** | | | | |
| WTP #2 Inflows | | | | |
| 54 | Main WMP Water to WTP #2 | 20 | 45 | 51 |
| | **Subtotal Inflows** | **20** | **45** | **51** |
| WTP #2 Outflows | | | | |
| 57 | Reject Brine from WTP #2 | <1 | <1 | <1 |
| 73 | Reject Sludge Flows from WTP #2 | <1 | <1 | <1 |
| 58 | Flows Released to Environment | 20 | 46 | 52 |
| | **Subtotal Outflows** | **20** | **46** | **52** |
| | **Balance (Inflows—Outflows)** | **-1** | **-1** | **-1** |
| **Water Treatment Plan #3 (WTP #3)** | | | | |
| WTP #3 Inflows | | | | |
| 71 | Surplus to WTP #3 from OP WMP | 8 | 10 | 16 |
| | **Subtotal Inflows** | **8** | **10** | **16** |

**Table K4.16-5: Average Annual Water Balance, Closure Phase 1—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| WTP #3 Outflows | | | | |
| 62 | Reject Brine from WTP #3 Open Pit Stream | <1 | <1 | <1 |
| 74 | Reject Sludge Flows from WTP #3 Open Pit Stream | <1 | <1 | <1 |
| 63 | Flows Released to Environment from WTP #3 | 7 | 10 | 15 |
| | **Subtotal Outflows** | **7** | **10** | **16** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Flows Released from WTPs to Downstream Environment** | | | | |
| 58 | Treated Flows from WTP #2 | 20 | 46 | 52 |
| 63 | Treated Flows from WTP #3 | 7 | 10 | 15 |
| | **Total Flows Released to Downstream Environment** | **28** | **56** | **67** |

Notes:

cfs = cubic feet per second
OP = open pit
PAG = potentially acid-generating
SCP = seepage collection pond
SCRP = seepage collection and recycle pond
TSF = tailings storage facility
WMP = water management pond
WTP = water treatment plant

Source: Knight Piésold 2019s

**Table K4.16-6: Average Annual Water Balance, Closure Phase 1—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Open Pit** | | | | |
| Open Pit Inflows | | | | |
| 1 | Open Pit Wall Runoff | 1 | 2 | 4 |
| 2 | Undisturbed Surface Runoff | <1 | 1 | 1 |
| 3 | Diversion Channel Leakage | <1 | <1 | <1 |
| 4 | Groundwater | <1 | <1 | <1 |
| 5 | Additional Snowblow on Pit Lake | <1 | <1 | <1 |
| 65 | Pyritic Tailings Re-Slurry Water to Open Pit | 33 | 33 | 33 |
| 72 | Direct Precipitation on Pit Lake | <1 | 1 | 1 |
| 57 | Reject Brine from WTP #2 | <1 | <1 | <1 |
| 73 | Reject Sludge Flows from WTP #2 | <1 | <1 | <1 |
| 62 | Reject Brine from WTP #3 Open Pit Stream | <1 | <1 | <1 |
| 74 | Reject Sludge Flows from WTP #3 Open Pit Stream | <1 | <1 | <1 |
| 84 | Runoff/Infiltration from Temporarily Exposed Waste Rock | <1 | <1 | <1 |
| | **Subtotal Inflows** | **34** | **37** | **40** |
| Open Pit Outflows | | | | |
| 6 | Open Pit Sump and/or Dewatering Wells | 3 | 7 | 12 |
| 64 | Pyritic Tailings Re-Slurry Make-up Water from Open Pit | 30 | 28 | 22 |
| 67 | Pyritic Tailings Void Losses | 3 | 3 | 3 |
| 68 | Waste Rock Void Losses | 1 | 1 | 1 |
| 70 | Pond Evaporation | <1 | <1 | <1 |
| | **Subtotal Outflows** | **38** | **38** | **39** |
| | **Change in Storage** | **-3** | **-2** | **2** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Open Pit Water Management Pond (OP WMP)** | | | | |
| OP WMP Inflows | | | | |
| 6 | Open Pit Sump and/or Dewatering Wells | 3 | 7 | 12 |

**Table K4.16-6: Average Annual Water Balance, Closure Phase 1—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 7 | Direct Precipitation | <1 | <1 | <1 |
| 8 | Undisturbed Surface Runoff | <1 | 1 | 2 |
| 61 | Water Collected in Open Pit Perimeter Wells | 3 | 3 | 3 |
| | **Subtotal Inflows** | **7** | **11** | **17** |
| OP WMP Outflows | | | | |
| 9 | Pond Evaporation | <1 | <1 | <1 |
| 71 | Surplus to WTP #3 from OP WMP | 9 | 13 | 18 |
| | **Subtotal Outflows** | **9** | **13** | **18** |
| | **Change in Storage** | **-2** | **-2** | **-1** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Pyritic Tailings and PAG Waste Rock Management Facility (Pyritic TSF)** | | | | |
| Pyritic TSF Inflows | | | | |
| 22 | Direct Precipitation on Supernatant Pond | 1 | 2 | 5 |
| 23 | Undisturbed Surface Runoff | <1 | 1 | 2 |
| 24 | Diversion Channel Leakage | <1 | <1 | <1 |
| 25 | Surplus from East/South SCRPs | <1 | 1 | 2 |
| 64 | Pyritic Tailings Re-Slurry Make-up Water from Open Pit | 30 | 28 | 22 |
| 66 | Make-up Re-Slurry Water from Main WMP | 0 | 0 | 0 |
| 78 | Runoff/Infiltration from Temporarily Exposed Waste Rock | <1 | 1 | 1 |
| | **Subtotal Inflows** | **31** | **32** | **33** |
| Pyritic TSF Outflows | | | | |
| 26 | Pond Evaporation | 1 | 1 | 1 |
| 29 | Surplus Water from Pyritic TSF | 0 | 0 | 4 |
| 65 | Pyritic Tailings Re-Slurry Water to Open Pit | 33 | 33 | 33 |
| 81 | Pyritic TSF Liner Leakage Reporting to Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Outflows** | **34** | **34** | **38** |
| | **Change in Storage** | **-2** | **-2** | **-5** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |

**Table K4.16-6: Average Annual Water Balance, Closure Phase 1—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Pyritic TSF North Seepage Collection Pond (Pyritic TSF North SCRP)** | | | | |
| Pyritic TSF North SCRP Inflows | | | | |
| 52 | Pyritic TSF Main Embankment Runoff | <1 | 1 | 1 |
| 82 | Undisturbed Surface Runoff to Pyritic TSF North SCP | <1 | <1 | <1 |
| 81 | Pyritic TSF Liner Leakage Reporting to Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Inflows** | **<1** | **1** | **1** |
| Pyritic TSF North SCRP Outflows | | | | |
| 83 | Surplus from Pyritic TSF North SCP | <1 | 1 | 1 |
| | **Subtotal Outflows** | **0** | **1** | **1** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Pyritic TSF East/South Seepage Collection Ponds (Pyritic TSF East/South SCRPs)** | | | | |
| Pyritic TSF East/South SCRPs Inflows | | | | |
| 79 | Pyritic TSF East/South Embankment Runoff | <1 | 1 | 1 |
| 80 | Undisturbed Surface Runoff | <1 | <1 | <1 |
| | **Subtotal Inflows** | **<1** | **1** | **2** |
| Pyritic TSF East/South SCRPs Outflows | | | | |
| 25 | Surplus from East/South SCRPs | <1 | 1 | 2 |
| | **Subtotal Outflows** | **<1** | **1** | **2** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk Tailings Management Facility (Bulk TSF)** | | | | |
| Bulk TSF Inflows | | | | |
| 30 | Direct Precipitation on Supernatant Pond | <1 | 1 | 3 |
| 31 | Undisturbed Surface Runoff | 2 | 4 | 10 |
| 32 | Diversion Channel Leakage | <1 | <1 | 1 |
| 34 | Bulk Tailings Beach Runoff | 4 | 10 | 22 |

**Table K4.16-6: Average Annual Water Balance, Closure Phase 1—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 77 | Bulk Tailings Consolidation Seepage | 2 | 2 | 2 |
| | **Subtotal Inflows** | **9** | **18** | **38** |
| Bulk TSF Outflows | | | | |
| 35 | Pond Evaporation | <1 | <1 | <1 |
| 37 | Seepage Reporting to Main Embankment and Basin Underdrains | 2 | 2 | 2 |
| 38 | Surplus Water from Bulk TSF | <1 | 17 | 17 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| 85 | Seepage Reporting to Bulk TSF Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Outflows** | **2** | **18** | **18** |
| | **Change in Storage** | **7** | **0** | **19** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Buk TSF Main Embankment Seepage Collection Pond (Bulk TSF Main SCP)** | | | | |
| Bulk TSF Main SCP Inflows | | | | |
| 39 | Direct Precipitation | <1 | <1 | 7 |
| 40 | Undisturbed Surface Runoff | 1 | 3 | 7 |
| 41 | Diversion Channel Leakage | <1 | 1 | 2 |
| 42 | Bulk TSF Main Embankment Runoff | <1 | 1 | 2 |
| 37 | Seepage Reporting to Main Embankment and Basin Underdrains | 2 | 2 | 2 |
| 76 | Surplus from South SCRP to Bulk TSF Main SCP | 1 | 2 | 5 |
| | **Subtotal Inflows** | **4** | **9** | **24** |
| Bulk TSF Main SCP Outflows | | | | |
| 43 | Pond Evaporation | <1 | <1 | <1 |
| 44 | Surplus Water from Bulk TSF Main SCP | 5 | 9 | 20 |
| | **Subtotal Outflows** | **5** | **9** | **20** |
| | **Change in Storage** | **-1** | **0** | **4** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |

**Table K4.16-6: Average Annual Water Balance, Closure Phase 1—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Bulk TSF South and East Seepage and Recycle Collection Pond** | | | | |
| Seepage Pond Inflows | | | | |
| 45 | Undisturbed Surface Runoff | 1 | 1 | 3 |
| 46 | Diversion Channel Leakage | <1 | 1 | 2 |
| 47 | Bulk TSF South Embankment Runoff | <1 | <1 | 1 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| | **Subtotal Inflows** | **1** | **2** | **6** |
| Seepage Pond Outflows | | | | |
| 76 | Surplus from South SCRP to Bulk TSF Main SCP | 1 | 2 | 6 |
| | **Subtotal Outflows** | **1** | **2** | **6** |
| | **Balance (Inflows—Outflows)** | **1** | **0** | **0** |
| **Main Water Management Pond (Main WMP)** | | | | |
| Main WMP Inflows | | | | |
| 29 | Surplus Water form Pyritic TSF | 0 | 0 | 4 |
| 38 | Surplus Water from Bulk TSF | <1 | 17 | 17 |
| 44 | Surplus Water from Bulk TSF Main SCP | 5 | 9 | 20 |
| 48 | Direct Precipitation | <1 | 3 | 5 |
| 49 | Undisturbed Surface Runoff | 4 | 5 | 14 |
| 50 | Diversion Channel Leakage | <1 | <1 | 1 |
| 83 | Surplus from Pyritic TSF North SCP | <1 | 1 | 1 |
| 88 | Surplus from Main WMP North SCRP | 1 | 1 | 2 |
| | **Subtotal Inflows** | **9** | **36** | **65** |
| Main WMP Outflows | | | | |
| 53 | Pond Evaporation | <1 | 1 | 1 |
| 54 | Main WMP Water to WTP #2 | 23 | 46 | 50 |
| 66 | Make-up Re-Slurry Water from Main WMP | 0 | 0 | 0 |
| 87 | Main WMP Liner Leakage Reporting to Basin Underdrains | <1 | <1 | <1 |

**Table K4.16-6: Average Annual Water Balance, Closure Phase 1—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| | **Subtotal Outflows** | **23** | **47** | **51** |
| | **Change in Storage** | **-14** | **-11** | **14** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Main WMP North Seepage Collection Pond (Main WMP North SCRP)** | | | | |
| Main WMP North SCRP Inflows | | | | |
| 89 | Main WMP Main Embankment Runoff | <1 | 1 | 1 |
| 90 | Undisturbed Surface Runoff to Main WMP North SCP | <1 | 1 | 1 |
| | **Subtotal Inflows** | **<1** | **2** | **2** |
| Main WMP North SCRP Outflows | | | | |
| 88 | Surplus from Main WMP North SCRP | 1 | 2 | 2 |
| | **Subtotal Outflows** | **1** | **2** | **2** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Water Treatment Plant #2 (WTP #2)** | | | | |
| WTP #2 Inflows | | | | |
| 54 | Main WMP Water to WTP #2 | 23 | 46 | 50 |
| | **Subtotal Inflows** | **23** | **46** | **50** |
| WTP #2 Outflows | | | | |
| 57 | Reject Brine from WTP #2 | <1 | <1 | <1 |
| 73 | Reject Sludge Flows from WTP #2 | <1 | <1 | <1 |
| 58 | Flows Released to Environment | 23 | 47 | 51 |
| | **Subtotal Outflows** | **24** | **47** | **51** |
| | **Balance (Inflows—Outflows)** | **-1** | **-1** | **-1** |
| **Water Treatment Plan #3 (WTP #3)** | | | | |
| WTP #3 Inflows | | | | |
| 71 | Surplus to WTP #3 from OP WMP | 9 | 13 | 18 |
| | **Subtotal Inflows** | **9** | **13** | **18** |

**Table K4.16-6: Average Annual Water Balance, Closure Phase 1—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| WTP #3 Outflows | | | | |
| 62 | Reject Brine from WTP #3 Open Pit Stream | <1 | <1 | <1 |
| 74 | Reject Sludge Flows from WTP #3 Open Pit Stream | <1 | <1 | <1 |
| 63 | Flows Released to Environment from WTP #3 | 9 | 13 | 17 |
| | **Subtotal Outflows** | **9** | **14** | **18** |
| | **Balance (Inflows—Outflows)** | **0** | **-1** | **0** |
| **Flows Released from WTPs to Downstream Environment** | | | | |
| 58 | Treated Flows from WTP #2 | 23 | 47 | 51 |
| 63 | Treated Flows from WTP #3 | 9 | 13 | 17 |
| | **Total Flows Released to Downstream Environment** | **32** | **59** | **68** |

Notes:

cfs = cubic feet per second
OP = open pit
PAG = potentially acid-generating
SCP = seepage collection pond
SCRP = seepage collection and recycle pond
TSF = tailings storage facility
WMP = water management pond
WTP = water treatment plant

Source: Knight Piésold 2019s

**Table K4.16-7: Average Annual Water Balance, Closure Phase 1—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Open Pit** | | | | |
| Open Pit Inflows | | | | |
| 1 | Open Pit Wall Runoff | 1 | 2 | 4 |
| 2 | Undisturbed Surface Runoff | <1 | 1 | 1 |
| 3 | Diversion Channel Leakage | <1 | <1 | <1 |
| 4 | Groundwater | <1 | <1 | <1 |
| 5 | Additional Snowblow on Pit Lake | <1 | <1 | <1 |
| 65 | Pyritic Tailings Re-Slurry Water to Open Pit | 33 | 33 | 33 |
| 72 | Direct Precipitation on Pit Lake | <1 | 1 | 1 |
| 57 | Reject Brine from WTP #2 | <1 | <1 | <1 |
| 73 | Reject Sludge Flows from WTP #2 | <1 | <1 | <1 |
| 62 | Reject Brine from WTP #3 Open Pit Stream | <1 | <1 | <1 |
| 74 | Reject Sludge Flows from WTP #3 Open Pit Stream | <1 | <1 | <1 |
| 84 | Runoff/Infiltration from Temporarily Exposed Waste Rock | <1 | <1 | <1 |
| | **Subtotal Inflows** | **34** | **37** | **40** |
| Open Pit Outflows | | | | |
| 6 | Open Pit Sump and/or Dewatering Wells | 3 | 7 | 13 |
| 64 | Pyritic Tailings Re-Slurry Make-up Water from Open Pit | 30 | 28 | 22 |
| 67 | Pyritic Tailings Void Losses | 3 | 3 | 3 |
| 68 | Waste Rock Void Losses | 1 | 1 | 1 |
| 70 | Pond Evaporation | <1 | <1 | <1 |
| | **Subtotal Outflows** | **37** | **38** | **39** |
| | **Change in Storage** | **-3** | **-2** | **1** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Open Pit Water Management Pond (OP WMP)** | | | | |
| OP WMP Inflows | | | | |
| 6 | Open Pit Sump and/or Dewatering Wells | 3 | 7 | 13 |

**Table K4.16-7: Average Annual Water Balance, Closure Phase 1—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 7 | Direct Precipitation | <1 | <1 | <1 |
| 8 | Undisturbed Surface Runoff | <1 | 1 | 2 |
| 61 | Water Collected in Open Pit Perimeter Wells | 2 | 2 | 2 |
| | **Subtotal Inflows** | **5** | **10** | **17** |
| OP WMP Outflows | | | | |
| 9 | Pond Evaporation | <1 | <1 | <1 |
| 71 | Surplus to WTP #3 from OP WMP | 5 | 10 | 16 |
| | **Subtotal Outflows** | **5** | **10** | **16** |
| | **Change in Storage** | **-1** | **0** | **1** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Pyritic Tailings and PAG Waste Rock Management Facility (Pyritic TSF)** | | | | |
| Pyritic TSF Inflows | | | | |
| 22 | Direct Precipitation on Supernatant Pond | 1 | 2 | 5 |
| 23 | Undisturbed Surface Runoff | <1 | 1 | 2 |
| 24 | Diversion Channel Leakage | <1 | <1 | <1 |
| 25 | Surplus from East/South SCRPs | <1 | 1 | 2 |
| 64 | Pyritic Tailings Re-Slurry Make-up Water from Open Pit | 30 | 28 | 22 |
| 66 | Make-up Re-Slurry Water from Main WMP | 0 | 0 | 0 |
| 78 | Runoff/Infiltration from Temporarily Exposed Waste Rock | <1 | 1 | 1 |
| | **Subtotal Inflows** | **31** | **32** | **33** |
| Pyritic TSF Outflows | | | | |
| 26 | Pond Evaporation | 1 | 1 | 1 |
| 29 | Surplus Water from Pyritic TSF | 0 | 0 | 8 |
| 65 | Pyritic Tailings Re-Slurry Water to Open Pit | 33 | 33 | 33 |
| 81 | Pyritic TSF Liner Leakage Reporting to Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Outflows** | **34** | **34** | **42** |
| | **Change in Storage** | **-2** | **-1** | **-9** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |

**Table K4.16-7: Average Annual Water Balance, Closure Phase 1—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Pyritic TSF North Seepage Collection Pond (Pyritic TSF North SCRP)** | | | | |
| Pyritic TSF North SCRP Inflows | | | | |
| 52 | Pyritic TSF Main Embankment Runoff | <1 | 1 | 1 |
| 82 | Undisturbed Surface Runoff to Pyritic TSF North SCP | <1 | <1 | <1 |
| 81 | Pyritic TSF Liner Leakage Reporting to Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Inflows** | **<1** | **1** | **1** |
| Pyritic TSF North SCRP Outflows | | | | |
| 83 | Surplus from Pyritic TSF North SCP | <1 | 1 | 1 |
| | **Subtotal Outflows** | **0** | **1** | **1** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Pyritic TSF East/South Seepage Collection Ponds (Pyritic TSF East/South SCRPs)** | | | | |
| Pyritic TSF East/South SCRPs Inflows | | | | |
| 79 | Pyritic TSF East/South Embankment Runoff | <1 | 1 | 1 |
| 80 | Undisturbed Surface Runoff | <1 | <1 | <1 |
| | **Subtotal Inflows** | **<1** | **1** | **2** |
| Pyritic TSF East/South SCRPs Outflows | | | | |
| 25 | Surplus from East/South SCRPs | <1 | 1 | 2 |
| | **Subtotal Outflows** | **<1** | **1** | **2** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk Tailings Management Facility (Bulk TSF)** | | | | |
| Bulk TSF Inflows | | | | |
| 30 | Direct Precipitation on Supernatant Pond | <1 | 1 | 3 |
| 31 | Undisturbed Surface Runoff | 2 | 4 | 10 |
| 32 | Diversion Channel Leakage | <1 | <1 | 1 |
| 34 | Bulk Tailings Beach Runoff | 4 | 10 | 22 |

**Table K4.16-7: Average Annual Water Balance, Closure Phase 1—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 77 | Bulk Tailings Consolidation Seepage | 2 | 2 | 2 |
| | **Subtotal Inflows** | **10** | **18** | **38** |
| Bulk TSF Outflows | | | | |
| 35 | Pond Evaporation | <1 | <1 | <1 |
| 37 | Seepage Reporting to Main Embankment and Basin Underdrains | 1 | 1 | 1 |
| 38 | Surplus Water from Bulk TSF | 8 | 17 | 25 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| 85 | Seepage Reporting to Bulk TSF Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Outflows** | **10** | **18** | **26** |
| | **Change in Storage** | **0** | **0** | **11** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk TSF Main Embankment Seepage Collection Pond (Bulk TSF Main SCP)** | | | | |
| Seepage Pond Inflows | | | | |
| 39 | Direct Precipitation | <1 | <1 | 7 |
| 40 | Undisturbed Surface Runoff | 1 | 3 | 7 |
| 41 | Diversion Channel Leakage | <1 | 1 | 2 |
| 42 | Bulk TSF Main Embankment Runoff | <1 | 1 | 2 |
| 37 | Seepage Reporting to Main Embankment | 1 | 1 | 1 |
| 76 | Surplus from South SCRP | 1 | 2 | 5 |
| | **Subtotal Inflows** | **4** | **8** | **24** |
| Seepage Pond Outflows | | | | |
| 43 | Pond Evaporation | <1 | <1 | <1 |
| 44 | Surplus Water from Bulk TSF | 5 | 8 | 20 |
| | **Subtotal Outflows** | **5** | **8** | **20** |
| | **Change in Storage** | **-1** | **0** | **4** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |

**Table K4.16-7: Average Annual Water Balance, Closure Phase 1—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Bulk TSF South and East Seepage and Recycle Collection Pond** | | | | |
| Seepage Pond Inflows | | | | |
| 45 | Undisturbed Surface Runoff | 1 | 1 | 3 |
| 46 | Diversion Channel Leakage | <1 | 1 | 2 |
| 47 | Bulk TSF South Embankment Runoff | <1 | <1 | 1 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| | **Subtotal Inflows** | **1** | **2** | **6** |
| Seepage Pond Outflows | | | | |
| 76 | Surplus from South SCRP to Bulk TSF Main SCP | 1 | 2 | 6 |
| | **Subtotal Outflows** | **1** | **2** | **6** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Main Water Management Pond (Main WMP)** | | | | |
| Main WMP Inflows | | | | |
| 29 | Surplus Water form Pyritic TSF | 0 | 0 | 8 |
| 38 | Surplus Water from Bulk TSF | 8 | 17 | 25 |
| 44 | Surplus Water from Bulk TSF Main SCP | 5 | 8 | 20 |
| 48 | Direct Precipitation | <1 | 3 | 4 |
| 49 | Undisturbed Surface Runoff | 4 | 6 | 15 |
| 50 | Diversion Channel Leakage | <1 | <1 | 1 |
| 83 | Surplus from Pyritic TSF North SCP | <1 | 1 | 1 |
| 88 | Surplus from Main WMP North SCRP | 1 | 1 | 2 |
| | **Subtotal Inflows** | **17** | **36** | **77** |
| Main WMP Outflows | | | | |
| 53 | Pond Evaporation | <1 | 1 | <1 |
| 54 | Main WMP Water to WTP #2 | 20 | 44 | 50 |
| 66 | Make-up Re-Slurry Water from Main WMP | 0 | 0 | 0 |
| 87 | Main WMP Liner Leakage Reporting to Basin Underdrains | <1 | <1 | <1 |

**Table K4.16-7: Average Annual Water Balance, Closure Phase 1—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| | **Subtotal Outflows** | **20** | **45** | **50** |
| | **Change in Storage** | **-3** | **-9** | **27** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Main WMP North Seepage Collection Pond (Main WMP North SCRP)** | | | | |
| Main WMP North SCRP Inflows | | | | |
| 89 | Main WMP Main Embankment Runoff | <1 | 1 | 1 |
| 90 | Undisturbed Surface Runoff to Main WMP North SCP | <1 | 1 | 1 |
| | **Subtotal Inflows** | **<1** | **2** | **2** |
| Main WMP North SCRP Outflows | | | | |
| 88 | Surplus from Main WMP North SCRP | 1 | 2 | 2 |
| | **Subtotal Outflows** | **1** | **2** | **2** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Water Treatment Plant #2 (WTP #2)** | | | | |
| WTP #2 Inflows | | | | |
| 54 | Main WMP Water to WTP #2 | 20 | 44 | 50 |
| | **Subtotal Inflows** | **20** | **44** | **50** |
| WTP #2 Outflows | | | | |
| 57 | Reject Brine from WTP #2 | <1 | <1 | <1 |
| 73 | Reject Sludge Flows from WTP #2 | <1 | <1 | <1 |
| 58 | Flows Released to Environment | 20 | 46 | 51 |
| | **Subtotal Outflows** | **20** | **46** | **51** |
| | **Balance (Inflows—Outflows)** | **-1** | **-1** | **-1** |
| **Water Treatment Plan #3 (WTP #3)** | | | | |
| WTP #3 Inflows | | | | |
| 71 | Surplus to WTP #3 from OP WMP | 5 | 10 | 16 |
| | **Subtotal Inflows** | **5** | **10** | **16** |

**Table K4.16-7: Average Annual Water Balance, Closure Phase 1—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| WTP #3 Outflows | | | | |
| 62 | Reject Brine from WTP #3 Open Pit Stream | <1 | <1 | <1 |
| 74 | Reject Sludge Flows from WTP #3 Open Pit Stream | <1 | <1 | <1 |
| 63 | Flows Released to Environment from WTP #3 | 5 | 10 | 15 |
| | **Subtotal Outflows** | **5** | **10** | **16** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Flows Released from WTPs to Downstream Environment** | | | | |
| 58 | Treated Flows from WTP #2 | 20 | 46 | 51 |
| 63 | Treated Flows from WTP #3 | 5 | 10 | 15 |
| | **Total Flows Released to Downstream Environment** | **25** | **56** | **66** |

Notes:

cfs = cubic feet per second
OP = open pit
PAG = potentially acid-generating
SCP = seepage collection pond
SCRP = seepage collection and recycle pond
TSF = tailings storage facility
WMP = water management pond
WTP = water treatment plant

Source: Knight Piésold 2019s

**Table K4.16-8: Average Annual Water Balance, Closure Phase 2—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Open Pit** | | | | |
| Open Pit Inflows | | | | |
| 1 | Open Pit Wall Runoff | 1 | 2 | 3 |
| 2 | Undisturbed Surface Runoff | 1 | 1 | 1 |
| 3 | Diversion Channel Leakage | <1 | <1 | 0 |
| 4 | Groundwater | 2 | 2 | 2 |
| 5 | Additional Snowblow on Pit Lake | <1 | <1 | <1 |
| 38 | Surplus Water from Bulk TSF | 8 | 8 | 25 |
| 44 | Surplus Water from Bulk TSF Main SCP | 9 | 15 | 21 |
| 72 | Direct Precipitation on Pit Lake | 2 | 2 | 4 |
| | **Subtotal Inflows** | **23** | **30** | **55** |
| Open Pit Outflows | | | | |
| 6 | Open Pit Dewatering | 0 | 0 | 0 |
| 70 | Pond Evaporation | 1 | 1 | <1 |
| | **Subtotal Outflows** | **1** | **1** | **<1** |
| | **Change in Storage** | **22** | **30** | **55** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk Tailings Management Facility (Bulk TSF)** | | | | |
| Bulk TSF Inflows | | | | |
| 30 | Direct Precipitation on Supernatant Pond | 1 | 2 | 3 |
| 31 | Undisturbed Surface Runoff | 4 | 7 | 10 |
| 32 | Diversion Channel Leakage | <1 | <1 | 1 |
| 69 | Bulk Tailings Beach Runoff—Reclamation in Progress | 10 | 16 | 22 |

**Table K4.16-8: Average Annual Water Balance, Closure Phase 2—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 77 | Bulk Tailings Consolidation Seepage | 1 | 1 | 1 |
| | **Subtotal Inflows** | **17** | **26** | **38** |
| Bulk TSF Outflows | | | | |
| 35 | Pond Evaporation | <1 | <1 | <1 |
| 37 | Seepage Reporting to Main Embankment | 2 | 2 | 2 |
| 38 | Surplus Water from Bulk TSF | 8 | 8 | 25 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| 85 | Seepage Reporting to Bulk TSF Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Outflows** | **10** | **10** | **27** |
| | **Change in Storage** | **7** | **17** | **11** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk TSF Main Embankment Seepage Collection Pond (Bulk TSF Main SCP)** | | | | |
| Seepage Pond Inflows | | | | |
| 39 | Direct Precipitation | <1 | <1 | 7 |
| 40 | Undisturbed Surface Runoff | 3 | 5 | 7 |
| 41 | Diversion Channel Leakage | 1 | 1 | 2 |
| 42 | Bulk TSF Main Embankment Runoff | 1 | 1 | 2 |
| 37 | Seepage Reporting to Main Embankment and Basin Underdrains | 2 | 2 | 2 |
| 76 | Surplus from South SCRP | 2 | 4 | 5 |
| 85 | Seepage Reporting to Bulk TSF Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Inflows** | **9** | **13** | **24** |
| Seepage Pond Outflows | | | | |
| 43 | Pond Evaporation | <1 | <1 | <1 |

**Table K4.16-8: Average Annual Water Balance, Closure Phase 2—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 44 | Surplus Water from Bulk TSF | 9 | 15 | 21 |
| | **Subtotal Outflows** | **9** | **15** | **21** |
| | **Change in Storage** | **0** | **-2** | **4** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk TSF South and East Seepage and Recycle Collection Pond** | | | | |
| Seepage Pond Inflows | | | | |
| 45 | Undisturbed Surface Runoff | 1 | 2 | 3 |
| 46 | Diversion Channel Leakage | 1 | 1 | 2 |
| 47 | Bulk TSF South Embankment Runoff | <1 | <1 | 1 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| | **Subtotal Inflows** | **2** | **3** | **5** |
| Seepage Pond Outflows | | | | |
| 76 | Surplus from South SCRP to Bulk TSF Main SCP | 2 | 4 | 5 |
| | **Subtotal Outflows** | **2** | **4** | **5** |
| | **Balance (Inflows—Outflows)** | **0** | **-1** | **0** |
| **Flows Released from WTPs to Downstream Environment** | | | | |
| 63 | Treated Flows from WTP #3 | 0 | 0 | 0 |
| | **Total Flows Released to Downstream Environment** | **0** | **0** | **0** |

Notes:

cfs = cubic feet per second
SCP = seepage collection pond
SCRP = seepage collection and recycle pond
TSF = tailings storage facility
WMP = water management pond
WTP = water treatment plant

Source: Knight Piésold 2019s

**Table K4.16-9: Average Annual Water Balance, Closure Phase 2—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Open Pit** | | | | |
| Open Pit Inflows | | | | |
| 1 | Open Pit Wall Runoff | 1 | 2 | 2 |
| 2 | Undisturbed Surface Runoff | 1 | 1 | 1 |
| 3 | Diversion Channel Leakage | <1 | <1 | 0 |
| 4 | Groundwater | 4 | 4 | 4 |
| 5 | Additional Snowblow on Pit Lake | <1 | <1 | <1 |
| 38 | Surplus Water from Bulk TSF | 17 | 33 | 33 |
| 44 | Surplus Water from Bulk TSF Main SCP | 9 | 15 | 20 |
| 72 | Direct Precipitation on Pit Lake | 2 | 3 | 4 |
| | **Subtotal Inflows** | **33** | **58** | **66** |
| Open Pit Outflows | | | | |
| 6 | Open Pit Dewatering | 0 | 0 | 0 |
| 70 | Pond Evaporation | 1 | 1 | <1 |
| | **Subtotal Outflows** | **1** | **1** | **0** |
| | **Change in Storage** | **33** | **57** | **66** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk Tailings Management Facility (Bulk TSF)** | | | | |
| Bulk TSF Inflows | | | | |
| 30 | Direct Precipitation on Supernatant Pond | 1 | 2 | 3 |
| 31 | Undisturbed Surface Runoff | 4 | 7 | 10 |
| 32 | Diversion Channel Leakage | <1 | <1 | 1 |
| 69 | Bulk Tailings Beach Runoff—Reclamation in Progress | 10 | 16 | 22 |

**Table K4.16-9: Average Annual Water Balance, Closure Phase 2—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 77 | Bulk Tailings Consolidation Seepage | 1 | 1 | 1 |
| | **Subtotal Inflows** | **17** | **26** | **38** |
| Bulk TSF Outflows | | | | |
| 35 | Pond Evaporation | <1 | <1 | <1 |
| 37 | Seepage Reporting to Main Embankment | 2 | 2 | 2 |
| 38 | Surplus Water from Bulk TSF | 17 | 33 | 33 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| 85 | Seepage Reporting to Bulk TSF Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Outflows** | **18** | **35** | **35** |
| | **Change in Storage** | **-1** | **-8** | **3** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk TSF Main Embankment Seepage Collection Pond (Bulk TSF Main SCP)** | | | | |
| Seepage Pond Inflows | | | | |
| 39 | Direct Precipitation | <1 | <1 | 7 |
| 40 | Undisturbed Surface Runoff | 3 | 5 | 7 |
| 41 | Diversion Channel Leakage | 1 | 1 | 2 |
| 42 | Bulk TSF Main Embankment Runoff | 1 | 1 | 2 |
| 37 | Seepage Reporting to Main Embankment and Basin Underdrains | 2 | 2 | 2 |
| 76 | Surplus from South SCRP | 2 | 4 | 5 |
| 85 | Seepage Reporting to Bulk TSF Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Inflows** | **9** | **15** | **25** |
| Seepage Pond Outflows | | | | |
| 43 | Pond Evaporation | <1 | <1 | <1 |

**Table K4.16-9: Average Annual Water Balance, Closure Phase 2—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 44 | Surplus Water from Bulk TSF | 9 | 15 | 20 |
| | **Subtotal Outflows** | **9** | **15** | **20** |
| | **Change in Storage** | **0** | **0** | **5** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk TSF South and East Seepage and Recycle Collection Pond** | | | | |
| Seepage Pond Inflows | | | | |
| 45 | Undisturbed Surface Runoff | 1 | 2 | 3 |
| 46 | Diversion Channel Leakage | 1 | 1 | 2 |
| 47 | Bulk TSF South Embankment Runoff | <1 | <1 | 1 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| | **Subtotal Inflows** | **2** | **4** | **6** |
| Seepage Pond Outflows | | | | |
| 76 | Surplus from South SCRP to Bulk TSF Main SCP | 2 | 4 | 6 |
| | **Subtotal Outflows** | **2** | **4** | **6** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Flows Released from WTPs to Downstream Environment** | | | | |
| 63 | Treated Flows from WTP #3 | 0 | 0 | 0 |
| | **Total Flows Released to Downstream Environment** | **0** | **0** | **0** |

Notes:

cfs = cubic feet per second
SCP = seepage collection pond
SCRP = seepage collection and recycle pond
TSF = tailings storage facility
WTP = water treatment plant

Source: Knight Piésold 2019s

**Table K4.16-10: Average Annual Water Balance, Closure Phase 2—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Open Pit** | | | | |
| Open Pit Inflows | | | | |
| 1 | Open Pit Wall Runoff | 1 | 2 | 3 |
| 2 | Undisturbed Surface Runoff | 1 | 1 | 1 |
| 3 | Diversion Channel Leakage | <1 | <1 | 0 |
| 4 | Groundwater | 1 | 2 | 2 |
| 5 | Additional Snowblow on Pit Lake | <1 | <1 | <1 |
| 38 | Surplus Water from Bulk TSF | 8 | 8 | 25 |
| 44 | Surplus Water from Bulk TSF Main SCP | 9 | 15 | 20 |
| 72 | Direct Precipitation on Pit Lake | 2 | 2 | 4 |
| | **Subtotal Inflows** | **22** | **30** | **55** |
| Open Pit Outflows | | | | |
| 6 | Open Pit Dewatering | 0 | 0 | 0 |
| 70 | Pond Evaporation | 1 | 1 | <1 |
| | **Subtotal Outflows** | **1** | **1** | **0** |
| | **Change in Storage** | **22** | **29** | **55** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk Tailings Management Facility (Bulk TSF)** | | | | |
| Bulk TSF Inflows | | | | |
| 30 | Direct Precipitation on Supernatant Pond | 1 | 2 | 3 |
| 31 | Undisturbed Surface Runoff | 4 | 7 | 10 |
| 32 | Diversion Channel Leakage | <1 | <1 | 1 |
| 69 | Bulk Tailings Beach Runoff—Reclamation in Progress | 10 | 16 | 22 |

**Table K4.16-10: Average Annual Water Balance, Closure Phase 2—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 77 | Bulk Tailings Consolidation Seepage | 1 | 1 | 1 |
| | **Subtotal Inflows** | **17** | **26** | **38** |
| Bulk TSF Outflows | | | | |
| 35 | Pond Evaporation | <1 | <1 | <1 |
| 37 | Seepage Reporting to Main Embankment | 1 | 1 | 1 |
| 38 | Surplus Water from Bulk TSF | 8 | 8 | 25 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| 85 | Seepage Reporting to Bulk TSF Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Outflows** | **10** | **10** | **26** |
| | **Change in Storage** | **7** | **17** | **11** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk TSF Main Embankment Seepage Collection Pond (Bulk TSF Main SCP)** | | | | |
| Seepage Pond Inflows | | | | |
| 39 | Direct Precipitation | <1 | <1 | 7 |
| 40 | Undisturbed Surface Runoff | 3 | 5 | 7 |
| 41 | Diversion Channel Leakage | 1 | 1 | 2 |
| 42 | Bulk TSF Main Embankment Runoff | 1 | 1 | 2 |
| 37 | Seepage Reporting to Main Embankment and Basin Underdrains | 1 | 1 | 1 |
| 76 | Surplus from South SCRP | 2 | 4 | 5 |
| 85 | Seepage Reporting to Bulk TSF Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Inflows** | **9** | **14** | **25** |
| Seepage Pond Outflows | | | | |
| 43 | Pond Evaporation | <1 | <1 | <1 |

**Table K4.16-10: Average Annual Water Balance, Closure Phase 2—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 44 | Surplus Water from Bulk TSF | 9 | 15 | 20 |
| | **Subtotal Outflows** | **9** | **15** | **20** |
| | **Change in Storage** | **0** | **0** | **5** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk TSF South and East Seepage and Recycle Collection Pond** | | | | |
| Seepage Pond Inflows | | | | |
| 45 | Undisturbed Surface Runoff | 1 | 2 | 3 |
| 46 | Diversion Channel Leakage | 1 | 1 | 2 |
| 47 | Bulk TSF South Embankment Runoff | <1 | <1 | 1 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| | **Subtotal Inflows** | **2** | **4** | **6** |
| Seepage Pond Outflows | | | | |
| 76 | Surplus from South SCRP to Bulk TSF Main SCP | 2 | 4 | 6 |
| | **Subtotal Outflows** | **2** | **4** | **6** |
| | **Balance (Inflows—Outflows)** | **0** | **-1** | **0** |
| **Flows Released from WTPs to Downstream Environment** | | | | |
| 63 | Treated Flows from WTP #3 | 0 | 0 | 0 |
| | **Total Flows Released to Downstream Environment** | **0** | **0** | **0** |

Notes:

cfs = cubic feet per second
SCP = seepage collection pond
SCRP = seepage collection and recycle pond
TSF = tailings storage facility
WTP = water treatment plant

Source: Knight Piésold 2019s

**Table K4.16-11: Average Annual Water Balance, Closure Phase 3—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Open Pit** | | | | |
| Open Pit Inflows | | | | |
| 1 | Open Pit Wall Runoff | 1 | 1 | 1 |
| 2 | Undisturbed Surface Runoff | 1 | 1 | 1 |
| 3 | Diversion Channel Leakage | <1 | <1 | <1 |
| 4 | Groundwater | 2 | 2 | 1 |
| 5 | Additional Snowblow on Pit Lake | <1 | <1 | <1 |
| 38 | Surplus Water from Bulk TSF | 17 | 17 | 25 |
| 72 | Direct Precipitation on Pit Lake | 2 | 3 | 3 |
| 74 | Reject Sludge Flows from WTP #3 Open Pit Stream | <1 | <1 | <1 |
| 91 | Reject Brine from WTP #3 Seepage Stream | <1 | <1 | <1 |
| 92 | Reject Sludge Flows from WTP #3 Seepage Stream | <1 | <1 | <1 |
| 93 | Surplus from Bulk TSF Main SCP to Pit Lake | <1 | <1 | <1 |
| | **Subtotal Inflows** | **21** | **24** | **31** |
| Open Pit Outflows | | | | |
| 6 | Open Pit Dewatering | 23 | 29 | 37 |
| 70 | Pond Evaporation | 1 | 1 | <1 |
| | **Subtotal Outflows** | **23** | **30** | **37** |
| | **Change in Storage** | **-2** | **-6** | **-6** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk Tailings Management Facility (Bulk TSF)** | | | | |
| Bulk TSF Inflows | | | | |
| 30 | Direct Precipitation on Supernatant Pond | 1 | 2 | 3 |
| 31 | Undisturbed Surface Runoff | 5 | 8 | 8 |
| 32 | Diversion Channel Leakage | <1 | <1 | 1 |
| 69 | Bulk Tailings Beach Runoff—Reclamation in Progress | 10 | 16 | <1 |

**Table K4.16-11: Average Annual Water Balance, Closure Phase 3—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 77 | Bulk Tailings Consolidation Seepage | <1 | <1 | <1 |
| | **Subtotal Inflows** | **16** | **22** | **23** |
| Bulk TSF Outflows | | | | |
| 35 | Pond Evaporation | <1 | <1 | <1 |
| 37 | Seepage and Non-contact Groundwater Reporting to Main Embankment | 1 | 1 | 1 |
| 38 | Surplus Water from Bulk TSF | 17 | 18 | 25 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| | **Subtotal Outflows** | **18** | **19** | **26** |
| | **Change in Storage** | **-2** | **3** | **-3** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk TSF Main Embankment Seepage Collection Pond (Bulk TSF Main SCP)** | | | | |
| Seepage Pond Inflows | | | | |
| 39 | Direct Precipitation | <1 | <1 | 4 |
| 40 | Undisturbed Surface Runoff | 3 | 5 | 4 |
| 41 | Diversion Channel Leakage | 1 | 1 | 1 |
| 42 | Bulk TSF Main Embankment Runoff | 1 | 1 | 1 |
| 37 | Seepage and Non-contact Groundwater Reporting to Main Embankment | 1 | 1 | 1 |
| 76 | Recycle from Seepage Collection Ponds to Bulk TSF Main SCP | 2 | 4 | 3 |
| | **Subtotal Inflows** | **8** | **12** | **15** |
| Seepage Pond Outflows | | | | |
| 43 | Pond Evaporation | <1 | <1 | <1 |
| 44 | Surplus Water from Bulk TSF Main SCP | 8 | 11 | 13 |
| 93 | Surplus from Bulk TSF Main SCP to Pit Lake | <1 | <1 | <1 |
| | **Subtotal Outflows** | **8** | **11** | **13** |

**Table K4.16-11: Average Annual Water Balance, Closure Phase 3—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| | **Change in Storage** | **0** | **1** | **2** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk TSF South and East Seepage and Recycle Collection Pond** | | | | |
| Seepage Pond Inflows | | | | |
| 45 | Undisturbed Surface Runoff | 1 | 2 | 2 |
| 46 | Diversion Channel Leakage | 1 | 1 | 1 |
| 47 | Bulk TSF South Embankment Runoff | <1 | <1 | <1 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| | **Subtotal Inflows** | **2** | **3** | **4** |
| Seepage Pond Outflows | | | | |
| 76 | Surplus from South SCRP to Bulk TSF Main SCP | 2 | 3 | 4 |
| | **Subtotal Outflows** | **2** | **3** | **4** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Water Treatment Plan #3 (WTP #3)** | | | | |
| WTP #3 Inflows | | | | |
| 6 | Open Pit Dewatering | 23 | 29 | 37 |
| 44 | Surplus Water from Bulk TSF Main SCP | 8 | 11 | 13 |
| | **Subtotal Inflows** | **31** | **41** | **50** |
| WTP #3 Outflows | | | | |
| 63 | Flows Released to Environment from WTP #3 | 30 | 40 | 47 |
| 74 | Reject Sludge Flows from WTP #3 Open Pit Stream | <1 | <1 | <1 |
| 91 | Reject Brine from WTP #3 Seepage Stream | <1 | <1 | <1 |
| 92 | Reject Sludge Flows from WTP #3 Seepage Stream | <1 | <1 | <1 |
| | **Subtotal Outflows** | **31** | **41** | **50** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |

**Table K4.16-11: Average Annual Water Balance, Closure Phase 3—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Flows Released to Downstream Environment** | | | | |
| 63 | Treated Flows from WTP #3 | 30 | 40 | 47 |
| | **Total Flows Released to Downstream Environment** | **30** | **40** | **47** |

Notes:

cfs = cubic feet per second
SCP = seepage collection pond
SCRP = seepage collection and recycle pond
TSF = tailings storage facility
WTP = water treatment plant

Source: Knight Piésold 2019s

**Table K4.16-12: Average Annual Water Balance, Closure Phase 3—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Open Pit** | | | | |
| Open Pit Inflows | | | | |
| 1 | Open Pit Wall Runoff | 1 | 1 | 1 |
| 2 | Undisturbed Surface Runoff | 1 | 1 | 1 |
| 3 | Diversion Channel Leakage | <1 | <1 | <1 |
| 4 | Groundwater | 4 | 4 | 4 |
| 5 | Additional Snowblow on Pit Lake | <1 | <1 | <1 |
| 38 | Surplus Water from Bulk TSF | 8 | 17 | 17 |
| 72 | Direct Precipitation on Pit Lake | 2 | 3 | 3 |
| 74 | Reject Sludge Flows from WTP #3 Open Pit Stream | <1 | <1 | <1 |
| 91 | Reject Brine from WTP #3 Seepage Stream | <1 | 0 | <1 |
| 92 | Reject Sludge Flows from WTP #3 Seepage Stream | <1 | <1 | <1 |
| 93 | Surplus from Bulk TSF Main SCP to Pit Lake | <1 | <1 | <1 |
| | **Subtotal Inflows** | **16** | **27** | **26** |
| Open Pit Outflows | | | | |
| 6 | Open Pit Dewatering | 30 | 33 | 37 |
| 70 | Pond Evaporation | 1 | 1 | 1 |
| | **Subtotal Outflows** | **31** | **34** | **38** |
| | **Change in Storage** | **-15** | **-7** | **-12** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk Tailings Management Facility (Bulk TSF)** | | | | |
| Bulk TSF Inflows | | | | |
| 30 | Direct Precipitation on Supernatant Pond | 1 | 2 | 3 |

**Table K4.16-12: Average Annual Water Balance, Closure Phase 3—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 31 | Undisturbed Surface Runoff | 5 | 8 | 8 |
| 32 | Diversion Channel Leakage | <1 | <1 | <1 |
| 69 | Reclaimed Bulk Tailings Beach Runoff | 10 | 12 | 12 |
| 77 | Bulk Tailings Consolidation Seepage | <1 | <1 | <1 |
| | **Subtotal Inflows** | **16** | **22** | **23** |
| Bulk TSF Outflows | | | | |
| 35 | Pond Evaporation | <1 | <1 | <1 |
| 37 | Seepage Reporting to Main Embankment | 1 | 1 | 1 |
| 38 | Surplus Water from Bulk TSF | 8 | 17 | 17 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| 85 | Seepage Reporting to Bulk TSF Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Outflows** | **9** | **17** | **18** |
| | **Change in Storage** | **7** | **4** | **4** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk TSF Main Embankment Seepage Collection Pond (Bulk TSF Main SCP)** | | | | |
| Seepage Pond Inflows | | | | |
| 39 | Direct Precipitation | <1 | <1 | 4 |
| 40 | Undisturbed Surface Runoff | 3 | 5 | 4 |
| 41 | Diversion Channel Leakage | 1 | 1 | 1 |
| 42 | Bulk TSF Main Embankment Runoff | 1 | 1 | 1 |
| 37 | Seepage Reporting to Main Embankment | 1 | 1 | 1 |
| 76 | Recycle from Seepage Collection Ponds to Bulk TSF Main SCP | 2 | 4 | 3 |

**Table K4.16-12: Average Annual Water Balance, Closure Phase 3—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 85 | Seepage Reporting to Bulk TSF Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Inflows** | **7** | **11** | **14** |
| Seepage Pond Outflows | | | | |
| 43 | Pond Evaporation | <1 | <1 | <1 |
| 44 | Surplus Water from Bulk TSF Main SCP | 8 | 12 | 13 |
| 93 | Surplus from Bulk TSF Main SCP to Pit Lake | <1 | <1 | <1 |
| | **Subtotal Outflows** | **8** | **12** | **14** |
| | **Change in Storage** | **-1** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk TSF South and East Seepage and Recycle Collection Pond** | | | | |
| Seepage Pond Inflows | | | | |
| 45 | Undisturbed Surface Runoff | 1 | 2 | 2 |
| 46 | Diversion Channel Leakage | 1 | 1 | 1 |
| 47 | Bulk TSF South Embankment Runoff | <1 | <1 | <1 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| | **Subtotal Inflows** | **2** | **3** | **4** |
| Seepage Pond Outflows | | | | |
| 76 | Surplus from South SCRP to Bulk TSF Main SCP | 2 | 4 | 4 |
| | **Subtotal Outflows** | **2** | **4** | **4** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Water Treatment Plan #3 (WTP #3)** | | | | |
| WTP #3 Inflows | | | | |
| 6 | Open Pit Dewatering | 30 | 33 | 37 |

**Table K4.16-12: Average Annual Water Balance, Closure Phase 3—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 44 | Surplus Water from Bulk TSF Main SCP | 8 | 12 | 13 |
| | **Subtotal Inflows** | **38** | **44** | **50** |
| WTP #3 Outflows | | | | |
| 63 | Flows Released to Environment from WTP #3 | 38 | 44 | 47 |
| 74 | Reject Sludge Flows from WTP #3 Open Pit Stream | <1 | <1 | <1 |
| 91 | Reject Brine from WTP #3 Seepage Stream | <1 | 0 | <1 |
| 92 | Reject Sludge Flows from WTP #3 Seepage Stream | <1 | <1 | <1 |
| | **Subtotal Outflows** | **38** | **44** | **50** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Flows Released to Downstream Environment** | | | | |
| 63 | Treated Flows from WTP #3 | 38 | 44 | 47 |
| | **Total Flows Released to Downstream Environment** | **38** | **44** | **47** |

Notes:

cfs = cubic feet per second
SCP = seepage collection pond
SCRP = seepage collection and recycle pond
TSF = tailings storage facility
WTP = water treatment plant

Source: Knight Piésold 2019s

**Table K4.16-13: Average Annual Water Balance, Closure Phase 3—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Open Pit** | | | | |
| Open Pit Inflows | | | | |
| 1 | Open Pit Wall Runoff | 1 | 1 | 1 |
| 2 | Undisturbed Surface Runoff | 1 | 1 | 1 |
| 3 | Diversion Channel Leakage | <1 | <1 | <1 |
| 4 | Groundwater | 1 | 1 | 1 |
| 5 | Additional Snowblow on Pit Lake | 0 | 0 | 0 |
| 38 | Surplus Water from Bulk TSF | 8 | 17 | 17 |
| 72 | Direct Precipitation on Pit Lake | 2 | 3 | 3 |
| 74 | Reject Sludge Flows from WTP #3 Open Pit Stream | <1 | <1 | <1 |
| 91 | Reject Brine from WTP #3 Seepage Stream | <1 | 0 | <1 |
| 92 | Reject Sludge Flows from WTP #3 Seepage Stream | <1 | <1 | <1 |
| 93 | Surplus from Bulk TSF Main SCP to Pit Lake | <1 | <1 | <1 |
| | **Subtotal Inflows** | **13** | **24** | **23** |
| Open Pit Outflows | | | | |
| 6 | Open Pit Dewatering | 23 | 29 | 37 |
| 70 | Pond Evaporation | 1 | 1 | 1 |
| | **Subtotal Outflows** | **23** | **30** | **37** |
| | **Change in Storage** | **-10** | **-6** | **-14** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk Tailings Management Facility (Bulk TSF)** | | | | |
| Bulk TSF Inflows | | | | |
| 30 | Direct Precipitation on Supernatant Pond | 1 | 2 | 3 |

**Table K4.16-13: Average Annual Water Balance, Closure Phase 3—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 31 | Undisturbed Surface Runoff | 5 | 8 | 8 |
| 32 | Diversion Channel Leakage | <1 | <1 | <1 |
| 69 | Reclaimed Bulk Tailings Beach Runoff | 10 | 12 | 12 |
| 77 | Bulk Tailings Consolidation Seepage | <1 | <1 | <1 |
| | **Subtotal Inflows** | **16** | **22** | **23** |
| Bulk TSF Outflows | | | | |
| 35 | Pond Evaporation | <1 | <1 | <1 |
| 37 | Seepage Reporting to Main Embankment | 1 | 1 | 1 |
| 38 | Surplus Water from Bulk TSF | 8 | 17 | 17 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| 85 | Seepage Reporting to Bulk TSF Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Outflows** | **9** | **17** | **17** |
| | **Change in Storage** | **7** | **4** | **5** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk TSF Main Embankment Seepage Collection Pond (Bulk TSF Main SCP)** | | | | |
| Seepage Pond Inflows | | | | |
| 39 | Direct Precipitation | <1 | <1 | 4 |
| 40 | Undisturbed Surface Runoff | 3 | 5 | 4 |
| 41 | Diversion Channel Leakage | 1 | 1 | 1 |
| 42 | Bulk TSF Main Embankment Runoff | 1 | 1 | 1 |
| 37 | Seepage Reporting to Main Embankment | 1 | 1 | 1 |
| 76 | Recycle from Seepage Collection Ponds to Bulk TSF Main SCP | 2 | 4 | 3 |

**Table K4.16-13: Average Annual Water Balance, Closure Phase 3—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 85 | Seepage Reporting to Bulk TSF Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Inflows** | **8** | **12** | **15** |
| Seepage Pond Outflows | | | | |
| 43 | Pond Evaporation | <1 | <1 | <1 |
| 44 | Surplus Water from Bulk TSF Main SCP | 8 | 12 | 13 |
| 93 | Surplus from Bulk TSF Main SCP to Pit Lake | <1 | <1 | <1 |
| | **Subtotal Outflows** | **8** | **12** | **13** |
| | **Change in Storage** | **0** | **0** | **1** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk TSF South and East Seepage and Recycle Collection Pond** | | | | |
| Seepage Pond Inflows | | | | |
| 45 | Undisturbed Surface Runoff | 1 | 2 | 2 |
| 46 | Diversion Channel Leakage | 1 | 1 | 1 |
| 47 | Bulk TSF South Embankment Runoff | <1 | <1 | <1 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| | **Subtotal Inflows** | **2** | **3** | **4** |
| Seepage Pond Outflows | | | | |
| 76 | Surplus from South SCRP to Bulk TSF Main SCP | 2 | 4 | 4 |
| | **Subtotal Outflows** | **2** | **4** | **4** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Water Treatment Plan #3 (WTP #3)** | | | | |
| WTP #3 Inflows | | | | |
| 6 | Open Pit Dewatering | 23 | 29 | 37 |

**Table K4.16-13: Average Annual Water Balance, Closure Phase 3—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 44 | Surplus Water from Bulk TSF Main SCP | 8 | 12 | 13 |
| | **Subtotal Inflows** | **31** | **41** | **50** |
| WTP #3 Outflows | | | | |
| 63 | Flows Released to Environment from WTP #3 | 30 | 40 | 49 |
| 74 | Reject Sludge Flows from WTP #3 Open Pit Stream | <1 | <1 | <1 |
| 91 | Reject Brine from WTP #3 Seepage Stream | <1 | 0 | <1 |
| 92 | Reject Sludge Flows from WTP #3 Seepage Stream | <1 | <1 | <1 |
| | **Subtotal Outflows** | **31** | **40** | **50** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Flows Released to Downstream Environment** | | | | |
| 63 | Treated Flows from WTP #3 | 30 | 40 | 49 |
| | **Total Flows Released to Downstream Environment** | **30** | **40** | **49** |

Notes:

cfs = cubic feet per second
SCP = seepage collection pond
SCRP = seepage collection and recycle pond
TSF = tailings storage facility
WTP = water treatment plant

Source: Knight Piésold 2019s

**Table K4.16-14: Average Annual Water Balance, Closure Phase 4—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Open Pit** | | | | |
| Open Pit Inflows | | | | |
| 1 | Open Pit Wall Runoff | <1 | 1 | 1 |
| 2 | Undisturbed Surface Runoff | <1 | <1 | 1 |
| 3 | Diversion Channel Leakage | <1 | <1 | 0 |
| 4 | Groundwater | 1 | 1 | 1 |
| 5 | Additional Snowblow on Pit Lake | <1 | <1 | <1 |
| 72 | Direct Precipitation on Pit Lake | 1 | 2 | 5 |
| 74 | Reject Sludge Flows from WTP #3 Open Pit Stream | <1 | <1 | <1 |
| 91 | Reject Brine from WTP #3 Seepage Stream | <1 | <1 | <1 |
| 92 | Reject Sludge Flows from WTP #3 Seepage Stream | <1 | <1 | <1 |
| 93 | Surplus from Bulk TSF Main SCP to Pit Lake | <1 | <1 | 2 |
| | **Subtotal Inflows** | **2** | **4** | **11** |
| Open Pit Outflows | | | | |
| 6 | Open Pit Dewatering | 4 | 6 | 11 |
| 70 | Pond Evaporation | 1 | 1 | 1 |
| | **Subtotal Outflows** | **5** | **6** | **12** |
| | **Change in Storage** | **-2** | **-3** | **-1** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk Tailings Management Facility (Bulk TSF)** | | | | |
| Bulk TSF Inflows | | | | |
| 30 | Direct Precipitation on Supernatant Pond | <1 | <1 | <1 |
| 31 | Undisturbed Surface Runoff | 3 | 4 | 13 |

**Table K4.16-14: Average Annual Water Balance, Closure Phase 4—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 69 | Reclaimed Bulk Tailings Beach Runoff | 5 | 8 | 25 |
| | **Subtotal Inflows** | **7** | **12** | **38** |
| Bulk TSF Outflows | | | | |
| 35 | Pond Evaporation | <1 | <1 | <1 |
| 37 | Seepage and Non-contact Groundwater Reporting to Main Embankment | 1 | 1 | 1 |
| 38 | Surplus Water from Bulk TSF | 7 | 11 | 36 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| | **Subtotal Outflows** | **7** | **12** | **38** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk TSF Main Embankment Seepage Collection Pond (Bulk TSF Main SCP)** | | | | |
| Seepage Pond Inflows | | | | |
| 39 | Direct Precipitation | <1 | <1 | 7 |
| 40 | Undisturbed Surface Runoff | 1 | 2 | 7 |
| 41 | Diversion Channel Leakage | <1 | 0 | 2 |
| 42 | Bulk TSF Main Embankment Runoff | <1 | 1 | 2 |
| 37 | Seepage and Non-contact Groundwater Reporting to Main Embankment | 1 | 1 | 1 |
| 76 | Surplus from South SCRP to Bulk TSF Main SCP | 1 | 2 | 5 |
| | **Subtotal Inflows** | **3** | **6** | **23** |
| Seepage Pond Outflows | | | | |
| 43 | Pond Evaporation | <1 | <1 | <1 |
| 44 | Surplus Water from Bulk TSF Main SCP | 5 | 7 | 11 |

**Table K4.16-14: Average Annual Water Balance, Closure Phase 4—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 93 | Surplus from Bulk TSF Main SCP to Pit Lake | <1 | <1 | <1 |
| | **Subtotal Outflows** | **5** | **7** | **11** |
| | **Change in Storage** | **-1** | **-1** | **12** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk TSF South and East Seepage and Recycle Collection Pond** | | | | |
| Seepage Pond Inflows | | | | |
| 45 | Undisturbed Surface Runoff | 1 | 1 | 3 |
| 46 | Diversion Channel Leakage | <1 | 1 | 2 |
| 47 | Bulk TSF South Embankment Runoff | <1 | <1 | 1 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| | **Subtotal Inflows** | **1** | **1** | **5** |
| Seepage Pond Outflows | | | | |
| 76 | Surplus from South SCRP to Bulk TSF Main SCP | 1 | 2 | 5 |
| | **Subtotal Outflows** | **1** | **2** | **5** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Water Treatment Plan #3 (WTP #3)** | | | | |
| WTP #3 Inflows | | | | |
| 6 | Open Pit Dewatering | 4 | 6 | 11 |
| 44 | Surplus Water from Bulk TSF Main SCP | 5 | 7 | 11 |
| | **Subtotal Inflows** | **9** | **13** | **23** |
| WTP #3 Outflows | | | | |
| 63 | Flows Released to Environment from WTP #3 | 8 | 12 | 21 |
| 74 | Reject Sludge Flows from WTP #3 Open Pit Stream | <1 | <1 | <1 |

**Table K4.16-14: Average Annual Water Balance, Closure Phase 4—Base Case**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 91 | Reject Brine from WTP #3 Seepage Stream | <1 | <1 | <1 |
| 92 | Reject Sludge Flows from WTP #3 Seepage Stream | <1 | <1 | <1 |
| | **Subtotal Outflows** | **8** | **12** | **23** |
| | **Balance (Inflows—Outflows)** | **0** | **-1** | **0** |
| **Flows Released to Downstream Environment** | | | | |
| 63 | Treated Flows from WTP #3 | 8 | 12 | 21 |
| | **Total Flows Released to Downstream Environment** | **8** | **12** | **21** |

Notes:

cfs = cubic feet per second
SCP = seepage collection pond
SCRP = seepage collection and recycle pond
TSF = tailings storage facility
WTP = water treatment plant

Source: Knight Piésold 2019s

**Table K4.16-15: Average Annual Water Balance, Closure Phase 4—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Open Pit** | | | | |
| Open Pit Inflows | | | | |
| 1 | Open Pit Wall Runoff | <1 | 1 | 1 |
| 2 | Undisturbed Surface Runoff | <1 | <1 | 1 |
| 3 | Diversion Channel Leakage | <1 | <1 | <1 |
| 4 | Groundwater | 4 | 4 | 4 |
| 5 | Additional Snowblow on Pit Lake | <1 | <1 | <1 |
| 72 | Direct Precipitation on Pit Lake | 1 | 2 | 5 |
| 74 | Reject Sludge Flows from WTP #3 Open Pit Stream | <1 | <1 | <1 |
| 91 | Reject Brine from WTP #3 Seepage Stream | <1 | <1 | <1 |
| 92 | Reject Sludge Flows from WTP #3 Seepage Stream | <1 | <1 | <1 |
| 93 | Surplus from Bulk TSF Main SCP to Pit Lake | <1 | <1 | 2 |
| | **Subtotal Inflows** | **5** | **9** | **14** |
| Open Pit Outflows | | | | |
| 6 | Open Pit Dewatering | 6 | 7 | 13 |
| 70 | Pond Evaporation | 1 | 1 | 1 |
| | **Subtotal Outflows** | **7** | **8** | **13** |
| | **Change in Storage** | **-2** | **2** | **1** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk Tailings Management Facility (Bulk TSF)** | | | | |
| Bulk TSF Inflows | | | | |
| 30 | Direct Precipitation on Supernatant Pond | <1 | <1 | <1 |
| 31 | Undisturbed Surface Runoff | 3 | 4 | 13 |

**Table K4.16-15: Average Annual Water Balance, Closure Phase 4—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 69 | Reclaimed Bulk Tailings Beach Runoff | 5 | 8 | 25 |
| | **Subtotal Inflows** | **7** | **12** | **38** |
| Bulk TSF Outflows | | | | |
| 35 | Pond Evaporation | <1 | <1 | <1 |
| 37 | Seepage Reporting to Main Embankment | 1 | 1 | 1 |
| 38 | Surplus Water from Bulk TSF | 7 | 12 | 37 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| 85 | Seepage Reporting to Bulk TSF Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Outflows** | **7** | **12** | **38** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk TSF Main Embankment Seepage Collection Pond (Bulk TSF Main SCP)** | | | | |
| Seepage Pond Inflows | | | | |
| 39 | Direct Precipitation | <1 | <1 | 7 |
| 40 | Undisturbed Surface Runoff | 1 | 2 | 7 |
| 41 | Diversion Channel Leakage | <1 | 0 | 2 |
| 42 | Bulk TSF Main Embankment Runoff | <1 | 1 | 2 |
| 37 | Seepage Reporting to Main Embankment | 1 | 1 | 1 |
| 76 | Surplus from South SCRP to Bulk TSF Main SCP | 1 | 2 | 5 |
| 85 | Seepage Reporting to Bulk TSF Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Inflows** | **3** | **6** | **23** |
| Seepage Pond Outflows | | | | |
| 43 | Pond Evaporation | <1 | <1 | <1 |

**Table K4.16-15: Average Annual Water Balance, Closure Phase 4—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 44 | Surplus Water from Bulk TSF Main SCP | 5 | 7 | 11 |
| 93 | Surplus from Bulk TSF Main SCP to Pit Lake | <1 | <1 | <1 |
| | **Subtotal Outflows** | **5** | **7** | **11** |
| | **Change in Storage** | **-2** | **-1** | **12** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk TSF South and East Seepage and Recycle Collection Pond** | | | | |
| Seepage Pond Inflows | | | | |
| 45 | Undisturbed Surface Runoff | 1 | 1 | 3 |
| 46 | Diversion Channel Leakage | <1 | 1 | 2 |
| 47 | Bulk TSF South Embankment Runoff | <1 | <1 | 1 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| | **Subtotal Inflows** | **1** | **1** | **5** |
| Seepage Pond Outflows | | | | |
| 76 | Surplus from South SCRP to Bulk TSF Main SCP | 1 | 2 | 5 |
| | **Subtotal Outflows** | **1** | **2** | **5** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Water Treatment Plan #3 (WTP #3)** | | | | |
| WTP #3 Inflows | | | | |
| 6 | Open Pit Dewatering | 6 | 7 | 13 |
| 44 | Surplus Water from Bulk TSF Main SCP | 5 | 7 | 11 |
| | **Subtotal Inflows** | **11** | **14** | **24** |
| WTP #3 Outflows | | | | |
| 63 | Flows Released to Environment from WTP #3 | 10 | 13 | 22 |

**Table K4.16-15: Average Annual Water Balance, Closure Phase 4—High Bedrock K Sensitivity (S7)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 74 | Reject Sludge Flows from WTP #3 Open Pit Stream | <1 | <1 | <1 |
| 91 | Reject Brine from WTP #3 Seepage Stream | <1 | <1 | <1 |
| 92 | Reject Sludge Flows from WTP #3 Seepage Stream | <1 | <1 | <1 |
| | **Subtotal Outflows** | **10** | **13** | **23** |
| | **Balance (Inflows—Outflows)** | **0** | **-1** | **0** |
| **Flows Released to Downstream Environment** | | | | |
| 63 | Treated Flows from WTP #3 | 10 | 13 | 22 |
| | **Total Flows Released to Downstream Environment** | **10** | **13** | **22** |

Notes:

cfs = cubic feet per second
SCP = seepage collection pond
SCRP = seepage collection and recycle pond
TSF = tailings storage facility
WTP = water treatment plant

Source: Knight Piésold 2019s

**Table K4.16-16: Average Annual Water Balance, Closure Phase 4—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| **Open Pit** | | | | |
| Open Pit Inflows | | | | |
| 1 | Open Pit Wall Runoff | <1 | 1 | 1 |
| 2 | Undisturbed Surface Runoff | <1 | <1 | 1 |
| 3 | Diversion Channel Leakage | <1 | <1 | 0 |
| 4 | Groundwater | 1 | 1 | 1 |
| 5 | Additional Snowblow on Pit Lake | 0 | 0 | 0 |
| 72 | Direct Precipitation on Pit Lake | 1 | 2 | 5 |
| 74 | Reject Sludge Flows from WTP #3 Open Pit Stream | <1 | <1 | <1 |
| 91 | Reject Brine from WTP #3 Seepage Stream | <1 | <1 | <1 |
| 92 | Reject Sludge Flows from WTP #3 Seepage Stream | <1 | <1 | <1 |
| 93 | Surplus from Bulk TSF Main SCP to Pit Lake | <1 | <1 | 2 |
| | **Subtotal Inflows** | **3** | **7** | **12** |
| Open Pit Outflows | | | | |
| 6 | Open Pit Dewatering | 2 | 6 | 9 |
| 70 | Pond Evaporation | 1 | 1 | 1 |
| | **Subtotal Outflows** | **3** | **7** | **10** |
| | **Change in Storage** | **0** | **1** | **2** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk Tailings Management Facility (Bulk TSF)** | | | | |
| Bulk TSF Inflows | | | | |
| 30 | Direct Precipitation on Supernatant Pond | <1 | <1 | <1 |
| 31 | Undisturbed Surface Runoff | 3 | 4 | 13 |

**Table K4.16-16: Average Annual Water Balance, Closure Phase 4—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 69 | Reclaimed Bulk Tailings Beach Runoff | 5 | 8 | 25 |
| | **Subtotal Inflows** | **7** | **12** | **38** |
| Bulk TSF Outflows | | | | |
| 35 | Pond Evaporation | <1 | <1 | <1 |
| 37 | Seepage Reporting to Main Embankment | 1 | 1 | 1 |
| 38 | Surplus Water from Bulk TSF | 7 | 12 | 37 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| 85 | Seepage Reporting to Bulk TSF Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Outflows** | **7** | **12** | **38** |
| | **Change in Storage** | **0** | **0** | **0** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk TSF Main Embankment Seepage Collection Pond (Bulk TSF Main SCP)** | | | | |
| Seepage Pond Inflows | | | | |
| 39 | Direct Precipitation | <1 | <1 | 7 |
| 40 | Undisturbed Surface Runoff | 1 | 2 | 7 |
| 41 | Diversion Channel Leakage | <1 | 0 | 2 |
| 42 | Bulk TSF Main Embankment Runoff | <1 | 1 | 2 |
| 37 | Seepage Reporting to Main Embankment | 1 | 1 | 1 |
| 76 | Surplus from South SCRP to Bulk TSF Main SCP | 1 | 2 | 5 |
| 85 | Seepage Reporting to Bulk TSF Basin Underdrains | <1 | <1 | <1 |
| | **Subtotal Inflows** | **3** | **6** | **23** |
| Seepage Pond Outflows | | | | |
| 43 | Pond Evaporation | <1 | <1 | <1 |

**Table K4.16-16: Average Annual Water Balance, Closure Phase 4—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 44 | Surplus Water from Bulk TSF Main SCP | 5 | 7 | 11 |
| 93 | Surplus from Bulk TSF Main SCP to Pit Lake | <1 | <1 | <1 |
| | **Subtotal Outflows** | **5** | **7** | **11** |
| | **Change in Storage** | **-2** | **-1** | **12** |
| | **Balance (Inflows—Outflows—Change in Storage)** | **0** | **0** | **0** |
| **Bulk TSF South and East Seepage and Recycle Collection Pond** | | | | |
| Seepage Pond Inflows | | | | |
| 45 | Undisturbed Surface Runoff | 1 | 1 | 3 |
| 46 | Diversion Channel Leakage | <1 | 1 | 2 |
| 47 | Bulk TSF South Embankment Runoff | <1 | <1 | 1 |
| 75 | Seepage Reporting to Bulk TSF South SCRP | <1 | <1 | <1 |
| | **Subtotal Inflows** | **1** | **1** | **5** |
| Seepage Pond Outflows | | | | |
| 76 | Surplus from South SCRP to Bulk TSF Main SCP | 1 | 2 | 5 |
| | **Subtotal Outflows** | **1** | **2** | **5** |
| | **Balance (Inflows—Outflows)** | **0** | **0** | **0** |
| **Water Treatment Plan #3 (WTP #3)** | | | | |
| WTP #3 Inflows | | | | |
| 6 | Open Pit Dewatering | 2 | 6 | 9 |
| 44 | Surplus Water from Bulk TSF Main SCP | 5 | 7 | 11 |
| | **Subtotal Inflows** | **7** | **13** | **20** |
| WTP #3 Outflows | | | | |
| 63 | Flows Released to Environment from WTP #3 | 7 | 12 | 18 |

**Table K4.16-16: Average Annual Water Balance, Closure Phase 4—Low Bedrock K Sensitivity (S8)**

| Flow Path Number and Description | | Average Annual Flow (cfs) | | |
|---|---|---|---|---|
| | | Relatively Dry Conditions | Average Conditions | Relatively Wet Conditions |
| 74 | Reject Sludge Flows from WTP #3 Open Pit Stream | <1 | <1 | <1 |
| 91 | Reject Brine from WTP #3 Seepage Stream | <1 | <1 | <1 |
| 92 | Reject Sludge Flows from WTP #3 Seepage Stream | <1 | <1 | <1 |
| | **Subtotal Outflows** | **7** | **12** | **20** |
| | **Balance (Inflows—Outflows)** | **0** | **-1** | **0** |
| **Flows Released to Downstream Environment** | | | | |
| 63 | Treated Flows from WTP #3 | 7 | 12 | 18 |
| | **Total Flows Released to Downstream Environment** | **7** | **12** | **18** |

Notes:

cfs = cubic feet per second
SCP = seepage collection pond
SCRP = seepage collection and recycle pond
TSF = tailings storage facility
WTP = water treatment plant

Source: Knight Piésold 2019s

**Table K4.16-17: Water Balance Model—Base Case Total Treated Water to Environment**

| Operations | | | | | |
|---|---|---|---|---|---|
| Month | Total Release from WTPs (cfs) | | | | |
| | 1st Percentile | 10th Percentile | 50th Percentile | 90th Percentile | 99th Percentile |
| Jan | 3 | 11 | 24 | 38 | 46 |
| Feb | 3 | 5 | 24 | 37 | 48 |
| Mar | 3 | 4 | 17 | 32 | 47 |
| Apr | 4 | 4 | 11 | 30 | 43 |
| May | 7 | 17 | 29 | 37 | 51 |
| Jun | 19 | 30 | 37 | 45 | 53 |
| Jul | 9 | 28 | 41 | 48 | 53 |
| Aug | 12 | 28 | 40 | 48 | 53 |
| Sep | 19 | 30 | 41 | 48 | 53 |
| Oct | 14 | 27 | 37 | 48 | 53 |
| Nov | 7 | 26 | 32 | 42 | 53 |
| Dec | 5 | 17 | 28 | 39 | 52 |
| Annual Average | 9 | 19 | 30 | 41 | 50 |

| Closure Phase 1 | | | | | |
|---|---|---|---|---|---|
| Month | Total Release from WTPs (cfs) | | | | |
| | 1st Percentile | 10th Percentile | 50th Percentile | 90th Percentile | 99th Percentile |
| Jan | **7** | **41** | **50** | **58** | **67** |
| Feb | **6** | **17** | **50** | **53** | **67** |
| Mar | **6** | **9** | **50** | **51** | **65** |
| Apr | **5** | **7** | **49** | **52** | **66** |
| May | **36** | **55** | **62** | **65** | **68** |
| Jun | 52 | 62 | 66 | 68 | 68 |
| Jul | 36 | 55 | 66 | 67 | 67 |
| Aug | 46 | 57 | 66 | 67 | 67 |
| Sep | 55 | 58 | 66 | 67 | 67 |
| Oct | 23 | 53 | 64 | 67 | 67 |
| Nov | 19 | 50 | 55 | 66 | 67 |
| Dec | 7 | 50 | 51 | 64 | 67 |
| Annual Average | 25 | 43 | 58 | 62 | 67 |

| Closure Phase 2 | | | | | |
|---|---|---|---|---|---|
| Month | Total Release from WTPs (cfs) | | | | |
| | 1st Percentile | 10th Percentile | 50th Percentile | 90th Percentile | 99th Percentile |
| Jan | **0** | **0** | **0** | **0** | **0** |
| Feb | **0** | **0** | **0** | **0** | **0** |
| Mar | **0** | **0** | **0** | **0** | **0** |
| Apr | **0** | **0** | **0** | **0** | **0** |
| May | **0** | **0** | **0** | **0** | **0** |
| Jun | 0 | 0 | 0 | 0 | 0 |
| Jul | 0 | 0 | 0 | 0 | 0 |
| Aug | 0 | 0 | 0 | 0 | 0 |
| Sep | 0 | 0 | 0 | 0 | 0 |
| Oct | 0 | 0 | 0 | 0 | 0 |
| Nov | 0 | 0 | 0 | 0 | 0 |
| Dec | 0 | 0 | 0 | 0 | 0 |
| Annual Average | 0 | 0 | 0 | 0 | 0 |

| Closure Phase 3 | | | | | |
|---|---|---|---|---|---|
| Month | Total Release from WTPs (cfs) | | | | |
| | 1st Percentile | 10th Percentile | 50th Percentile | 90th Percentile | 99th Percentile |
| Jan | 4 | 4 | 31 | 44 | 52 |
| Feb | 3 | 4 | 31 | 35 | 46 |
| Mar | 4 | 4 | 11 | 31 | 52 |
| Apr | 2 | 2 | 11 | 34 | 43 |
| May | 14 | 37 | 43 | 44 | 52 |
| Jun | 35 | 44 | 44 | 45 | 52 |
| Jul | 12 | 39 | 44 | 50 | 52 |
| Aug | 24 | 41 | 44 | 52 | 52 |
| Sep | 35 | 43 | 44 | 52 | 52 |
| Oct | 6 | 36 | 44 | 52 | 52 |
| Nov | 4 | 28 | 41 | 51 | 52 |
| Dec | 4 | 5 | 31 | 46 | 52 |
| Annual Average | 12 | 24 | 35 | 45 | 51 |

| Closure Phase 4 | | | | | |
|---|---|---|---|---|---|
| Month | Total Release from WTPs (cfs) | | | | |
| | 1st Percentile | 10th Percentile | 50th Percentile | 90th Percentile | 99th Percentile |
| Jan | 2 | 4 | 5 | 19 | 24 |
| Feb | 3 | 3 | 5 | 10 | 19 |
| Mar | 2 | 2 | 5 | 5 | 24 |
| Apr | 1 | 2 | 5 | 11 | 19 |
| May | 9 | 16 | 18 | 19 | 24 |
| Jun | 11 | 19 | 18 | 22 | 24 |
| Jul | 0 | 15 | 18 | 24 | 34 |
| Aug | 10 | 18 | 18 | 24 | 34 |
| Sep | 13 | 19 | 18 | 24 | 30 |
| Oct | 1 | 16 | 19 | 23 | 29 |
| Nov | 3 | 5 | 18 | 21 | 25 |
| Dec | 2 | 5 | 7 | 19 | 24 |
| Annual Average | 5 | 10 | 13 | 18 | 26 |

Notes:

cfs = cubic feet per second
WTP = water treatment plant

Source: Knight Piésold 2019s

**Table K4.16-18: Water Balance Model—High Bedrock K Sensitivity (S7) Total Treated Water to Environment**

| Operations | | | | | |
|---|---|---|---|---|---|
| Month | Total Release from WTPs (cfs) | | | | |
| | 1st Percentile | 10th Percentile | 50th Percentile | 90th Percentile | 99th Percentile |
| Jan | 10 | 19 | 33 | 47 | 53 |
| Feb | 9 | 14 | 30 | 45 | 53 |
| Mar | 9 | 9 | 27 | 42 | 53 |
| Apr | 10 | 10 | 19 | 36 | 52 |
| May | 13 | 21 | 30 | 41 | 53 |
| Jun | 24 | 34 | 39 | 47 | 53 |
| Jul | 18 | 35 | 41 | 48 | 53 |
| Aug | 17 | 35 | 41 | 48 | 53 |
| Sep | 21 | 35 | 45 | 48 | 53 |
| Oct | 17 | 35 | 45 | 48 | 53 |
| Nov | 10 | 35 | 41 | 48 | 53 |
| Dec | 10 | 30 | 40 | 48 | 53 |
| Annual Average | 14 | 26 | 36 | 46 | 53 |

| Closure Phase 1 | | | | | |
|---|---|---|---|---|---|
| Month | Total Release from WTPs (cfs) | | | | |
| | 1st Percentile | 10th Percentile | 50th Percentile | 90th Percentile | 99th Percentile |
| Jan | 11 | 53 | 54 | 65 | 68 |
| Feb | 10 | 30 | 54 | 60 | 68 |
| Mar | 9 | 15 | 54 | 56 | 67 |
| Apr | 9 | 13 | 53 | 56 | 67 |
| May | 42 | 58 | 64 | 66 | 68 |
| Jun | 56 | 65 | 67 | 68 | 68 |
| Jul | 39 | 59 | 67 | 67 | 68 |
| Aug | 48 | 61 | 67 | 67 | 68 |
| Sep | 58 | 63 | 67 | 67 | 67 |
| Oct | 17 | 59 | 67 | 67 | 67 |
| Nov | 17 | 54 | 62 | 67 | 67 |
| Dec | 11 | 54 | 55 | 67 | 67 |
| Annual Average | 27 | 49 | 61 | 64 | 68 |

| Closure Phase 2 | | | | | |
|---|---|---|---|---|---|
| Month | Total Release from WTPs (cfs) | | | | |
| | 1st Percentile | 10th Percentile | 50th Percentile | 90th Percentile | 99th Percentile |
| Jan | 0 | 0 | 0 | 0 | 0 |
| Feb | 0 | 0 | 0 | 0 | 0 |
| Mar | 0 | 0 | 0 | 0 | 0 |
| Apr | 0 | 0 | 0 | 0 | 0 |
| May | 0 | 0 | 0 | 0 | 0 |
| Jun | 0 | 0 | 0 | 0 | 0 |
| Jul | 0 | 0 | 0 | 0 | 0 |
| Aug | 0 | 0 | 0 | 0 | 0 |
| Sep | 0 | 0 | 0 | 0 | 0 |
| Oct | 0 | 0 | 0 | 0 | 0 |
| Nov | 0 | 0 | 0 | 0 | 0 |
| Dec | 0 | 0 | 0 | 0 | 0 |
| Annual Average | 0 | 0 | 0 | 0 | 0 |

| Closure Phase 3 | | | | | |
|---|---|---|---|---|---|
| Month | Total Release from WTPs (cfs) | | | | |
| | 1st Percentile | 10th Percentile | 50th Percentile | 90th Percentile | 99th Percentile |
| Jan | 6 | 14 | 31 | 44 | 52 |
| Feb | 6 | 7 | 31 | 39 | 47 |
| Mar | 6 | 7 | 31 | 32 | 52 |
| Apr | 5 | 5 | 31 | 35 | 43 |
| May | 17 | 39 | 44 | 44 | 52 |
| Jun | 35 | 44 | 44 | 50 | 52 |
| Jul | 20 | 39 | 44 | 52 | 52 |
| Aug | 29 | 41 | 44 | 52 | 52 |
| Sep | 35 | 43 | 44 | 52 | 52 |
| Oct | 9 | 35 | 44 | 52 | 52 |
| Nov | 7 | 31 | 41 | 52 | 52 |
| Dec | 7 | 31 | 31 | 51 | 52 |
| Annual Average | 15 | 28 | 38 | 46 | 51 |

| Closure Phase 4 | | | | | |
|---|---|---|---|---|---|
| Month | Total Release from WTPs (cfs) | | | | |
| | 1st Percentile | 10th Percentile | 50th Percentile | 90th Percentile | 99th Percentile |
| Jan | 5 | 5 | 5 | 24 | 25 |
| Feb | 5 | 5 | 6 | 13 | 24 |
| Mar | 5 | 5 | 5 | 10 | 25 |
| Apr | 5 | 5 | 6 | 12 | 22 |
| May | 11 | 19 | 23 | 24 | 25 |
| Jun | 11 | 22 | 24 | 24 | 29 |
| Jul | 5 | 15 | 24 | 24 | 35 |
| Aug | 11 | 18 | 24 | 24 | 35 |
| Sep | 12 | 20 | 24 | 25 | 35 |
| Oct | 5 | 13 | 24 | 25 | 35 |
| Nov | 5 | 5 | 18 | 24 | 35 |
| Dec | 5 | 5 | 7 | 24 | 25 |
| Annual Average | 7 | 11 | 16 | 21 | 29 |

Notes:

cfs = cubic feet per second
WTP = water treatment plant

Source: Knight Piésold 2019s

**Table K4.16-19: Water Balance Model—Low Bedrock K Sensitivity (S8) Treated Water to Environment**

| Operations | | | | | |
|---|---|---|---|---|---|
| Month | Total Release from WTPs (cfs) | | | | |
| | 1st Percentile | 10th Percentile | 50th Percentile | 90th Percentile | 99th Percentile |
| Jan | 3 | 10 | 23 | 37 | 45 |
| Feb | 3 | 4 | 23 | 36 | 47 |
| Mar | 3 | 3 | 16 | 31 | 48 |
| Apr | 3 | 4 | 11 | 29 | 42 |
| May | 7 | 16 | 28 | 37 | 51 |
| Jun | 18 | 29 | 37 | 45 | 53 |
| Jul | 8 | 27 | 40 | 48 | 53 |
| Aug | 12 | 28 | 39 | 48 | 53 |
| Sep | 20 | 29 | 40 | 48 | 53 |
| Oct | 13 | 26 | 36 | 48 | 53 |
| Nov | 6 | 25 | 32 | 40 | 53 |
| Dec | 5 | 16 | 27 | 38 | 50 |
| Annual Average | 8 | 18 | 29 | 41 | 50 |

| Closure Phase 1 | | | | | |
|---|---|---|---|---|---|
| Month | Total Release from WTPs (cfs) | | | | |
| | 1st Percentile | 10th Percentile | 50th Percentile | 90th Percentile | 99th Percentile |
| Jan | 6 | 40 | 50 | 57 | 65 |
| Feb | 6 | 18 | 49 | 53 | 64 |
| Mar | 5 | 8 | 49 | 50 | 65 |
| Apr | 4 | 6 | 49 | 52 | 65 |
| May | 35 | 55 | 62 | 65 | 67 |
| Jun | 52 | 61 | 66 | 67 | 68 |
| Jul | 38 | 54 | 65 | 67 | 67 |
| Aug | 46 | 56 | 65 | 67 | 67 |
| Sep | 55 | 57 | 65 | 67 | 67 |
| Oct | 21 | 52 | 62 | 66 | 67 |
| Nov | 20 | 50 | 54 | 64 | 67 |
| Dec | 7 | 50 | 50 | 63 | 67 |
| Annual Average | 25 | 42 | 57 | 62 | 66 |

| Closure Phase 2 | | | | | |
|---|---|---|---|---|---|
| Month | Total Release from WTPs (cfs) | | | | |
| | 1st Percentile | 10th Percentile | 50th Percentile | 90th Percentile | 99th Percentile |
| Jan | 0 | 0 | 0 | 0 | 0 |
| Feb | 0 | 0 | 0 | 0 | 0 |
| Mar | 0 | 0 | 0 | 0 | 0 |
| Apr | 0 | 0 | 0 | 0 | 0 |
| May | 0 | 0 | 0 | 0 | 0 |
| Jun | 0 | 0 | 0 | 0 | 0 |
| Jul | 0 | 0 | 0 | 0 | 0 |
| Aug | 0 | 0 | 0 | 0 | 0 |
| Sep | 0 | 0 | 0 | 0 | 0 |
| Oct | 0 | 0 | 0 | 0 | 0 |
| Nov | 0 | 0 | 0 | 0 | 0 |
| Dec | 0 | 0 | 0 | 0 | 0 |
| Annual Average | 0 | 0 | 0 | 0 | 0 |

| Closure Phase 3 | | | | | |
|---|---|---|---|---|---|
| Month | Total Release from WTPs (cfs) | | | | |
| | 1st Percentile | 10th Percentile | 50th Percentile | 90th Percentile | 99th Percentile |
| Jan | 3 | 4 | 31 | 44 | 52 |
| Feb | 3 | 3 | 31 | 34 | 46 |
| Mar | 3 | 4 | 9 | 31 | 52 |
| Apr | 2 | 2 | 10 | 33 | 43 |
| May | 14 | 38 | 43 | 44 | 52 |
| Jun | 35 | 44 | 44 | 45 | 52 |
| Jul | 12 | 39 | 44 | 50 | 52 |
| Aug | 23 | 41 | 44 | 52 | 52 |
| Sep | 35 | 43 | 44 | 52 | 52 |
| Oct | 5 | 35 | 44 | 52 | 52 |
| Nov | 3 | 26 | 40 | 51 | 52 |
| Dec | 3 | 4 | 31 | 46 | 52 |
| Annual Average | 12 | 24 | 35 | 45 | 51 |

| Closure Phase 4 | | | | | |
|---|---|---|---|---|---|
| Month | Total Release from WTPs (cfs) | | | | |
| | 1st Percentile | 10th Percentile | 50th Percentile | 90th Percentile | 99th Percentile |
| Jan | 2 | 2 | 5 | 19 | 24 |
| Feb | 2 | 2 | 5 | 10 | 19 |
| Mar | 2 | 2 | 5 | 5 | 23 |
| Apr | 1 | 1 | 5 | 10 | 18 |
| May | 8 | 15 | 18 | 19 | 23 |
| Jun | 10 | 18 | 18 | 20 | 24 |
| Jul | 0 | 14 | 18 | 23 | 29 |
| Aug | 8 | 17 | 18 | 23 | 33 |
| Sep | 11 | 19 | 18 | 21 | 27 |
| Oct | 1 | 13 | 19 | 20 | 26 |
| Nov | 2 | 5 | 17 | 19 | 25 |
| Dec | 2 | 2 | 5 | 19 | 24 |
| Annual Average | 4 | 9 | 13 | 17 | 25 |

Notes:

cfs = cubic feet per second
WTP = water treatment plant

Source: Knight Piésold 2019s

**Table K4.16-20: North Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S0—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| NFK-A | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | No | 90% | 51.0 | 40.3 | 32.6 | 30.2 | 184.2 | 226.7 | 114.0 | 113.6 | 162.5 | 138.4 | 98.5 | 69.0 | 105.1 | 226.7 | 30.2 |
| | | S0 | No | 50% | 70.3 | 54.2 | 43.2 | 39.7 | 434.0 | 377.9 | 235.3 | 241.8 | 316.5 | 267.5 | 154.2 | 94.2 | 194.1 | 434.0 | 39.7 |
| | | S0 | No | 10% | 114.9 | 102.0 | 82.5 | 93.5 | 831.7 | 979.6 | 435.1 | 447.1 | 539.9 | 421.3 | 296.9 | 155.5 | 375.0 | 979.6 | 82.5 |
| | End of-Mine | S0 | No | 90% | 36.3 | 27.2 | 21.0 | 19.0 | 163.0 | 182.8 | 92.8 | 94.6 | 139.9 | 118.9 | 79.1 | 51.1 | 85.5 | 182.8 | 19.0 |
| | | S0 | No | 50% | 53.1 | 39.1 | 29.9 | 27.6 | 366.7 | 297.3 | 186.6 | 194.3 | 258.2 | 224.5 | 130.7 | 75.4 | 157.0 | 366.7 | 27.6 |
| | | S0 | No | 10% | 99.3 | 86.0 | 64.1 | 79.9 | 717.9 | 785.8 | 350.2 | 369.6 | 446.1 | 346.4 | 246.1 | 137.8 | 310.8 | 785.8 | 64.1 |
| | Post-Closure | S0 | No | 90% | 45.1 | 35.1 | 28.0 | 25.9 | 180.7 | 216.4 | 109.9 | 110.0 | 158.9 | 134.4 | 91.2 | 62.3 | 99.8 | 216.4 | 25.9 |
| | | S0 | No | 50% | 63.4 | 48.4 | 38.2 | 35.1 | 422.2 | 367.3 | 224.2 | 232.9 | 307.2 | 251.9 | 147.7 | 87.4 | 185.5 | 422.2 | 35.1 |
| | | S0 | No | 10% | 110.8 | 97.0 | 76.3 | 89.3 | 812.1 | 952.5 | 419.3 | 432.6 | 522.7 | 408.2 | 275.9 | 151.3 | 362.3 | 952.5 | 76.3 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -14.8 | -13.0 | -11.6 | -11.1 | -21.2 | -43.8 | -21.2 | -19.0 | -22.5 | -19.5 | -19.3 | -17.9 | -19.6 | -11.1 | -43.8 |
| | | S0 | No | 50% | -17.2 | -15.1 | -13.3 | -12.1 | -67.3 | -80.5 | -48.7 | -47.5 | -58.3 | -43.0 | -23.6 | -18.8 | -37.1 | -12.1 | -80.5 |
| | | S0 | No | 10% | -15.6 | -16.0 | -18.4 | -13.6 | -113.8 | -193.9 | -84.9 | -77.5 | -93.8 | -75.0 | -50.7 | -17.7 | -64.2 | -13.6 | -193.9 |
| | Post-Closure | S0 | No | 90% | -5.9 | -5.2 | -4.6 | -4.2 | -3.5 | -10.3 | -4.1 | -3.6 | -3.5 | -4.0 | -7.3 | -6.7 | -5.2 | -3.5 | -10.3 |
| | | S0 | No | 50% | -6.9 | -5.8 | -5.0 | -4.6 | -11.8 | -10.6 | -11.1 | -8.9 | -9.3 | -15.6 | -6.6 | -6.8 | -8.6 | -4.6 | -15.6 |
| | | S0 | No | 10% | -4.1 | -5.1 | -6.2 | -4.2 | -19.6 | -27.1 | -15.8 | -14.5 | -17.2 | -13.1 | -21.0 | -4.3 | -12.7 | -4.1 | -27.1 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -28.9 | -32.3 | -35.6 | -36.9 | -11.5 | -19.3 | -18.6 | -16.7 | -13.9 | -14.1 | -19.6 | -26.0 | -22.8 | -11.5 | -36.9 |
| | | S0 | No | 50% | -24.5 | -27.9 | -30.7 | -30.6 | -15.5 | -21.3 | -20.7 | -19.6 | -18.4 | -16.1 | -15.3 | -19.9 | -21.7 | -15.3 | -30.7 |
| | | S0 | No | 10% | -13.6 | -15.7 | -22.3 | -14.5 | -13.7 | -19.8 | -19.5 | -17.3 | -17.4 | -17.8 | -17.1 | -11.4 | -16.7 | -11.4 | -22.3 |
| | Post-Closure | S0 | No | 90% | -11.6 | -12.9 | -14.0 | -14.1 | -1.9 | -4.5 | -3.6 | -3.2 | -2.2 | -2.9 | -7.4 | -9.7 | -7.3 | -1.9 | -14.1 |
| | | S0 | No | 50% | -9.8 | -10.8 | -11.6 | -11.6 | -2.7 | -2.8 | -4.7 | -3.7 | -2.9 | -5.8 | -4.3 | -7.2 | -6.5 | -2.7 | -11.6 |
| | | S0 | No | 10% | -3.5 | -5.0 | -7.5 | -4.5 | -2.4 | -2.8 | -3.6 | -3.2 | -3.2 | -3.1 | -7.1 | -2.7 | -4.0 | -2.4 | -7.5 |
| NFK-B | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | No | 90% | 47.0 | 37.0 | 29.8 | 27.1 | 150.1 | 195.9 | 101.3 | 102.4 | 141.5 | 122.8 | 87.9 | 62.5 | 92.1 | 195.9 | 27.1 |
| | | S0 | No | 50% | 65.0 | 49.9 | 39.6 | 34.9 | 379.7 | 332.5 | 203.8 | 213.4 | 274.3 | 234.7 | 133.1 | 85.9 | 170.6 | 379.7 | 34.9 |
| | | S0 | No | 10% | 105.4 | 89.1 | 76.3 | 77.3 | 720.4 | 868.9 | 387.7 | 389.6 | 477.6 | 368.3 | 264.9 | 136.1 | 330.1 | 868.9 | 76.3 |
| | End of Mine | S0 | No | 90% | 32.1 | 24.2 | 18.3 | 16.5 | 129.8 | 153.3 | 79.9 | 82.8 | 119.2 | 102.7 | 68.2 | 44.7 | 72.6 | 153.3 | 16.5 |
| | | S0 | No | 50% | 47.1 | 34.9 | 26.5 | 23.6 | 305.5 | 253.1 | 156.4 | 166.3 | 217.6 | 190.7 | 109.7 | 67.3 | 133.2 | 305.5 | 23.6 |
| | | S0 | No | 10% | 90.1 | 71.9 | 57.9 | 63.6 | 607.4 | 676.4 | 304.0 | 312.3 | 384.6 | 294.5 | 211.4 | 118.5 | 266.1 | 676.4 | 57.9 |
| | Post-Closure | S0 | No | 90% | 41.1 | 31.9 | 25.1 | 23.3 | 146.4 | 186.1 | 96.9 | 99.1 | 138.0 | 118.5 | 81.9 | 55.3 | 87.0 | 186.1 | 23.3 |
| | | S0 | No | 50% | 58.1 | 44.2 | 34.6 | 30.7 | 368.4 | 322.8 | 193.8 | 204.8 | 265.5 | 219.8 | 127.7 | 78.9 | 162.4 | 368.4 | 30.7 |
| | | S0 | No | 10% | 101.6 | 83.1 | 70.1 | 73.1 | 701.6 | 844.0 | 372.2 | 375.9 | 461.2 | 355.8 | 244.2 | 131.9 | 317.9 | 844.0 | 70.1 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -14.9 | -12.7 | -11.5 | -10.6 | -20.3 | -42.6 | -21.3 | -19.6 | -22.4 | -20.0 | -19.7 | -17.8 | -19.5 | -10.6 | -42.6 |
| | | S0 | No | 50% | -17.8 | -14.9 | -13.1 | -11.3 | -74.2 | -79.4 | -47.4 | -47.0 | -56.7 | -44.0 | -23.4 | -18.6 | -37.3 | -11.3 | -79.4 |
| | | S0 | No | 10% | -15.4 | -17.2 | -18.4 | -13.7 | -113.0 | -192.5 | -83.7 | -77.3 | -93.0 | -73.7 | -53.5 | -17.7 | -64.1 | -13.7 | -192.5 |
| | Post-Closure | S0 | No | 90% | -5.9 | -5.0 | -4.6 | -3.8 | -3.7 | -9.8 | -4.4 | -3.3 | -3.5 | -4.3 | -6.0 | -7.2 | -5.1 | -3.3 | -9.8 |
| | | S0 | No | 50% | -6.8 | -5.6 | -4.9 | -4.2 | -11.3 | -9.8 | -10.0 | -8.6 | -8.8 | -14.9 | -5.4 | -7.0 | -8.1 | -4.2 | -14.9 |
| | | S0 | No | 10% | -3.8 | -6.0 | -6.2 | -4.2 | -18.8 | -24.9 | -15.5 | -13.6 | -16.4 | -12.5 | -20.6 | -4.2 | -12.2 | -3.8 | -24.9 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -31.7 | -34.4 | -38.6 | -39.1 | -13.5 | -21.7 | -21.1 | -19.1 | -15.8 | -16.3 | -22.4 | -28.5 | -25.2 | -13.5 | -39.1 |
| | | S0 | No | 50% | -27.4 | -30.0 | -33.0 | -32.4 | -19.5 | -23.9 | -23.3 | -22.0 | -20.7 | -18.8 | -17.6 | -21.7 | -24.2 | -17.6 | -33.0 |
| | | S0 | No | 10% | -14.6 | -19.3 | -24.1 | -17.7 | -15.7 | -22.2 | -21.6 | -19.8 | -19.5 | -20.0 | -20.2 | -13.0 | -19.0 | -13.0 | -24.1 |
| | Post-Closure | S0 | No | 90% | -12.5 | -13.6 | -15.5 | -14.1 | -2.5 | -5.0 | -4.3 | -3.2 | -2.5 | -3.5 | -6.9 | -11.5 | -7.9 | -2.5 | -15.5 |
| | | S0 | No | 50% | -10.5 | -11.3 | -12.5 | -12.0 | -3.0 | -2.9 | -4.9 | -4.0 | -3.2 | -6.3 | -4.1 | -8.2 | -6.9 | -2.9 | -12.5 |
| | | S0 | No | 10% | -3.6 | -6.8 | -8.1 | -5.4 | -2.6 | -2.9 | -4.0 | -3.5 | -3.4 | -3.4 | -7.8 | -3.1 | -4.5 | -2.6 | -8.1 |
| NFK-C | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | No | 90% | 19.7 | 11.4 | 5.7 | 3.2 | 84.2 | 132.8 | 63.5 | 65.7 | 87.2 | 79.5 | 52.8 | 31.5 | 53.1 | 132.8 | 3.2 |
| | | S0 | No | 50% | 34.7 | 22.4 | 13.8 | 9.8 | 258.8 | 245.3 | 140.2 | 149.4 | 189.2 | 161.2 | 84.5 | 53.0 | 113.5 | 258.8 | 9.8 |
| | | S0 | No | 10% | 67.9 | 50.5 | 45.1 | 41.3 | 514.6 | 656.9 | 295.7 | 278.8 | 359.7 | 266.4 | 194.4 | 87.5 | 238.2 | 656.9 | 41.3 |

**Table K4.16-20: North Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S0—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | End of Mine | S0 | No | 90% | 4.7 | 0.0 | 0.0 | 0.0 | 65.6 | 89.5 | 41.0 | 44.5 | 62.6 | 57.4 | 32.4 | 14.2 | 34.3 | 89.5 | 0.0 |
| | | S0 | No | 50% | 17.2 | 7.5 | 1.2 | 0.0 | 186.1 | 161.6 | 92.6 | 101.1 | 133.8 | 115.3 | 62.5 | 33.1 | 76.0 | 186.1 | 0.0 |
| | | S0 | No | 10% | 51.5 | 33.2 | 27.9 | 26.1 | 397.6 | 456.8 | 207.1 | 197.1 | 258.5 | 192.8 | 139.6 | 69.5 | 171.5 | 456.8 | 26.1 |
| | Post-Closure | S0 | No | 90% | 12.9 | 6.2 | 0.7 | 0.1 | 80.4 | 120.7 | 57.9 | 61.3 | 82.5 | 72.9 | 45.8 | 23.4 | 47.1 | 120.7 | 0.1 |
| | | S0 | No | 50% | 27.4 | 16.3 | 9.0 | 5.3 | 245.9 | 230.4 | 128.2 | 139.0 | 177.8 | 148.1 | 78.9 | 44.9 | 104.3 | 245.9 | 5.3 |
| | | S0 | No | 10% | 62.9 | 43.9 | 39.1 | 35.9 | 492.1 | 623.6 | 275.7 | 261.6 | 339.3 | 251.0 | 172.3 | 82.6 | 223.3 | 623.6 | 35.9 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -14.9 | -11.4 | -5.7 | -3.2 | -18.6 | -43.3 | -22.5 | -21.2 | -24.6 | -22.0 | -20.4 | -17.4 | -18.8 | -3.2 | -43.3 |
| | | S0 | No | 50% | -17.6 | -14.9 | -12.5 | -9.8 | -72.7 | -83.7 | -47.5 | -48.3 | -55.5 | -45.9 | -22.0 | -19.8 | -37.5 | -9.8 | -83.7 |
| | | S0 | No | 10% | -16.4 | -17.4 | -17.3 | -15.2 | -117.0 | -200.1 | -88.6 | -81.8 | -101.1 | -73.6 | -54.8 | -17.9 | -66.8 | -15.2 | -200.1 |
| | Post-Closure | S0 | No | 90% | -6.7 | -5.2 | -4.9 | -3.1 | -3.8 | -12.1 | -5.5 | -4.4 | -4.8 | -6.6 | -7.0 | -8.1 | -6.0 | -3.1 | -12.1 |
| | | S0 | No | 50% | -7.3 | -6.1 | -4.8 | -4.5 | -12.9 | -14.9 | -12.0 | -10.4 | -11.4 | -13.1 | -5.6 | -8.1 | -9.3 | -4.5 | -14.9 |
| | | S0 | No | 10% | -5.0 | -6.6 | -6.0 | -5.4 | -22.5 | -33.2 | -20.0 | -17.2 | -20.4 | -15.4 | -22.0 | -4.8 | -14.9 | -4.8 | -33.2 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -75.9 | -100.0 | -100.0 | -100.0 | -22.1 | -32.6 | -35.4 | -32.3 | -28.2 | -27.7 | -38.7 | -55.1 | -54.0 | -22.1 | -100.0 |
| | | S0 | No | 50% | -50.6 | -66.6 | -91.1 | -100.0 | -28.1 | -34.1 | -33.9 | -32.3 | -29.3 | -28.5 | -26.0 | -37.5 | -46.5 | -26.0 | -100.0 |
| | | S0 | No | 10% | -24.1 | -34.4 | -38.3 | -36.8 | -22.7 | -30.5 | -29.9 | -29.3 | -28.1 | -27.6 | -28.2 | -20.5 | -29.2 | -20.5 | -38.3 |
| | Post-Closure | S0 | No | 90% | -34.3 | -45.4 | -86.8 | -96.6 | -4.5 | -9.1 | -8.7 | -6.8 | -5.5 | -8.3 | -13.3 | -25.8 | -28.8 | -4.5 | -96.6 |
| | | S0 | No | 50% | -20.9 | -27.3 | -34.9 | -45.9 | -5.0 | -6.1 | -8.5 | -7.0 | -6.0 | -8.1 | -6.6 | -15.3 | -16.0 | -5.0 | -45.9 |
| | | S0 | No | 10% | -7.4 | -13.1 | -13.3 | -13.1 | -4.4 | -5.1 | -6.8 | -6.2 | -5.7 | -5.8 | -11.3 | -5.5 | -8.1 | -4.4 | -13.3 |
| | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | No | 90% | 13.8 | 11.4 | 9.2 | 7.9 | 35.8 | 58.7 | 27.2 | 23.0 | 27.1 | 29.5 | 22.2 | 17.2 | 23.6 | 58.7 | 7.9 |
| | | S0 | No | 50% | 20.3 | 16.4 | 13.3 | 11.5 | 83.0 | 94.6 | 54.2 | 48.2 | 61.9 | 57.6 | 39.9 | 26.8 | 44.0 | 94.6 | 11.5 |
| | | S0 | No | 10% | 33.7 | 27.5 | 23.7 | 21.6 | 177.1 | 207.3 | 117.2 | 85.1 | 111.4 | 101.5 | 81.7 | 43.9 | 86.0 | 207.3 | 21.6 |
| | End of Mine | S0 | No | 90% | 12.2 | 10.0 | 8.0 | 6.8 | 33.2 | 54.8 | 25.2 | 21.0 | 24.8 | 26.8 | 20.0 | 15.4 | 21.5 | 54.8 | 6.8 |
| | | S0 | No | 50% | 18.3 | 14.6 | 11.8 | 10.1 | 78.0 | 88.5 | 51.0 | 44.8 | 58.1 | 53.0 | 36.5 | 24.3 | 40.8 | 88.5 | 10.1 |
| | | S0 | No | 10% | 30.7 | 24.9 | 21.3 | 19.4 | 166.4 | 198.5 | 110.2 | 80.3 | 104.8 | 94.5 | 75.5 | 40.1 | 80.6 | 198.5 | 19.4 |
| | Post-Closure | S0 | No | 90% | 13.8 | 11.4 | 9.2 | 7.9 | 35.8 | 58.7 | 27.2 | 23.0 | 27.1 | 29.5 | 22.2 | 17.2 | 23.6 | 58.7 | 7.9 |
| | | S0 | No | 50% | 20.3 | 16.4 | 13.3 | 11.5 | 83.0 | 94.6 | 54.2 | 48.2 | 61.9 | 57.6 | 39.9 | 26.8 | 44.0 | 94.6 | 11.5 |
| | | S0 | No | 10% | 33.7 | 27.5 | 23.7 | 21.6 | 177.1 | 207.3 | 117.2 | 85.1 | 111.4 | 101.5 | 81.7 | 43.9 | 86.0 | 207.3 | 21.6 |
| **NFK-D[1]** | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | --1.6 | --1.4 | -1.2 | -1.1 | -2.5 | -3.9 | -2.0 | -2.0 | -2.3 | -2.8 | -2.2 | -1.8 | -2.1 | -1.1 | -3.9 |
| | | S0 | No | 50% | -2.0 | -1.8 | -1.5 | -1.4 | -5.0 | -6.1 | -3.2 | -3.5 | -3.8 | -4.6 | -3.4 | -2.5 | -3.2 | -1.4 | -6.1 |
| | | S0 | No | 10% | -3.0 | -2.6 | -2.4 | -2.2 | -10.7 | -8.8 | -7.0 | -4.8 | -6.6 | -6.9 | -6.2 | -3.8 | -5.4 | -2.2 | -10.7 |
| | Post-Closure | S0 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S0 | No | 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S0 | No | 10% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -11.4 | -12.3 | -13.4 | -14.1 | -7.1 | -6.7 | -7.4 | -8.7 | -8.5 | -9.4 | -9.8 | -10.7 | -10.0 | -6.7 | -14.1 |
| | | S0 | No | 50% | -9.9 | -10.8 | -11.2 | -12.3 | -6.1 | -6.4 | -5.8 | -7.2 | -6.2 | -8.0 | -8.5 | -9.3 | -8.5 | -5.8 | -12.3 |
| | | S0 | No | 10% | -8.9 | -9.6 | -10.2 | -10.1 | -6.1 | -4.2 | -5.9 | -5.6 | -5.9 | -6.8 | -7.6 | -8.6 | -7.5 | -4.2 | -10.2 |
| | Post-Closure | S0 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S0 | No | 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S0 | No | 10% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | No | 90% | 3.4 | 2.8 | 2.3 | 2.1 | 12.6 | 24.2 | 13.5 | 11.9 | 19.7 | 13.6 | 6.3 | 4.3 | 9.7 | 24.2 | 2.1 |
| | | S0 | No | 50% | 4.6 | 3.7 | 3.0 | 2.6 | 49.9 | 63.4 | 28.4 | 29.9 | 35.8 | 24.8 | 13.6 | 6.3 | 22.2 | 63.4 | 2.6 |
| **Tributary 1.19** | | S0 | No | 10% | 7.0 | 6.3 | 5.7 | 8.0 | 89.0 | 140.6 | 52.5 | 58.0 | 62.7 | 46.0 | 23.5 | 9.1 | 42.4 | 140.6 | 5.7 |
| | End of Mine | S0 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S0 | No | 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S0 | No | 10% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

**Table K4.16-20: North Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S0—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S0 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S0 | No | 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S0 | No | 10% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -3.4 | -2.8 | -2.3 | -2.1 | -12.6 | -24.2 | -13.5 | -11.9 | -19.7 | -13.6 | -6.3 | -4.3 | -9.7 | -2.1 | -24.2 |
| | | S0 | No | 50% | -4.6 | -3.7 | -3.0 | -2.6 | -49.9 | -63.4 | -28.4 | -29.9 | -35.8 | -24.8 | -13.6 | -6.3 | -22.2 | -2.6 | -63.4 |
| | | S0 | No | 10% | -7.0 | -6.3 | -5.7 | -8.0 | -89.0 | -140.6 | -52.5 | -58.0 | -62.7 | -46.0 | -23.5 | -9.1 | -42.4 | -5.7 | -140.6 |
| | Post-Closure | S0 | No | 90% | -3.4 | -2.8 | -2.3 | -2.1 | -12.6 | -24.2 | -13.5 | -11.9 | -19.7 | -13.6 | -6.3 | -4.3 | -9.7 | -2.1 | -24.2 |
| | | S0 | No | 50% | -4.6 | -3.7 | -3.0 | -2.6 | -49.9 | -63.4 | -28.4 | -29.9 | -35.8 | -24.8 | -13.6 | -6.3 | -22.2 | -2.6 | -63.4 |
| | | S0 | No | 10% | -7.0 | -6.3 | -5.7 | -8.0 | -89.0 | -140.6 | -52.5 | -58.0 | -62.7 | -46.0 | -23.5 | -9.1 | -42.4 | -5.7 | -140.6 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | | S0 | No | 50% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | | S0 | No | 10% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | Post-Closure | S0 | No | 90% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | | S0 | No | 50% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | | S0 | No | 10% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |

Notes:

cfs = cubic feet per second
NFK = North Fork Koktuli

Source: Knight Piésold 2019q, r

[1] Source: PLP 2020-RFI 161

**Table K4.16-21: South Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S0—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| SFK-A | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | No | 90% | 37.1 | 25.4 | 15.9 | 10.4 | 140.6 | 141.2 | 87.2 | 93.4 | 129.0 | 115.2 | 77.5 | 51.1 | 77.0 | 141.2 | 10.4 |
| | | S0 | No | 50% | 56.9 | 42.0 | 30.6 | 24.3 | 323.0 | 294.3 | 182.3 | 212.4 | 252.4 | 212.7 | 130.6 | 82.1 | 153.6 | 323.0 | 24.3 |
| | | S0 | No | 10% | 129.4 | 93.5 | 71.5 | 78.0 | 568.6 | 704.8 | 352.8 | 360.5 | 437.8 | 335.1 | 254.7 | 154.0 | 295.0 | 704.8 | 71.5 |
| | End of Mine | S0 | No | 90% | 34.3 | 22.5 | 13.4 | 9.2 | 136.9 | 135.1 | 83.6 | 89.5 | 123.9 | 110.1 | 73.2 | 48.1 | 73.3 | 136.9 | 9.2 |
| | | S0 | No | 50% | 53.2 | 39.5 | 27.8 | 21.5 | 315.2 | 285.1 | 174.6 | 204.6 | 243.7 | 204.3 | 124.0 | 77.5 | 147.6 | 315.2 | 21.5 |
| | | S0 | No | 10% | 124.6 | 89.3 | 67.5 | 75.3 | 556.4 | 688.2 | 342.2 | 351.1 | 426.6 | 324.7 | 244.8 | 146.7 | 286.4 | 688.2 | 67.5 |
| | Post-Closure | S0 | No | 90% | 34.4 | 22.7 | 13.6 | 9.3 | 136.1 | 134.4 | 83.1 | 89.1 | 123.5 | 109.9 | 73.2 | 48.1 | 73.1 | 136.1 | 9.3 |
| | | S0 | No | 50% | 53.3 | 39.6 | 28.0 | 21.7 | 314.3 | 282.9 | 174.1 | 203.9 | 243.2 | 204.2 | 123.9 | 77.6 | 147.2 | 314.3 | 21.7 |
| | | S0 | No | 10% | 124.6 | 89.4 | 67.7 | 75.2 | 555.4 | 684.4 | 340.7 | 349.7 | 425.2 | 324.1 | 245.0 | 147.0 | 285.7 | 684.4 | 67.7 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -2.8 | -3.0 | -2.5 | -1.2 | -3.7 | -6.1 | -3.6 | -3.9 | -5.1 | -5.2 | -4.4 | -3.0 | -3.7 | -1.2 | -6.1 |
| | | S0 | No | 50% | -3.7 | -2.4 | -2.8 | -2.9 | -7.8 | -9.2 | -7.6 | -7.8 | -8.7 | -8.5 | -6.6 | -4.5 | -6.0 | -2.4 | -9.2 |
| | | S0 | No | 10% | -4.8 | -4.2 | -4.0 | -2.7 | -12.2 | -16.6 | -10.6 | -9.4 | -11.2 | -10.4 | -9.9 | -7.3 | -8.6 | -2.7 | -16.6 |
| | Post-Closure | S0 | No | 90% | -2.7 | -2.7 | -2.3 | -1.0 | -4.5 | -6.7 | -4.1 | -4.3 | -5.5 | -5.4 | -4.3 | -3.0 | -3.9 | -1.0 | -6.7 |
| | | S0 | No | 50% | -3.7 | -2.3 | -2.6 | -2.6 | -8.7 | -11.4 | -8.2 | -8.5 | -9.2 | -8.5 | -6.6 | -4.5 | -6.4 | -2.3 | -11.4 |
| | | S0 | No | 10% | -4.8 | -4.1 | -3.7 | -2.8 | -13.2 | -20.4 | -12.1 | -10.8 | -12.6 | -11.0 | -9.7 | -7.0 | -9.4 | -2.8 | -20.4 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -7.7 | -11.6 | -15.6 | -11.8 | -2.6 | -4.3 | -4.2 | -4.2 | -3.9 | -4.5 | -5.6 | -5.8 | -6.8 | -2.6 | -15.6 |
| | | S0 | No | 50% | -6.5 | -5.8 | -9.0 | -11.9 | -2.4 | -3.1 | -4.2 | -3.7 | -3.4 | -4.0 | -5.0 | -5.5 | -5.4 | -2.4 | -11.9 |
| | | S0 | No | 10% | -3.7 | -4.5 | -5.6 | -3.5 | -2.2 | -2.4 | -3.0 | -2.6 | -2.6 | -3.1 | -3.9 | -4.8 | -3.5 | -2.2 | -5.6 |
| | Post-Closure | S0 | No | 90% | -7.2 | -10.6 | -14.2 | -10.0 | -3.2 | -4.8 | -4.7 | -4.6 | -4.3 | -4.7 | -5.6 | -5.8 | -6.6 | -3.2 | -14.2 |
| | | S0 | No | 50% | -6.4 | -5.5 | -8.5 | -10.8 | -2.7 | -3.9 | -4.5 | -4.0 | -3.6 | -4.0 | -5.1 | -5.5 | -5.4 | -2.7 | -10.8 |
| | | S0 | No | 10% | -3.7 | -4.4 | -5.2 | -3.6 | -2.3 | -2.9 | -3.4 | -3.0 | -2.9 | -3.3 | -3.8 | -4.5 | -3.6 | -2.3 | -5.2 |
| SFK-B | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | No | 90% | 35.1 | 27.7 | 20.3 | 15.3 | 92.8 | 122.4 | 71.0 | 72.2 | 94.3 | 86.0 | 59.4 | 42.3 | 61.6 | 122.4 | 15.3 |
| | | S0 | No | 50% | 43.7 | 35.8 | 29.2 | 24.1 | 240.6 | 244.1 | 143.5 | 159.6 | 190.6 | 164.5 | 99.9 | 62.7 | 119.9 | 244.1 | 24.1 |
| | | S0 | No | 10% | 86.2 | 62.3 | 51.7 | 48.6 | 435.8 | 583.4 | 283.3 | 276.4 | 342.1 | 251.5 | 202.5 | 115.2 | 228.2 | 583.4 | 48.6 |
| | End of Mine | S0 | No | 90% | 32.5 | 24.9 | 17.7 | 12.9 | 89.1 | 116.0 | 68.1 | 68.7 | 90.7 | 81.9 | 55.4 | 40.4 | 58.2 | 116.0 | 12.9 |
| | | S0 | No | 50% | 41.1 | 34.4 | 26.9 | 21.9 | 232.6 | 233.6 | 136.2 | 152.7 | 182.2 | 156.8 | 94.2 | 58.8 | 114.3 | 233.6 | 21.9 |
| | | S0 | No | 10% | 82.0 | 59.1 | 48.6 | 46.0 | 422.0 | 564.4 | 272.2 | 266.3 | 330.9 | 240.9 | 191.7 | 108.8 | 219.4 | 564.4 | 46.0 |
| | Post-Closure | S0 | No | 90% | 32.7 | 25.2 | 18.0 | 13.2 | 89.0 | 115.2 | 67.5 | 67.9 | 90.0 | 81.7 | 55.6 | 40.5 | 58.1 | 115.2 | 13.2 |
| | | S0 | No | 50% | 41.2 | 34.5 | 27.2 | 22.1 | 232.2 | 231.6 | 135.6 | 151.8 | 181.4 | 156.3 | 94.0 | 59.1 | 113.9 | 232.2 | 22.1 |
| | | S0 | No | 10% | 82.1 | 59.0 | 49.0 | 46.2 | 420.6 | 558.8 | 270.5 | 264.6 | 328.9 | 240.2 | 192.1 | 109.2 | 218.4 | 558.8 | 46.2 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -2.6 | -2.8 | -2.7 | -2.3 | -3.6 | -6.3 | -2.9 | -3.5 | -3.6 | -4.2 | -4.0 | -1.9 | -3.4 | -1.9 | -6.3 |
| | | S0 | No | 50% | -2.7 | -1.5 | -2.2 | -2.2 | -8.0 | -10.5 | -7.3 | -6.9 | -8.4 | -7.7 | -5.7 | -3.9 | -5.6 | -1.5 | -10.5 |
| | | S0 | No | 10% | -4.2 | -3.2 | -3.1 | -2.6 | -13.8 | -19.0 | -11.0 | -10.1 | -11.2 | -10.6 | -10.8 | -6.5 | -8.8 | -2.6 | -19.0 |

**Table K4.16-21: South Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S0—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S0 | No | 90% | -2.3 | -2.4 | -2.3 | -2.0 | -3.8 | -7.2 | -3.5 | -4.3 | -4.3 | -4.3 | -3.8 | -1.8 | -3.5 | -1.8 | -7.2 |
| | | S0 | No | 50% | -2.5 | -1.3 | -1.9 | -2.0 | -8.4 | -12.5 | -8.0 | -7.8 | -9.1 | -8.2 | -5.9 | -3.6 | -5.9 | -1.3 | -12.5 |
| | | S0 | No | 10% | -4.1 | -3.3 | -2.8 | -2.4 | -15.2 | -24.5 | -12.7 | -11.7 | -13.2 | -11.3 | -10.4 | -6.1 | -9.8 | -2.4 | -24.5 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -7.4 | -10.0 | -13.2 | -15.4 | -3.9 | -5.2 | -4.1 | -4.8 | -3.8 | -4.8 | -6.8 | -4.5 | -7.0 | -3.8 | -15.4 |
| | | S0 | No | 50% | -6.1 | -4.1 | -7.6 | -9.2 | -3.3 | -4.3 | -5.1 | -4.3 | -4.4 | -4.7 | -5.8 | -6.2 | -5.4 | -3.3 | -9.2 |
| | | S0 | No | 10% | -4.9 | -5.2 | -6.0 | -5.4 | -3.2 | -3.3 | -3.9 | -3.7 | -3.3 | -4.2 | -5.3 | -5.6 | -4.5 | -3.2 | -6.0 |
| | Post-Closure | S0 | No | 90% | -6.7 | -8.8 | -11.5 | -13.3 | -4.0 | -5.8 | -4.9 | -6.0 | -4.6 | -5.0 | -6.4 | -4.3 | -6.8 | -4.0 | -13.3 |
| | | S0 | No | 50% | -5.8 | -3.6 | -6.6 | -8.2 | -3.5 | -5.1 | -5.6 | -4.9 | -4.8 | -5.0 | -5.9 | -5.8 | -5.4 | -3.5 | -8.2 |
| | | S0 | No | 10% | -4.8 | -5.2 | -5.4 | -5.0 | -3.5 | -4.2 | -4.5 | -4.2 | -3.9 | -4.5 | -5.1 | -5.3 | -4.6 | -3.5 | -5.4 |
| | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 28.6 | 43.9 | 8.2 | 7.8 | 16.7 | 22.0 | 8.6 | 0.3 | 11.3 | 43.9 | 0.0 |
| | | S0 | No | 50% | 1.9 | 0.1 | 0.0 | 0.0 | 117.7 | 100.3 | 47.4 | 54.9 | 76.7 | 63.9 | 36.1 | 13.2 | 42.7 | 117.7 | 0.0 |
| | | S0 | No | 10% | 29.9 | 16.4 | 7.0 | 5.6 | 240.6 | 288.9 | 133.5 | 117.1 | 159.9 | 126.5 | 93.8 | 49.0 | 105.7 | 288.9 | 5.6 |
| | End of Mine | S0 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 28.1 | 41.1 | 7.1 | 7.2 | 15.1 | 17.9 | 5.9 | 0.2 | 10.2 | 41.1 | 0.0 |
| | | S0 | No | 50% | 0.4 | 0.1 | 0.0 | 0.0 | 114.8 | 95.0 | 43.2 | 50.5 | 71.2 | 59.0 | 32.7 | 10.6 | 39.8 | 114.8 | 0.0 |
| | | S0 | No | 10% | 27.0 | 13.1 | 5.5 | 4.8 | 232.7 | 280.6 | 126.5 | 112.0 | 153.1 | 119.7 | 87.4 | 44.4 | 100.6 | 280.6 | 4.8 |
| | Post-Closure | S0 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 27.8 | 41.1 | 6.8 | 6.8 | 14.9 | 18.3 | 6.2 | 0.2 | 10.2 | 41.1 | 0.0 |
| | | S0 | No | 50% | 0.4 | 0.1 | 0.0 | 0.0 | 115.0 | 95.0 | 43.4 | 50.7 | 71.7 | 59.5 | 32.8 | 10.8 | 39.9 | 115.0 | 0.0 |
| | | S0 | No | 10% | 27.1 | 13.6 | 5.7 | 4.7 | 233.6 | 280.8 | 126.7 | 112.1 | 153.5 | 120.3 | 88.2 | 44.8 | 100.9 | 280.8 | 4.7 |
| SFK-C | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | -0.5 | -2.8 | -1.1 | -0.6 | -1.6 | -4.1 | -2.8 | 0.0 | -1.1 | 0.0 | -4.1 |
| | | S0 | No | 50% | -1.6 | 0.0 | 0.0 | 0.0 | -3.0 | -5.3 | -4.3 | -4.4 | -5.5 | -4.8 | -3.4 | -2.6 | -2.9 | 0.0 | -5.5 |
| | | S0 | No | 10% | -2.9 | -3.2 | -1.5 | -0.8 | -7.9 | -8.2 | -7.0 | -5.1 | -6.8 | -6.8 | -6.4 | -4.5 | -5.1 | -0.8 | -8.2 |
| | Post-Closure | S0 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | -0.8 | -2.9 | -1.3 | -1.0 | -1.8 | -3.7 | -2.4 | 0.0 | -1.2 | 0.0 | -3.7 |
| | | S0 | No | 50% | -1.5 | 0.0 | 0.0 | 0.0 | -2.8 | -5.3 | -4.0 | -4.2 | -5.0 | -4.4 | -3.3 | -2.4 | -2.7 | 0.0 | -5.3 |
| | | S0 | No | 10% | -2.8 | -2.7 | -1.3 | -0.8 | -7.0 | -8.0 | -6.7 | -5.0 | -6.3 | -6.2 | -5.6 | -4.2 | -4.7 | -0.8 | -8.0 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | -1.7 | -6.4 | -13.3 | -7.5 | -9.3 | -18.6 | -32.0 | -17.2 | -8.8 | 0.0 | -32.0 |
| | | S0 | No | 50% | -80.2 | 0.0 | 0.0 | 0.0 | -2.5 | -5.3 | -9.0 | -8.0 | -7.1 | -7.6 | -9.4 | -19.5 | -12.4 | 0.0 | -80.2 |
| | | S0 | No | 10% | -9.9 | -19.8 | -21.6 | -13.5 | -3.3 | -2.8 | -5.3 | -4.4 | -4.2 | -5.4 | -6.8 | -9.3 | -8.9 | -2.8 | -21.6 |
| | Post-Closure | S0 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | -2.8 | -6.5 | -16.3 | -12.7 | -10.7 | -16.9 | -28.4 | -17.2 | -9.3 | 0.0 | -28.4 |
| | | S0 | No | 50% | -77.6 | 0.0 | 0.0 | 0.0 | -2.3 | -5.3 | -8.4 | -7.6 | -6.6 | -6.9 | -9.1 | -17.9 | -11.8 | 0.0 | -77.6 |
| | | S0 | No | 10% | -9.2 | -16.7 | -18.3 | -15.2 | -2.9 | -2.8 | -5.1 | -4.3 | -4.0 | -4.9 | -5.9 | -8.6 | -8.2 | -2.8 | -18.3 |
| SFK-D | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | No | 90% | 6.4 | 4.6 | 3.3 | 2.6 | 21.7 | 35.8 | 16.6 | 15.2 | 20.7 | 19.9 | 13.1 | 8.9 | 14.1 | 35.8 | 2.6 |
| | | S0 | No | 50% | 9.3 | 6.5 | 4.8 | 3.9 | 61.6 | 54.7 | 36.0 | 32.5 | 44.1 | 38.6 | 23.2 | 13.3 | 27.4 | 61.6 | 3.9 |
| | | S0 | No | 10% | 19.2 | 13.1 | 12.7 | 10.9 | 112.8 | 137.5 | 67.3 | 59.0 | 77.3 | 61.0 | 49.0 | 23.4 | 53.6 | 137.5 | 10.9 |

**Table K4.16-21: South Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S0—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | End of Mine | S0 | No | 90% | 3.9 | 2.5 | 1.5 | 1.1 | 18.1 | 29.1 | 12.8 | 11.6 | 16.5 | 15.4 | 9.5 | 5.9 | 10.7 | 29.1 | 1.1 |
| | | S0 | No | 50% | 6.5 | 4.2 | 2.9 | 2.2 | 53.3 | 46.5 | 30.7 | 27.1 | 37.5 | 31.6 | 18.1 | 9.7 | 22.5 | 53.3 | 2.2 |
| | | S0 | No | 10% | 14.9 | 9.9 | 9.6 | 8.4 | 97.3 | 124.1 | 56.9 | 51.5 | 66.6 | 51.0 | 40.4 | 18.7 | 45.8 | 124.1 | 8.4 |
| | Post-Closure | S0 | No | 90% | 4.5 | 3.0 | 1.9 | 1.5 | 19.0 | 30.5 | 13.7 | 12.4 | 17.5 | 16.4 | 10.3 | 6.6 | 11.4 | 30.5 | 1.5 |
| | | S0 | No | 50% | 7.2 | 4.7 | 3.3 | 2.6 | 55.4 | 48.3 | 32.0 | 28.3 | 39.0 | 33.1 | 19.2 | 10.5 | 23.6 | 55.4 | 2.6 |
| | | S0 | No | 10% | 15.9 | 10.6 | 10.2 | 8.9 | 100.8 | 127.5 | 59.2 | 53.3 | 69.1 | 53.3 | 42.2 | 19.8 | 47.6 | 127.5 | 8.9 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -2.5 | -2.1 | -1.7 | -1.5 | -3.6 | -6.7 | -3.8 | -3.7 | -4.2 | -4.5 | -3.7 | -3.0 | -3.4 | -1.5 | -6.7 |
| | | S0 | No | 50% | -2.8 | -2.3 | -1.9 | -1.7 | -8.3 | -8.2 | -5.2 | -5.5 | -6.6 | -7.0 | -5.1 | -3.6 | -4.9 | -1.7 | -8.3 |
| | | S0 | No | 10% | -4.3 | -3.2 | -3.2 | -2.5 | -15.4 | -13.4 | -10.4 | -7.6 | -10.6 | -10.0 | -8.6 | -4.7 | -7.8 | -2.5 | -15.4 |
| | Post-Closure | S0 | No | 90% | -1.9 | -1.6 | -1.3 | -1.1 | -2.7 | -5.3 | -2.9 | -2.8 | -3.2 | -3.5 | -2.8 | -2.3 | -2.6 | -1.1 | -5.3 |
| | | S0 | No | 50% | -2.2 | -1.8 | -1.5 | -1.3 | -6.2 | -6.4 | -4.0 | -4.2 | -5.1 | -5.5 | -4.0 | -2.7 | -3.7 | -1.3 | -6.4 |
| | | S0 | No | 10% | -3.3 | -2.5 | -2.5 | -1.9 | -11.9 | -10.1 | -8.0 | -5.7 | -8.2 | -7.8 | -6.7 | -3.6 | -6.0 | -1.9 | -11.9 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -38.9 | -45.4 | -53.4 | -56.4 | -16.4 | -18.8 | -22.6 | -24.0 | -20.2 | -22.8 | -27.8 | -33.9 | -31.7 | -16.4 | -56.4 |
| | | S0 | No | 50% | -30.4 | -35.6 | -40.5 | -42.5 | -13.5 | -15.0 | -14.6 | -16.8 | -15.0 | -18.2 | -22.1 | -26.9 | -24.3 | -13.5 | -42.5 |
| | | S0 | No | 10% | -22.3 | -24.5 | -24.8 | -22.8 | -13.7 | -9.8 | -15.4 | -12.8 | -13.8 | -16.4 | -17.6 | -20.2 | -17.8 | -9.8 | -24.8 |
| | Post-Closure | S0 | No | 90% | -29.7 | -34.6 | -40.6 | -42.5 | -12.4 | -14.8 | -17.3 | -18.6 | -15.5 | -17.6 | -21.5 | -26.2 | -24.3 | -12.4 | -42.5 |
| | | S0 | No | 50% | -23.2 | -27.1 | -30.5 | -32.2 | -10.1 | -11.7 | -11.1 | -12.8 | -11.5 | -14.2 | -17.1 | -20.6 | -18.5 | -10.1 | -32.2 |
| | | S0 | No | 10% | -17.2 | -19.1 | -19.5 | -17.7 | -10.6 | -7.3 | -12.0 | -9.7 | -10.6 | -12.7 | -13.7 | -15.6 | -13.8 | -7.3 | -19.5 |
| SFK-E | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | No | 90% | 4.2 | 3.5 | 2.8 | 2.6 | 10.2 | 16.9 | 8.1 | 7.6 | 9.4 | 9.8 | 7.0 | 5.3 | 7.3 | 16.9 | 2.6 |
| | | S0 | No | 50% | 5.6 | 4.4 | 3.7 | 3.2 | 25.2 | 24.3 | 15.3 | 14.6 | 19.0 | 17.1 | 11.7 | 7.3 | 12.6 | 25.2 | 3.2 |
| | | S0 | No | 10% | 9.6 | 7.2 | 7.0 | 6.1 | 47.3 | 55.7 | 30.7 | 24.0 | 31.9 | 28.1 | 22.5 | 12.3 | 23.6 | 55.7 | 6.1 |
| | End of Mine | S0 | No | 90% | 1.7 | 1.4 | 1.1 | 1.0 | 6.4 | 10.5 | 4.2 | 4.0 | 5.3 | 5.4 | 3.3 | 2.3 | 3.9 | 10.5 | 1.0 |
| | | S0 | No | 50% | 2.8 | 2.2 | 1.7 | 1.5 | 17.1 | 16.3 | 10.0 | 9.2 | 12.3 | 10.5 | 6.5 | 3.7 | 7.8 | 17.1 | 1.5 |
| | | S0 | No | 10% | 5.4 | 4.2 | 3.9 | 3.5 | 32.5 | 41.7 | 20.4 | 16.3 | 21.3 | 18.1 | 14.1 | 7.1 | 15.7 | 41.7 | 3.5 |
| | Post-Closure | S0 | No | 90% | 2.3 | 1.9 | 1.5 | 1.4 | 7.3 | 11.9 | 5.0 | 4.8 | 6.2 | 6.4 | 4.2 | 3.0 | 4.7 | 11.9 | 1.4 |
| | | S0 | No | 50% | 3.4 | 2.7 | 2.2 | 1.9 | 19.0 | 18.1 | 11.2 | 10.4 | 13.8 | 11.9 | 7.6 | 4.5 | 8.9 | 19.0 | 1.9 |
| | | S0 | No | 10% | 6.3 | 5.0 | 4.5 | 4.0 | 36.0 | 45.4 | 22.7 | 18.1 | 23.7 | 20.3 | 15.9 | 8.3 | 17.5 | 45.4 | 4.0 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -2.5 | -2.1 | -1.7 | -1.5 | -3.9 | -6.4 | -3.9 | -3.6 | -4.1 | -4.4 | -3.7 | -3.0 | -3.4 | -1.5 | -6.4 |
| | | S0 | No | 50% | -2.8 | -2.3 | -1.9 | -1.7 | -8.1 | -8.1 | -5.3 | -5.5 | -6.8 | -6.6 | -5.3 | -3.6 | -4.8 | -1.7 | -8.1 |
| | | S0 | No | 10% | -4.3 | -3.0 | -3.1 | -2.7 | -14.8 | -14.0 | -10.4 | -7.6 | -10.6 | -10.0 | -8.4 | -5.2 | -7.8 | -2.7 | -14.8 |
| | Post-Closure | S0 | No | 90% | -1.9 | -1.6 | -1.3 | -1.1 | -2.9 | -5.0 | -3.0 | -2.8 | -3.2 | -3.4 | -2.9 | -2.3 | -2.6 | -1.1 | -5.0 |
| | | S0 | No | 50% | -2.2 | -1.7 | -1.5 | -1.3 | -6.1 | -6.2 | -4.1 | -4.2 | -5.2 | -5.2 | -4.1 | -2.8 | -3.7 | -1.3 | -6.2 |
| | | S0 | No | 10% | -3.3 | -2.3 | -2.5 | -2.1 | -11.3 | -10.3 | -8.0 | -5.9 | -8.2 | -7.8 | -6.6 | -4.0 | -6.0 | -2.1 | -11.3 |

**Table K4.16-21: South Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S0—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -59.0 | -60.1 | -61.2 | -59.2 | -37.7 | -38.0 | -48.1 | -47.1 | -43.8 | -44.7 | -52.7 | -56.9 | -50.7 | -37.7 | -61.2 |
| | | S0 | No | 50% | -50.7 | -51.5 | -53.0 | -52.2 | -32.1 | -33.1 | -34.6 | -37.4 | -35.6 | -38.8 | -44.9 | -49.4 | -42.8 | -32.1 | -53.0 |
| | | S0 | No | 10% | -44.5 | -41.5 | -44.7 | -43.3 | -31.3 | -25.1 | -33.7 | -31.9 | -33.2 | -35.7 | -37.5 | -42.2 | -37.0 | -25.1 | -44.7 |
| | Post-Closure | S0 | No | 90% | -45.2 | -45.9 | -46.4 | -44.7 | -28.8 | -29.6 | -37.7 | -36.5 | -33.7 | -34.5 | -40.7 | -43.8 | -39.0 | -28.8 | -46.4 |
| | | S0 | No | 50% | -38.8 | -39.2 | -40.3 | -39.5 | -24.4 | -25.5 | -26.8 | -28.6 | -27.3 | -30.2 | -35.1 | -38.1 | -32.8 | -24.4 | -40.3 |
| | | S0 | No | 10% | -34.3 | -31.3 | -35.1 | -34.2 | -23.9 | -18.5 | -26.2 | -24.5 | -25.6 | -27.7 | -29.1 | -32.5 | -28.6 | -18.5 | -35.1 |
| | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | No | 90% | 4.9 | 3.4 | 2.2 | 1.5 | 22.3 | 35.6 | 20.8 | 18.9 | 28.5 | 21.5 | 11.4 | 7.2 | 14.8 | 35.6 | 1.5 |
| | | S0 | No | 50% | 7.1 | 4.9 | 3.3 | 2.6 | 67.8 | 83.1 | 41.8 | 44.3 | 51.0 | 38.6 | 20.7 | 10.6 | 31.3 | 83.1 | 2.6 |
| | | S0 | No | 10% | 13.0 | 9.6 | 8.6 | 10.5 | 123.4 | 184.7 | 78.5 | 84.2 | 89.1 | 66.3 | 38.2 | 17.1 | 60.3 | 184.7 | 8.6 |
| | End of Mine | S0 | No | 90% | 4.1 | 2.8 | 1.7 | 1.1 | 21.9 | 33.4 | 19.0 | 17.1 | 26.6 | 19.1 | 10.0 | 6.2 | 13.6 | 33.4 | 1.1 |
| | | S0 | No | 50% | 6.1 | 4.2 | 2.8 | 2.1 | 65.3 | 79.1 | 38.8 | 41.4 | 48.3 | 35.5 | 18.5 | 9.2 | 29.3 | 79.1 | 2.1 |
| | | S0 | No | 10% | 11.8 | 8.6 | 7.5 | 10.0 | 118.6 | 175.8 | 74.4 | 79.7 | 84.6 | 62.4 | 34.5 | 15.6 | 57.0 | 175.8 | 7.5 |
| | Post-Closure | S0 | No | 90% | 4.1 | 2.8 | 1.7 | 1.1 | 21.4 | 32.6 | 18.7 | 17.0 | 26.0 | 19.0 | 10.0 | 6.2 | 13.4 | 32.6 | 1.1 |
| | | S0 | No | 50% | 6.1 | 4.2 | 2.8 | 2.1 | 63.8 | 76.1 | 38.0 | 40.6 | 47.1 | 35.1 | 18.5 | 9.2 | 28.6 | 76.1 | 2.1 |
| | | S0 | No | 10% | 11.8 | 8.6 | 7.5 | 9.6 | 115.8 | 171.3 | 72.5 | 77.8 | 82.5 | 61.1 | 34.3 | 15.6 | 55.7 | 171.3 | 7.5 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| Tributary 1.19 | End of Mine | S0 | No | 90% | -0.7 | -0.6 | -0.5 | -0.4 | -0.4 | -2.2 | -1.8 | -1.8 | -1.8 | -2.4 | -1.4 | -1.0 | -1.2 | -0.4 | -2.4 |
| | | S0 | No | 50% | -0.9 | -0.7 | -0.6 | -0.5 | -2.5 | -4.0 | -3.0 | -2.9 | -2.7 | -3.1 | -2.2 | -1.3 | -2.0 | -0.5 | -4.0 |
| | | S0 | No | 10% | -1.1 | -1.0 | -1.1 | -0.5 | -4.9 | -8.9 | -4.1 | -4.5 | -4.5 | -3.9 | -3.7 | -1.5 | -3.3 | -0.5 | -8.9 |
| | Post-Closure | S0 | No | 90% | -0.7 | -0.6 | -0.5 | -0.4 | -0.9 | -3.0 | -2.1 | -2.0 | -2.5 | -2.5 | -1.4 | -1.0 | -1.5 | -0.4 | -3.0 |
| | | S0 | No | 50% | -0.9 | -0.7 | -0.6 | -0.5 | -4.0 | -7.0 | -3.8 | -3.7 | -3.9 | -3.5 | -2.2 | -1.3 | -2.7 | -0.5 | -7.0 |
| | | S0 | No | 10% | -1.1 | -1.0 | -1.1 | -0.9 | -7.6 | -13.3 | -6.0 | -6.3 | -6.5 | -5.2 | -3.9 | -1.5 | -4.6 | -0.9 | -13.3 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -15.0 | -17.2 | -21.2 | -26.0 | -2.0 | -6.1 | -8.6 | -9.4 | -6.5 | -11.2 | -12.3 | -13.6 | -12.4 | -2.0 | -26.0 |
| | | S0 | No | 50% | -13.4 | -15.2 | -17.1 | -19.0 | -3.7 | -4.8 | -7.2 | -6.6 | -5.3 | -8.1 | -10.6 | -12.6 | -10.3 | -3.7 | -19.0 |
| | | S0 | No | 10% | -8.7 | -10.7 | -12.6 | -4.8 | -3.9 | -4.8 | -5.2 | -5.3 | -5.0 | -5.8 | -9.7 | -8.7 | -7.1 | -3.9 | -12.6 |
| | Post-Closure | S0 | No | 90% | -15.0 | -17.3 | -21.2 | -26.0 | -4.2 | -8.3 | -10.1 | -10.3 | -8.8 | -11.6 | -12.3 | -13.6 | -13.2 | -4.2 | -26.0 |
| | | S0 | No | 50% | -13.4 | -15.3 | -17.1 | -19.0 | -5.9 | -8.4 | -9.1 | -8.4 | -7.7 | -9.2 | -10.8 | -12.7 | -11.4 | -5.9 | -19.0 |
| | | S0 | No | 10% | -8.8 | -10.8 | -12.6 | -8.3 | -6.2 | -7.2 | -7.7 | -7.5 | -7.3 | -7.9 | -10.2 | -8.8 | -8.6 | -6.2 | -12.6 |
| Tributary 1.24 | **Streamflow During Baseline, Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | No | 90% | 0.4 | 0.0 | 0.0 | 0.0 | 18.5 | 12.0 | 6.0 | 7.3 | 14.8 | 9.4 | 4.2 | 2.0 | 6.2 | 18.5 | 0.0 |
| | | S0 | No | 50% | 2.0 | 0.4 | 0.0 | 0.0 | 51.6 | 47.3 | 16.6 | 27.7 | 31.8 | 18.8 | 8.7 | 4.1 | 17.4 | 51.6 | 0.0 |
| | | S0 | No | 10% | 6.9 | 4.2 | 2.8 | 5.9 | 93.8 | 128.6 | 40.3 | 53.9 | 60.4 | 42.9 | 19.1 | 9.0 | 39.0 | 128.6 | 2.8 |
| | End of Mine | S0 | No | 90% | 0.7 | 0.0 | 0.0 | 0.0 | 18.9 | 13.4 | 6.9 | 8.0 | 15.8 | 10.1 | 4.5 | 2.3 | 6.7 | 18.9 | 0.0 |
| | | S0 | No | 50% | 2.4 | 0.8 | 0.0 | 0.0 | 53.0 | 50.9 | 18.4 | 29.3 | 33.3 | 19.5 | 9.3 | 4.4 | 18.4 | 53.0 | 0.0 |
| | | S0 | No | 10% | 7.3 | 4.7 | 3.1 | 6.4 | 96.6 | 134.2 | 43.7 | 56.2 | 62.9 | 44.8 | 20.2 | 9.4 | 40.8 | 134.2 | 3.1 |

**Table K4.16-21: South Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S0—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S0 | No | 90% | 0.5 | 0.0 | 0.0 | 0.0 | 18.6 | 12.3 | 6.2 | 7.4 | 15.1 | 9.5 | 4.3 | 2.0 | 6.3 | 18.6 | 0.0 |
| | | S0 | No | 50% | 2.1 | 0.5 | 0.0 | 0.0 | 51.9 | 48.3 | 17.0 | 28.1 | 32.2 | 18.9 | 8.9 | 4.2 | 17.7 | 51.9 | 0.0 |
| | | S0 | No | 10% | 7.0 | 4.3 | 2.9 | 6.0 | 94.5 | 130.1 | 41.2 | 54.5 | 61.1 | 43.4 | 19.3 | 9.1 | 39.5 | 130.1 | 2.9 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | 0.3 | 0.0 | 0.0 | 0.0 | 0.3 | 1.4 | 0.9 | 0.7 | 1.0 | 0.7 | 0.3 | 0.3 | 0.5 | 1.4 | 0.0 |
| | | S0 | No | 50% | 0.4 | 0.4 | 0.0 | 0.0 | 1.4 | 3.6 | 1.8 | 1.6 | 1.5 | 0.7 | 0.6 | 0.3 | 1.0 | 3.6 | 0.0 |
| | | S0 | No | 10% | 0.4 | 0.5 | 0.3 | 0.5 | 2.8 | 5.7 | 3.4 | 2.4 | 2.5 | 1.9 | 1.1 | 0.5 | 1.8 | 5.7 | 0.3 |
| | Post-Closure | S0 | No | 90% | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.4 | 0.2 | 0.2 | 0.3 | 0.2 | 0.1 | 0.1 | 0.1 | 0.4 | 0.0 |
| | | S0 | No | 50% | 0.1 | 0.1 | 0.0 | 0.0 | 0.4 | 1.0 | 0.4 | 0.4 | 0.4 | 0.1 | 0.1 | 0.1 | 0.3 | 1.0 | 0.0 |
| | | S0 | No | 10% | 0.1 | 0.1 | 0.1 | 0.1 | 0.7 | 1.5 | 0.9 | 0.6 | 0.7 | 0.5 | 0.2 | 0.1 | 0.5 | 1.5 | 0.1 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | 86.0 | 54.2 | 0.0 | 0.0 | 1.7 | 11.9 | 15.6 | 9.9 | 6.6 | 7.9 | 7.2 | 16.7 | 18.1 | 86.0 | 0.0 |
| | | S0 | No | 50% | 18.4 | 97.9 | 0.0 | 2.2 | 2.7 | 7.7 | 11.0 | 5.8 | 4.8 | 4.0 | 7.0 | 7.3 | 14.1 | 97.9 | 0.0 |
| | | S0 | No | 10% | 6.2 | 11.1 | 9.6 | 8.1 | 3.0 | 4.4 | 8.5 | 4.4 | 4.1 | 4.5 | 5.7 | 5.4 | 6.3 | 11.1 | 3.0 |
| | Post-Closure | S0 | No | 90% | 17.3 | 0.0 | 0.0 | 0.0 | 0.3 | 3.0 | 3.5 | 2.4 | 1.7 | 1.7 | 1.7 | 3.5 | 2.9 | 17.3 | 0.0 |
| | | S0 | No | 50% | 3.8 | 18.7 | 0.0 | 0.0 | 0.7 | 2.2 | 2.3 | 1.6 | 1.3 | 0.8 | 1.5 | 1.7 | 2.9 | 18.7 | 0.0 |
| | | S0 | No | 10% | 1.5 | 2.4 | 2.0 | 2.1 | 0.8 | 1.2 | 2.3 | 1.2 | 1.2 | 1.2 | 1.2 | 1.3 | 1.5 | 2.4 | 0.8 |

Notes:

cfs = cubic feet per second
SFK = South Fork Koktuli

Source: Knight Piésold 2019q, r

**Table K4.16-22: Upper Talarik Creek Change in Streamflow End of Mine and Post-Closure—Scenario S0—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| UTC-A | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | No | 90% | 119.2 | 104.7 | 93.3 | 89.3 | 228.2 | 291.6 | 175.6 | 173.6 | 209.2 | 218.3 | 171.5 | 140.4 | 167.9 | 291.6 | 89.3 |
| | | S0 | No | 50% | 146.3 | 127.0 | 112.6 | 109.7 | 537.2 | 437.7 | 265.5 | 294.0 | 392.1 | 350.1 | 245.8 | 180.0 | 266.5 | 537.2 | 109.7 |
| | | S0 | No | 10% | 241.1 | 185.8 | 166.7 | 188.7 | 1013.4 | 917.8 | 504.9 | 481.6 | 650.7 | 525.5 | 433.2 | 272.3 | 465.1 | 1013.4 | 166.7 |
| | End of Mine | S0 | No | 90% | 118.0 | 103.7 | 92.4 | 88.5 | 227.3 | 290.4 | 174.2 | 172.2 | 207.8 | 216.8 | 170.1 | 139.1 | 166.7 | 290.4 | 88.5 |
| | | S0 | No | 50% | 145.1 | 125.9 | 111.6 | 108.8 | 536.3 | 436.5 | 264.1 | 292.6 | 390.7 | 348.6 | 244.4 | 178.6 | 265.3 | 536.3 | 108.8 |
| | | S0 | No | 10% | 239.9 | 184.8 | 165.7 | 187.9 | 1012.4 | 916.6 | 503.5 | 480.3 | 649.3 | 524.1 | 431.8 | 271.0 | 463.9 | 1012.4 | 165.7 |
| | Post-Closure | S0 | No | 90% | 118.7 | 104.3 | 93.0 | 89.0 | 227.8 | 291.2 | 175.1 | 173.1 | 208.7 | 217.8 | 171.0 | 139.9 | 167.5 | 291.2 | 89.0 |
| | | S0 | No | 50% | 145.8 | 126.6 | 112.2 | 109.3 | 536.8 | 437.3 | 265.0 | 293.5 | 391.6 | 349.6 | 245.3 | 179.5 | 266.0 | 536.8 | 109.3 |
| | | S0 | No | 10% | 240.6 | 185.4 | 166.3 | 188.4 | 1013.0 | 917.4 | 504.4 | 481.1 | 650.2 | 525.0 | 432.7 | 271.8 | 464.7 | 1013.0 | 166.3 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -1.2 | -1.1 | -1.0 | -0.8 | -0.9 | -1.2 | -1.3 | -1.4 | -1.4 | -1.4 | -1.4 | -1.3 | -1.2 | -0.8 | -1.4 |
| | | S0 | No | 50% | -1.2 | -1.1 | -1.0 | -0.9 | -0.9 | -1.2 | -1.4 | -1.4 | -1.4 | -1.4 | -1.4 | -1.3 | -1.2 | -0.9 | -1.4 |
| | | S0 | No | 10% | -1.2 | -1.0 | -0.9 | -0.9 | -1.0 | -1.2 | -1.3 | -1.4 | -1.4 | -1.4 | -1.4 | -1.3 | -1.2 | -0.9 | -1.4 |
| | Post-Closure | S0 | No | 90% | -0.4 | -0.4 | -0.4 | -0.3 | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.3 | -0.5 |
| | | S0 | No | 50% | -0.4 | -0.4 | -0.4 | -0.4 | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.4 | -0.5 |
| | | S0 | No | 10% | -0.5 | -0.4 | -0.4 | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.4 | -0.5 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -1.0 | -1.0 | -1.0 | -0.9 | -0.4 | -0.4 | -0.8 | -0.8 | -0.7 | -0.7 | -0.8 | -0.9 | -0.8 | -0.4 | -1.0 |
| | | S0 | No | 50% | -0.8 | -0.8 | -0.9 | -0.8 | -0.2 | -0.3 | -0.5 | -0.5 | -0.4 | -0.4 | -0.6 | -0.7 | -0.6 | -0.2 | -0.9 |
| | | S0 | No | 10% | -0.5 | -0.6 | -0.6 | -0.5 | -0.1 | -0.1 | -0.3 | -0.3 | -0.2 | -0.3 | -0.3 | -0.5 | -0.3 | -0.1 | -0.6 |
| | Post-Closure | S0 | No | 90% | -0.4 | -0.4 | -0.4 | -0.4 | -0.2 | -0.2 | -0.3 | -0.3 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.2 | -0.4 |
| | | S0 | No | 50% | -0.3 | -0.3 | -0.3 | -0.3 | -0.1 | -0.1 | -0.2 | -0.2 | -0.1 | -0.1 | -0.2 | -0.3 | -0.2 | -0.1 | -0.3 |
| | | S0 | No | 10% | -0.2 | -0.2 | -0.2 | -0.2 | 0.0 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.1 | 0.0 | -0.2 |
| UTC-B | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | No | 90% | 131.3 | 115.4 | 102.8 | 98.4 | 251.4 | 321.3 | 193.4 | 191.2 | 230.5 | 240.5 | 189.0 | 154.7 | 185.0 | 321.3 | 98.4 |
| | | S0 | No | 50% | 161.2 | 139.9 | 124.1 | 120.8 | 591.8 | 482.2 | 292.5 | 323.9 | 431.9 | 385.7 | 270.8 | 198.3 | 293.6 | 591.8 | 120.8 |
| | | S0 | No | 10% | 265.6 | 204.7 | 183.6 | 207.9 | 1116.5 | 1011.2 | 556.2 | 530.6 | 716.9 | 579.0 | 477.3 | 300.0 | 512.5 | 1116.5 | 183.6 |
| | End of Mine | S0 | No | 90% | 130.1 | 114.3 | 101.9 | 97.5 | 250.5 | 320.1 | 192.1 | 189.9 | 229.1 | 239.0 | 187.6 | 153.4 | 183.8 | 320.1 | 97.5 |
| | | S0 | No | 50% | 160.0 | 138.8 | 123.1 | 120.0 | 590.9 | 481.0 | 291.1 | 322.5 | 430.6 | 384.3 | 269.4 | 197.0 | 292.4 | 590.9 | 120.0 |
| | | S0 | No | 10% | 264.4 | 203.7 | 182.7 | 207.1 | 1115.5 | 1010.0 | 554.9 | 529.3 | 715.5 | 577.6 | 475.9 | 298.7 | 511.3 | 1115.5 | 182.7 |
| | Post-Closure | S0 | No | 90% | 130.9 | 115.0 | 102.5 | 98.0 | 251.1 | 320.8 | 192.9 | 190.7 | 230.0 | 240.0 | 188.5 | 154.2 | 184.5 | 320.8 | 98.0 |
| | | S0 | No | 50% | 160.7 | 139.5 | 123.7 | 120.5 | 591.5 | 481.8 | 292.0 | 323.4 | 431.5 | 385.2 | 270.3 | 197.8 | 293.1 | 591.5 | 120.5 |
| | | S0 | No | 10% | 265.1 | 204.3 | 183.2 | 207.6 | 1116.1 | 1010.7 | 555.8 | 530.1 | 716.4 | 578.5 | 476.8 | 299.5 | 512.0 | 1116.1 | 183.2 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -1.2 | -1.1 | -1.0 | -0.8 | -0.9 | -1.2 | -1.3 | -1.4 | -1.4 | -1.4 | -1.4 | -1.3 | -1.2 | -0.8 | -1.4 |
| | | S0 | No | 50% | -1.2 | -1.1 | -1.0 | -0.9 | -0.9 | -1.2 | -1.4 | -1.4 | -1.4 | -1.4 | -1.4 | -1.3 | -1.2 | -0.9 | -1.4 |
| | | S0 | No | 10% | -1.2 | -1.0 | -0.9 | -0.9 | -1.0 | -1.2 | -1.3 | -1.4 | -1.4 | -1.4 | -1.4 | -1.3 | -1.2 | -0.9 | -1.4 |
| | Post-Closure | S0 | No | 90% | -0.4 | -0.4 | -0.4 | -0.3 | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.3 | -0.5 |
| | | S0 | No | 50% | -0.4 | -0.4 | -0.4 | -0.4 | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.4 | -0.5 |
| | | S0 | No | 10% | -0.5 | -0.4 | -0.4 | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.4 | -0.5 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -0.9 | -0.9 | -0.9 | -0.9 | -0.4 | -0.4 | -0.7 | -0.7 | -0.6 | -0.6 | -0.8 | -0.8 | -0.7 | -0.4 | -0.9 |
| | | S0 | No | 50% | -0.7 | -0.8 | -0.8 | -0.7 | -0.2 | -0.2 | -0.5 | -0.4 | -0.3 | -0.4 | -0.5 | -0.7 | -0.5 | -0.2 | -0.8 |
| | | S0 | No | 10% | -0.5 | -0.5 | -0.5 | -0.4 | -0.1 | -0.1 | -0.2 | -0.3 | -0.2 | -0.2 | -0.3 | -0.4 | -0.3 | -0.1 | -0.5 |
| | Post-Closure | S0 | No | 90% | -0.3 | -0.3 | -0.4 | -0.3 | -0.1 | -0.1 | -0.2 | -0.3 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.1 | -0.4 |
| | | S0 | No | 50% | -0.3 | -0.3 | -0.3 | -0.3 | -0.1 | -0.1 | -0.2 | -0.2 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.1 | -0.3 |
| | | S0 | No | 10% | -0.2 | -0.2 | -0.2 | -0.2 | 0.0 | 0.0 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.1 | 0.0 | -0.2 |
| UTC-C | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | No | 90% | 96.7 | 85.8 | 76.8 | 74.1 | 179.4 | 235.3 | 142.7 | 141.4 | 167.4 | 174.4 | 138.2 | 114.0 | 135.5 | 235.3 | 74.1 |
| | | S0 | No | 50% | 118.9 | 103.1 | 91.9 | 88.6 | 407.0 | 355.2 | 215.1 | 232.2 | 299.0 | 275.3 | 195.4 | 145.0 | 210.6 | 407.0 | 88.6 |
| | | S0 | No | 10% | 189.4 | 145.7 | 134.1 | 142.1 | 774.7 | 722.0 | 407.5 | 370.7 | 496.9 | 418.6 | 337.6 | 210.7 | 362.5 | 774.7 | 134.1 |
| | End of Mine | S0 | No | 90% | 95.6 | 84.8 | 75.9 | 73.3 | 178.5 | 234.1 | 141.3 | 140.1 | 166.0 | 173.0 | 136.8 | 112.7 | 134.3 | 234.1 | 73.3 |
| | | S0 | No | 50% | 117.8 | 102.0 | 90.9 | 87.7 | 406.0 | 354.0 | 213.8 | 230.8 | 297.6 | 273.8 | 194.0 | 143.7 | 209.4 | 406.0 | 87.7 |
| | | S0 | No | 10% | 188.3 | 144.7 | 133.2 | 141.3 | 773.7 | 720.8 | 406.2 | 369.3 | 495.5 | 417.2 | 336.2 | 209.4 | 361.3 | 773.7 | 133.2 |

**Table K4.16-22: Upper Talarik Creek Change in Streamflow End of Mine and Post-Closure—Scenario S0—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S0 | No | 90% | 96.3 | 85.4 | 76.5 | 73.8 | 179.0 | 234.8 | 142.2 | 140.9 | 166.9 | 173.9 | 137.7 | 113.6 | 135.1 | 234.8 | 73.8 |
| | | S0 | No | 50% | 118.5 | 102.7 | 91.5 | 88.3 | 406.6 | 354.8 | 214.7 | 231.7 | 298.5 | 274.8 | 194.9 | 144.6 | 210.1 | 406.6 | 88.3 |
| | | S0 | No | 10% | 189.0 | 145.3 | 133.8 | 141.8 | 774.3 | 721.6 | 407.1 | 370.2 | 496.4 | 418.1 | 337.1 | 210.3 | 362.1 | 774.3 | 133.8 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -1.2 | -1.1 | -0.9 | -0.8 | -0.9 | -1.2 | -1.3 | -1.4 | -1.4 | -1.5 | -1.4 | -1.3 | -1.2 | -0.8 | -1.5 |
| | | S0 | No | 50% | -1.2 | -1.1 | -0.9 | -0.9 | -0.9 | -1.2 | -1.4 | -1.4 | -1.4 | -1.4 | -1.4 | -1.3 | -1.2 | -0.9 | -1.4 |
| | | S0 | No | 10% | -1.2 | -1.0 | -0.9 | -0.9 | -1.0 | -1.2 | -1.4 | -1.4 | -1.4 | -1.4 | -1.4 | -1.3 | -1.2 | -0.9 | -1.4 |
| | Post-Closure | S0 | No | 90% | -0.4 | -0.4 | -0.4 | -0.3 | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.3 | -0.5 |
| | | S0 | No | 50% | -0.4 | -0.4 | -0.4 | -0.4 | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.4 | -0.5 |
| | | S0 | No | 10% | -0.4 | -0.4 | -0.4 | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.4 | -0.5 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -1.2 | -1.2 | -1.2 | -1.1 | -0.5 | -0.5 | -0.9 | -1.0 | -0.8 | -0.8 | -1.0 | -1.1 | -1.0 | -0.5 | -1.2 |
| | | S0 | No | 50% | -1.0 | -1.1 | -1.0 | -1.0 | -0.2 | -0.3 | -0.6 | -0.6 | -0.5 | -0.5 | -0.7 | -0.9 | -0.7 | -0.2 | -1.1 |
| | | S0 | No | 10% | -0.6 | -0.7 | -0.7 | -0.6 | -0.1 | -0.2 | -0.3 | -0.4 | -0.3 | -0.3 | -0.4 | -0.6 | -0.4 | -0.1 | -0.7 |
| | Post-Closure | S0 | No | 90% | -0.5 | -0.5 | -0.5 | -0.5 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.3 | -0.4 | -0.4 | -0.4 | -0.2 | -0.5 |
| | | S0 | No | 50% | -0.4 | -0.4 | -0.4 | -0.4 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.1 | -0.4 |
| | | S0 | No | 10% | -0.2 | -0.3 | -0.3 | -0.2 | 0.0 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.2 | 0.0 | -0.3 |
| **UTC-D** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | No | 90% | 58.8 | 50.8 | 43.3 | 41.1 | 117.9 | 167.1 | 94.8 | 93.4 | 109.0 | 116.7 | 89.5 | 70.6 | 87.7 | 167.1 | 41.1 |
| | | S0 | No | 50% | 79.3 | 66.2 | 56.5 | 51.5 | 285.2 | 261.6 | 155.2 | 158.6 | 206.6 | 191.5 | 133.4 | 99.4 | 145.4 | 285.2 | 51.5 |
| | | S0 | No | 10% | 121.2 | 96.2 | 87.0 | 83.5 | 569.6 | 563.6 | 310.3 | 259.2 | 354.7 | 303.1 | 247.6 | 147.9 | 262.0 | 569.6 | 83.5 |
| | End of Mine | S0 | No | 90% | 57.9 | 49.9 | 42.5 | 40.4 | 117.1 | 166.1 | 93.7 | 92.3 | 107.8 | 115.4 | 88.3 | 69.5 | 86.7 | 166.1 | 40.4 |
| | | S0 | No | 50% | 78.3 | 65.3 | 55.7 | 50.8 | 284.5 | 260.6 | 154.1 | 157.4 | 205.4 | 190.2 | 132.2 | 98.3 | 144.4 | 284.5 | 50.8 |
| | | S0 | No | 10% | 120.3 | 95.4 | 86.2 | 82.9 | 568.9 | 562.6 | 309.2 | 258.1 | 353.5 | 301.8 | 246.4 | 146.8 | 261.0 | 568.9 | 82.9 |
| | Post-Closure | S0 | No | 90% | 58.6 | 50.5 | 43.1 | 40.9 | 117.7 | 166.8 | 94.5 | 93.1 | 108.7 | 116.3 | 89.1 | 70.3 | 87.5 | 166.8 | 40.9 |
| | | S0 | No | 50% | 79.0 | 65.9 | 56.3 | 51.3 | 285.0 | 261.4 | 154.9 | 158.3 | 206.3 | 191.1 | 133.0 | 99.2 | 145.1 | 285.0 | 51.3 |
| | | S0 | No | 10% | 121.0 | 96.0 | 86.8 | 83.4 | 569.4 | 563.3 | 310.0 | 258.9 | 354.4 | 302.7 | 247.3 | 147.6 | 261.7 | 569.4 | 83.4 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -1.0 | -0.9 | -0.7 | -0.6 | -0.7 | -1.0 | -1.1 | -1.2 | -1.2 | -1.2 | -1.2 | -1.1 | -1.0 | -0.6 | -1.2 |
| | | S0 | No | 50% | -1.0 | -0.9 | -0.7 | -0.6 | -0.7 | -1.0 | -1.2 | -1.2 | -1.2 | -1.2 | -1.2 | -1.1 | -1.0 | -0.6 | -1.2 |
| | | S0 | No | 10% | -1.0 | -0.9 | -0.7 | -0.6 | -0.7 | -1.0 | -1.2 | -1.2 | -1.2 | -1.2 | -1.2 | -1.1 | -1.0 | -0.6 | -1.2 |
| | Post-Closure | S0 | No | 90% | -0.3 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.2 | -0.3 |
| | | S0 | No | 50% | -0.3 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.2 | -0.3 |
| | | S0 | No | 10% | -0.3 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.2 | -0.3 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -1.7 | -1.7 | -1.7 | -1.5 | -0.6 | -0.6 | -1.2 | -1.2 | -1.1 | -1.1 | -1.4 | -1.6 | -1.3 | -0.6 | -1.7 |
| | | S0 | No | 50% | -1.2 | -1.3 | -1.3 | -1.3 | -0.3 | -0.4 | -0.7 | -0.7 | -0.6 | -0.6 | -0.9 | -1.1 | -0.9 | -0.3 | -1.3 |
| | | S0 | No | 10% | -0.8 | -0.9 | -0.8 | -0.8 | -0.1 | -0.2 | -0.4 | -0.4 | -0.3 | -0.4 | -0.5 | -0.8 | -0.5 | -0.1 | -0.9 |
| | Post-Closure | S0 | No | 90% | -0.4 | -0.5 | -0.5 | -0.4 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.3 | -0.4 | -0.4 | -0.3 | -0.2 | -0.5 |
| | | S0 | No | 50% | -0.3 | -0.3 | -0.4 | -0.3 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.2 | -0.1 | -0.4 |
| | | S0 | No | 10% | -0.2 | -0.2 | -0.2 | -0.2 | 0.0 | 0.0 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.1 | 0.0 | -0.2 |
| **UTC-E** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | No | 90% | 35.2 | 27.2 | 20.9 | 19.1 | 85.4 | 133.3 | 68.4 | 67.4 | 83.0 | 89.3 | 64.0 | 46.6 | 61.7 | 133.3 | 19.1 |
| | | S0 | No | 50% | 51.3 | 38.8 | 30.1 | 26.8 | 207.2 | 205.8 | 122.0 | 122.3 | 163.0 | 153.0 | 102.6 | 70.0 | 107.7 | 207.2 | 26.8 |
| | | S0 | No | 10% | 88.2 | 65.8 | 58.9 | 56.5 | 430.0 | 455.3 | 252.8 | 206.9 | 282.6 | 244.9 | 197.1 | 112.0 | 204.2 | 455.3 | 56.5 |
| | End of Mine | S0 | No | 90% | 34.2 | 26.3 | 20.2 | 18.5 | 84.6 | 132.3 | 67.2 | 66.2 | 81.8 | 88.1 | 62.8 | 45.5 | 60.6 | 132.3 | 18.5 |
| | | S0 | No | 50% | 50.3 | 37.9 | 29.3 | 26.1 | 206.4 | 204.8 | 120.8 | 121.1 | 161.8 | 151.8 | 101.4 | 68.9 | 106.7 | 206.4 | 26.1 |
| | | S0 | No | 10% | 87.2 | 64.9 | 58.1 | 55.9 | 429.3 | 454.2 | 251.6 | 205.7 | 281.4 | 243.7 | 195.9 | 110.8 | 203.2 | 454.2 | 55.9 |
| | Post-Closure | S0 | No | 90% | 35.0 | 26.9 | 20.7 | 19.0 | 85.2 | 133.0 | 68.1 | 67.1 | 82.7 | 89.0 | 63.7 | 46.3 | 61.4 | 133.0 | 19.0 |
| | | S0 | No | 50% | 51.0 | 38.6 | 29.9 | 26.6 | 207.0 | 205.5 | 121.7 | 121.9 | 162.7 | 152.7 | 102.3 | 69.7 | 107.5 | 207.0 | 26.6 |
| | | S0 | No | 10% | 87.9 | 65.5 | 58.7 | 56.4 | 429.8 | 455.0 | 252.5 | 206.6 | 282.2 | 244.5 | 196.8 | 111.7 | 204.0 | 455.0 | 56.4 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -1.0 | -0.9 | -0.7 | -0.6 | -0.7 | -1.0 | -1.2 | -1.2 | -1.2 | -1.2 | -1.2 | -1.1 | -1.0 | -0.6 | -1.2 |
| | | S0 | No | 50% | -1.0 | -0.9 | -0.7 | -0.6 | -0.7 | -1.0 | -1.2 | -1.2 | -1.2 | -1.2 | -1.2 | -1.1 | -1.0 | -0.6 | -1.2 |
| | | S0 | No | 10% | -1.0 | -0.9 | -0.7 | -0.6 | -0.7 | -1.0 | -1.2 | -1.2 | -1.2 | -1.2 | -1.2 | -1.1 | -1.0 | -0.6 | -1.2 |

**Table K4.16-22: Upper Talarik Creek Change in Streamflow End of Mine and Post-Closure—Scenario S0—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S0 | No | 90% | -0.3 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.2 | -0.3 |
| | | S0 | No | 50% | -0.3 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.2 | -0.3 |
| | | S0 | No | 10% | -0.3 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.2 | -0.3 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -2.8 | -3.2 | -3.6 | -3.3 | -0.9 | -0.8 | -1.7 | -1.7 | -1.4 | -1.4 | -1.9 | -2.4 | -2.1 | -0.8 | -3.6 |
| | | S0 | No | 50% | -1.9 | -2.2 | -2.5 | -2.4 | -0.4 | -0.5 | -0.9 | -1.0 | -0.7 | -0.8 | -1.2 | -1.6 | -1.3 | -0.4 | -2.5 |
| | | S0 | No | 10% | -1.1 | -1.3 | -1.3 | -1.1 | -0.2 | -0.2 | -0.5 | -0.6 | -0.4 | -0.5 | -0.6 | -1.0 | -0.7 | -0.2 | -1.3 |
| | Post-Closure | S0 | No | 90% | -0.7 | -0.8 | -0.9 | -0.9 | -0.2 | -0.2 | -0.4 | -0.5 | -0.4 | -0.4 | -0.5 | -0.6 | -0.6 | -0.2 | -0.9 |
| | | S0 | No | 50% | -0.5 | -0.6 | -0.7 | -0.6 | -0.1 | -0.1 | -0.3 | -0.3 | -0.2 | -0.2 | -0.3 | -0.4 | -0.4 | -0.1 | -0.7 |
| | | S0 | No | 10% | -0.3 | -0.3 | -0.3 | -0.3 | 0.0 | -0.1 | -0.1 | -0.2 | -0.1 | -0.1 | -0.2 | -0.3 | -0.2 | 0.0 | -0.3 |
| **UTC-F** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | No | 90% | 6.1 | 5.1 | 4.2 | 3.7 | 14.7 | 21.1 | 9.8 | 9.4 | 12.0 | 12.6 | 9.5 | 7.5 | 9.7 | 21.1 | 3.7 |
| | | S0 | No | 50% | 8.2 | 6.7 | 5.6 | 4.9 | 35.6 | 33.1 | 17.5 | 18.7 | 25.6 | 22.9 | 15.3 | 10.4 | 17.0 | 35.6 | 4.9 |
| | | S0 | No | 10% | 14.1 | 10.8 | 9.9 | 9.1 | 67.8 | 75.6 | 39.5 | 32.1 | 43.6 | 38.5 | 29.6 | 16.7 | 32.3 | 75.6 | 9.1 |
| | End of Mine | S0 | No | 90% | 5.7 | 4.7 | 3.8 | 3.4 | 14.3 | 20.6 | 9.2 | 8.8 | 11.4 | 12.0 | 8.9 | 7.0 | 9.2 | 20.6 | 3.4 |
| | | S0 | No | 50% | 7.7 | 6.2 | 5.2 | 4.6 | 35.3 | 32.6 | 16.9 | 18.2 | 25.0 | 22.3 | 14.7 | 9.8 | 16.5 | 35.3 | 4.6 |
| | | S0 | No | 10% | 13.6 | 10.4 | 9.5 | 8.8 | 67.4 | 75.1 | 39.0 | 31.5 | 43.0 | 37.8 | 29.0 | 16.1 | 31.8 | 75.1 | 8.8 |
| | Post-Closure | S0 | No | 90% | 6.0 | 5.0 | 4.1 | 3.7 | 14.6 | 21.0 | 9.7 | 9.2 | 11.9 | 12.4 | 9.4 | 7.4 | 9.5 | 21.0 | 3.7 |
| | | S0 | No | 50% | 8.0 | 6.6 | 5.5 | 4.8 | 35.5 | 33.0 | 17.4 | 18.6 | 25.4 | 22.8 | 15.2 | 10.2 | 16.9 | 35.5 | 4.8 |
| | | S0 | No | 10% | 14.0 | 10.7 | 9.8 | 9.1 | 67.7 | 75.5 | 39.4 | 31.9 | 43.5 | 38.3 | 29.5 | 16.5 | 32.2 | 75.5 | 9.1 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -0.5 | -0.4 | -0.4 | -0.3 | -0.4 | -0.5 | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 | -0.5 | -0.3 | -0.6 |
| | | S0 | No | 50% | -0.5 | -0.4 | -0.4 | -0.3 | -0.4 | -0.5 | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 | -0.5 | -0.3 | -0.6 |
| | | S0 | No | 10% | -0.5 | -0.4 | -0.4 | -0.3 | -0.4 | -0.5 | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 | -0.5 | -0.3 | -0.6 |
| | Post-Closure | S0 | No | 90% | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.1 | -0.1 | -0.1 | -0.2 |
| | | S0 | No | 50% | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.1 | -0.1 | -0.1 | -0.2 |
| | | S0 | No | 10% | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.1 | -0.1 | -0.1 | -0.2 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -8.0 | -8.4 | -8.9 | -8.6 | -2.5 | -2.4 | -5.8 | -6.2 | -5.0 | -4.9 | -6.3 | -7.4 | -6.2 | -2.4 | -8.9 |
| | | S0 | No | 50% | -6.0 | -6.4 | -6.6 | -6.6 | -1.0 | -1.5 | -3.3 | -3.1 | -2.3 | -2.7 | -3.9 | -5.4 | -4.1 | -1.0 | -6.6 |
| | | S0 | No | 10% | -3.5 | -3.9 | -3.7 | -3.5 | -0.5 | -0.7 | -1.5 | -1.8 | -1.4 | -1.6 | -2.0 | -3.3 | -2.3 | -0.5 | -3.9 |
| | Post-Closure | S0 | No | 90% | -2.1 | -2.2 | -2.4 | -2.3 | -0.7 | -0.6 | -1.6 | -1.6 | -1.3 | -1.3 | -1.7 | -2.0 | -1.7 | -0.6 | -2.4 |
| | | S0 | No | 50% | -1.6 | -1.7 | -1.8 | -1.8 | -0.3 | -0.4 | -0.9 | -0.8 | -0.6 | -0.7 | -1.1 | -1.4 | -1.1 | -0.3 | -1.8 |
| | | S0 | No | 10% | -0.9 | -1.0 | -1.0 | -0.9 | -0.1 | -0.2 | -0.4 | -0.5 | -0.4 | -0.4 | -0.5 | -0.9 | -0.6 | -0.1 | -1.0 |
| **Tributary 1.19** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | No | 90% | 25.5 | 24.8 | 25.4 | 25.0 | 26.4 | 27.6 | 26.5 | 26.4 | 26.6 | 26.4 | 25.8 | 25.8 | 26.0 | 27.6 | 24.8 |
| | | S0 | No | 50% | 26.4 | 26.1 | 26.0 | 25.9 | 30.8 | 33.7 | 29.8 | 28.5 | 28.8 | 28.3 | 27.6 | 26.8 | 28.2 | 33.7 | 25.9 |
| | | S0 | No | 10% | 27.7 | 27.2 | 27.1 | 26.9 | 39.5 | 39.9 | 36.7 | 32.0 | 32.0 | 32.7 | 30.9 | 29.2 | 31.8 | 39.9 | 26.9 |
| | End of Mine | S0 | No | 90% | 25.3 | 24.6 | 25.2 | 24.8 | 26.2 | 27.4 | 26.3 | 26.2 | 26.4 | 26.2 | 25.6 | 25.6 | 25.8 | 27.4 | 24.6 |
| | | S0 | No | 50% | 26.2 | 25.9 | 25.8 | 25.6 | 30.5 | 33.5 | 29.5 | 28.3 | 28.6 | 28.1 | 27.4 | 26.6 | 28.0 | 33.5 | 25.6 |
| | | S0 | No | 10% | 27.5 | 27.0 | 26.9 | 26.7 | 39.3 | 39.7 | 36.4 | 31.8 | 31.8 | 32.4 | 30.7 | 29.0 | 31.6 | 39.7 | 26.7 |
| | Post-Closure | S0 | No | 90% | 25.4 | 24.6 | 25.2 | 24.8 | 26.2 | 27.4 | 26.3 | 26.2 | 26.4 | 26.2 | 25.6 | 25.6 | 25.8 | 27.4 | 24.6 |
| | | S0 | No | 50% | 26.2 | 25.9 | 25.8 | 25.7 | 30.6 | 33.5 | 29.6 | 28.3 | 28.6 | 28.1 | 27.4 | 26.7 | 28.0 | 33.5 | 25.7 |
| | | S0 | No | 10% | 27.5 | 27.1 | 26.9 | 26.7 | 39.4 | 39.7 | 36.5 | 31.8 | 31.8 | 32.5 | 30.7 | 29.0 | 31.6 | 39.7 | 26.7 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 |
| | | S0 | No | 50% | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 |
| | | S0 | No | 10% | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 |
| | Post-Closure | S0 | No | 90% | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 |
| | | S0 | No | 50% | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 |
| | | S0 | No | 10% | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 |

**Table K4.16-22: Upper Talarik Creek Change in Streamflow End of Mine and Post-Closure—Scenario S0—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | No | 90% | -0.8 | -0.7 | -0.8 | -0.9 | -0.9 | -0.7 | -0.9 | -0.7 | -0.8 | -0.7 | -0.9 | -0.8 | -0.8 | -0.7 | -0.9 |
| | | S0 | No | 50% | -0.7 | -0.8 | -0.8 | -0.8 | -0.7 | -0.7 | -0.7 | -0.7 | -0.7 | -0.8 | -0.7 | -0.7 | -0.7 | -0.7 | -0.8 |
| | | S0 | No | 10% | -0.7 | -0.8 | -0.8 | -0.8 | -0.5 | -0.5 | -0.6 | -0.6 | -0.7 | -0.7 | -0.7 | -0.7 | -0.7 | -0.5 | -0.8 |
| | Post-Closure | S0 | No | 90% | -0.7 | -0.7 | -0.7 | -0.8 | -0.8 | -0.6 | -0.8 | -0.6 | -0.7 | -0.6 | -0.8 | -0.7 | -0.7 | -0.6 | -0.8 |
| | | S0 | No | 50% | -0.6 | -0.7 | -0.7 | -0.8 | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 | -0.7 | -0.6 | -0.7 | -0.7 | -0.6 | -0.8 |
| | | S0 | No | 10% | -0.6 | -0.7 | -0.7 | -0.7 | -0.5 | -0.4 | -0.5 | -0.5 | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 | -0.4 | -0.7 |

Notes:

cfs = cubic feet per second
UTC = Upper Talarik Creek

Source: Knight Piésold 2019q, r

**Table K4.16-23: North Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S7—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| **NFK-A** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | No | 90% | 51.0 | 40.3 | 32.6 | 30.2 | 184.2 | 226.7 | 114.0 | 113.6 | 162.5 | 138.4 | 98.5 | 69.0 | 105.1 | 226.7 | 30.2 |
| | | S7 | No | 50% | 70.3 | 54.2 | 43.2 | 39.7 | 434.0 | 377.9 | 235.3 | 241.8 | 316.5 | 267.5 | 154.2 | 94.2 | 194.1 | 434.0 | 39.7 |
| | | S7 | No | 10% | 114.9 | 102.0 | 82.5 | 93.5 | 831.7 | 979.6 | 435.1 | 447.1 | 539.9 | 421.3 | 296.9 | 155.5 | 375.0 | 979.6 | 82.5 |
| | End of Mine | S7 | No | 90% | 36.3 | 27.2 | 21.0 | 19.0 | 163.0 | 182.8 | 92.8 | 94.6 | 139.9 | 118.9 | 79.1 | 51.1 | 85.5 | 182.8 | 19.0 |
| | | S7 | No | 50% | 53.1 | 39.1 | 29.9 | 27.6 | 366.7 | 297.3 | 186.6 | 194.3 | 258.2 | 224.5 | 130.7 | 75.4 | 157.0 | 366.7 | 27.6 |
| | | S7 | No | 10% | 99.3 | 86.0 | 64.1 | 79.9 | 717.9 | 785.8 | 350.2 | 369.6 | 446.1 | 346.4 | 246.1 | 137.8 | 310.8 | 785.8 | 64.1 |
| | Post-Closure | S7 | No | 90% | 45.0 | 34.8 | 27.7 | 25.5 | 181.2 | 216.6 | 110.1 | 110.2 | 159.0 | 134.5 | 91.3 | 62.3 | 99.8 | 216.6 | 25.5 |
| | | S7 | No | 50% | 63.3 | 48.1 | 37.9 | 34.8 | 424.8 | 367.4 | 224.3 | 233.1 | 307.3 | 252.0 | 147.7 | 87.3 | 185.7 | 424.8 | 34.8 |
| | | S7 | No | 10% | 110.8 | 97.0 | 76.2 | 89.6 | 814.6 | 952.5 | 419.5 | 432.7 | 522.9 | 408.3 | 276.0 | 151.2 | 362.6 | 952.5 | 76.2 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -14.8 | -13.0 | -11.6 | -11.1 | -21.2 | -43.8 | -21.2 | -19.0 | -22.5 | -19.5 | -19.3 | -17.9 | -19.6 | -11.1 | -43.8 |
| | | S7 | No | 50% | -17.2 | -15.1 | -13.3 | -12.1 | -67.3 | -80.5 | -48.7 | -47.5 | -58.3 | -43.0 | -23.6 | -18.8 | -37.1 | -12.1 | -80.5 |
| | | S7 | No | 10% | -15.6 | -16.0 | -18.4 | -13.6 | -113.8 | -193.9 | -84.9 | -77.5 | -93.8 | -75.0 | -50.7 | -17.7 | -64.2 | -13.6 | -193.9 |
| | Post-Closure | S7 | No | 90% | -6.0 | -5.5 | -4.9 | -4.6 | -3.0 | -10.1 | -3.9 | -3.4 | -3.5 | -3.9 | -7.2 | -6.6 | -5.2 | -3.0 | -10.1 |
| | | S7 | No | 50% | -7.0 | -6.1 | -5.3 | -4.9 | -9.2 | -10.4 | -10.9 | -8.8 | -9.2 | -15.5 | -6.5 | -6.9 | -8.4 | -4.9 | -15.5 |
| | | S7 | No | 10% | -4.1 | -5.0 | -6.2 | -3.9 | -17.1 | -27.1 | -15.6 | -14.4 | -17.0 | -13.0 | -20.9 | -4.3 | -12.4 | -3.9 | -27.1 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -28.9 | -32.3 | -35.6 | -36.9 | -11.5 | -19.3 | -18.6 | -16.7 | -13.9 | -14.1 | -19.6 | -26.0 | -22.8 | -11.5 | -36.9 |
| | | S7 | No | 50% | -24.5 | -27.9 | -30.7 | -30.6 | -15.5 | -21.3 | -20.7 | -19.6 | -18.4 | -16.1 | -15.3 | -19.9 | -21.7 | -15.3 | -30.7 |
| | | S7 | No | 10% | -13.6 | -15.7 | -22.3 | -14.5 | -13.7 | -19.8 | -19.5 | -17.3 | -17.4 | -17.8 | -17.1 | -11.4 | -16.7 | -11.4 | -22.3 |
| | Post-Closure | S7 | No | 90% | -11.8 | -13.6 | -15.0 | -15.4 | -1.6 | -4.4 | -3.4 | -3.0 | -2.1 | -2.8 | -7.3 | -9.6 | -7.5 | -1.6 | -15.4 |
| | | S7 | No | 50% | -10.0 | -11.2 | -12.2 | -12.3 | -2.1 | -2.8 | -4.6 | -3.6 | -2.9 | -5.8 | -4.2 | -7.3 | -6.6 | -2.1 | -12.3 |
| | | S7 | No | 10% | -3.5 | -4.9 | -7.5 | -4.1 | -2.1 | -2.8 | -3.6 | -3.2 | -3.1 | -3.1 | -7.0 | -2.7 | -4.0 | -2.1 | -7.5 |
| **NFK-B** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | No | 90% | 47.0 | 37.0 | 29.8 | 27.1 | 150.1 | 195.9 | 101.3 | 102.4 | 141.5 | 122.8 | 87.9 | 62.5 | 92.1 | 195.9 | 27.1 |
| | | S7 | No | 50% | 65.0 | 49.9 | 39.6 | 34.9 | 379.7 | 332.5 | 203.8 | 213.4 | 274.3 | 234.7 | 133.1 | 85.9 | 170.6 | 379.7 | 34.9 |
| | | S7 | No | 10% | 105.4 | 89.1 | 76.3 | 77.3 | 720.4 | 868.9 | 387.7 | 389.6 | 477.6 | 368.3 | 264.9 | 136.1 | 330.1 | 868.9 | 76.3 |
| | End of Mine | S7 | No | 90% | 32.1 | 24.2 | 18.3 | 16.5 | 129.8 | 153.3 | 79.9 | 82.8 | 119.2 | 102.7 | 68.2 | 44.7 | 72.6 | 153.3 | 16.5 |
| | | S7 | No | 50% | 47.1 | 34.9 | 26.5 | 23.6 | 305.5 | 253.1 | 156.4 | 166.3 | 217.6 | 190.7 | 109.7 | 67.3 | 133.2 | 305.5 | 23.6 |
| | | S7 | No | 10% | 90.1 | 71.9 | 57.9 | 63.6 | 607.4 | 676.4 | 304.0 | 312.3 | 384.6 | 294.5 | 211.4 | 118.5 | 266.1 | 676.4 | 57.9 |
| | Post-Closure | S7 | No | 90% | 41.0 | 31.7 | 24.8 | 22.9 | 146.9 | 186.3 | 97.0 | 99.2 | 138.1 | 118.6 | 82.0 | 55.4 | 87.0 | 186.3 | 22.9 |
| | | S7 | No | 50% | 58.0 | 44.0 | 34.4 | 30.4 | 370.5 | 323.0 | 194.0 | 204.9 | 265.5 | 219.9 | 127.7 | 78.9 | 162.6 | 370.5 | 30.4 |
| | | S7 | No | 10% | 101.6 | 83.1 | 70.1 | 73.4 | 704.1 | 844.0 | 372.5 | 376.0 | 461.4 | 355.9 | 244.4 | 131.9 | 318.2 | 844.0 | 70.1 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -14.9 | -12.7 | -11.5 | -10.6 | -20.3 | -42.6 | -21.3 | -19.6 | -22.4 | -20.0 | -19.7 | -17.8 | -19.5 | -10.6 | -42.6 |
| | | S7 | No | 50% | -17.8 | -14.9 | -13.1 | -11.3 | -74.2 | -79.4 | -47.4 | -47.0 | -56.7 | -44.0 | -23.4 | -18.6 | -37.3 | -11.3 | -79.4 |
| | | S7 | No | 10% | -15.4 | -17.2 | -18.4 | -13.7 | -113.0 | -192.5 | -83.7 | -77.3 | -93.0 | -73.7 | -53.5 | -17.7 | -64.1 | -13.7 | -192.5 |
| | Post-Closure | S7 | No | 90% | -6.0 | -5.3 | -5.0 | -4.2 | -3.2 | -9.6 | -4.3 | -3.2 | -3.4 | -4.2 | -6.0 | -7.1 | -5.1 | -3.2 | -9.6 |
| | | S7 | No | 50% | -7.0 | -5.9 | -5.2 | -4.5 | -9.2 | -9.6 | -9.9 | -8.5 | -8.8 | -14.8 | -5.4 | -7.0 | -8.0 | -4.5 | -14.8 |
| | | S7 | No | 10% | -3.8 | -6.0 | -6.2 | -3.9 | -16.3 | -24.9 | -15.2 | -13.6 | -16.2 | -12.4 | -20.5 | -4.2 | -11.9 | -3.8 | -24.9 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -31.7 | -34.4 | -38.6 | -39.1 | -13.5 | -21.7 | -21.1 | -19.1 | -15.8 | -16.3 | -22.4 | -28.5 | -25.2 | -13.5 | -39.1 |
| | | S7 | No | 50% | -27.4 | -30.0 | -33.0 | -32.4 | -19.5 | -23.9 | -23.3 | -22.0 | -20.7 | -18.8 | -17.6 | -21.7 | -24.2 | -17.6 | -33.0 |
| | | S7 | No | 10% | -14.6 | -19.3 | -24.1 | -17.7 | -15.7 | -22.2 | -21.6 | -19.8 | -19.5 | -20.0 | -20.2 | -13.0 | -19.0 | -13.0 | -24.1 |
| | Post-Closure | S7 | No | 90% | -12.8 | -14.3 | -16.7 | -15.4 | -2.1 | -4.9 | -4.2 | -3.1 | -2.4 | -3.4 | -6.8 | -11.4 | -8.1 | -2.1 | -16.7 |
| | | S7 | No | 50% | -10.7 | -11.8 | -13.2 | -12.9 | -2.4 | -2.9 | -4.8 | -4.0 | -3.2 | -6.3 | -4.0 | -8.2 | -7.0 | -2.4 | -13.2 |
| | | S7 | No | 10% | -3.6 | -6.7 | -8.1 | -5.0 | -2.3 | -2.9 | -3.9 | -3.5 | -3.4 | -3.4 | -7.7 | -3.1 | -4.5 | -2.3 | -8.1 |
| **NFK-C** | **Streamflow During Baseline, Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | No | 90% | 19.7 | 11.4 | 5.7 | 3.2 | 84.2 | 132.8 | 63.5 | 65.7 | 87.2 | 79.5 | 52.8 | 31.5 | 53.1 | 132.8 | 3.2 |
| | | S7 | No | 50% | 34.7 | 22.4 | 13.8 | 9.8 | 258.8 | 245.3 | 140.2 | 149.4 | 189.2 | 161.2 | 84.5 | 53.0 | 113.5 | 258.8 | 9.8 |
| | | S7 | No | 10% | 67.9 | 50.5 | 45.1 | 41.3 | 514.6 | 656.9 | 295.7 | 278.8 | 359.7 | 266.4 | 194.4 | 87.5 | 238.2 | 656.9 | 41.3 |

**Table K4.16-23: North Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S7—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | End of Mine | S7 | No | 90% | 4.7 | 0.0 | 0.0 | 0.0 | 65.6 | 89.5 | 41.0 | 44.5 | 62.6 | 57.4 | 32.4 | 14.2 | 34.3 | 89.5 | 0.0 |
| | | S7 | No | 50% | 17.2 | 7.5 | 1.2 | 0.0 | 186.1 | 161.6 | 92.6 | 101.1 | 133.8 | 115.3 | 62.5 | 33.1 | 76.0 | 186.1 | 0.0 |
| | | S7 | No | 10% | 51.5 | 33.2 | 27.9 | 26.1 | 397.6 | 456.8 | 207.1 | 197.1 | 258.5 | 192.8 | 139.6 | 69.5 | 171.5 | 456.8 | 26.1 |
| | Post-Closure | S7 | No | 90% | 12.8 | 5.9 | 0.3 | 0.0 | 81.1 | 120.9 | 58.1 | 61.4 | 82.6 | 72.9 | 45.9 | 23.3 | 47.1 | 120.9 | 0.0 |
| | | S7 | No | 50% | 27.3 | 16.0 | 8.7 | 5.2 | 248.5 | 230.7 | 128.4 | 139.0 | 177.9 | 148.2 | 79.0 | 44.9 | 104.5 | 248.5 | 5.2 |
| | | S7 | No | 10% | 62.9 | 44.0 | 39.2 | 36.1 | 494.6 | 623.6 | 275.9 | 261.7 | 339.4 | 251.1 | 172.5 | 82.6 | 223.6 | 623.6 | 36.1 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -14.9 | -11.4 | -5.7 | -3.2 | -18.6 | -43.3 | -22.5 | -21.2 | -24.6 | -22.0 | -20.4 | -17.4 | -18.8 | -3.2 | -43.3 |
| | | S7 | No | 50% | -17.6 | -14.9 | -12.5 | -9.8 | -72.7 | -83.7 | -47.5 | -48.3 | -55.5 | -45.9 | -22.0 | -19.8 | -37.5 | -9.8 | -83.7 |
| | | S7 | No | 10% | -16.4 | -17.4 | -17.3 | -15.2 | -117.0 | -200.1 | -88.6 | -81.8 | -101.1 | -73.6 | -54.8 | -17.9 | -66.8 | -15.2 | -200.1 |
| | Post-Closure | S7 | No | 90% | -6.9 | -5.5 | -5.3 | -3.2 | -3.1 | -11.9 | -5.3 | -4.3 | -4.6 | -6.5 | -6.9 | -8.2 | -6.0 | -3.1 | -11.9 |
| | | S7 | No | 50% | -7.4 | -6.4 | -5.1 | -4.7 | -10.3 | -14.6 | -11.8 | -10.4 | -11.4 | -13.0 | -5.5 | -8.1 | -9.1 | -4.7 | -14.6 |
| | | S7 | No | 10% | -5.0 | -6.6 | -5.9 | -5.2 | -19.9 | -33.2 | -19.8 | -17.2 | -20.2 | -15.3 | -21.9 | -4.9 | -14.6 | -4.9 | -33.2 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | ,End of Mine | S7 | No | 90% | -75.9 | -100.0 | -100.0 | -100.0 | -22.1 | -32.6 | -35.4 | -32.3 | -28.2 | -27.7 | -38.7 | -55.1 | -54.0 | -22.1 | -100.0 |
| | | S7 | No | 50% | -50.6 | -66.6 | -91.1 | -100.0 | -28.1 | -34.1 | -33.9 | -32.3 | -29.3 | -28.5 | -26.0 | -37.5 | -46.5 | -26.0 | -100.0 |
| | | S7 | No | 10% | -24.1 | -34.4 | -38.3 | -36.8 | -22.7 | -30.5 | -29.9 | -29.3 | -28.1 | -27.6 | -28.2 | -20.5 | -29.2 | -20.5 | -38.3 |
| | Post-Closure | S7 | No | 90% | -35.0 | -48.2 | -94.1 | -100.0 | -3.7 | -8.9 | -8.4 | -6.6 | -5.3 | -8.2 | -13.1 | -26.0 | -29.8 | -3.7 | -100.0 |
| | | S7 | No | 50% | -21.4 | -28.6 | -36.8 | -47.6 | -4.0 | -5.9 | -8.4 | -6.9 | -6.0 | -8.1 | -6.5 | -15.3 | -16.3 | -4.0 | -47.6 |
| | | S7 | No | 10% | -7.4 | -13.0 | -13.1 | -12.6 | -3.9 | -5.1 | -6.7 | -6.2 | -5.6 | -5.7 | -11.3 | -5.6 | -8.0 | -3.9 | -13.1 |
| | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | No | 90% | 13.8 | 11.4 | 9.2 | 7.9 | 35.8 | 58.7 | 27.2 | 23.0 | 27.1 | 29.5 | 22.2 | 17.2 | 23.6 | 58.7 | 7.9 |
| | | S7 | No | 50% | 20.3 | 16.4 | 13.3 | 11.5 | 83.0 | 94.6 | 54.2 | 48.2 | 61.9 | 57.6 | 39.9 | 26.8 | 44.0 | 94.6 | 11.5 |
| | | S7 | No | 10% | 33.7 | 27.5 | 23.7 | 21.6 | 177.1 | 207.3 | 117.2 | 85.1 | 111.4 | 101.5 | 81.7 | 43.9 | 86.0 | 207.3 | 21.6 |
| | End of Mine | S7 | No | 90% | 12.2 | 10.0 | 8.0 | 6.8 | 33.2 | 54.8 | 25.2 | 21.0 | 24.8 | 26.8 | 20.0 | 15.4 | 21.5 | 54.8 | 6.8 |
| | | S7 | No | 50% | 18.3 | 14.6 | 11.8 | 10.1 | 78.0 | 88.5 | 51.0 | 44.8 | 58.1 | 53.0 | 36.5 | 24.3 | 40.8 | 88.5 | 10.1 |
| | | S7 | No | 10% | 30.7 | 24.9 | 21.3 | 19.4 | 166.4 | 198.5 | 110.2 | 80.3 | 104.8 | 94.5 | 75.5 | 40.1 | 80.6 | 198.5 | 19.4 |
| | Post-Closure | S7 | No | 90% | 13.7 | 11.3 | 9.1 | 7.9 | 35.7 | 58.7 | 27.1 | 23.0 | 27.0 | 29.5 | 22.1 | 17.1 | 23.5 | 58.7 | 7.9 |
| | | S7 | No | 50% | 20.3 | 16.3 | 13.3 | 11.5 | 83.0 | 94.5 | 54.1 | 48.2 | 61.9 | 57.6 | 39.8 | 26.7 | 43.9 | 94.5 | 11.5 |
| | | S7 | No | 10% | 33.6 | 27.5 | 23.7 | 21.6 | 177.1 | 207.2 | 117.1 | 85.0 | 111.3 | 101.4 | 81.6 | 43.9 | 85.9 | 207.2 | 21.6 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| **NFK-D[1]** | End of Mine | S7 | No | 90% | --1.6 | --1.4 | -1.2 | -1.1 | -2.5 | -3.9 | -2.0 | -2.0 | -2.3 | -2.8 | -2.2 | -1.8 | -2.1 | -1.1 | -3.9 |
| | | S7 | No | 50% | -2.0 | -1.8 | -1.5 | -1.4 | -5.0 | -6.1 | -3.2 | -3.5 | -3.8 | -4.6 | -3.4 | -2.5 | -3.2 | -1.4 | -6.1 |
| | | S7 | No | 10% | -3.0 | -2.6 | -2.4 | -2.2 | -10.7 | -8.8 | -7.0 | -4.8 | -6.6 | -6.9 | -6.2 | -3.8 | -5.4 | -2.2 | -10.7 |
| | Post-Closure | S7 | No | 90% | -0.1 | -0.1 | -0.1 | 0.0 | 0.0 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | 0.0 | -0.1 |
| | | S7 | No | 50% | -0.1 | -0.1 | -0.1 | 0.0 | 0.0 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | 0.0 | -0.1 |
| | | S7 | No | 10% | -0.1 | -0.1 | -0.1 | 0.0 | 0.0 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | 0.0 | -0.1 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -11.4 | -12.3 | -13.4 | -14.1 | -7.1 | -6.7 | -7.4 | -8.7 | -8.5 | -9.4 | -9.8 | -10.7 | -10.0 | -6.7 | -14.1 |
| | | S7 | No | 50% | -9.9 | -10.8 | -11.2 | -12.3 | -6.1 | -6.4 | -5.8 | -7.2 | -6.2 | -8.0 | -8.5 | -9.3 | -8.5 | -5.8 | -12.3 |
| | | S7 | No | 10% | -8.9 | -9.6 | -10.2 | -10.1 | -6.1 | -4.2 | -5.9 | -5.6 | -5.9 | -6.8 | -7.6 | -8.6 | -7.5 | -4.2 | -10.2 |
| | Post-Closure | S7 | No | 90% | -0.4 | -0.5 | -0.6 | -0.6 | -0.1 | -0.1 | -0.2 | -0.3 | -0.2 | -0.2 | -0.3 | -0.4 | -0.3 | -0.1 | -0.6 |
| | | S7 | No | 50% | -0.3 | -0.3 | -0.4 | -0.4 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.1 | -0.4 |
| | | S7 | No | 10% | -0.2 | -0.2 | -0.2 | -0.2 | -0.0 | -0.0 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | 0.0 | -0.2 |
| **Tributary 1.19** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | No | 90% | 3.4 | 2.8 | 2.3 | 2.1 | 12.6 | 24.2 | 13.5 | 11.9 | 19.7 | 13.6 | 6.3 | 4.3 | 9.7 | 24.2 | 2.1 |
| | | S7 | No | 50% | 4.6 | 3.7 | 3.0 | 2.6 | 49.9 | 63.4 | 28.4 | 29.9 | 35.8 | 24.8 | 13.6 | 6.3 | 22.2 | 63.4 | 2.6 |
| | | S7 | No | 10% | 7.0 | 6.3 | 5.7 | 8.0 | 89.0 | 140.6 | 52.5 | 58.0 | 62.7 | 46.0 | 23.5 | 9.1 | 42.4 | 140.6 | 5.7 |
| | End of Mine | S7 | No | 90% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | S7 | No | 50% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | S7 | No | 10% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Post-Closure | S7 | No | 90% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | S7 | No | 50% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | S7 | No | 10% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Table K4.16-23: North Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S7—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -3.4 | -2.8 | -2.3 | -2.1 | -12.6 | -24.2 | -13.5 | -11.9 | -19.7 | -13.6 | -6.3 | -4.3 | -9.7 | -2.1 | -24.2 |
| | | S7 | No | 50% | -4.6 | -3.7 | -3.0 | -2.6 | -49.9 | -63.4 | -28.4 | -29.9 | -35.8 | -24.8 | -13.6 | -6.3 | -22.2 | -2.6 | -63.4 |
| | | S7 | No | 10% | -7.0 | -6.3 | -5.7 | -8.0 | -89.0 | -140.6 | -52.5 | -58.0 | -62.7 | -46.0 | -23.5 | -9.1 | -42.4 | -5.7 | -140.6 |
| | Post-Closure | S7 | No | 90% | -3.4 | -2.8 | -2.3 | -2.1 | -12.6 | -24.2 | -13.5 | -11.9 | -19.7 | -13.6 | -6.3 | -4.3 | -9.7 | -2.1 | -24.2 |
| | | S7 | No | 50% | -4.6 | -3.7 | -3.0 | -2.6 | -49.9 | -63.4 | -28.4 | -29.9 | -35.8 | -24.8 | -13.6 | -6.3 | -22.2 | -2.6 | -63.4 |
| | | S7 | No | 10% | -7.0 | -6.3 | -5.7 | -8.0 | -89.0 | -140.6 | -52.5 | -58.0 | -62.7 | -46.0 | -23.5 | -9.1 | -42.4 | -5.7 | -140.6 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | | S7 | No | 50% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | | S7 | No | 10% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | Post-Closure | S7 | No | 90% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | | S7 | No | 50% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | | S7 | No | 10% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |

Notes:

cfs = cubic feet per second
NFK = North Fork Koktuli

Source: Knight Piésold 2019q, r

[1] Source: PLP 2020-RFI 161

**Table K4.16-24: South Fork Koktuli Change in Streamflow End of Mine and Post Closure—Scenario S7—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| **SFK-A** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | No | 90% | 37.1 | 25.4 | 15.9 | 10.4 | 140.6 | 141.2 | 87.2 | 93.4 | 129.0 | 115.2 | 77.5 | 51.1 | 77.0 | 141.2 | 10.4 |
| | | S7 | No | 50% | 56.9 | 42.0 | 30.6 | 24.3 | 323.0 | 294.3 | 182.3 | 212.4 | 252.4 | 212.7 | 130.6 | 82.1 | 153.6 | 323.0 | 24.3 |
| | | S7 | No | 10% | 129.4 | 93.5 | 71.5 | 78.0 | 568.6 | 704.8 | 352.8 | 360.5 | 437.8 | 335.1 | 254.7 | 154.0 | 295.0 | 704.8 | 71.5 |
| | End of Mine | S7 | No | 90% | 32.0 | 20.1 | 11.2 | 8.2 | 134.0 | 130.2 | 80.5 | 86.5 | 120.1 | 106.2 | 70.2 | 46.5 | 70.5 | 134.0 | 8.2 |
| | | S7 | No | 50% | 52.0 | 37.6 | 25.5 | 19.7 | 311.5 | 280.3 | 170.3 | 200.1 | 238.0 | 199.5 | 120.6 | 74.6 | 144.1 | 311.5 | 19.7 |
| | | S7 | No | 10% | 121.7 | 86.8 | 65.2 | 73.1 | 552.6 | 683.0 | 337.1 | 346.5 | 422.0 | 319.8 | 240.1 | 143.4 | 282.6 | 683.0 | 65.2 |
| | Post-Closure | S7 | No | 90% | 33.7 | 21.9 | 12.9 | 8.9 | 135.2 | 133.0 | 82.3 | 88.3 | 122.2 | 108.7 | 72.3 | 47.7 | 72.3 | 135.2 | 8.9 |
| | | S7 | No | 50% | 52.9 | 39.1 | 27.3 | 21.0 | 313.1 | 281.3 | 172.6 | 202.5 | 241.4 | 202.7 | 123.0 | 76.7 | 146.1 | 313.1 | 21.0 |
| | | S7 | No | 10% | 123.8 | 88.6 | 67.0 | 74.6 | 554.2 | 682.8 | 339.1 | 348.2 | 423.8 | 322.6 | 243.6 | 145.8 | 284.5 | 682.8 | 67.0 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -5.1 | -5.4 | -4.7 | -2.2 | -6.6 | -11.0 | -6.8 | -6.9 | -8.8 | -9.1 | -7.4 | -4.6 | -6.5 | -2.2 | -11.0 |
| | | S7 | No | 50% | -5.0 | -4.3 | -5.0 | -4.6 | -11.5 | -14.0 | -12.0 | -12.3 | -14.3 | -13.2 | -10.0 | -7.4 | -9.5 | -4.3 | -14.3 |
| | | S7 | No | 10% | -7.7 | -6.7 | -6.3 | -4.9 | -16.0 | -21.7 | -15.7 | -14.0 | -15.8 | -15.3 | -14.6 | -10.6 | -12.4 | -4.9 | -21.7 |
| | Post-Closure | S7 | No | 90% | -3.4 | -3.5 | -3.0 | -1.5 | -5.4 | -8.2 | -4.9 | -5.2 | -6.7 | -6.5 | -5.2 | -3.4 | -4.7 | -1.5 | -8.2 |
| | | S7 | No | 50% | -4.1 | -2.9 | -3.3 | -3.3 | -9.9 | -13.0 | -9.7 | -9.9 | -11.0 | -10.0 | -7.6 | -5.4 | -7.5 | -2.9 | -13.0 |
| | | S7 | No | 10% | -5.6 | -4.9 | -4.5 | -3.4 | -14.4 | -22.0 | -13.7 | -12.3 | -14.0 | -12.5 | -11.1 | -8.2 | -10.5 | -3.4 | -22.0 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -13.9 | -21.1 | -29.3 | -21.1 | -4.7 | -7.8 | -7.8 | -7.4 | -6.9 | -7.9 | -9.5 | -8.9 | -12.2 | -4.7 | -29.3 |
| | | S7 | No | 50% | -8.7 | -10.3 | -16.5 | -18.9 | -3.6 | -4.8 | -6.6 | -5.8 | -5.7 | -6.2 | -7.6 | -9.1 | -8.7 | -3.6 | -18.9 |
| | | S7 | No | 10% | -5.9 | -7.2 | -8.8 | -6.3 | -2.8 | -3.1 | -4.4 | -3.9 | -3.6 | -4.6 | -5.7 | -6.9 | -5.3 | -2.8 | -8.8 |
| | Post-Closure | S7 | No | 90% | -9.2 | -13.8 | -19.0 | -14.3 | -3.8 | -5.8 | -5.6 | -5.5 | -5.2 | -5.7 | -6.7 | -6.7 | -8.4 | -3.8 | -19.0 |
| | | S7 | No | 50% | -7.2 | -6.9 | -10.7 | -13.7 | -3.1 | -4.4 | -5.3 | -4.7 | -4.3 | -4.7 | -5.8 | -6.5 | -6.4 | -3.1 | -13.7 |
| | | S7 | No | 10% | -4.3 | -5.2 | -6.2 | -4.4 | -2.5 | -3.1 | -3.9 | -3.4 | -3.2 | -3.7 | -4.4 | -5.3 | -4.1 | -2.5 | -6.2 |
| **SFK-B** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | No | 90% | 35.1 | 27.7 | 20.3 | 15.3 | 92.8 | 122.4 | 71.0 | 72.2 | 94.3 | 86.0 | 59.4 | 42.3 | 61.6 | 122.4 | 15.3 |
| | | S7 | No | 50% | 43.7 | 35.8 | 29.2 | 24.1 | 240.6 | 244.1 | 143.5 | 159.6 | 190.6 | 164.5 | 99.9 | 62.7 | 119.9 | 244.1 | 24.1 |
| | | S7 | No | 10% | 86.2 | 62.3 | 51.7 | 48.6 | 435.8 | 583.4 | 283.3 | 276.4 | 342.1 | 251.5 | 202.5 | 115.2 | 228.2 | 583.4 | 48.6 |
| | End of Mine | S7 | No | 90% | 30.2 | 22.4 | 15.0 | 10.3 | 86.6 | 111.3 | 65.2 | 66.1 | 87.3 | 78.7 | 52.3 | 39.7 | 55.4 | 111.3 | 10.3 |
| | | S7 | No | 50% | 40.2 | 32.9 | 24.8 | 19.9 | 229.9 | 227.7 | 131.1 | 147.9 | 177.1 | 151.6 | 91.1 | 56.1 | 110.9 | 229.9 | 19.9 |
| | | S7 | No | 10% | 79.3 | 57.3 | 46.8 | 44.4 | 418.1 | 559.1 | 266.8 | 261.3 | 325.9 | 235.6 | 187.1 | 106.4 | 215.7 | 559.1 | 44.4 |
| | Post-Closure | S7 | No | 90% | 32.0 | 24.4 | 17.1 | 12.4 | 88.3 | 113.7 | 66.9 | 67.2 | 88.8 | 80.9 | 54.7 | 40.3 | 57.2 | 113.7 | 12.4 |
| | | S7 | No | 50% | 40.8 | 34.2 | 26.5 | 21.5 | 231.3 | 229.7 | 133.9 | 150.4 | 179.9 | 154.7 | 93.3 | 58.2 | 112.9 | 231.3 | 21.5 |
| | | S7 | No | 10% | 81.3 | 58.5 | 48.3 | 45.8 | 419.4 | 557.3 | 268.9 | 263.1 | 327.4 | 238.6 | 190.7 | 108.2 | 217.3 | 557.3 | 45.8 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -4.9 | -5.3 | -5.4 | -4.9 | -6.1 | -11.1 | -5.8 | -6.0 | -7.0 | -7.3 | -7.2 | -2.6 | -6.1 | -2.6 | -11.1 |
| | | S7 | No | 50% | -3.5 | -3.0 | -4.4 | -4.2 | -10.7 | -16.4 | -12.4 | -11.7 | -13.5 | -12.9 | -8.8 | -6.7 | -9.0 | -3.0 | -16.4 |
| | | S7 | No | 10% | -6.9 | -5.0 | -5.0 | -4.2 | -17.6 | -24.2 | -16.5 | -15.1 | -16.1 | -15.9 | -15.4 | -8.9 | -12.6 | -4.2 | -24.2 |
| | Post-Closure | S7 | No | 90% | -3.1 | -3.3 | -3.3 | -2.9 | -4.5 | -8.6 | -4.1 | -5.0 | -5.4 | -5.1 | -4.8 | -2.1 | -4.3 | -2.1 | -8.6 |
| | | S7 | No | 50% | -2.9 | -1.7 | -2.6 | -2.6 | -9.4 | -14.4 | -9.6 | -9.2 | -10.7 | -9.8 | -6.6 | -4.5 | -7.0 | -1.7 | -14.4 |
| | | S7 | No | 10% | -4.9 | -3.7 | -3.4 | -2.8 | -16.4 | -26.1 | -14.4 | -13.3 | -14.7 | -12.9 | -11.8 | -7.0 | -11.0 | -2.8 | -26.1 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | ,End of Mine | S7 | No | 90% | -14.0 | -19.1 | -26.5 | -32.3 | -6.6 | -9.0 | -8.1 | -8.4 | -7.4 | -8.5 | -12.0 | -6.2 | -13.2 | -6.2 | -32.3 |
| | | S7 | No | 50% | -8.0 | -8.3 | -14.9 | -17.3 | -4.5 | -6.7 | -8.6 | -7.3 | -7.1 | -7.8 | -8.8 | -10.6 | -9.2 | -4.5 | -17.3 |
| | | S7 | No | 10% | -8.0 | -8.1 | -9.7 | -8.5 | -4.0 | -4.2 | -5.8 | -5.5 | -4.7 | -6.3 | -7.6 | -7.7 | -6.7 | -4.0 | -9.7 |
| | Post-Closure | S7 | No | 90% | -8.7 | -11.9 | -16.0 | -19.0 | -4.8 | -7.1 | -5.8 | -6.9 | -5.8 | -5.9 | -8.0 | -4.8 | -8.7 | -4.8 | -19.0 |
| | | S7 | No | 50% | -6.7 | -4.6 | -9.0 | -10.8 | -3.9 | -5.9 | -6.7 | -5.8 | -5.6 | -6.0 | -6.6 | -7.2 | -6.6 | -3.9 | -10.8 |
| | | S7 | No | 10% | -5.7 | -6.0 | -6.6 | -5.8 | -3.8 | -4.5 | -5.1 | -4.8 | -4.3 | -5.1 | -5.8 | -6.1 | -5.3 | -3.8 | -6.6 |
| **SFK-C** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 28.6 | 43.9 | 8.2 | 7.8 | 16.7 | 22.0 | 8.6 | 0.3 | 11.3 | 43.9 | 0.0 |
| | | S7 | No | 50% | 1.9 | 0.1 | 0.0 | 0.0 | 117.7 | 100.3 | 47.4 | 54.9 | 76.7 | 63.9 | 36.1 | 13.2 | 42.7 | 117.7 | 0.0 |
| | | S7 | No | 10% | 29.9 | 16.4 | 7.0 | 5.6 | 240.6 | 288.9 | 133.5 | 117.1 | 159.9 | 126.5 | 93.8 | 49.0 | 105.7 | 288.9 | 5.6 |
| | End of Mine | S7 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 27.6 | 38.8 | 6.6 | 6.4 | 13.5 | 14.0 | 3.2 | 0.1 | 9.2 | 38.8 | 0.0 |
| | | S7 | No | 50% | 0.4 | 0.1 | 0.0 | 0.0 | 113.2 | 91.2 | 38.9 | 46.7 | 66.4 | 54.2 | 30.0 | 8.1 | 37.4 | 113.2 | 0.0 |
| | | S7 | No | 10% | 24.6 | 10.8 | 4.8 | 4.7 | 231.1 | 276.3 | 121.7 | 107.3 | 148.3 | 115.0 | 82.2 | 40.8 | 97.3 | 276.3 | 4.7 |

**Table K4.16-24: South Fork Koktuli Change in Streamflow End of Mine and Post Closure—Scenario S7—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S7 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 27.5 | 40.3 | 6.8 | 6.7 | 14.4 | 16.9 | 5.2 | 0.2 | 9.8 | 40.3 | 0.0 |
| | | S7 | No | 50% | 0.4 | 0.1 | 0.0 | 0.0 | 114.5 | 93.7 | 42.2 | 49.3 | 70.2 | 58.0 | 32.0 | 10.1 | 39.2 | 114.5 | 0.0 |
| | | S7 | No | 10% | 26.4 | 12.9 | 5.4 | 4.7 | 233.1 | 279.5 | 125.3 | 110.7 | 152.1 | 118.9 | 86.6 | 43.7 | 99.9 | 279.5 | 4.7 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | -1.0 | -5.2 | -1.5 | -1.4 | -3.2 | -8.0 | -5.4 | -0.2 | -2.2 | 0.0 | -8.0 |
| | | S7 | No | 50% | -1.6 | 0.0 | 0.0 | 0.0 | -4.5 | -9.1 | -8.5 | -8.2 | -10.3 | -9.6 | -6.1 | -5.1 | -5.3 | 0.0 | -10.3 |
| | | S7 | No | 10% | -5.3 | -5.6 | -2.2 | -0.8 | -9.4 | -12.5 | -11.8 | -9.7 | -11.6 | -11.6 | -11.6 | -8.2 | -8.4 | -0.8 | -12.5 |
| | Post-Closure | S7 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | -1.0 | -3.6 | -1.4 | -1.1 | -2.3 | -5.1 | -3.4 | -0.1 | -1.5 | 0.0 | -5.1 |
| | | S7 | No | 50% | -1.6 | 0.0 | 0.0 | 0.0 | -3.2 | -6.6 | -5.2 | -5.6 | -6.5 | -5.9 | -4.1 | -3.2 | -3.5 | 0.0 | -6.6 |
| | | S7 | No | 10% | -3.5 | -3.5 | -1.7 | -0.9 | -7.4 | -9.3 | -8.2 | -6.4 | -7.8 | -7.6 | -7.1 | -5.3 | -5.7 | -0.9 | -9.3 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | -3.5 | -11.8 | -18.7 | -18.0 | -19.3 | -36.3 | -63.0 | -65.1 | -19.6 | 0.0 | -65.1 |
| | | S7 | No | 50% | -81.0 | 0.0 | 0.0 | 0.0 | -3.8 | -9.1 | -17.9 | -14.9 | -13.4 | -15.1 | -17.0 | -38.9 | -17.6 | 0.0 | -81.0 |
| | | S7 | No | 10% | -17.7 | -34.1 | -31.9 | -14.9 | -3.9 | -4.3 | -8.8 | -8.3 | -7.3 | -9.1 | -12.3 | -16.7 | -14.1 | -3.9 | -34.1 |
| | Post-Closure | S7 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | -3.6 | -8.1 | -16.8 | -13.8 | -14.0 | -23.2 | -39.5 | -31.8 | -12.6 | 0.0 | -39.5 |
| | | S7 | No | 50% | -80.2 | 0.0 | 0.0 | 0.0 | -2.7 | -6.6 | -11.0 | -10.2 | -8.5 | -9.2 | -11.3 | -23.9 | -13.6 | 0.0 | -80.2 |
| | | S7 | No | 10% | -11.8 | -21.3 | -23.7 | -15.4 | -3.1 | -3.2 | -6.2 | -5.5 | -4.9 | -6.0 | -7.6 | -10.8 | -10.0 | -3.1 | -23.7 |
| **SFK-D** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | No | 90% | 6.4 | 4.6 | 3.3 | 2.6 | 21.7 | 35.8 | 16.6 | 15.2 | 20.7 | 19.9 | 13.1 | 8.9 | 14.1 | 35.8 | 2.6 |
| | | S7 | No | 50% | 9.3 | 6.5 | 4.8 | 3.9 | 61.6 | 54.7 | 36.0 | 32.5 | 44.1 | 38.6 | 23.2 | 13.3 | 27.4 | 61.6 | 3.9 |
| | | S7 | No | 10% | 19.2 | 13.1 | 12.7 | 10.9 | 112.8 | 137.5 | 67.3 | 59.0 | 77.3 | 61.0 | 49.0 | 23.4 | 53.6 | 137.5 | 10.9 |
| | End of Mine | S7 | No | 90% | 1.3 | 0.8 | 0.6 | 0.6 | 16.2 | 26.2 | 9.5 | 8.2 | 13.1 | 11.9 | 6.1 | 2.9 | 8.1 | 26.2 | 0.6 |
| | | S7 | No | 50% | 3.9 | 2.0 | 1.2 | 1.0 | 51.5 | 43.6 | 27.3 | 23.7 | 34.0 | 28.1 | 14.7 | 6.6 | 19.8 | 51.5 | 1.0 |
| | | S7 | No | 10% | 12.3 | 7.7 | 7.8 | 6.9 | 95.4 | 121.2 | 53.5 | 48.1 | 63.2 | 47.5 | 36.9 | 15.6 | 43.0 | 121.2 | 6.9 |
| | Post-Closure | S7 | No | 90% | 3.4 | 2.1 | 1.3 | 1.2 | 18.2 | 29.4 | 12.4 | 11.1 | 16.1 | 15.0 | 9.0 | 5.4 | 10.4 | 29.4 | 1.2 |
| | | S7 | No | 50% | 6.1 | 3.9 | 2.6 | 2.0 | 54.7 | 47.2 | 30.6 | 27.0 | 37.7 | 31.8 | 17.9 | 9.3 | 22.6 | 54.7 | 2.0 |
| | | S7 | No | 10% | 14.9 | 9.8 | 9.7 | 8.4 | 100.1 | 126.3 | 57.9 | 52.0 | 67.9 | 51.9 | 40.9 | 18.7 | 46.5 | 126.3 | 8.4 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -5.1 | -3.7 | -2.7 | -2.1 | -5.5 | -9.6 | -7.1 | -7.0 | -7.6 | -8.1 | -7.1 | -6.1 | -6.0 | -2.1 | -9.6 |
| | | S7 | No | 50% | -5.5 | -4.5 | -3.6 | -2.9 | -10.1 | -11.1 | -8.6 | -8.8 | -10.1 | -10.6 | -8.6 | -6.6 | -7.6 | -2.9 | -11.1 |
| | | S7 | No | 10% | -6.9 | -5.4 | -4.9 | -4.0 | -17.4 | -16.4 | -13.8 | -11.0 | -14.1 | -13.6 | -12.1 | -7.8 | -10.6 | -4.0 | -17.4 |
| | Post-Closure | S7 | No | 90% | -2.9 | -2.5 | -1.9 | -1.4 | -3.5 | -6.4 | -4.2 | -4.2 | -4.6 | -4.9 | -4.2 | -3.5 | -3.7 | -1.4 | -6.4 |
| | | S7 | No | 50% | -3.2 | -2.6 | -2.2 | -1.8 | -6.9 | -7.5 | -5.3 | -5.5 | -6.4 | -6.9 | -5.3 | -3.9 | -4.8 | -1.8 | -7.5 |
| | | S7 | No | 10% | -4.3 | -3.3 | -3.1 | -2.4 | -12.7 | -11.2 | -9.4 | -7.1 | -9.4 | -9.1 | -8.0 | -4.8 | -7.1 | -2.4 | -12.7 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -80.0 | -81.6 | -81.8 | -77.8 | -25.5 | -26.9 | -42.7 | -46.1 | -36.8 | -40.5 | -53.8 | -68.0 | -55.1 | -25.5 | -81.8 |
| | | S7 | No | 50% | -58.5 | -69.1 | -75.5 | -73.6 | -16.5 | -20.3 | -24.0 | -27.1 | -22.8 | -27.3 | -36.8 | -50.1 | -41.8 | -16.5 | -75.5 |
| | | S7 | No | 10% | -35.9 | -41.3 | -38.8 | -36.6 | -15.4 | -11.9 | -20.5 | -18.6 | -18.2 | -22.2 | -24.7 | -33.4 | -26.5 | -11.9 | -41.3 |
| | Post-Closure | S7 | No | 90% | -46.0 | -53.5 | -59.5 | -53.2 | -16.0 | -18.0 | -25.4 | -27.3 | -22.1 | -24.5 | -31.6 | -39.7 | -34.7 | -16.0 | -59.5 |
| | | S7 | No | 50% | -34.1 | -40.1 | -45.6 | -47.4 | -11.3 | -13.8 | -14.8 | -16.8 | -14.6 | -17.8 | -22.8 | -29.8 | -25.7 | -11.3 | -47.4 |
| | | S7 | No | 10% | -22.3 | -25.0 | -24.1 | -22.3 | -11.2 | -8.1 | -13.9 | -11.9 | -12.2 | -15.0 | -16.4 | -20.3 | -16.9 | -8.1 | -25.0 |
| **SFK-E** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | No | 90% | 4.2 | 3.5 | 2.8 | 2.6 | 10.2 | 16.9 | 8.1 | 7.6 | 9.4 | 9.8 | 7.0 | 5.3 | 7.3 | 16.9 | 2.6 |
| | | S7 | No | 50% | 5.6 | 4.4 | 3.7 | 3.2 | 25.2 | 24.3 | 15.3 | 14.6 | 19.0 | 17.1 | 11.7 | 7.3 | 12.6 | 25.2 | 3.2 |
| | | S7 | No | 10% | 9.6 | 7.2 | 7.0 | 6.1 | 47.3 | 55.7 | 30.7 | 24.0 | 31.9 | 28.1 | 22.5 | 12.3 | 23.6 | 55.7 | 6.1 |
| | End of Mine | S7 | No | 90% | 1.1 | 0.8 | 0.6 | 0.6 | 5.8 | 9.8 | 3.6 | 3.3 | 4.5 | 4.5 | 2.5 | 1.6 | 3.2 | 9.8 | 0.6 |
| | | S7 | No | 50% | 2.0 | 1.5 | 1.2 | 1.0 | 16.6 | 15.6 | 9.2 | 8.4 | 11.4 | 9.6 | 5.6 | 2.9 | 7.1 | 16.6 | 1.0 |
| | | S7 | No | 10% | 4.5 | 3.5 | 3.3 | 3.0 | 31.9 | 41.0 | 19.5 | 15.4 | 20.4 | 17.1 | 13.1 | 6.2 | 14.9 | 41.0 | 3.0 |
| | Post-Closure | S7 | No | 90% | 2.1 | 1.7 | 1.3 | 1.2 | 7.1 | 11.6 | 4.9 | 4.6 | 6.0 | 6.1 | 3.9 | 2.7 | 4.4 | 11.6 | 1.2 |
| | | S7 | No | 50% | 3.1 | 2.4 | 2.0 | 1.7 | 18.8 | 17.9 | 10.9 | 10.2 | 13.5 | 11.6 | 7.3 | 4.2 | 8.6 | 18.8 | 1.7 |
| | | S7 | No | 10% | 6.0 | 4.7 | 4.4 | 3.9 | 35.7 | 45.1 | 22.4 | 17.7 | 23.3 | 19.9 | 15.5 | 7.9 | 17.2 | 45.1 | 3.9 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -3.1 | -2.6 | -2.2 | -2.0 | -4.4 | -7.0 | -4.5 | -4.3 | -4.8 | -5.3 | -4.5 | -3.7 | -4.0 | -2.0 | -7.0 |
| | | S7 | No | 50% | -3.6 | -2.9 | -2.5 | -2.2 | -8.6 | -8.7 | -6.1 | -6.2 | -7.6 | -7.5 | -6.2 | -4.4 | -5.5 | -2.2 | -8.7 |
| | | S7 | No | 10% | -5.1 | -3.8 | -3.7 | -3.2 | -15.4 | -14.8 | -11.2 | -8.6 | -11.5 | -11.0 | -9.4 | -6.1 | -8.7 | -3.2 | -15.4 |

**Table K4.16-24: South Fork Koktuli Change in Streamflow End of Mine and Post Closure—Scenario S7—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S7 | No | 90% | -2.1 | -1.8 | -1.5 | -1.3 | -3.2 | -5.2 | -3.2 | -3.0 | -3.4 | -3.8 | -3.1 | -2.6 | -2.9 | -1.3 | -5.2 |
| | | S7 | No | 50% | -2.5 | -2.0 | -1.7 | -1.5 | -6.4 | -6.4 | -4.4 | -4.5 | -5.5 | -5.5 | -4.5 | -3.1 | -4.0 | -1.5 | -6.4 |
| | | S7 | No | 10% | -3.7 | -2.6 | -2.7 | -2.3 | -11.6 | -10.7 | -8.4 | -6.3 | -8.6 | -8.2 | -7.0 | -4.4 | -6.4 | -2.3 | -11.6 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -73.6 | -76.5 | -79.3 | -77.2 | -43.2 | -41.7 | -55.6 | -56.9 | -51.6 | -53.9 | -63.8 | -70.3 | -62.0 | -41.7 | -79.3 |
| | | S7 | No | 50% | -64.1 | -66.3 | -68.6 | -68.0 | -34.1 | -35.8 | -39.7 | -42.6 | -40.1 | -43.7 | -52.6 | -60.3 | -51.3 | -34.1 | -68.6 |
| | | S7 | No | 10% | -53.1 | -52.2 | -53.2 | -51.8 | -32.6 | -26.5 | -36.5 | -35.9 | -36.1 | -39.1 | -41.7 | -49.8 | -42.4 | -26.5 | -53.2 |
| | Post-Closure | S7 | No | 90% | -50.2 | -52.0 | -53.2 | -51.9 | -30.9 | -30.9 | -39.8 | -39.9 | -36.1 | -38.2 | -44.8 | -48.5 | -43.1 | -30.9 | -53.2 |
| | | S7 | No | 50% | -44.4 | -45.0 | -46.5 | -45.9 | -25.4 | -26.5 | -28.8 | -30.4 | -29.1 | -31.9 | -38.2 | -42.5 | -36.2 | -25.4 | -46.5 |
| | | S7 | No | 10% | -37.9 | -35.6 | -37.9 | -37.1 | -24.5 | -19.1 | -27.3 | -26.3 | -26.8 | -29.2 | -31.1 | -35.8 | -30.7 | -19.1 | -37.9 |
| **Tributary 1.19** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | No | 90% | 4.9 | 3.4 | 2.2 | 1.5 | 22.3 | 35.6 | 20.8 | 18.9 | 28.5 | 21.5 | 11.4 | 7.2 | 14.8 | 35.6 | 1.5 |
| | | S7 | No | 50% | 7.1 | 4.9 | 3.3 | 2.6 | 67.8 | 83.1 | 41.8 | 44.3 | 51.0 | 38.6 | 20.7 | 10.6 | 31.3 | 83.1 | 2.6 |
| | | S7 | No | 10% | 13.0 | 9.6 | 8.6 | 10.5 | 123.4 | 184.7 | 78.5 | 84.2 | 89.1 | 66.3 | 38.2 | 17.1 | 60.3 | 184.7 | 8.6 |
| | End of Mine | S7 | No | 90% | 4.1 | 2.8 | 1.7 | 1.1 | 21.9 | 33.4 | 19.0 | 17.1 | 26.6 | 19.1 | 10.0 | 6.2 | 13.6 | 33.4 | 1.1 |
| | | S7 | No | 50% | 6.1 | 4.2 | 2.8 | 2.1 | 65.3 | 79.1 | 38.8 | 41.4 | 48.3 | 35.5 | 18.5 | 9.2 | 29.3 | 79.1 | 2.1 |
| | | S7 | No | 10% | 11.8 | 8.6 | 7.5 | 10.0 | 118.6 | 175.8 | 74.4 | 79.7 | 84.6 | 62.4 | 34.5 | 15.6 | 57.0 | 175.8 | 7.5 |
| | Post-Closure | S7 | No | 90% | 4.1 | 2.8 | 1.7 | 1.1 | 21.4 | 32.6 | 18.7 | 17.0 | 26.0 | 19.0 | 10.0 | 6.2 | 13.4 | 32.6 | 1.1 |
| | | S7 | No | 50% | 6.1 | 4.2 | 2.8 | 2.1 | 63.8 | 76.1 | 38.0 | 40.6 | 47.1 | 35.1 | 18.5 | 9.2 | 28.6 | 76.1 | 2.1 |
| | | S7 | No | 10% | 11.8 | 8.6 | 7.5 | 9.6 | 115.8 | 171.3 | 72.5 | 77.8 | 82.5 | 61.1 | 34.3 | 15.6 | 55.7 | 171.3 | 7.5 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -0.7 | -0.6 | -0.5 | -0.4 | -0.4 | -2.2 | -1.8 | -1.8 | -1.8 | -2.4 | -1.4 | -1.0 | -1.2 | -0.4 | -2.4 |
| | | S7 | No | 50% | -0.9 | -0.7 | -0.6 | -0.5 | -2.5 | -4.0 | -3.0 | -2.9 | -2.7 | -3.1 | -2.2 | -1.3 | -2.0 | -0.5 | -4.0 |
| | | S7 | No | 10% | -1.1 | -1.0 | -1.1 | -0.5 | -4.9 | -8.9 | -4.1 | -4.5 | -4.5 | -3.9 | -3.7 | -1.5 | -3.3 | -0.5 | -8.9 |
| | Post-Closure | S7 | No | 90% | -0.7 | -0.6 | -0.5 | -0.4 | -0.9 | -3.0 | -2.1 | -2.0 | -2.5 | -2.5 | -1.4 | -1.0 | -1.5 | -0.4 | -3.0 |
| | | S7 | No | 50% | -0.9 | -0.7 | -0.6 | -0.5 | -4.0 | -7.0 | -3.8 | -3.7 | -3.9 | -3.5 | -2.2 | -1.3 | -2.7 | -0.5 | -7.0 |
| | | S7 | No | 10% | -1.1 | -1.0 | -1.1 | -0.9 | -7.6 | -13.3 | -6.0 | -6.3 | -6.5 | -5.2 | -3.9 | -1.5 | -4.6 | -0.9 | -13.3 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -15.0 | -17.2 | -21.2 | -26.0 | -2.0 | -6.1 | -8.6 | -9.4 | -6.5 | -11.2 | -12.3 | -13.6 | -12.4 | -2.0 | -26.0 |
| | | S7 | No | 50% | -13.4 | -15.2 | -17.1 | -19.0 | -3.7 | -4.8 | -7.2 | -6.6 | -5.3 | -8.1 | -10.6 | -12.6 | -10.3 | -3.7 | -19.0 |
| | | S7 | No | 10% | -8.7 | -10.7 | -12.6 | -4.8 | -3.9 | -4.8 | -5.2 | -5.3 | -5.0 | -5.8 | -9.7 | -8.7 | -7.1 | -3.9 | -12.6 |
| | Post-Closure | S7 | No | 90% | -15.0 | -17.3 | -21.2 | -26.0 | -4.2 | -8.3 | -10.1 | -10.3 | -8.8 | -11.6 | -12.3 | -13.6 | -13.2 | -4.2 | -26.0 |
| | | S7 | No | 50% | -13.4 | -15.3 | -17.1 | -19.0 | -5.9 | -8.4 | -9.1 | -8.4 | -7.7 | -9.2 | -10.8 | -12.7 | -11.4 | -5.9 | -19.0 |
| | | S7 | No | 10% | -8.8 | -10.8 | -12.6 | -8.3 | -6.2 | -7.2 | -7.7 | -7.5 | -7.3 | -7.9 | -10.2 | -8.8 | -8.6 | -6.2 | -12.6 |
| **Tributary 1.24** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | No | 90% | 0.4 | 0.0 | 0.0 | 0.0 | 18.5 | 12.0 | 6.0 | 7.3 | 14.8 | 9.4 | 4.2 | 2.0 | 6.2 | 18.5 | 0.0 |
| | | S7 | No | 50% | 2.0 | 0.4 | 0.0 | 0.0 | 51.6 | 47.3 | 16.6 | 27.7 | 31.8 | 18.8 | 8.7 | 4.1 | 17.4 | 51.6 | 0.0 |
| | | S7 | No | 10% | 6.9 | 4.2 | 2.8 | 5.9 | 93.8 | 128.6 | 40.3 | 53.9 | 60.4 | 42.9 | 19.1 | 9.0 | 39.0 | 128.6 | 2.8 |
| | End of Mine | S7 | No | 90% | 0.1 | 0.0 | 0.0 | 0.0 | 18.3 | 12.1 | 5.4 | 6.6 | 14.4 | 8.7 | 4.0 | 1.7 | 5.9 | 18.3 | 0.0 |
| | | S7 | No | 50% | 1.9 | 0.2 | 0.0 | 0.0 | 52.1 | 49.6 | 17.0 | 27.9 | 32.0 | 18.2 | 8.4 | 4.0 | 17.6 | 52.1 | 0.0 |
| | | S7 | No | 10% | 7.0 | 4.3 | 2.8 | 6.1 | 95.7 | 133.0 | 42.3 | 54.9 | 61.5 | 43.5 | 19.0 | 9.1 | 39.9 | 133.0 | 2.8 |
| | Post-Closure | S7 | No | 90% | 0.4 | 0.0 | 0.0 | 0.0 | 18.6 | 12.2 | 6.0 | 7.3 | 15.0 | 9.4 | 4.2 | 2.0 | 6.3 | 18.6 | 0.0 |
| | | S7 | No | 50% | 2.1 | 0.4 | 0.0 | 0.0 | 51.9 | 48.2 | 16.9 | 28.0 | 32.1 | 18.8 | 8.8 | 4.1 | 17.6 | 51.9 | 0.0 |
| | | S7 | No | 10% | 7.0 | 4.3 | 2.9 | 6.0 | 94.4 | 130.0 | 41.1 | 54.4 | 61.0 | 43.3 | 19.2 | 9.0 | 39.4 | 130.0 | 2.9 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -0.3 | 0.0 | 0.0 | 0.0 | -0.2 | 0.1 | -0.6 | -0.7 | -0.5 | -0.6 | -0.2 | -0.3 | -0.3 | 0.1 | -0.7 |
| | | S7 | No | 50% | -0.2 | -0.2 | 0.0 | 0.0 | 0.5 | 2.3 | 0.4 | 0.2 | 0.2 | -0.5 | -0.4 | -0.1 | 0.2 | 2.3 | -0.5 |
| | | S7 | No | 10% | 0.1 | 0.0 | 0.0 | 0.2 | 2.0 | 4.4 | 2.0 | 1.0 | 1.1 | 0.6 | -0.1 | 0.2 | 1.0 | 4.4 | -0.1 |
| | Post-Closure | S7 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 |
| | | S7 | No | 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.9 | 0.2 | 0.3 | 0.3 | 0.0 | 0.1 | 0.0 | 0.2 | 0.9 | 0.0 |
| | | S7 | No | 10% | 0.1 | 0.1 | 0.0 | 0.1 | 0.6 | 1.4 | 0.8 | 0.5 | 0.6 | 0.4 | 0.1 | 0.1 | 0.4 | 1.4 | 0.0 |

**Table K4.16-24: South Fork Koktuli Change in Streamflow End of Mine and Post Closure—Scenario S7—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -82.1 | 0.0 | 0.0 | 0.0 | -1.1 | 1.1 | -9.7 | -9.4 | -3.1 | -6.7 | -5.3 | -14.4 | -10.9 | 1.1 | -82.1 |
| | | S7 | No | 50% | -8.5 | -57.5 | 0.0 | 0.0 | 1.0 | 4.9 | 2.4 | 0.9 | 0.6 | -2.9 | -4.1 | -1.9 | -5.4 | 4.9 | -57.5 |
| | | S7 | No | 10% | 0.8 | 1.1 | -1.2 | 3.4 | 2.1 | 3.4 | 5.0 | 1.9 | 1.8 | 1.4 | -0.5 | 1.8 | 1.8 | 5.0 | -1.2 |
| | Post-Closure | S7 | No | 90% | 1.2 | 0.0 | 0.0 | 0.0 | 0.1 | 1.9 | 1.0 | 0.5 | 0.7 | 0.3 | 0.8 | 0.7 | 0.6 | 1.9 | 0.0 |
| | | S7 | No | 50% | 1.3 | 4.4 | 0.0 | 0.0 | 0.5 | 1.9 | 1.5 | 1.1 | 0.9 | 0.1 | 0.7 | 0.9 | 1.1 | 4.4 | 0.0 |
| | | S7 | No | 10% | 1.1 | 1.6 | 1.1 | 1.7 | 0.7 | 1.1 | 2.0 | 1.0 | 0.9 | 0.9 | 0.7 | 1.0 | 1.2 | 2.0 | 0.7 |

Notes:

cfs = cubic feet per second
SFK = South Fork Koktuli

Source: Knight Piésold 2019q, r

**Table K4.16-25: Upper Talarik Creek Change in Streamflow End of Mine and Post-Closure—Scenario S7—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| **UTC-A** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | No | 90% | 119.2 | 104.7 | 93.3 | 89.3 | 228.2 | 291.6 | 175.6 | 173.6 | 209.2 | 218.3 | 171.5 | 140.4 | 167.9 | 291.6 | 89.3 |
| | | S7 | No | 50% | 146.3 | 127.0 | 112.6 | 109.7 | 537.2 | 437.7 | 265.5 | 294.0 | 392.1 | 350.1 | 245.8 | 180.0 | 266.5 | 537.2 | 109.7 |
| | | S7 | No | 10% | 241.1 | 185.8 | 166.7 | 188.7 | 1013.4 | 917.8 | 504.9 | 481.6 | 650.7 | 525.5 | 433.2 | 272.3 | 465.1 | 1,013.4 | 166.7 |
| | End of Mine | S7 | No | 90% | 116.9 | 102.7 | 91.4 | 87.6 | 226.4 | 289.2 | 173.0 | 170.9 | 206.5 | 215.4 | 168.8 | 137.9 | 165.6 | 289.2 | 87.6 |
| | | S7 | No | 50% | 143.9 | 124.9 | 110.7 | 108.0 | 535.4 | 435.4 | 262.8 | 291.3 | 389.4 | 347.3 | 243.1 | 177.4 | 264.1 | 535.4 | 108.0 |
| | | S7 | No | 10% | 238.7 | 183.8 | 164.8 | 187.0 | 1011.5 | 915.4 | 502.2 | 478.9 | 647.9 | 522.8 | 430.5 | 269.7 | 462.8 | 1011.5 | 164.8 |
| | Post-Closure | S7 | No | 90% | 118.1 | 103.8 | 92.5 | 88.5 | 227.4 | 290.6 | 174.4 | 172.4 | 208.0 | 217.0 | 170.3 | 139.3 | 166.9 | 290.6 | 88.5 |
| | | S7 | No | 50% | 145.2 | 126.0 | 111.7 | 108.9 | 536.4 | 436.7 | 264.3 | 292.8 | 390.9 | 348.9 | 244.6 | 178.8 | 265.4 | 536.4 | 108.9 |
| | | S7 | No | 10% | 240.0 | 184.9 | 165.8 | 187.9 | 1012.5 | 916.8 | 503.7 | 480.4 | 649.5 | 524.3 | 432.0 | 271.2 | 464.1 | 1012.5 | 165.8 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -2.3 | -2.0 | -1.9 | -1.7 | -1.8 | -2.4 | -2.6 | -2.7 | -2.8 | -2.8 | -2.8 | -2.5 | -2.4 | -1.7 | -2.8 |
| | | S7 | No | 50% | -2.3 | -2.1 | -1.9 | -1.7 | -1.8 | -2.3 | -2.6 | -2.7 | -2.7 | -2.7 | -2.7 | -2.6 | -2.4 | -1.7 | -2.7 |
| | | S7 | No | 10% | -2.4 | -2.0 | -1.8 | -1.7 | -1.9 | -2.4 | -2.6 | -2.7 | -2.8 | -2.8 | -2.7 | -2.5 | -2.4 | -1.7 | -2.8 |
| | Post-Closure | S7 | No | 90% | -1.0 | -0.9 | -0.9 | -0.7 | -0.8 | -1.0 | -1.1 | -1.2 | -1.2 | -1.3 | -1.2 | -1.1 | -1.0 | -0.7 | -1.3 |
| | | S7 | No | 50% | -1.0 | -0.9 | -0.9 | -0.8 | -0.8 | -1.0 | -1.2 | -1.2 | -1.2 | -1.2 | -1.2 | -1.1 | -1.0 | -0.8 | -1.2 |
| | | S7 | No | 10% | -1.1 | -0.9 | -0.8 | -0.8 | -0.9 | -1.1 | -1.2 | -1.2 | -1.2 | -1.2 | -1.2 | -1.1 | -1.1 | -0.8 | -1.2 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -1.9 | -1.9 | -2.0 | -1.9 | -0.8 | -0.8 | -1.5 | -1.5 | -1.3 | -1.3 | -1.6 | -1.8 | -1.5 | -0.8 | -2.0 |
| | | S7 | No | 50% | -1.6 | -1.7 | -1.7 | -1.5 | -0.3 | -0.5 | -1.0 | -0.9 | -0.7 | -0.8 | -1.1 | -1.4 | -1.1 | -0.3 | -1.7 |
| | | S7 | No | 10% | -1.0 | -1.1 | -1.1 | -0.9 | -0.2 | -0.3 | -0.5 | -0.6 | -0.4 | -0.5 | -0.6 | -0.9 | -0.7 | -0.2 | -1.1 |
| | Post-Closure | S7 | No | 90% | -0.9 | -0.9 | -0.9 | -0.8 | -0.4 | -0.4 | -0.7 | -0.7 | -0.6 | -0.6 | -0.7 | -0.8 | -0.7 | -0.4 | -0.9 |
| | | S7 | No | 50% | -0.7 | -0.7 | -0.8 | -0.7 | -0.2 | -0.2 | -0.4 | -0.4 | -0.3 | -0.3 | -0.5 | -0.6 | -0.5 | -0.2 | -0.8 |
| | | S7 | No | 10% | -0.4 | -0.5 | -0.5 | -0.4 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.4 | -0.3 | -0.1 | -0.5 |
| **UTC-B** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | No | 90% | 131.3 | 115.4 | 102.8 | 98.4 | 251.4 | 321.3 | 193.4 | 191.2 | 230.5 | 240.5 | 189.0 | 154.7 | 185.0 | 321.3 | 98.4 |
| | | S7 | No | 50% | 161.2 | 139.9 | 124.1 | 120.8 | 591.8 | 482.2 | 292.5 | 323.9 | 431.9 | 385.7 | 270.8 | 198.3 | 293.6 | 591.8 | 120.8 |
| | | S7 | No | 10% | 265.6 | 204.7 | 183.6 | 207.9 | 1116.5 | 1011.2 | 556.2 | 530.6 | 716.9 | 579.0 | 477.3 | 300.0 | 512.5 | 1116.5 | 183.6 |
| | End of Mine | S7 | No | 90% | 129.0 | 113.3 | 100.9 | 96.7 | 249.6 | 318.9 | 190.8 | 188.6 | 227.7 | 237.6 | 186.2 | 152.2 | 182.6 | 318.9 | 96.7 |
| | | S7 | No | 50% | 158.8 | 137.8 | 122.1 | 119.1 | 590.0 | 479.9 | 289.8 | 321.2 | 429.2 | 382.9 | 268.1 | 195.7 | 291.2 | 590.0 | 119.1 |
| | | S7 | No | 10% | 263.2 | 202.7 | 181.8 | 206.2 | 1114.6 | 1008.8 | 553.6 | 527.9 | 714.1 | 576.2 | 474.6 | 297.4 | 510.1 | 1114.6 | 181.8 |
| | Post-Closure | S7 | No | 90% | 130.3 | 114.5 | 102.0 | 97.6 | 250.6 | 320.2 | 192.3 | 190.0 | 229.3 | 239.2 | 187.8 | 153.6 | 183.9 | 320.2 | 97.6 |
| | | S7 | No | 50% | 160.1 | 139.0 | 123.2 | 120.0 | 591.0 | 481.2 | 291.3 | 322.7 | 430.8 | 384.5 | 269.6 | 197.1 | 292.5 | 591.0 | 120.0 |
| | | S7 | No | 10% | 264.5 | 203.8 | 182.8 | 207.1 | 1115.6 | 1010.1 | 555.1 | 529.4 | 715.7 | 577.8 | 476.1 | 298.9 | 511.4 | 1115.6 | 182.8 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -2.3 | -2.0 | -1.9 | -1.7 | -1.8 | -2.4 | -2.6 | -2.7 | -2.8 | -2.8 | -2.8 | -2.5 | -2.4 | -1.7 | -2.8 |
| | | S7 | No | 50% | -2.3 | -2.1 | -1.9 | -1.7 | -1.8 | -2.3 | -2.6 | -2.7 | -2.7 | -2.7 | -2.7 | -2.6 | -2.4 | -1.7 | -2.7 |
| | | S7 | No | 10% | -2.4 | -2.0 | -1.8 | -1.7 | -1.9 | -2.4 | -2.6 | -2.7 | -2.8 | -2.8 | -2.7 | -2.5 | -2.4 | -1.7 | -2.8 |
| | Post-Closure | S7 | No | 90% | -1.0 | -0.9 | -0.9 | -0.7 | -0.8 | -1.0 | -1.1 | -1.2 | -1.2 | -1.3 | -1.2 | -1.1 | -1.0 | -0.7 | -1.3 |
| | | S7 | No | 50% | -1.0 | -0.9 | -0.9 | -0.8 | -0.8 | -1.0 | -1.2 | -1.2 | -1.2 | -1.2 | -1.2 | -1.1 | -1.0 | -0.8 | -1.2 |
| | | S7 | No | 10% | -1.1 | -0.9 | -0.8 | -0.8 | -0.9 | -1.1 | -1.2 | -1.2 | -1.2 | -1.2 | -1.2 | -1.1 | -1.1 | -0.8 | -1.2 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -1.7 | -1.8 | -1.9 | -1.7 | -0.7 | -0.7 | -1.3 | -1.4 | -1.2 | -1.2 | -1.5 | -1.6 | -1.4 | -0.7 | -1.9 |
| | | S7 | No | 50% | -1.5 | -1.5 | -1.6 | -1.4 | -0.3 | -0.5 | -0.9 | -0.8 | -0.6 | -0.7 | -1.0 | -1.3 | -1.0 | -0.3 | -1.6 |
| | | S7 | No | 10% | -0.9 | -1.0 | -1.0 | -0.8 | -0.2 | -0.2 | -0.5 | -0.5 | -0.4 | -0.5 | -0.6 | -0.8 | -0.6 | -0.2 | -1.0 |
| | Post-Closure | S7 | No | 90% | -0.8 | -0.8 | -0.8 | -0.8 | -0.3 | -0.3 | -0.6 | -0.6 | -0.5 | -0.5 | -0.7 | -0.7 | -0.6 | -0.3 | -0.8 |
| | | S7 | No | 50% | -0.6 | -0.7 | -0.7 | -0.6 | -0.1 | -0.2 | -0.4 | -0.4 | -0.3 | -0.3 | -0.4 | -0.6 | -0.4 | -0.1 | -0.7 |
| | | S7 | No | 10% | -0.4 | -0.4 | -0.5 | -0.4 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.4 | -0.3 | -0.1 | -0.5 |
| **UTC-C** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | No | 90% | 96.7 | 85.8 | 76.8 | 74.1 | 179.4 | 235.3 | 142.7 | 141.4 | 167.4 | 174.4 | 138.2 | 114.0 | 135.5 | 235.3 | 74.1 |
| | | S7 | No | 50% | 118.9 | 103.1 | 91.9 | 88.6 | 407.0 | 355.2 | 215.1 | 232.2 | 299.0 | 275.3 | 195.4 | 145.0 | 210.6 | 407.0 | 88.6 |
| | | S7 | No | 10% | 189.4 | 145.7 | 134.1 | 142.1 | 774.7 | 722.0 | 407.5 | 370.7 | 496.9 | 418.6 | 337.6 | 210.7 | 362.5 | 774.7 | 134.1 |

**Table K4.16-25: Upper Talarik Creek Change in Streamflow End of Mine and Post-Closure—Scenario S7—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | End of Mine | S7 | No | 90% | 94.5 | 83.8 | 75.0 | 72.4 | 177.6 | 232.9 | 140.1 | 138.8 | 164.6 | 171.6 | 135.5 | 111.5 | 133.2 | 232.9 | 72.4 |
| | | S7 | No | 50% | 116.6 | 101.0 | 90.0 | 86.9 | 405.1 | 352.9 | 212.5 | 229.5 | 296.3 | 272.5 | 192.6 | 142.5 | 208.2 | 405.1 | 86.9 |
| | | S7 | No | 10% | 187.1 | 143.7 | 132.3 | 140.5 | 772.8 | 719.6 | 404.9 | 368.0 | 494.2 | 415.8 | 334.9 | 208.1 | 360.2 | 772.8 | 132.3 |
| | Post-Closure | S7 | No | 90% | 95.7 | 84.9 | 76.0 | 73.4 | 178.6 | 234.2 | 141.5 | 140.3 | 166.2 | 173.2 | 137.0 | 112.9 | 134.5 | 234.2 | 73.4 |
| | | S7 | No | 50% | 117.9 | 102.2 | 91.0 | 87.8 | 406.1 | 354.2 | 214.0 | 231.0 | 297.8 | 274.1 | 194.2 | 143.9 | 209.5 | 406.1 | 87.8 |
| | | S7 | No | 10% | 188.4 | 144.8 | 133.3 | 141.4 | 773.8 | 721.0 | 406.4 | 369.5 | 495.7 | 417.4 | 336.4 | 209.6 | 361.5 | 773.8 | 133.3 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -2.3 | -2.0 | -1.8 | -1.7 | -1.8 | -2.4 | -2.6 | -2.7 | -2.8 | -2.9 | -2.8 | -2.5 | -2.3 | -1.7 | -2.9 |
| | | S7 | No | 50% | -2.3 | -2.1 | -1.9 | -1.7 | -1.8 | -2.3 | -2.6 | -2.7 | -2.7 | -2.7 | -2.7 | -2.6 | -2.4 | -1.7 | -2.7 |
| | | S7 | No | 10% | -2.3 | -2.0 | -1.9 | -1.7 | -1.9 | -2.4 | -2.6 | -2.7 | -2.7 | -2.8 | -2.7 | -2.6 | -2.4 | -1.7 | -2.8 |
| | Post-Closure | S7 | No | 90% | -1.0 | -0.9 | -0.8 | -0.7 | -0.8 | -1.0 | -1.1 | -1.2 | -1.2 | -1.3 | -1.2 | -1.1 | -1.0 | -0.7 | -1.3 |
| | | S7 | No | 50% | -1.0 | -1.0 | -0.8 | -0.8 | -0.8 | -1.0 | -1.2 | -1.2 | -1.2 | -1.2 | -1.2 | -1.1 | -1.1 | -0.8 | -1.2 |
| | | S7 | No | 10% | -1.0 | -0.9 | -0.8 | -0.8 | -0.9 | -1.1 | -1.2 | -1.2 | -1.2 | -1.2 | -1.2 | -1.1 | -1.0 | -0.8 | -1.2 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -2.4 | -2.4 | -2.4 | -2.2 | -1.0 | -1.0 | -1.8 | -1.9 | -1.7 | -1.6 | -2.0 | -2.2 | -1.9 | -1.0 | -2.4 |
| | | S7 | No | 50% | -1.9 | -2.1 | -2.0 | -2.0 | -0.5 | -0.7 | -1.2 | -1.2 | -0.9 | -1.0 | -1.4 | -1.8 | -1.4 | -0.5 | -2.1 |
| | | S7 | No | 10% | -1.2 | -1.4 | -1.4 | -1.2 | -0.2 | -0.3 | -0.6 | -0.7 | -0.5 | -0.7 | -0.8 | -1.2 | -0.9 | -0.2 | -1.4 |
| | Post-Closure | S7 | No | 90% | -1.1 | -1.1 | -1.1 | -1.0 | -0.5 | -0.4 | -0.8 | -0.8 | -0.7 | -0.7 | -0.9 | -1.0 | -0.8 | -0.4 | -1.1 |
| | | S7 | No | 50% | -0.9 | -0.9 | -0.9 | -0.9 | -0.2 | -0.3 | -0.5 | -0.5 | -0.4 | -0.4 | -0.6 | -0.8 | -0.6 | -0.2 | -0.9 |
| | | S7 | No | 10% | -0.5 | -0.6 | -0.6 | -0.5 | -0.1 | -0.1 | -0.3 | -0.3 | -0.2 | -0.3 | -0.4 | -0.5 | -0.4 | -0.1 | -0.6 |
| **UTC-D** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | No | 90% | 58.8 | 50.8 | 43.3 | 41.1 | 117.9 | 167.1 | 94.8 | 93.4 | 109.0 | 116.7 | 89.5 | 70.6 | 87.7 | 167.1 | 41.1 |
| | | S7 | No | 50% | 79.3 | 66.2 | 56.5 | 51.5 | 285.2 | 261.6 | 155.2 | 158.6 | 206.6 | 191.5 | 133.4 | 99.4 | 145.4 | 285.2 | 51.5 |
| | | S7 | No | 10% | 121.2 | 96.2 | 87.0 | 83.5 | 569.6 | 563.6 | 310.3 | 259.2 | 354.7 | 303.1 | 247.6 | 147.9 | 262.0 | 569.6 | 83.5 |
| | End of Mine | S7 | No | 90% | 57.0 | 49.1 | 41.9 | 39.9 | 116.5 | 165.2 | 92.6 | 91.2 | 106.7 | 114.3 | 87.1 | 68.5 | 85.8 | 165.2 | 39.9 |
| | | S7 | No | 50% | 77.4 | 64.5 | 55.0 | 50.2 | 283.8 | 259.7 | 153.0 | 156.4 | 204.3 | 189.1 | 131.1 | 97.3 | 143.5 | 283.8 | 50.2 |
| | | S7 | No | 10% | 119.4 | 94.6 | 85.6 | 82.3 | 568.2 | 561.7 | 308.1 | 257.0 | 352.4 | 300.7 | 245.3 | 145.8 | 260.1 | 568.2 | 82.3 |
| | Post-Closure | S7 | No | 90% | 58.1 | 50.1 | 42.7 | 40.6 | 117.3 | 166.3 | 93.9 | 92.5 | 108.0 | 115.7 | 88.5 | 69.7 | 86.9 | 166.3 | 40.6 |
| | | S7 | No | 50% | 78.5 | 65.5 | 55.9 | 50.9 | 284.6 | 260.8 | 154.3 | 157.7 | 205.7 | 190.5 | 132.4 | 98.6 | 144.6 | 284.6 | 50.9 |
| | | S7 | No | 10% | 120.5 | 95.5 | 86.4 | 83.0 | 569.0 | 562.8 | 309.4 | 258.3 | 353.8 | 302.1 | 246.7 | 147.0 | 261.2 | 569.0 | 83.0 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -1.9 | -1.6 | -1.4 | -1.2 | -1.4 | -1.9 | -2.2 | -2.2 | -2.3 | -2.4 | -2.3 | -2.1 | -1.9 | -1.2 | -2.4 |
| | | S7 | No | 50% | -1.9 | -1.6 | -1.4 | -1.2 | -1.4 | -1.9 | -2.2 | -2.2 | -2.3 | -2.4 | -2.3 | -2.1 | -1.9 | -1.2 | -2.4 |
| | | S7 | No | 10% | -1.9 | -1.6 | -1.4 | -1.2 | -1.4 | -1.9 | -2.2 | -2.2 | -2.3 | -2.3 | -2.3 | -2.1 | -1.9 | -1.2 | -2.3 |
| | Post-Closure | S7 | No | 90% | -0.8 | -0.7 | -0.6 | -0.5 | -0.6 | -0.8 | -0.9 | -0.9 | -1.0 | -1.0 | -1.0 | -0.9 | -0.8 | -0.5 | -1.0 |
| | | S7 | No | 50% | -0.8 | -0.7 | -0.6 | -0.5 | -0.6 | -0.8 | -0.9 | -0.9 | -1.0 | -1.0 | -1.0 | -0.9 | -0.8 | -0.5 | -1.0 |
| | | S7 | No | 10% | -0.8 | -0.7 | -0.6 | -0.5 | -0.6 | -0.8 | -0.9 | -0.9 | -1.0 | -1.0 | -1.0 | -0.9 | -0.8 | -0.5 | -1.0 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -3.2 | -3.2 | -3.3 | -3.0 | -1.2 | -1.2 | -2.3 | -2.4 | -2.1 | -2.0 | -2.6 | -3.0 | -2.5 | -1.2 | -3.3 |
| | | S7 | No | 50% | -2.4 | -2.5 | -2.5 | -2.4 | -0.5 | -0.7 | -1.4 | -1.4 | -1.1 | -1.2 | -1.7 | -2.1 | -1.7 | -0.5 | -2.5 |
| | | S7 | No | 10% | -1.5 | -1.7 | -1.6 | -1.5 | -0.2 | -0.3 | -0.7 | -0.9 | -0.6 | -0.8 | -0.9 | -1.4 | -1.0 | -0.2 | -1.7 |
| | Post-Closure | S7 | No | 90% | -1.3 | -1.4 | -1.4 | -1.2 | -0.5 | -0.5 | -1.0 | -1.0 | -0.9 | -0.8 | -1.1 | -1.3 | -1.0 | -0.5 | -1.4 |
| | | S7 | No | 50% | -1.0 | -1.0 | -1.1 | -1.0 | -0.2 | -0.3 | -0.6 | -0.6 | -0.5 | -0.5 | -0.7 | -0.9 | -0.7 | -0.2 | -1.1 |
| | | S7 | No | 10% | -0.6 | -0.7 | -0.7 | -0.6 | -0.1 | -0.1 | -0.3 | -0.4 | -0.3 | -0.3 | -0.4 | -0.6 | -0.4 | -0.1 | -0.7 |
| **UTC-E** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | No | 90% | 35.2 | 27.2 | 20.9 | 19.1 | 85.4 | 133.3 | 68.4 | 67.4 | 83.0 | 89.3 | 64.0 | 46.6 | 61.7 | 133.3 | 19.1 |
| | | S7 | No | 50% | 51.3 | 38.8 | 30.1 | 26.8 | 207.2 | 205.8 | 122.0 | 122.3 | 163.0 | 153.0 | 102.6 | 70.0 | 107.7 | 207.2 | 26.8 |
| | | S7 | No | 10% | 88.2 | 65.8 | 58.9 | 56.5 | 430.0 | 455.3 | 252.8 | 206.9 | 282.6 | 244.9 | 197.1 | 112.0 | 204.2 | 455.3 | 56.5 |
| | End of Mine | S7 | No | 90% | 33.4 | 25.5 | 19.5 | 17.9 | 84.0 | 131.4 | 66.2 | 65.2 | 80.7 | 87.0 | 61.7 | 44.5 | 59.7 | 131.4 | 17.9 |
| | | S7 | No | 50% | 49.4 | 37.1 | 28.6 | 25.5 | 205.8 | 203.9 | 119.8 | 120.0 | 160.7 | 150.7 | 100.3 | 67.9 | 105.8 | 205.8 | 25.5 |
| | | S7 | No | 10% | 86.3 | 64.1 | 57.5 | 55.3 | 428.6 | 453.3 | 250.6 | 204.6 | 280.3 | 242.5 | 194.8 | 109.8 | 202.3 | 453.3 | 55.3 |

**Table K4.16-25: Upper Talarik Creek Change in Streamflow End of Mine and Post-Closure—Scenario S7—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S7 | No | 90% | 34.4 | 26.5 | 20.3 | 18.6 | 84.8 | 132.5 | 67.4 | 66.5 | 82.0 | 88.4 | 63.1 | 45.7 | 60.8 | 132.5 | 18.6 |
| | | S7 | No | 50% | 50.5 | 38.1 | 29.5 | 26.3 | 206.6 | 205.0 | 121.1 | 121.3 | 162.1 | 152.1 | 101.7 | 69.2 | 106.9 | 206.6 | 26.3 |
| | | S7 | No | 10% | 87.4 | 65.1 | 58.3 | 56.0 | 429.4 | 454.4 | 251.8 | 205.9 | 281.6 | 243.9 | 196.1 | 111.1 | 203.4 | 454.4 | 56.0 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -1.9 | -1.6 | -1.4 | -1.2 | -1.4 | -1.9 | -2.2 | -2.2 | -2.3 | -2.4 | -2.3 | -2.1 | -1.9 | -1.2 | -2.4 |
| | | S7 | No | 50% | -1.9 | -1.6 | -1.4 | -1.2 | -1.4 | -1.9 | -2.2 | -2.2 | -2.3 | -2.4 | -2.3 | -2.1 | -1.9 | -1.2 | -2.4 |
| | | S7 | No | 10% | -1.9 | -1.6 | -1.4 | -1.2 | -1.4 | -1.9 | -2.2 | -2.2 | -2.3 | -2.3 | -2.3 | -2.1 | -1.9 | -1.2 | -2.3 |
| | Post-Closure | S7 | No | 90% | -0.8 | -0.7 | -0.6 | -0.5 | -0.6 | -0.8 | -0.9 | -0.9 | -1.0 | -1.0 | -1.0 | -0.9 | -0.8 | -0.5 | -1.0 |
| | | S7 | No | 50% | -0.8 | -0.7 | -0.6 | -0.5 | -0.6 | -0.8 | -0.9 | -0.9 | -1.0 | -1.0 | -1.0 | -0.9 | -0.8 | -0.5 | -1.0 |
| | | S7 | No | 10% | -0.8 | -0.7 | -0.6 | -0.5 | -0.6 | -0.8 | -0.9 | -0.9 | -1.0 | -1.0 | -1.0 | -0.9 | -0.8 | -0.5 | -1.0 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -5.3 | -6.0 | -6.8 | -6.4 | -1.6 | -1.4 | -3.2 | -3.3 | -2.8 | -2.6 | -3.6 | -4.6 | -4.0 | -1.4 | -6.8 |
| | | S7 | No | 50% | -3.7 | -4.2 | -4.7 | -4.6 | -0.7 | -0.9 | -1.8 | -1.8 | -1.4 | -1.5 | -2.3 | -3.0 | -2.6 | -0.7 | -4.7 |
| | | S7 | No | 10% | -2.1 | -2.5 | -2.4 | -2.2 | -0.3 | -0.4 | -0.9 | -1.1 | -0.8 | -1.0 | -1.2 | -1.9 | -1.4 | -0.3 | -2.5 |
| | Post-Closure | S7 | No | 90% | -2.2 | -2.5 | -2.8 | -2.7 | -0.7 | -0.6 | -1.3 | -1.4 | -1.2 | -1.1 | -1.5 | -1.9 | -1.7 | -0.6 | -2.8 |
| | | S7 | No | 50% | -1.5 | -1.8 | -2.0 | -1.9 | -0.3 | -0.4 | -0.8 | -0.8 | -0.6 | -0.6 | -0.9 | -1.3 | -1.1 | -0.3 | -2.0 |
| | | S7 | No | 10% | -0.9 | -1.0 | -1.0 | -0.9 | -0.1 | -0.2 | -0.4 | -0.5 | -0.3 | -0.4 | -0.5 | -0.8 | -0.6 | -0.1 | -1.0 |
| **UTC-F** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | No | 90% | 6.1 | 5.1 | 4.2 | 3.7 | 14.7 | 21.1 | 9.8 | 9.4 | 12.0 | 12.6 | 9.5 | 7.5 | 9.7 | 21.1 | 3.7 |
| | | S7 | No | 50% | 8.2 | 6.7 | 5.6 | 4.9 | 35.6 | 33.1 | 17.5 | 18.7 | 25.6 | 22.9 | 15.3 | 10.4 | 17.0 | 35.6 | 4.9 |
| | | S7 | No | 10% | 14.1 | 10.8 | 9.9 | 9.1 | 67.8 | 75.6 | 39.5 | 32.1 | 43.6 | 38.5 | 29.6 | 16.7 | 32.3 | 75.6 | 9.1 |
| | End of Mine | S7 | No | 90% | 5.2 | 4.3 | 3.5 | 3.1 | 14.0 | 20.2 | 8.7 | 8.3 | 10.9 | 11.4 | 8.4 | 6.5 | 8.7 | 20.2 | 3.1 |
| | | S7 | No | 50% | 7.2 | 5.9 | 4.9 | 4.3 | 34.9 | 32.2 | 16.4 | 17.6 | 24.5 | 21.7 | 14.2 | 9.3 | 16.1 | 34.9 | 4.3 |
| | | S7 | No | 10% | 13.2 | 10.0 | 9.2 | 8.5 | 67.1 | 74.7 | 38.4 | 31.0 | 42.5 | 37.3 | 28.5 | 15.6 | 31.3 | 74.7 | 8.5 |
| | Post-Closure | S7 | No | 90% | 5.7 | 4.8 | 3.9 | 3.5 | 14.4 | 20.7 | 9.4 | 8.9 | 11.6 | 12.1 | 9.0 | 7.1 | 9.3 | 20.7 | 3.5 |
| | | S7 | No | 50% | 7.8 | 6.3 | 5.3 | 4.7 | 35.3 | 32.7 | 17.0 | 18.3 | 25.1 | 22.4 | 14.9 | 9.9 | 16.6 | 35.3 | 4.7 |
| | | S7 | No | 10% | 13.7 | 10.5 | 9.6 | 8.9 | 67.5 | 75.2 | 39.1 | 31.6 | 43.2 | 38.0 | 29.2 | 16.2 | 31.9 | 75.2 | 8.9 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -0.9 | -0.8 | -0.7 | -0.6 | -0.7 | -1.0 | -1.1 | -1.1 | -1.1 | -1.2 | -1.2 | -1.1 | -1.0 | -0.6 | -1.2 |
| | | S7 | No | 50% | -0.9 | -0.8 | -0.7 | -0.6 | -0.7 | -1.0 | -1.1 | -1.1 | -1.1 | -1.2 | -1.2 | -1.1 | -1.0 | -0.6 | -1.2 |
| | | S7 | No | 10% | -0.9 | -0.8 | -0.7 | -0.6 | -0.7 | -1.0 | -1.1 | -1.1 | -1.1 | -1.2 | -1.1 | -1.1 | -1.0 | -0.6 | -1.2 |
| | Post-Closure | S7 | No | 90% | -0.4 | -0.3 | -0.3 | -0.3 | -0.3 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.4 | -0.3 | -0.5 |
| | | S7 | No | 50% | -0.4 | -0.3 | -0.3 | -0.3 | -0.3 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.4 | -0.3 | -0.5 |
| | | S7 | No | 10% | -0.4 | -0.3 | -0.3 | -0.3 | -0.3 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.4 | -0.3 | -0.5 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -15.3 | -16.1 | -17.1 | -16.5 | -4.8 | -4.6 | -11.1 | -11.8 | -9.5 | -9.3 | -12.1 | -14.2 | -11.9 | -4.6 | -17.1 |
| | | S7 | No | 50% | -11.5 | -12.3 | -12.6 | -12.6 | -2.0 | -2.9 | -6.3 | -5.9 | -4.4 | -5.1 | -7.5 | -10.3 | -7.8 | -2.0 | -12.6 |
| | | S7 | No | 10% | -6.7 | -7.5 | -7.1 | -6.8 | -1.0 | -1.3 | -2.8 | -3.5 | -2.6 | -3.1 | -3.9 | -6.4 | -4.4 | -1.0 | -7.5 |
| | Post-Closure | S7 | No | 90% | -6.4 | -6.7 | -7.1 | -6.9 | -2.0 | -1.9 | -4.7 | -4.9 | -4.0 | -3.9 | -5.1 | -5.9 | -5.0 | -1.9 | -7.1 |
| | | S7 | No | 50% | -4.8 | -5.2 | -5.3 | -5.3 | -0.8 | -1.2 | -2.6 | -2.5 | -1.9 | -2.2 | -3.2 | -4.3 | -3.3 | -0.8 | -5.3 |
| | | S7 | No | 10% | -2.8 | -3.1 | -3.0 | -2.8 | -0.4 | -0.5 | -1.2 | -1.5 | -1.1 | -1.3 | -1.6 | -2.7 | -1.8 | -0.4 | -3.1 |
| **Tributary 1.19** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | No | 90% | 25.5 | 24.8 | 25.4 | 25.0 | 26.4 | 27.6 | 26.5 | 26.4 | 26.6 | 26.4 | 25.8 | 25.8 | 26.0 | 27.6 | 24.8 |
| | | S7 | No | 50% | 26.4 | 26.1 | 26.0 | 25.9 | 30.8 | 33.7 | 29.8 | 28.5 | 28.8 | 28.3 | 27.6 | 26.8 | 28.2 | 33.7 | 25.9 |
| | | S7 | No | 10% | 27.7 | 27.2 | 27.1 | 26.9 | 39.5 | 39.9 | 36.7 | 32.0 | 32.0 | 32.7 | 30.9 | 29.2 | 31.8 | 39.9 | 26.9 |
| | End of Mine | S7 | No | 90% | 25.1 | 24.3 | 24.9 | 24.5 | 25.8 | 27.1 | 26.0 | 26.0 | 26.1 | 26.0 | 25.3 | 25.4 | 25.5 | 27.1 | 24.3 |
| | | S7 | No | 50% | 26.0 | 25.6 | 25.5 | 25.4 | 30.3 | 33.2 | 29.3 | 28.1 | 28.4 | 27.9 | 27.1 | 26.4 | 27.8 | 33.2 | 25.4 |
| | | S7 | No | 10% | 27.3 | 26.8 | 26.7 | 26.5 | 39.1 | 39.5 | 36.1 | 31.5 | 31.6 | 32.2 | 30.4 | 28.7 | 31.4 | 39.5 | 26.5 |
| | Post-Closure | S7 | No | 90% | 25.3 | 24.5 | 25.1 | 24.7 | 26.1 | 27.3 | 26.2 | 26.1 | 26.4 | 26.2 | 25.6 | 25.6 | 25.8 | 27.3 | 24.5 |
| | | S7 | No | 50% | 26.2 | 25.8 | 25.7 | 25.6 | 30.5 | 33.5 | 29.5 | 28.3 | 28.5 | 28.0 | 27.3 | 26.6 | 28.0 | 33.5 | 25.6 |
| | | S7 | No | 10% | 27.5 | 27.0 | 26.9 | 26.7 | 39.3 | 39.7 | 36.4 | 31.8 | 31.8 | 32.4 | 30.6 | 28.9 | 31.6 | 39.7 | 26.7 |

**Table K4.16-25: Upper Talarik Creek Change in Streamflow End of Mine and Post-Closure—Scenario S7—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -0.5 | -0.4 | -0.5 | -0.5 | -0.5 | -0.4 | -0.5 | -0.4 | -0.5 | -0.4 | -0.5 | -0.4 | -0.5 | -0.4 | -0.5 |
| | | S7 | No | 50% | -0.4 | -0.4 | -0.5 | -0.4 | -0.5 | -0.5 | -0.5 | -0.4 | -0.4 | -0.4 | -0.4 | -0.5 | -0.5 | -0.4 | -0.5 |
| | | S7 | No | 10% | -0.4 | -0.4 | -0.4 | -0.4 | -0.5 | -0.4 | -0.5 | -0.5 | -0.4 | -0.5 | -0.5 | -0.4 | -0.5 | -0.4 | -0.5 |
| | Post-Closure | S7 | No | 90% | -0.3 | -0.2 | -0.2 | -0.3 | -0.3 | -0.2 | -0.3 | -0.2 | -0.3 | -0.2 | -0.3 | -0.2 | -0.3 | -0.2 | -0.3 |
| | | S7 | No | 50% | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.2 | -0.2 | -0.3 | -0.2 | -0.2 | -0.3 | -0.2 | -0.3 |
| | | S7 | No | 10% | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.2 | -0.3 | -0.2 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.2 | -0.3 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | No | 90% | -1.9 | -1.7 | -1.8 | -2.0 | -2.0 | -1.6 | -2.0 | -1.5 | -1.9 | -1.5 | -2.0 | -1.7 | -1.8 | -1.5 | -2.0 |
| | | S7 | No | 50% | -1.5 | -1.7 | -1.8 | -1.7 | -1.6 | -1.6 | -1.6 | -1.5 | -1.5 | -1.5 | -1.6 | -1.7 | -1.6 | -1.5 | -1.8 |
| | | S7 | No | 10% | -1.5 | -1.5 | -1.5 | -1.5 | -1.2 | -1.1 | -1.4 | -1.4 | -1.4 | -1.4 | -1.6 | -1.5 | -1.4 | -1.1 | -1.6 |
| | Post-Closure | S7 | No | 90% | -1.0 | -0.9 | -0.9 | -1.1 | -1.1 | -0.9 | -1.1 | -0.9 | -1.0 | -0.9 | -1.1 | -0.9 | -1.0 | -0.9 | -1.1 |
| | | S7 | No | 50% | -0.9 | -0.9 | -1.0 | -1.0 | -0.9 | -0.8 | -0.9 | -0.9 | -0.8 | -0.9 | -0.9 | -0.9 | -0.9 | -0.8 | -1.0 |
| | | S7 | No | 10% | -0.9 | -0.9 | -0.9 | -0.9 | -0.7 | -0.6 | -0.8 | -0.8 | -0.8 | -0.8 | -0.9 | -0.9 | -0.8 | -0.6 | -0.9 |

Notes:

cfs = cubic feet per second
UTC = Upper Talarik Creek

Source: Knight Piésold 2019q, r

**Table K4.16-26: North Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S8—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| NFK-A | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | No | 90% | 51.0 | 40.3 | 32.6 | 30.2 | 184.2 | 226.7 | 114.0 | 113.6 | 162.5 | 138.4 | 98.5 | 69.0 | 105.1 | 226.7 | 30.2 |
| | | S8 | No | 50% | 70.3 | 54.2 | 43.2 | 39.7 | 434.0 | 377.9 | 235.3 | 241.8 | 316.5 | 267.5 | 154.2 | 94.2 | 194.1 | 434.0 | 39.7 |
| | | S8 | No | 10% | 114.9 | 102.0 | 82.5 | 93.5 | 831.7 | 979.6 | 435.1 | 447.1 | 539.9 | 421.3 | 296.9 | 155.5 | 375.0 | 979.6 | 82.5 |
| | End of Mine | S8 | No | 90% | 36.3 | 27.2 | 21.0 | 19.0 | 163.0 | 182.8 | 92.8 | 94.6 | 139.9 | 118.9 | 79.1 | 51.1 | 85.5 | 182.8 | 19.0 |
| | | S8 | No | 50% | 53.1 | 39.1 | 29.9 | 27.6 | 366.7 | 297.3 | 186.6 | 194.3 | 258.2 | 224.5 | 130.7 | 75.4 | 157.0 | 366.7 | 27.6 |
| | | S8 | No | 10% | 99.3 | 86.0 | 64.1 | 79.9 | 717.9 | 785.8 | 350.2 | 369.6 | 446.1 | 346.4 | 246.1 | 137.8 | 310.8 | 785.8 | 64.1 |
| | Post-Closure | S8 | No | 90% | 45.4 | 35.2 | 28.1 | 26.0 | 181.4 | 217.1 | 110.3 | 110.4 | 159.3 | 134.8 | 91.7 | 62.8 | 100.2 | 217.1 | 26.0 |
| | | S8 | No | 50% | 63.7 | 48.6 | 38.3 | 35.2 | 424.7 | 368.1 | 224.9 | 233.6 | 307.9 | 252.6 | 148.1 | 87.7 | 186.1 | 424.7 | 35.2 |
| | | S8 | No | 10% | 111.0 | 97.3 | 76.5 | 89.9 | 814.6 | 953.3 | 420.2 | 433.3 | 523.4 | 409.0 | 276.5 | 151.7 | 363.1 | 953.3 | 76.5 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -14.8 | -13.0 | -11.6 | -11.1 | -21.2 | -43.8 | -21.2 | -19.0 | -22.5 | -19.5 | -19.3 | -17.9 | -19.6 | -11.1 | -43.8 |
| | | S8 | No | 50% | -17.2 | -15.1 | -13.3 | -12.1 | -67.3 | -80.5 | -48.7 | -47.5 | -58.3 | -43.0 | -23.6 | -18.8 | -37.1 | -12.1 | -80.5 |
| | | S8 | No | 10% | -15.6 | -16.0 | -18.4 | -13.6 | -113.8 | -193.9 | -84.9 | -77.5 | -93.8 | -75.0 | -50.7 | -17.7 | -64.2 | -13.6 | -193.9 |
| | Post-Closure | S8 | No | 90% | -5.7 | -5.1 | -4.4 | -4.1 | -2.8 | -9.6 | -3.6 | -3.1 | -3.2 | -3.7 | -6.8 | -6.2 | -4.9 | -2.8 | -9.6 |
| | | S8 | No | 50% | -6.6 | -5.6 | -4.9 | -4.5 | -9.3 | -9.8 | -10.4 | -8.2 | -8.5 | -14.9 | -6.1 | -6.5 | -8.0 | -4.5 | -14.9 |
| | | S8 | No | 10% | -3.9 | -4.8 | -5.9 | -3.6 | -17.1 | -26.4 | -14.9 | -13.9 | -16.4 | -12.3 | -20.4 | -3.9 | -11.9 | -3.6 | -26.4 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End-of-Mine | S8 | No | 90% | -28.9 | -32.3 | -35.6 | -36.9 | -11.5 | -19.3 | -18.6 | -16.7 | -13.9 | -14.1 | -19.6 | -26.0 | -22.8 | -11.5 | -36.9 |
| | | S8 | No | 50% | -24.5 | -27.9 | -30.7 | -30.6 | -15.5 | -21.3 | -20.7 | -19.6 | -18.4 | -16.1 | -15.3 | -19.9 | -21.7 | -15.3 | -30.7 |
| | | S8 | No | 10% | -13.6 | -15.7 | -22.3 | -14.5 | -13.7 | -19.8 | -19.5 | -17.3 | -17.4 | -17.8 | -17.1 | -11.4 | -16.7 | -11.4 | -22.3 |
| | Post-Closure | S8 | No | 90% | -11.1 | -12.6 | -13.6 | -13.7 | -1.5 | -4.2 | -3.2 | -2.8 | -2.0 | -2.7 | -6.9 | -9.0 | -6.9 | -1.5 | -13.7 |
| | | S8 | No | 50% | -9.4 | -10.4 | -11.4 | -11.3 | -2.1 | -2.6 | -4.4 | -3.4 | -2.7 | -5.6 | -4.0 | -6.9 | -6.2 | -2.1 | -11.4 |
| | | S8 | No | 10% | -3.4 | -4.7 | -7.2 | -3.8 | -2.1 | -2.7 | -3.4 | -3.1 | -3.0 | -2.9 | -6.9 | -2.5 | -3.8 | -2.1 | -7.2 |
| NFK-B | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | No | 90% | 47.0 | 37.0 | 29.8 | 27.1 | 150.1 | 195.9 | 101.3 | 102.4 | 141.5 | 122.8 | 87.9 | 62.5 | 92.1 | 195.9 | 27.1 |
| | | S8 | No | 50% | 65.0 | 49.9 | 39.6 | 34.9 | 379.7 | 332.5 | 203.8 | 213.4 | 274.3 | 234.7 | 133.1 | 85.9 | 170.6 | 379.7 | 34.9 |
| | | S8 | No | 10% | 105.4 | 89.1 | 76.3 | 77.3 | 720.4 | 868.9 | 387.7 | 389.6 | 477.6 | 368.3 | 264.9 | 136.1 | 330.1 | 868.9 | 76.3 |
| | End of Mine | S8 | No | 90% | 32.1 | 24.2 | 18.3 | 16.5 | 129.8 | 153.3 | 79.9 | 82.8 | 119.2 | 102.7 | 68.2 | 44.7 | 72.6 | 153.3 | 16.5 |
| | | S8 | No | 50% | 47.1 | 34.9 | 26.5 | 23.6 | 305.5 | 253.1 | 156.4 | 166.3 | 217.6 | 190.7 | 109.7 | 67.3 | 133.2 | 305.5 | 23.6 |
| | | S8 | No | 10% | 90.1 | 71.9 | 57.9 | 63.6 | 607.4 | 676.4 | 304.0 | 312.3 | 384.6 | 294.5 | 211.4 | 118.5 | 266.1 | 676.4 | 57.9 |
| | Post-Closure | S8 | No | 90% | 41.3 | 32.1 | 25.3 | 23.4 | 147.1 | 186.8 | 97.3 | 99.5 | 138.4 | 118.9 | 82.4 | 55.8 | 87.3 | 186.8 | 23.4 |
| | | S8 | No | 50% | 58.4 | 44.4 | 34.8 | 30.8 | 370.5 | 323.5 | 194.5 | 205.4 | 266.1 | 220.4 | 128.1 | 79.2 | 163.0 | 370.5 | 30.8 |
| | | S8 | No | 10% | 101.9 | 83.5 | 70.4 | 73.7 | 704.2 | 844.8 | 373.2 | 376.6 | 462.0 | 356.6 | 244.9 | 132.3 | 318.7 | 844.8 | 70.4 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -14.9 | -12.7 | -11.5 | -10.6 | -20.3 | -42.6 | -21.3 | -19.6 | -22.4 | -20.0 | -19.7 | -17.8 | -19.5 | -10.6 | -42.6 |
| | | S8 | No | 50% | -17.8 | -14.9 | -13.1 | -11.3 | -74.2 | -79.4 | -47.4 | -47.0 | -56.7 | -44.0 | -23.4 | -18.6 | -37.3 | -11.3 | -79.4 |
| | | S8 | No | 10% | -15.4 | -17.2 | -18.4 | -13.7 | -113.0 | -192.5 | -83.7 | -77.3 | -93.0 | -73.7 | -53.5 | -17.7 | -64.1 | -13.7 | -192.5 |
| | Post-Closure | S8 | No | 90% | -5.6 | -4.9 | -4.5 | -3.7 | -3.0 | -9.1 | -4.0 | -2.9 | -3.1 | -3.9 | -5.6 | -6.7 | -4.7 | -2.9 | -9.1 |
| | | S8 | No | 50% | -6.5 | -5.4 | -4.8 | -4.1 | -9.2 | -9.0 | -9.4 | -7.9 | -8.2 | -14.2 | -5.0 | -6.7 | -7.5 | -4.1 | -14.2 |
| | | S8 | No | 10% | -3.5 | -5.6 | -5.9 | -3.6 | -16.2 | -24.1 | -14.5 | -13.0 | -15.7 | -11.7 | -20.0 | -3.8 | -11.5 | -3.5 | -24.1 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -31.7 | -34.4 | -38.6 | -39.1 | -13.5 | -21.7 | -21.1 | -19.1 | -15.8 | -16.3 | -22.4 | -28.5 | -25.2 | -13.5 | -39.1 |
| | | S8 | No | 50% | -27.4 | -30.0 | -33.0 | -32.4 | -19.5 | -23.9 | -23.3 | -22.0 | -20.7 | -18.8 | -17.6 | -21.7 | -24.2 | -17.6 | -33.0 |
| | | S8 | No | 10% | -14.6 | -19.3 | -24.1 | -17.7 | -15.7 | -22.2 | -21.6 | -19.8 | -19.5 | -20.0 | -20.2 | -13.0 | -19.0 | -13.0 | -24.1 |
| | Post-Closure | S8 | No | 90% | -12.0 | -13.3 | -15.1 | -13.7 | -2.0 | -4.6 | -4.0 | -2.8 | -2.2 | -3.2 | -6.3 | -10.8 | -7.5 | -2.0 | -15.1 |
| | | S8 | No | 50% | -10.1 | -10.9 | -12.2 | -11.8 | -2.4 | -2.7 | -4.6 | -3.7 | -3.0 | -6.1 | -3.8 | -7.8 | -6.6 | -2.4 | -12.2 |
| | | S8 | No | 10% | -3.4 | -6.3 | -7.7 | -4.7 | -2.3 | -2.8 | -3.7 | -3.3 | -3.3 | -3.2 | -7.6 | -2.8 | -4.2 | -2.3 | -7.7 |
| NFK-C | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | No | 90% | 19.7 | 11.4 | 5.7 | 3.2 | 84.2 | 132.8 | 63.5 | 65.7 | 87.2 | 79.5 | 52.8 | 31.5 | 53.1 | 132.8 | 3.2 |
| | | S8 | No | 50% | 34.7 | 22.4 | 13.8 | 9.8 | 258.8 | 245.3 | 140.2 | 149.4 | 189.2 | 161.2 | 84.5 | 53.0 | 113.5 | 258.8 | 9.8 |
| | | S8 | No | 10% | 67.9 | 50.5 | 45.1 | 41.3 | 514.6 | 656.9 | 295.7 | 278.8 | 359.7 | 266.4 | 194.4 | 87.5 | 238.2 | 656.9 | 41.3 |
| | End of Mine | S8 | No | 90% | 4.7 | 0.0 | 0.0 | 0.0 | 65.6 | 89.5 | 41.0 | 44.5 | 62.6 | 57.4 | 32.4 | 14.2 | 34.3 | 89.5 | 0.0 |
| | | S8 | No | 50% | 17.2 | 7.5 | 1.2 | 0.0 | 186.1 | 161.6 | 92.6 | 101.1 | 133.8 | 115.3 | 62.5 | 33.1 | 76.0 | 186.1 | 0.0 |
| | | S8 | No | 10% | 51.5 | 33.2 | 27.9 | 26.1 | 397.6 | 456.8 | 207.1 | 197.1 | 258.5 | 192.8 | 139.6 | 69.5 | 171.5 | 456.8 | 26.1 |

**Table K4.16-26: North Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S8—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S8 | No | 90% | 13.1 | 6.3 | 0.9 | 0.2 | 81.2 | 121.4 | 58.3 | 61.7 | 83.0 | 73.3 | 46.3 | 23.8 | 47.5 | 121.4 | 0.2 |
| | | S8 | No | 50% | 27.7 | 16.5 | 9.1 | 5.5 | 248.5 | 231.2 | 128.9 | 139.8 | 178.4 | 148.9 | 79.2 | 45.2 | 104.9 | 248.5 | 5.5 |
| | | S8 | No | 10% | 63.2 | 44.3 | 39.6 | 36.4 | 494.7 | 624.4 | 276.6 | 262.2 | 340.0 | 251.8 | 173.0 | 82.8 | 224.1 | 624.4 | 36.4 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -14.9 | -11.4 | -5.7 | -3.2 | -18.6 | -43.3 | -22.5 | -21.2 | -24.6 | -22.0 | -20.4 | -17.4 | -18.8 | -3.2 | -43.3 |
| | | S8 | No | 50% | -17.6 | -14.9 | -12.5 | -9.8 | -72.7 | -83.7 | -47.5 | -48.3 | -55.5 | -45.9 | -22.0 | -19.8 | -37.5 | -9.8 | -83.7 |
| | | S8 | No | 10% | -16.4 | -17.4 | -17.3 | -15.2 | -117.0 | -200.1 | -88.6 | -81.8 | -101.1 | -73.6 | -54.8 | -17.9 | -66.8 | -15.2 | -200.1 |
| | Post-Closure | S8 | No | 90% | -6.5 | -5.1 | -4.8 | -3.1 | -3.0 | -11.4 | -5.2 | -4.0 | -4.3 | -6.1 | -6.5 | -7.8 | -5.6 | -3.0 | -11.4 |
| | | S8 | No | 50% | -7.0 | -5.9 | -4.7 | -4.4 | -10.3 | -14.0 | -11.3 | -9.7 | -10.8 | -12.3 | -5.2 | -7.7 | -8.6 | -4.4 | -14.0 |
| | | S8 | No | 10% | -4.7 | -6.2 | -5.6 | -4.9 | -19.9 | -32.5 | -19.1 | -16.6 | -19.7 | -14.6 | -21.4 | -4.6 | -14.1 | -4.6 | -32.5 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -75.9 | -100.0 | -100.0 | -100.0 | -22.1 | -32.6 | -35.4 | -32.3 | -28.2 | -27.7 | -38.7 | -55.1 | -54.0 | -22.1 | -100.0 |
| | | S8 | No | 50% | -50.6 | -66.6 | -91.1 | -100.0 | -28.1 | -34.1 | -33.9 | -32.3 | -29.3 | -28.5 | -26.0 | -37.5 | -46.5 | -26.0 | -100.0 |
| | | S8 | No | 10% | -24.1 | -34.4 | -38.3 | -36.8 | -22.7 | -30.5 | -29.9 | -29.3 | -28.1 | -27.6 | -28.2 | -20.5 | -29.2 | -20.5 | -38.3 |
| | Post-Closure | S8 | No | 90% | -33.2 | -44.6 | -84.6 | -95.3 | -3.6 | -8.6 | -8.1 | -6.1 | -4.9 | -7.7 | -12.3 | -24.6 | -27.8 | -3.6 | -95.3 |
| | | S8 | No | 50% | -20.1 | -26.3 | -34.0 | -44.3 | -4.0 | -5.7 | -8.1 | -6.5 | -5.7 | -7.6 | -6.2 | -14.6 | -15.3 | -4.0 | -44.3 |
| | | S8 | No | 10% | -6.9 | -12.3 | -12.3 | -11.8 | -3.9 | -4.9 | -6.5 | -5.9 | -5.5 | -5.5 | -11.0 | -5.3 | -7.7 | -3.9 | -12.3 |
| **NFK-D[1]** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | No | 90% | 13.8 | 11.4 | 9.2 | 7.9 | 35.8 | 58.7 | 27.2 | 23.0 | 27.1 | 29.5 | 22.2 | 17.2 | 23.6 | 58.7 | 7.9 |
| | | S8 | No | 50% | 20.3 | 16.4 | 13.3 | 11.5 | 83.0 | 94.6 | 54.2 | 48.2 | 61.9 | 57.6 | 39.9 | 26.8 | 44.0 | 94.6 | 11.5 |
| | | S8 | No | 10% | 33.7 | 27.5 | 23.7 | 21.6 | 177.1 | 207.3 | 117.2 | 85.1 | 111.4 | 101.5 | 81.7 | 43.9 | 86.0 | 207.3 | 21.6 |
| | End of Mine | S8 | No | 90% | 12.2 | 10.0 | 8.0 | 6.8 | 33.2 | 54.8 | 25.2 | 21.0 | 24.8 | 26.8 | 20.0 | 15.4 | 21.5 | 54.8 | 6.8 |
| | | S8 | No | 50% | 18.3 | 14.6 | 11.8 | 10.1 | 78.0 | 88.5 | 51.0 | 44.8 | 58.1 | 53.0 | 36.5 | 24.3 | 40.8 | 88.5 | 10.1 |
| | | S8 | No | 10% | 30.7 | 24.9 | 21.3 | 19.4 | 166.4 | 198.5 | 110.2 | 80.3 | 104.8 | 94.5 | 75.5 | 40.1 | 80.6 | 198.5 | 19.4 |
| | Post-Closure | S8 | No | 90% | 13.8 | 11.4 | 9.2 | 7.9 | 35.8 | 58.7 | 27.2 | 23.0 | 27.1 | 29.5 | 22.2 | 17.2 | 23.6 | 58.7 | 7.9 |
| | | S8 | No | 50% | 20.3 | 16.4 | 13.3 | 11.5 | 83.0 | 94.6 | 54.2 | 48.2 | 61.9 | 57.6 | 39.9 | 26.8 | 44.0 | 94.6 | 11.5 |
| | | S8 | No | 10% | 33.7 | 27.5 | 23.7 | 21.6 | 177.1 | 207.3 | 117.2 | 85.1 | 111.4 | 101.5 | 81.7 | 43.9 | 86.0 | 207.3 | 21.6 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -1.6 | -1.4 | -1.2 | -1.1 | -2.5 | -3.9 | -2.0 | -2.0 | -2.3 | -2.8 | -2.2 | -1.8 | -2.1 | -1.1 | -3.9 |
| | | S8 | No | 50% | -2.0 | -1.8 | -1.5 | -1.4 | -5.0 | -6.1 | -3.2 | -3.5 | -3.8 | -4.6 | -3.4 | -2.5 | -3.2 | -1.4 | -6.1 |
| | | S8 | No | 10% | -3.0 | -2.6 | -2.4 | -2.2 | -10.7 | -8.8 | -7.0 | -4.8 | -6.6 | -6.9 | -6.2 | -3.8 | -5.4 | -2.2 | -10.7 |
| | Post-Closure | S8 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S8 | No | 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S8 | No | 10% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -11.4 | -12.3 | -13.4 | -14.1 | -7.1 | -6.7 | -7.4 | -8.7 | -8.5 | -9.4 | -9.8 | -10.7 | -10.0 | -6.7 | -14.1 |
| | | S8 | No | 50% | -9.9 | -10.8 | -11.2 | -12.3 | -6.1 | -6.4 | -5.8 | -7.2 | -6.2 | -8.0 | -8.5 | -9.3 | -8.5 | -5.8 | -12.3 |
| | | S8 | No | 10% | -8.9 | -9.6 | -10.2 | -10.1 | -6.1 | -4.2 | -5.9 | -5.6 | -5.9 | -6.8 | -7.6 | -8.6 | -7.5 | -4.2 | -10.2 |
| | Post-Closure | S8 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S8 | No | 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S8 | No | 10% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Tributary 1.19** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | No | 90% | 3.4 | 2.8 | 2.3 | 2.1 | 12.6 | 24.2 | 13.5 | 11.9 | 19.7 | 13.6 | 6.3 | 4.3 | 9.7 | 24.2 | 2.1 |
| | | S8 | No | 50% | 4.6 | 3.7 | 3.0 | 2.6 | 49.9 | 63.4 | 28.4 | 29.9 | 35.8 | 24.8 | 13.6 | 6.3 | 22.2 | 63.4 | 2.6 |
| | | S8 | No | 10% | 7.0 | 6.3 | 5.7 | 8.0 | 89.0 | 140.6 | 52.5 | 58.0 | 62.7 | 46.0 | 23.5 | 9.1 | 42.4 | 140.6 | 5.7 |
| | End of Mine | S8 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S8 | No | 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S8 | No | 10% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Post-Closure | S8 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S8 | No | 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S8 | No | 10% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

**Table K4.16-26: North Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S8—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -3.4 | -2.8 | -2.3 | -2.1 | -12.6 | -24.2 | -13.5 | -11.9 | -19.7 | -13.6 | -6.3 | -4.3 | -9.7 | -2.1 | -24.2 |
| | | S8 | No | 50% | -4.6 | -3.7 | -3.0 | -2.6 | -49.9 | -63.4 | -28.4 | -29.9 | -35.8 | -24.8 | -13.6 | -6.3 | -22.2 | -2.6 | -63.4 |
| | | S8 | No | 10% | -7.0 | -6.3 | -5.7 | -8.0 | -89.0 | -140.6 | -52.5 | -58.0 | -62.7 | -46.0 | -23.5 | -9.1 | -42.4 | -5.7 | -140.6 |
| | Post-Closure | S8 | No | 90% | -3.4 | -2.8 | -2.3 | -2.1 | -12.6 | -24.2 | -13.5 | -11.9 | -19.7 | -13.6 | -6.3 | -4.3 | -9.7 | -2.1 | -24.2 |
| | | S8 | No | 50% | -4.6 | -3.7 | -3.0 | -2.6 | -49.9 | -63.4 | -28.4 | -29.9 | -35.8 | -24.8 | -13.6 | -6.3 | -22.2 | -2.6 | -63.4 |
| | | S8 | No | 10% | -7.0 | -6.3 | -5.7 | -8.0 | -89.0 | -140.6 | -52.5 | -58.0 | -62.7 | -46.0 | -23.5 | -9.1 | -42.4 | -5.7 | -140.6 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | | S8 | No | 50% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | | S8 | No | 10% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | Post-Closure | S8 | No | 90% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | | S8 | No | 50% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | | S8 | No | 10% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |

Notes:

cfs = cubic feet per second
NFK = North Fork Koktuli

Source: Knight Piésold 2019q, r

[1] Source: PLP 2020-RFI 161

**Table K4.16-27: South Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S8—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| **SFK-A** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | No | 90% | 37.1 | 25.4 | 15.9 | 10.4 | 140.6 | 141.2 | 87.2 | 93.4 | 129.0 | 115.2 | 77.5 | 51.1 | 77.0 | 141.2 | 10.4 |
| | | S8 | No | 50% | 56.9 | 42.0 | 30.6 | 24.3 | 323.0 | 294.3 | 182.3 | 212.4 | 252.4 | 212.7 | 130.6 | 82.1 | 153.6 | 323.0 | 24.3 |
| | | S8 | No | 10% | 129.4 | 93.5 | 71.5 | 78.0 | 568.6 | 704.8 | 352.8 | 360.5 | 437.8 | 335.1 | 254.7 | 154.0 | 295.0 | 704.8 | 71.5 |
| | End of Mine | S8 | No | 90% | 34.7 | 23.0 | 13.9 | 9.5 | 137.5 | 136.0 | 84.1 | 90.0 | 124.7 | 110.8 | 73.8 | 48.4 | 73.9 | 137.5 | 9.5 |
| | | S8 | No | 50% | 53.5 | 39.9 | 28.2 | 21.9 | 316.0 | 286.1 | 175.5 | 205.4 | 244.8 | 205.2 | 124.6 | 78.0 | 148.3 | 316.0 | 21.9 |
| | | S8 | No | 10% | 125.1 | 89.7 | 68.0 | 75.7 | 557.2 | 689.0 | 343.1 | 352.0 | 427.4 | 325.6 | 245.5 | 147.4 | 287.1 | 689.0 | 68.0 |
| | Post-Closure | S8 | No | 90% | 34.6 | 22.9 | 13.8 | 9.4 | 136.3 | 134.8 | 83.3 | 89.3 | 123.7 | 110.1 | 73.4 | 48.2 | 73.3 | 136.3 | 9.4 |
| | | S8 | No | 50% | 53.4 | 39.7 | 28.1 | 21.9 | 314.6 | 283.2 | 174.4 | 204.1 | 243.6 | 204.5 | 124.1 | 77.8 | 147.4 | 314.6 | 21.9 |
| | | S8 | No | 10% | 124.8 | 89.5 | 67.9 | 75.3 | 555.7 | 684.7 | 341.0 | 350.0 | 425.5 | 324.4 | 245.3 | 147.2 | 285.9 | 684.7 | 67.9 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -2.4 | -2.4 | -2.0 | -0.9 | -3.1 | -5.1 | -3.2 | -3.4 | -4.3 | -4.5 | -3.8 | -2.7 | -3.1 | -0.9 | -5.1 |
| | | S8 | No | 50% | -3.4 | -2.1 | -2.3 | -2.4 | -7.0 | -8.2 | -6.8 | -7.0 | -7.6 | -7.5 | -6.0 | -4.0 | -5.4 | -2.1 | -8.2 |
| | | S8 | No | 10% | -4.3 | -3.8 | -3.5 | -2.3 | -11.4 | -15.8 | -9.7 | -8.5 | -10.3 | -9.5 | -9.2 | -6.6 | -7.9 | -2.3 | -15.8 |
| | Post-Closure | S8 | No | 90% | -2.5 | -2.5 | -2.1 | -0.9 | -4.4 | -6.4 | -3.9 | -4.2 | -5.2 | -5.1 | -4.1 | -2.9 | -3.7 | -0.9 | -6.4 |
| | | S8 | No | 50% | -3.5 | -2.2 | -2.4 | -2.5 | -8.4 | -11.1 | -7.9 | -8.3 | -8.8 | -8.2 | -6.4 | -4.3 | -6.2 | -2.2 | -11.1 |
| | | S8 | No | 10% | -4.6 | -4.0 | -3.6 | -2.7 | -12.9 | -20.1 | -11.8 | -10.5 | -12.3 | -10.7 | -9.4 | -6.8 | -9.1 | -2.7 | -20.1 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -6.4 | -9.5 | -12.4 | -8.7 | -2.2 | -3.6 | -3.6 | -3.7 | -3.3 | -3.9 | -4.9 | -5.2 | -5.6 | -2.2 | -12.4 |
| | | S8 | No | 50% | -6.0 | -5.0 | -7.6 | -9.9 | -2.2 | -2.8 | -3.7 | -3.3 | -3.0 | -3.5 | -4.6 | -4.9 | -4.7 | -2.2 | -9.9 |
| | | S8 | No | 10% | -3.3 | -4.0 | -4.9 | -3.0 | -2.0 | -2.2 | -2.7 | -2.3 | -2.4 | -2.8 | -3.6 | -4.3 | -3.1 | -2.0 | -4.9 |
| | Post-Closure | S8 | No | 90% | -6.8 | -9.9 | -13.1 | -9.0 | -3.1 | -4.6 | -4.5 | -4.5 | -4.1 | -4.4 | -5.3 | -5.6 | -6.2 | -3.1 | -13.1 |
| | | S8 | No | 50% | -6.2 | -5.3 | -8.0 | -10.2 | -2.6 | -3.8 | -4.3 | -3.9 | -3.5 | -3.9 | -4.9 | -5.3 | -5.2 | -2.6 | -10.2 |
| | | S8 | No | 10% | -3.5 | -4.2 | -5.0 | -3.4 | -2.3 | -2.9 | -3.3 | -2.9 | -2.8 | -3.2 | -3.7 | -4.4 | -3.5 | -2.3 | -5.0 |
| **SFK-B** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | No | 90% | 35.1 | 27.7 | 20.3 | 15.3 | 92.8 | 122.4 | 71.0 | 72.2 | 94.3 | 86.0 | 59.4 | 42.3 | 61.6 | 122.4 | 15.3 |
| | | S8 | No | 50% | 43.7 | 35.8 | 29.2 | 24.1 | 240.6 | 244.1 | 143.5 | 159.6 | 190.6 | 164.5 | 99.9 | 62.7 | 119.9 | 244.1 | 24.1 |
| | | S8 | No | 10% | 86.2 | 62.3 | 51.7 | 48.6 | 435.8 | 583.4 | 283.3 | 276.4 | 342.1 | 251.5 | 202.5 | 115.2 | 228.2 | 583.4 | 48.6 |
| | End of Mine | S8 | No | 90% | 32.9 | 25.4 | 18.3 | 13.5 | 89.6 | 117.0 | 68.4 | 69.1 | 91.4 | 82.3 | 56.0 | 40.6 | 58.7 | 117.0 | 13.5 |
| | | S8 | No | 50% | 41.3 | 34.6 | 27.4 | 22.3 | 233.3 | 234.7 | 137.1 | 153.4 | 183.1 | 157.8 | 94.6 | 59.4 | 114.9 | 234.7 | 22.3 |
| | | S8 | No | 10% | 82.4 | 59.3 | 49.0 | 46.2 | 422.9 | 565.2 | 273.2 | 267.2 | 331.8 | 241.8 | 192.3 | 109.3 | 220.1 | 565.2 | 46.2 |
| | Post-Closure | S8 | No | 90% | 32.9 | 25.4 | 18.2 | 13.4 | 89.2 | 115.5 | 67.6 | 68.0 | 90.2 | 81.9 | 55.8 | 40.6 | 58.2 | 115.5 | 13.4 |
| | | S8 | No | 50% | 41.3 | 34.6 | 27.4 | 22.3 | 232.4 | 232.1 | 135.8 | 152.1 | 181.7 | 156.7 | 94.2 | 59.3 | 114.2 | 232.4 | 22.3 |
| | | S8 | No | 10% | 82.2 | 59.1 | 49.1 | 46.2 | 420.9 | 559.2 | 270.9 | 264.9 | 329.2 | 240.5 | 192.3 | 109.3 | 218.7 | 559.2 | 46.2 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -2.2 | -2.2 | -2.1 | -1.8 | -3.2 | -5.4 | -2.6 | -3.1 | -2.9 | -3.7 | -3.4 | -1.7 | -2.9 | -1.7 | -5.4 |
| | | S8 | No | 50% | -2.5 | -1.2 | -1.8 | -1.8 | -7.4 | -9.4 | -6.4 | -6.2 | -7.5 | -6.7 | -5.3 | -3.3 | -5.0 | -1.2 | -9.4 |
| | | S8 | No | 10% | -3.8 | -2.9 | -2.7 | -2.4 | -12.9 | -18.1 | -10.1 | -9.2 | -10.3 | -9.6 | -10.2 | -6.0 | -8.2 | -2.4 | -18.1 |
| | Post-Closure | S8 | No | 90% | -2.2 | -2.3 | -2.1 | -1.8 | -3.6 | -6.8 | -3.4 | -4.2 | -4.1 | -4.1 | -3.6 | -1.8 | -3.3 | -1.8 | -6.8 |
| | | S8 | No | 50% | -2.5 | -1.2 | -1.8 | -1.8 | -8.2 | -12.0 | -7.7 | -7.5 | -8.8 | -7.8 | -5.7 | -3.4 | -5.7 | -1.2 | -12.0 |
| | | S8 | No | 10% | -4.0 | -3.2 | -2.7 | -2.4 | -14.8 | -24.2 | -12.4 | -11.4 | -12.9 | -10.9 | -10.2 | -5.9 | -9.6 | -2.4 | -24.2 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -6.2 | -8.0 | -10.2 | -11.6 | -3.4 | -4.4 | -3.7 | -4.3 | -3.1 | -4.3 | -5.8 | -4.1 | -5.7 | -3.1 | -11.6 |
| | | S8 | No | 50% | -5.6 | -3.4 | -6.0 | -7.5 | -3.1 | -3.9 | -4.5 | -3.9 | -3.9 | -4.1 | -5.3 | -5.3 | -4.7 | -3.1 | -7.5 |
| | | S8 | No | 10% | -4.4 | -4.7 | -5.3 | -5.0 | -3.0 | -3.1 | -3.5 | -3.3 | -3.0 | -3.8 | -5.0 | -5.2 | -4.1 | -3.0 | -5.3 |
| | Post-Closure | S8 | No | 90% | -6.3 | -8.1 | -10.5 | -12.0 | -3.9 | -5.6 | -4.7 | -5.8 | -4.4 | -4.8 | -6.0 | -4.1 | -6.3 | -3.9 | -12.0 |
| | | S8 | No | 50% | -5.6 | -3.4 | -6.1 | -7.6 | -3.4 | -4.9 | -5.4 | -4.7 | -4.6 | -4.8 | -5.7 | -5.5 | -5.1 | -3.4 | -7.6 |
| | | S8 | No | 10% | -4.6 | -5.1 | -5.1 | -4.9 | -3.4 | -4.1 | -4.4 | -4.1 | -3.8 | -4.4 | -5.0 | -5.1 | -4.5 | -3.4 | -5.1 |
| **SFK-C** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 28.6 | 43.9 | 8.2 | 7.8 | 16.7 | 22.0 | 8.6 | 0.3 | 11.3 | 43.9 | 0.0 |
| | | S8 | No | 50% | 1.9 | 0.1 | 0.0 | 0.0 | 117.7 | 100.3 | 47.4 | 54.9 | 76.7 | 63.9 | 36.1 | 13.2 | 42.7 | 117.7 | 0.0 |
| | | S8 | No | 10% | 29.9 | 16.4 | 7.0 | 5.6 | 240.6 | 288.9 | 133.5 | 117.1 | 159.9 | 126.5 | 93.8 | 49.0 | 105.7 | 288.9 | 5.6 |
| | End of Mine | S8 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 28.2 | 41.5 | 7.1 | 7.3 | 15.4 | 18.8 | 6.5 | 0.2 | 10.4 | 41.5 | 0.0 |
| | | S8 | No | 50% | 0.5 | 0.1 | 0.0 | 0.0 | 115.0 | 95.8 | 43.9 | 51.3 | 72.1 | 59.9 | 33.2 | 11.1 | 40.2 | 115.0 | 0.0 |
| | | S8 | No | 10% | 27.4 | 13.5 | 5.7 | 4.8 | 233.0 | 281.3 | 127.3 | 112.8 | 153.9 | 120.5 | 88.3 | 45.1 | 101.1 | 281.3 | 4.8 |

**Table K4.16-27: South Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S8—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S8 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 27.8 | 41.2 | 6.8 | 6.9 | 15.0 | 18.6 | 6.4 | 0.2 | 10.2 | 41.2 | 0.0 |
| | | S8 | No | 50% | 0.5 | 0.1 | 0.0 | 0.0 | 115.1 | 95.2 | 43.7 | 51.0 | 72.0 | 59.8 | 33.0 | 11.0 | 40.1 | 115.1 | 0.0 |
| | | S8 | No | 10% | 27.3 | 13.8 | 5.8 | 4.7 | 233.7 | 281.1 | 127.0 | 112.4 | 153.8 | 120.6 | 88.5 | 45.0 | 101.1 | 281.1 | 4.7 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | -0.4 | -2.4 | -1.1 | -0.5 | -1.2 | -3.2 | -2.1 | 0.0 | -0.9 | 0.0 | -3.2 |
| | | S8 | No | 50% | -1.4 | 0.0 | 0.0 | 0.0 | -2.7 | -4.5 | -3.5 | -3.6 | -4.6 | -3.9 | -2.9 | -2.1 | -2.4 | 0.0 | -4.6 |
| | | S8 | No | 10% | -2.5 | -2.8 | -1.3 | -0.8 | -7.6 | -7.5 | -6.1 | -4.3 | -5.9 | -6.0 | -5.4 | -3.9 | -4.5 | -0.8 | -7.6 |
| | Post-Closure | S8 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | -0.8 | -2.7 | -1.3 | -0.9 | -1.7 | -3.4 | -2.2 | 0.0 | -1.1 | 0.0 | -3.4 |
| | | S8 | No | 50% | -1.4 | 0.0 | 0.0 | 0.0 | -2.7 | -5.1 | -3.7 | -3.9 | -4.7 | -4.1 | -3.1 | -2.2 | -2.6 | 0.0 | -5.1 |
| | | S8 | No | 10% | -2.6 | -2.6 | -1.2 | -0.8 | -6.9 | -7.8 | -6.4 | -4.7 | -6.1 | -5.9 | -5.2 | -4.0 | -4.5 | -0.8 | -7.8 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | -1.3 | -5.4 | -13.3 | -6.6 | -7.5 | -14.4 | -24.9 | -17.2 | -7.5 | 0.0 | -24.9 |
| | | S8 | No | 50% | -73.3 | 0.0 | 0.0 | 0.0 | -2.3 | -4.5 | -7.4 | -6.5 | -6.0 | -6.2 | -8.1 | -15.9 | -10.9 | 0.0 | -73.3 |
| | | S8 | No | 10% | -8.5 | -17.3 | -18.5 | -13.5 | -3.1 | -2.6 | -4.6 | -3.7 | -3.7 | -4.8 | -5.8 | -8.0 | -7.8 | -2.6 | -18.5 |
| | Post-Closure | S8 | No | 90% | 0.0 | 0.0 | 0.0 | 0.0 | -2.7 | -6.2 | -16.3 | -12.0 | -10.1 | -15.4 | -26.0 | -17.2 | -8.8 | 0.0 | -26.0 |
| | | S8 | No | 50% | -72.9 | 0.0 | 0.0 | 0.0 | -2.3 | -5.0 | -7.9 | -7.1 | -6.2 | -6.4 | -8.7 | -16.7 | -11.1 | 0.0 | -72.9 |
| | | S8 | No | 10% | -8.7 | -15.8 | -17.2 | -15.2 | -2.9 | -2.7 | -4.8 | -4.0 | -3.8 | -4.7 | -5.6 | -8.2 | -7.8 | -2.7 | -17.2 |
| SFK-D | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | No | 90% | 6.4 | 4.6 | 3.3 | 2.6 | 21.7 | 35.8 | 16.6 | 15.2 | 20.7 | 19.9 | 13.1 | 8.9 | 14.1 | 35.8 | 2.6 |
| | | S8 | No | 50% | 9.3 | 6.5 | 4.8 | 3.9 | 61.6 | 54.7 | 36.0 | 32.5 | 44.1 | 38.6 | 23.2 | 13.3 | 27.4 | 61.6 | 3.9 |
| | | S8 | No | 10% | 19.2 | 13.1 | 12.7 | 10.9 | 112.8 | 137.5 | 67.3 | 59.0 | 77.3 | 61.0 | 49.0 | 23.4 | 53.6 | 137.5 | 10.9 |
| | End of Mine | S8 | No | 90% | 4.6 | 3.2 | 2.1 | 1.6 | 18.6 | 29.9 | 13.7 | 12.4 | 17.4 | 16.3 | 10.4 | 6.8 | 11.4 | 29.9 | 1.6 |
| | | S8 | No | 50% | 7.2 | 4.8 | 3.4 | 2.7 | 53.8 | 47.2 | 31.5 | 27.9 | 38.3 | 32.5 | 18.9 | 10.6 | 23.2 | 53.8 | 2.7 |
| | | S8 | No | 10% | 15.5 | 10.4 | 10.0 | 8.8 | 97.9 | 124.7 | 57.7 | 52.3 | 67.3 | 51.8 | 41.0 | 19.3 | 46.4 | 124.7 | 8.8 |
| | Post-Closure | S8 | No | 90% | 4.7 | 3.2 | 2.1 | 1.7 | 19.2 | 30.8 | 14.0 | 12.7 | 17.8 | 16.7 | 10.6 | 6.9 | 11.7 | 30.8 | 1.7 |
| | | S8 | No | 50% | 7.4 | 5.0 | 3.5 | 2.8 | 55.5 | 48.6 | 32.2 | 28.6 | 39.3 | 33.5 | 19.5 | 10.8 | 23.9 | 55.5 | 2.8 |
| | | S8 | No | 10% | 16.1 | 10.8 | 10.4 | 9.1 | 101.0 | 127.7 | 59.5 | 53.6 | 69.4 | 53.5 | 42.4 | 20.0 | 47.8 | 127.7 | 9.1 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -1.7 | -1.4 | -1.1 | -1.0 | -3.1 | -5.9 | -2.9 | -2.8 | -3.3 | -3.7 | -2.7 | -2.2 | -2.7 | -1.0 | -5.9 |
| | | S8 | No | 50% | -2.1 | -1.7 | -1.4 | -1.2 | -7.8 | -7.4 | -4.4 | -4.6 | -5.8 | -6.1 | -4.3 | -2.7 | -4.1 | -1.2 | -7.8 |
| | | S8 | No | 10% | -3.7 | -2.7 | -2.7 | -2.1 | -14.9 | -12.8 | -9.6 | -6.8 | -10.0 | -9.2 | -8.0 | -4.1 | -7.2 | -2.1 | -14.9 |
| | Post-Closure | S8 | No | 90% | -1.6 | -1.4 | -1.1 | -1.0 | -2.5 | -5.0 | -2.6 | -2.6 | -2.9 | -3.2 | -2.5 | -2.1 | -2.4 | -1.0 | -5.0 |
| | | S8 | No | 50% | -1.9 | -1.5 | -1.3 | -1.1 | -6.1 | -6.1 | -3.7 | -3.9 | -4.8 | -5.2 | -3.7 | -2.4 | -3.5 | -1.1 | -6.1 |
| | | S8 | No | 10% | -3.1 | -2.4 | -2.3 | -1.8 | -11.8 | -9.8 | -7.7 | -5.4 | -7.9 | -7.5 | -6.5 | -3.4 | -5.8 | -1.8 | -11.8 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -26.8 | -30.7 | -35.3 | -38.5 | -14.1 | -16.6 | -17.5 | -18.7 | -15.8 | -18.3 | -20.9 | -24.2 | -23.1 | -14.1 | -38.5 |
| | | S8 | No | 50% | -22.6 | -26.1 | -29.1 | -30.7 | -12.7 | -13.6 | -12.3 | -14.2 | -13.1 | -15.8 | -18.7 | -20.4 | -19.1 | -12.3 | -30.7 |
| | | S8 | No | 10% | -19.2 | -20.9 | -21.4 | -19.3 | -13.2 | -9.3 | -14.2 | -11.5 | -12.9 | -15.1 | -16.3 | -17.7 | -15.9 | -9.3 | -21.4 |
| | Post-Closure | S8 | No | 90% | -25.7 | -29.8 | -34.6 | -36.1 | -11.7 | -14.0 | -15.7 | -16.8 | -14.0 | -16.1 | -19.1 | -23.0 | -21.4 | -11.7 | -36.1 |
| | | S8 | No | 50% | -20.5 | -23.8 | -26.6 | -28.2 | -9.9 | -11.2 | -10.3 | -12.0 | -10.9 | -13.4 | -16.0 | -18.4 | -16.8 | -9.9 | -28.2 |
| | | S8 | No | 10% | -16.1 | -18.0 | -18.3 | -16.4 | -10.4 | -7.1 | -11.5 | -9.2 | -10.3 | -12.3 | -13.3 | -14.7 | -13.1 | -7.1 | -18.3 |
| SFK-E | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | No | 90% | 4.2 | 3.5 | 2.8 | 2.6 | 10.2 | 16.9 | 8.1 | 7.6 | 9.4 | 9.8 | 7.0 | 5.3 | 7.3 | 16.9 | 2.6 |
| | | S8 | No | 50% | 5.6 | 4.4 | 3.7 | 3.2 | 25.2 | 24.3 | 15.3 | 14.6 | 19.0 | 17.1 | 11.7 | 7.3 | 12.6 | 25.2 | 3.2 |
| | | S8 | No | 10% | 9.6 | 7.2 | 7.0 | 6.1 | 47.3 | 55.7 | 30.7 | 24.0 | 31.9 | 28.1 | 22.5 | 12.3 | 23.6 | 55.7 | 6.1 |
| | End of Mine | S8 | No | 90% | 2.5 | 2.1 | 1.7 | 1.5 | 6.9 | 11.2 | 5.1 | 4.9 | 6.2 | 6.4 | 4.2 | 3.1 | 4.6 | 11.2 | 1.5 |
| | | S8 | No | 50% | 3.5 | 2.8 | 2.2 | 2.0 | 17.6 | 17.0 | 10.8 | 10.0 | 13.1 | 11.4 | 7.3 | 4.6 | 8.5 | 17.6 | 2.0 |
| | | S8 | No | 10% | 6.0 | 4.7 | 4.3 | 3.9 | 33.0 | 42.4 | 21.2 | 17.1 | 22.1 | 18.9 | 14.8 | 7.8 | 16.3 | 42.4 | 3.9 |
| | Post-Closure | S8 | No | 90% | 2.6 | 2.1 | 1.7 | 1.6 | 7.5 | 12.1 | 5.3 | 5.1 | 6.5 | 6.7 | 4.5 | 3.2 | 4.9 | 12.1 | 1.6 |
| | | S8 | No | 50% | 3.7 | 2.9 | 2.4 | 2.1 | 19.2 | 18.4 | 11.5 | 10.7 | 14.1 | 12.2 | 7.9 | 4.8 | 9.2 | 19.2 | 2.1 |
| | | S8 | No | 10% | 6.5 | 5.1 | 4.7 | 4.2 | 36.2 | 45.7 | 23.0 | 18.4 | 24.0 | 20.6 | 16.2 | 8.5 | 17.8 | 45.7 | 4.2 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -1.7 | -1.4 | -1.1 | -1.0 | -3.4 | -5.6 | -3.0 | -2.7 | -3.2 | -3.5 | -2.8 | -2.2 | -2.6 | -1.0 | -5.6 |
| | | S8 | No | 50% | -2.1 | -1.7 | -1.4 | -1.2 | -7.5 | -7.3 | -4.4 | -4.6 | -5.9 | -5.7 | -4.4 | -2.8 | -4.1 | -1.2 | -7.5 |
| | | S8 | No | 10% | -3.7 | -2.5 | -2.7 | -2.3 | -14.3 | -13.3 | -9.6 | -6.9 | -9.8 | -9.2 | -7.7 | -4.5 | -7.2 | -2.3 | -14.3 |

**Table K4.16-27: South Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S8—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S8 | No | 90% | -1.7 | -1.4 | -1.1 | -1.0 | -2.8 | -4.7 | -2.7 | -2.5 | -2.8 | -3.1 | -2.5 | -2.0 | -2.4 | -1.0 | -4.7 |
| | | S8 | No | 50% | -1.9 | -1.5 | -1.3 | -1.1 | -6.0 | -5.9 | -3.8 | -3.9 | -4.9 | -4.8 | -3.8 | -2.5 | -3.5 | -1.1 | -6.0 |
| | | S8 | No | 10% | -3.1 | -2.1 | -2.3 | -2.0 | -11.1 | -10.1 | -7.7 | -5.6 | -7.9 | -7.5 | -6.3 | -3.8 | -5.8 | -2.0 | -11.1 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -40.8 | -40.6 | -40.6 | -39.7 | -32.8 | -33.4 | -37.0 | -35.7 | -33.8 | -35.4 | -39.6 | -40.8 | -37.5 | -32.8 | -40.8 |
| | | S8 | No | 50% | -37.8 | -38.0 | -38.9 | -38.0 | -30.0 | -29.9 | -29.0 | -31.7 | -31.2 | -33.6 | -37.6 | -37.6 | -34.4 | -29.0 | -38.9 |
| | | S8 | No | 10% | -38.2 | -35.2 | -38.4 | -37.1 | -30.2 | -23.8 | -31.1 | -28.8 | -30.8 | -32.9 | -34.1 | -36.7 | -33.1 | -23.8 | -38.4 |
| | Post-Closure | S8 | No | 90% | -39.2 | -39.4 | -39.5 | -38.1 | -27.0 | -28.1 | -34.0 | -32.7 | -30.3 | -31.3 | -36.3 | -38.5 | -34.5 | -27.0 | -39.5 |
| | | S8 | No | 50% | -34.3 | -34.5 | -35.6 | -34.5 | -23.7 | -24.4 | -24.9 | -26.7 | -25.8 | -28.4 | -32.6 | -34.1 | -30.0 | -23.7 | -35.6 |
| | | S8 | No | 10% | -32.2 | -29.2 | -33.0 | -32.0 | -23.5 | -18.1 | -25.2 | -23.4 | -24.7 | -26.7 | -28.0 | -30.6 | -27.2 | -18.1 | -33.0 |
| **Tributary 1.19** | **Streamflow During Baseline, Operations, and Post-Closure in Cubic Feet Per Second (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | No | 90% | 4.9 | 3.4 | 2.2 | 1.5 | 22.3 | 35.6 | 20.8 | 18.9 | 28.5 | 21.5 | 11.4 | 7.2 | 14.8 | 35.6 | 1.5 |
| | | S8 | No | 50% | 7.1 | 4.9 | 3.3 | 2.6 | 67.8 | 83.1 | 41.8 | 44.3 | 51.0 | 38.6 | 20.7 | 10.6 | 31.3 | 83.1 | 2.6 |
| | | S8 | No | 10% | 13.0 | 9.6 | 8.6 | 10.5 | 123.4 | 184.7 | 78.5 | 84.2 | 89.1 | 66.3 | 38.2 | 17.1 | 60.3 | 184.7 | 8.6 |
| | End of Mine | S8 | No | 90% | 4.1 | 2.8 | 1.7 | 1.1 | 21.9 | 33.4 | 19.0 | 17.1 | 26.6 | 19.1 | 10.0 | 6.2 | 13.6 | 33.4 | 1.1 |
| | | S8 | No | 50% | 6.1 | 4.2 | 2.8 | 2.1 | 65.3 | 79.1 | 38.8 | 41.4 | 48.3 | 35.5 | 18.5 | 9.2 | 29.3 | 79.1 | 2.1 |
| | | S8 | No | 10% | 11.8 | 8.6 | 7.5 | 10.0 | 118.6 | 175.8 | 74.4 | 79.7 | 84.6 | 62.4 | 34.5 | 15.6 | 57.0 | 175.8 | 7.5 |
| | Post-Closure | S8 | No | 90% | 4.1 | 2.8 | 1.7 | 1.1 | 21.4 | 32.6 | 18.7 | 17.0 | 26.0 | 19.0 | 10.0 | 6.2 | 13.4 | 32.6 | 1.1 |
| | | S8 | No | 50% | 6.1 | 4.2 | 2.8 | 2.1 | 63.8 | 76.1 | 38.0 | 40.6 | 47.1 | 35.1 | 18.5 | 9.2 | 28.6 | 76.1 | 2.1 |
| | | S8 | No | 10% | 11.8 | 8.6 | 7.5 | 9.6 | 115.8 | 171.3 | 72.5 | 77.8 | 82.5 | 61.1 | 34.3 | 15.6 | 55.7 | 171.3 | 7.5 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -0.7 | -0.6 | -0.5 | -0.4 | -0.4 | -2.2 | -1.8 | -1.8 | -1.8 | -2.4 | -1.4 | -1.0 | -1.2 | -0.4 | -2.4 |
| | | S8 | No | 50% | -0.9 | -0.7 | -0.6 | -0.5 | -2.5 | -4.0 | -3.0 | -2.9 | -2.7 | -3.1 | -2.2 | -1.3 | -2.0 | -0.5 | -4.0 |
| | | S8 | No | 10% | -1.1 | -1.0 | -1.1 | -0.5 | -4.9 | -8.9 | -4.1 | -4.5 | -4.5 | -3.9 | -3.7 | -1.5 | -3.3 | -0.5 | -8.9 |
| | Post-Closure | S8 | No | 90% | -0.7 | -0.6 | -0.5 | -0.4 | -0.9 | -3.0 | -2.1 | -2.0 | -2.5 | -2.5 | -1.4 | -1.0 | -1.5 | -0.4 | -3.0 |
| | | S8 | No | 50% | -0.9 | -0.7 | -0.6 | -0.5 | -4.0 | -7.0 | -3.8 | -3.7 | -3.9 | -3.5 | -2.2 | -1.3 | -2.7 | -0.5 | -7.0 |
| | | S8 | No | 10% | -1.1 | -1.0 | -1.1 | -0.9 | -7.6 | -13.3 | -6.0 | -6.3 | -6.5 | -5.2 | -3.9 | -1.5 | -4.6 | -0.9 | -13.3 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -15.0 | -17.2 | -21.2 | -26.0 | -2.0 | -6.1 | -8.6 | -9.4 | -6.5 | -11.2 | -12.3 | -13.6 | -12.4 | -2.0 | -26.0 |
| | | S8 | No | 50% | -13.4 | -15.2 | -17.1 | -19.0 | -3.7 | -4.8 | -7.2 | -6.6 | -5.3 | -8.1 | -10.6 | -12.6 | -10.3 | -3.7 | -19.0 |
| | | S8 | No | 10% | -8.7 | -10.7 | -12.6 | -4.8 | -3.9 | -4.8 | -5.2 | -5.3 | -5.0 | -5.8 | -9.7 | -8.7 | -7.1 | -3.9 | -12.6 |
| | Post-Closure | S8 | No | 90% | -15.0 | -17.3 | -21.2 | -26.0 | -4.2 | -8.3 | -10.1 | -10.3 | -8.8 | -11.6 | -12.3 | -13.6 | -13.2 | -4.2 | -26.0 |
| | | S8 | No | 50% | -13.4 | -15.3 | -17.1 | -19.0 | -5.9 | -8.4 | -9.1 | -8.4 | -7.7 | -9.2 | -10.8 | -12.7 | -11.4 | -5.9 | -19.0 |
| | | S8 | No | 10% | -8.8 | -10.8 | -12.6 | -8.3 | -6.2 | -7.2 | -7.7 | -7.5 | -7.3 | -7.9 | -10.2 | -8.8 | -8.6 | -6.2 | -12.6 |
| **Tributary 1.24** | **Streamflow During Baseline, Operations, and Post-Closure in Cubic Feet Per Second (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | No | 90% | 0.4 | 0.0 | 0.0 | 0.0 | 18.5 | 12.0 | 6.0 | 7.3 | 14.8 | 9.4 | 4.2 | 2.0 | 6.2 | 18.5 | 0.0 |
| | | S8 | No | 50% | 2.0 | 0.4 | 0.0 | 0.0 | 51.6 | 47.3 | 16.6 | 27.7 | 31.8 | 18.8 | 8.7 | 4.1 | 17.4 | 51.6 | 0.0 |
| | | S8 | No | 10% | 6.9 | 4.2 | 2.8 | 5.9 | 93.8 | 128.6 | 40.3 | 53.9 | 60.4 | 42.9 | 19.1 | 9.0 | 39.0 | 128.6 | 2.8 |
| | End of Mine | S8 | No | 90% | 0.7 | 0.0 | 0.0 | 0.0 | 18.9 | 13.4 | 6.9 | 8.0 | 15.8 | 10.1 | 4.5 | 2.3 | 6.7 | 18.9 | 0.0 |
| | | S8 | No | 50% | 2.4 | 0.8 | 0.0 | 0.0 | 53.0 | 50.9 | 18.4 | 29.3 | 33.3 | 19.5 | 9.3 | 4.4 | 18.4 | 53.0 | 0.0 |
| | | S8 | No | 10% | 7.3 | 4.7 | 3.1 | 6.4 | 96.6 | 134.2 | 43.7 | 56.2 | 62.9 | 44.8 | 20.2 | 9.4 | 40.8 | 134.2 | 3.1 |
| | Post-Closure | S8 | No | 90% | 0.5 | 0.0 | 0.0 | 0.0 | 18.6 | 12.3 | 6.2 | 7.4 | 15.1 | 9.5 | 4.3 | 2.0 | 6.3 | 18.6 | 0.0 |
| | | S8 | No | 50% | 2.1 | 0.5 | 0.0 | 0.0 | 51.9 | 48.3 | 17.0 | 28.1 | 32.2 | 18.9 | 8.9 | 4.2 | 17.7 | 51.9 | 0.0 |
| | | S8 | No | 10% | 7.0 | 4.3 | 2.9 | 6.0 | 94.5 | 130.1 | 41.2 | 54.5 | 61.1 | 43.4 | 19.3 | 9.1 | 39.5 | 130.1 | 2.9 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | 0.3 | 0.0 | 0.0 | 0.0 | 0.3 | 1.4 | 0.9 | 0.7 | 1.0 | 0.7 | 0.3 | 0.3 | 0.5 | 1.4 | 0.0 |
| | | S8 | No | 50% | 0.4 | 0.4 | 0.0 | 0.0 | 1.4 | 3.6 | 1.8 | 1.6 | 1.5 | 0.7 | 0.6 | 0.3 | 1.0 | 3.6 | 0.0 |
| | | S8 | No | 10% | 0.4 | 0.5 | 0.3 | 0.5 | 2.8 | 5.7 | 3.4 | 2.4 | 2.5 | 1.9 | 1.1 | 0.5 | 1.8 | 5.7 | 0.3 |
| | Post-Closure | S8 | No | 90% | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.4 | 0.2 | 0.2 | 0.3 | 0.2 | 0.1 | 0.1 | 0.1 | 0.4 | 0.0 |
| | | S8 | No | 50% | 0.1 | 0.1 | 0.0 | 0.0 | 0.4 | 1.0 | 0.4 | 0.4 | 0.4 | 0.1 | 0.1 | 0.1 | 0.3 | 1.0 | 0.0 |
| | | S8 | No | 10% | 0.1 | 0.1 | 0.1 | 0.1 | 0.7 | 1.5 | 0.9 | 0.6 | 0.7 | 0.5 | 0.2 | 0.1 | 0.5 | 1.5 | 0.1 |

**Table K4.16-27: South Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S8—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | 86.0 | 54.2 | 0.0 | 0.0 | 1.7 | 11.9 | 15.6 | 9.9 | 6.6 | 7.9 | 7.2 | 16.7 | 18.1 | 86.0 | 0.0 |
| | | S8 | No | 50% | 18.4 | 97.9 | 0.0 | 2.2 | 2.7 | 7.7 | 11.0 | 5.8 | 4.8 | 4.0 | 7.0 | 7.3 | 14.1 | 97.9 | 0.0 |
| | | S8 | No | 10% | 6.2 | 11.1 | 9.6 | 8.1 | 3.0 | 4.4 | 8.5 | 4.4 | 4.1 | 4.5 | 5.7 | 5.4 | 6.3 | 11.1 | 3.0 |
| | Post-Closure | S8 | No | 90% | 17.3 | 0.0 | 0.0 | 0.0 | 0.3 | 3.0 | 3.5 | 2.4 | 1.7 | 1.7 | 1.7 | 3.5 | 2.9 | 17.3 | 0.0 |
| | | S8 | No | 50% | 3.8 | 18.7 | 0.0 | 0.0 | 0.7 | 2.2 | 2.3 | 1.6 | 1.3 | 0.8 | 1.5 | 1.7 | 2.9 | 18.7 | 0.0 |
| | | S8 | No | 10% | 1.5 | 2.4 | 2.0 | 2.1 | 0.8 | 1.2 | 2.3 | 1.2 | 1.2 | 1.2 | 1.2 | 1.3 | 1.5 | 2.4 | 0.8 |

Notes:

cfs = cubic feet per second
SFK = South Fork Koktuli

Source: Knight Piésold 2019q, r

**Table K4.16-28: Upper Talarik Creek Change in Streamflow End of Mine and Post-Closure—Scenario S8—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| **UTC-A** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | No | 90% | 119.2 | 104.7 | 93.3 | 89.3 | 228.2 | 291.6 | 175.6 | 173.6 | 209.2 | 218.3 | 171.5 | 140.4 | 167.9 | 291.6 | 89.3 |
| | | S8 | No | 50% | 146.3 | 127.0 | 112.6 | 109.7 | 537.2 | 437.7 | 265.5 | 294.0 | 392.1 | 350.1 | 245.8 | 180.0 | 266.5 | 537.2 | 109.7 |
| | | S8 | No | 10% | 241.1 | 185.8 | 166.7 | 188.7 | 1013.4 | 917.8 | 504.9 | 481.6 | 650.7 | 525.5 | 433.2 | 272.3 | 465.1 | 1013.4 | 166.7 |
| | End of Mine | S8 | No | 90% | 118.7 | 104.3 | 93.0 | 89.0 | 227.8 | 291.1 | 175.1 | 173.1 | 208.7 | 217.7 | 171.0 | 139.9 | 167.5 | 291.1 | 89.0 |
| | | S8 | No | 50% | 145.8 | 126.6 | 112.2 | 109.3 | 536.8 | 437.2 | 265.0 | 293.4 | 391.5 | 349.6 | 245.3 | 179.5 | 266.0 | 536.8 | 109.3 |
| | | S8 | No | 10% | 240.6 | 185.4 | 166.3 | 188.4 | 1013.0 | 917.4 | 504.4 | 481.1 | 650.2 | 525.0 | 432.7 | 271.8 | 464.7 | 1013.0 | 166.3 |
| | Post-Closure | S8 | No | 90% | 118.7 | 104.3 | 93.0 | 89.0 | 227.8 | 291.1 | 175.1 | 173.1 | 208.7 | 217.7 | 171.0 | 139.9 | 167.5 | 291.1 | 89.0 |
| | | S8 | No | 50% | 145.8 | 126.6 | 112.2 | 109.3 | 536.8 | 437.3 | 265.0 | 293.5 | 391.6 | 349.6 | 245.3 | 179.5 | 266.0 | 536.8 | 109.3 |
| | | S8 | No | 10% | 240.6 | 185.4 | 166.3 | 188.4 | 1013.0 | 917.4 | 504.4 | 481.1 | 650.2 | 525.0 | 432.7 | 271.8 | 464.7 | 1013.0 | 166.3 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -0.5 | -0.4 | -0.4 | -0.3 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.3 | -0.5 |
| | | S8 | No | 50% | -0.5 | -0.4 | -0.4 | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.5 |
| | | S8 | No | 10% | -0.5 | -0.4 | -0.4 | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.5 |
| | Post-Closure | S8 | No | 90% | -0.4 | -0.4 | -0.4 | -0.3 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.3 | -0.5 |
| | | S8 | No | 50% | -0.4 | -0.4 | -0.4 | -0.4 | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.5 |
| | | S8 | No | 10% | -0.5 | -0.4 | -0.4 | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.5 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -0.4 | -0.4 | -0.4 | -0.4 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.2 | -0.3 | -0.3 | -0.3 | -0.2 | -0.4 |
| | | S8 | No | 50% | -0.3 | -0.3 | -0.4 | -0.3 | -0.1 | -0.1 | -0.2 | -0.2 | -0.1 | -0.1 | -0.2 | -0.3 | -0.2 | -0.1 | -0.4 |
| | | S8 | No | 10% | -0.2 | -0.2 | -0.2 | -0.2 | 0.0 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.1 | 0.0 | -0.2 |
| | Post-Closure | S8 | No | 90% | -0.4 | -0.4 | -0.4 | -0.4 | -0.2 | -0.2 | -0.3 | -0.3 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.2 | -0.4 |
| | | S8 | No | 50% | -0.3 | -0.3 | -0.3 | -0.3 | -0.1 | -0.1 | -0.2 | -0.2 | -0.1 | -0.1 | -0.2 | -0.3 | -0.2 | -0.1 | -0.3 |
| | | S8 | No | 10% | -0.2 | -0.2 | -0.2 | -0.2 | 0.0 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.1 | 0.0 | -0.2 |
| **UTC-B** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | No | 90% | 131.3 | 115.4 | 102.8 | 98.4 | 251.4 | 321.3 | 193.4 | 191.2 | 230.5 | 240.5 | 189.0 | 154.7 | 185.0 | 321.3 | 98.4 |
| | | S8 | No | 50% | 161.2 | 139.9 | 124.1 | 120.8 | 591.8 | 482.2 | 292.5 | 323.9 | 431.9 | 385.7 | 270.8 | 198.3 | 293.6 | 591.8 | 120.8 |
| | | S8 | No | 10% | 265.6 | 204.7 | 183.6 | 207.9 | 1116.5 | 1011.2 | 556.2 | 530.6 | 716.9 | 579.0 | 477.3 | 300.0 | 512.5 | 1116.5 | 183.6 |
| | End of Mine | S8 | No | 90% | 130.8 | 115.0 | 102.5 | 98.0 | 251.0 | 320.8 | 192.9 | 190.7 | 230.0 | 239.9 | 188.5 | 154.2 | 184.5 | 320.8 | 98.0 |
| | | S8 | No | 50% | 160.7 | 139.5 | 123.7 | 120.5 | 591.5 | 481.8 | 292.0 | 323.4 | 431.4 | 385.2 | 270.3 | 197.8 | 293.1 | 591.5 | 120.5 |
| | | S8 | No | 10% | 265.1 | 204.3 | 183.2 | 207.6 | 1116.1 | 1010.7 | 555.8 | 530.1 | 716.4 | 578.5 | 476.8 | 299.5 | 512.0 | 1116.1 | 183.2 |
| | Post-Closure | S8 | No | 90% | 130.8 | 115.0 | 102.5 | 98.0 | 251.1 | 320.8 | 192.9 | 190.7 | 230.0 | 240.0 | 188.5 | 154.2 | 184.5 | 320.8 | 98.0 |
| | | S8 | No | 50% | 160.7 | 139.5 | 123.7 | 120.5 | 591.5 | 481.8 | 292.0 | 323.4 | 431.4 | 385.2 | 270.3 | 197.8 | 293.1 | 591.5 | 120.5 |
| | | S8 | No | 10% | 265.1 | 204.3 | 183.2 | 207.6 | 1116.1 | 1010.7 | 555.8 | 530.1 | 716.4 | 578.5 | 476.8 | 299.5 | 512.0 | 1116.1 | 183.2 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -0.5 | -0.4 | -0.4 | -0.3 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.3 | -0.5 |
| | | S8 | No | 50% | -0.5 | -0.4 | -0.4 | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.5 |
| | | S8 | No | 10% | -0.5 | -0.4 | -0.4 | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.5 |
| | Post-Closure | S8 | No | 90% | -0.4 | -0.4 | -0.4 | -0.3 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.3 | -0.5 |
| | | S8 | No | 50% | -0.4 | -0.4 | -0.4 | -0.4 | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.5 |
| | | S8 | No | 10% | -0.5 | -0.4 | -0.4 | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.5 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -0.3 | -0.4 | -0.4 | -0.4 | -0.1 | -0.1 | -0.3 | -0.3 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.1 | -0.4 |
| | | S8 | No | 50% | -0.3 | -0.3 | -0.3 | -0.3 | -0.1 | -0.1 | -0.2 | -0.2 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.1 | -0.3 |
| | | S8 | No | 10% | -0.2 | -0.2 | -0.2 | -0.2 | 0.0 | 0.0 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.1 | 0.0 | -0.2 |
| | Post-Closure | S8 | No | 90% | -0.3 | -0.4 | -0.4 | -0.3 | -0.1 | -0.1 | -0.3 | -0.3 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.1 | -0.4 |
| | | S8 | No | 50% | -0.3 | -0.3 | -0.3 | -0.3 | -0.1 | -0.1 | -0.2 | -0.2 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.1 | -0.3 |
| | | S8 | No | 10% | -0.2 | -0.2 | -0.2 | -0.2 | 0.0 | 0.0 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.1 | 0.0 | -0.2 |
| **UTC-C** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | No | 90% | 96.7 | 85.8 | 76.8 | 74.1 | 179.4 | 235.3 | 142.7 | 141.4 | 167.4 | 174.4 | 138.2 | 114.0 | 135.5 | 235.3 | 74.1 |
| | | S8 | No | 50% | 118.9 | 103.1 | 91.9 | 88.6 | 407.0 | 355.2 | 215.1 | 232.2 | 299.0 | 275.3 | 195.4 | 145.0 | 210.6 | 407.0 | 88.6 |
| | | S8 | No | 10% | 189.4 | 145.7 | 134.1 | 142.1 | 774.7 | 722.0 | 407.5 | 370.7 | 496.9 | 418.6 | 337.6 | 210.7 | 362.5 | 774.7 | 134.1 |
| | End of Mine | S8 | No | 90% | 96.3 | 85.4 | 76.5 | 73.8 | 179.0 | 234.8 | 142.2 | 140.9 | 166.9 | 173.9 | 137.7 | 113.5 | 135.1 | 234.8 | 73.8 |
| | | S8 | No | 50% | 118.5 | 102.7 | 91.5 | 88.3 | 406.6 | 354.8 | 214.6 | 231.7 | 298.5 | 274.7 | 194.8 | 144.5 | 210.1 | 406.6 | 88.3 |
| | | S8 | No | 10% | 189.0 | 145.3 | 133.8 | 141.8 | 774.3 | 721.6 | 407.0 | 370.2 | 496.4 | 418.1 | 337.1 | 210.2 | 362.1 | 774.3 | 133.8 |

**Table K4.16-28: Upper Talarik Creek Change in Streamflow End of Mine and Post-Closure—Scenario S8—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S8 | No | 90% | 96.3 | 85.4 | 76.5 | 73.8 | 179.0 | 234.8 | 142.2 | 140.9 | 166.9 | 173.9 | 137.7 | 113.5 | 135.1 | 234.8 | 73.8 |
| | | S8 | No | 50% | 118.5 | 102.7 | 91.5 | 88.3 | 406.6 | 354.8 | 214.6 | 231.7 | 298.5 | 274.8 | 194.9 | 144.5 | 210.1 | 406.6 | 88.3 |
| | | S8 | No | 10% | 189.0 | 145.3 | 133.8 | 141.8 | 774.3 | 721.6 | 407.0 | 370.2 | 496.4 | 418.1 | 337.1 | 210.3 | 362.1 | 774.3 | 133.8 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -0.5 | -0.4 | -0.4 | -0.3 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.3 | -0.5 |
| | | S8 | No | 50% | -0.5 | -0.4 | -0.4 | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.5 |
| | | S8 | No | 10% | -0.5 | -0.4 | -0.4 | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.5 |
| | Post-Closure | S8 | No | 90% | -0.4 | -0.4 | -0.4 | -0.3 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.3 | -0.5 |
| | | S8 | No | 50% | -0.4 | -0.4 | -0.4 | -0.4 | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.5 |
| | | S8 | No | 10% | -0.4 | -0.4 | -0.4 | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.5 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -0.5 | -0.5 | -0.5 | -0.5 | -0.2 | -0.2 | -0.3 | -0.4 | -0.3 | -0.3 | -0.4 | -0.4 | -0.4 | -0.2 | -0.5 |
| | | S8 | No | 50% | -0.4 | -0.4 | -0.4 | -0.4 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.1 | -0.4 |
| | | S8 | No | 10% | -0.2 | -0.3 | -0.3 | -0.3 | 0.0 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | 0.0 | -0.3 |
| | Post-Closure | S8 | No | 90% | -0.5 | -0.5 | -0.5 | -0.5 | -0.2 | -0.2 | -0.3 | -0.4 | -0.3 | -0.3 | -0.4 | -0.4 | -0.4 | -0.2 | -0.5 |
| | | S8 | No | 50% | -0.4 | -0.4 | -0.4 | -0.4 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.1 | -0.4 |
| | | S8 | No | 10% | -0.2 | -0.3 | -0.3 | -0.2 | 0.0 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | 0.0 | -0.3 |
| **UTC-D** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | No | 90% | 58.8 | 50.8 | 43.3 | 41.1 | 117.9 | 167.1 | 94.8 | 93.4 | 109.0 | 116.7 | 89.5 | 70.6 | 87.7 | 167.1 | 41.1 |
| | | S8 | No | 50% | 79.3 | 66.2 | 56.5 | 51.5 | 285.2 | 261.6 | 155.2 | 158.6 | 206.6 | 191.5 | 133.4 | 99.4 | 145.4 | 285.2 | 51.5 |
| | | S8 | No | 10% | 121.2 | 96.2 | 87.0 | 83.5 | 569.6 | 563.6 | 310.3 | 259.2 | 354.7 | 303.1 | 247.6 | 147.9 | 262.0 | 569.6 | 83.5 |
| | End of Mine | S8 | No | 90% | 58.6 | 50.5 | 43.1 | 40.9 | 117.7 | 166.8 | 94.5 | 93.1 | 108.6 | 116.3 | 89.1 | 70.3 | 87.4 | 166.8 | 40.9 |
| | | S8 | No | 50% | 79.0 | 65.9 | 56.2 | 51.3 | 285.0 | 261.3 | 154.9 | 158.3 | 206.3 | 191.1 | 133.0 | 99.1 | 145.1 | 285.0 | 51.3 |
| | | S8 | No | 10% | 120.9 | 96.0 | 86.7 | 83.3 | 569.4 | 563.3 | 310.0 | 258.9 | 354.4 | 302.7 | 247.3 | 147.6 | 261.7 | 569.4 | 83.3 |
| | Post-Closure | S8 | No | 90% | 58.6 | 50.5 | 43.1 | 40.9 | 117.7 | 166.8 | 94.5 | 93.1 | 108.6 | 116.3 | 89.1 | 70.3 | 87.5 | 166.8 | 40.9 |
| | | S8 | No | 50% | 79.0 | 65.9 | 56.2 | 51.3 | 285.0 | 261.3 | 154.9 | 158.3 | 206.3 | 191.1 | 133.0 | 99.1 | 145.1 | 285.0 | 51.3 |
| | | S8 | No | 10% | 121.0 | 96.0 | 86.8 | 83.3 | 569.4 | 563.3 | 310.0 | 258.9 | 354.4 | 302.7 | 247.3 | 147.6 | 261.7 | 569.4 | 83.3 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -0.3 | -0.3 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.4 | -0.4 | -0.4 | -0.3 | -0.3 | -0.2 | -0.4 |
| | | S8 | No | 50% | -0.3 | -0.3 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.4 | -0.4 | -0.4 | -0.3 | -0.3 | -0.2 | -0.4 |
| | | S8 | No | 10% | -0.3 | -0.3 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.4 | -0.4 | -0.4 | -0.3 | -0.3 | -0.2 | -0.4 |
| | Post-Closure | S8 | No | 90% | -03 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.3 | -0.4 | -0.3 | -0.3 | -0.3 | -0.2 | -0.4 |
| | | S8 | No | 50% | -0.3 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.3 | -0.4 | -0.3 | -0.3 | -0.3 | -0.2 | -0.4 |
| | | S8 | No | 10% | -0.3 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.3 | -0.4 | -0.3 | -0.3 | -0.3 | -0.2 | -0.4 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -0.5 | -0.5 | -0.5 | -0.5 | -0.2 | -0.2 | -0.4 | -0.4 | -0.3 | -0.3 | -0.4 | -0.5 | -0.4 | -0.2 | -0.5 |
| | | S8 | No | 50% | -0.4 | -0.4 | -0.4 | -0.4 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.1 | -0.4 |
| | | S8 | No | 10% | -0.2 | -0.3 | -0.3 | -0.2 | 0.0 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.2 | 0.0 | -0.3 |
| | Post-Closure | S8 | No | 90% | -0.5 | -0.5 | -0.5 | -0.4 | -0.2 | -0.2 | -0.3 | -0.4 | -0.3 | -0.3 | -0.4 | -0.5 | -0.4 | -0.2 | -0.5 |
| | | S8 | No | 50% | -0.4 | -0.4 | -0.4 | -0.4 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.1 | -0.4 |
| | | S8 | No | 10% | -0.2 | -0.3 | -0.2 | -0.2 | 0.0 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.2 | 0.0 | -0.3 |
| **UTC-E** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | No | 90% | 35.2 | 27.2 | 20.9 | 19.1 | 85.4 | 133.3 | 68.4 | 67.4 | 83.0 | 89.3 | 64.0 | 46.6 | 61.7 | 133.3 | 19.1 |
| | | S8 | No | 50% | 51.3 | 38.8 | 30.1 | 26.8 | 207.2 | 205.8 | 122.0 | 122.3 | 163.0 | 153.0 | 102.6 | 70.0 | 107.7 | 207.2 | 26.8 |
| | | S8 | No | 10% | 88.2 | 65.8 | 58.9 | 56.5 | 430.0 | 455.3 | 252.8 | 206.9 | 282.6 | 244.9 | 197.1 | 112.0 | 204.2 | 455.3 | 56.5 |
| | End of Mine | S8 | No | 90% | 34.9 | 26.9 | 20.7 | 18.9 | 85.1 | 133.0 | 68.0 | 67.0 | 82.6 | 89.0 | 63.7 | 46.3 | 61.4 | 133.0 | 18.9 |
| | | S8 | No | 50% | 51.0 | 38.5 | 29.8 | 26.6 | 207.0 | 205.5 | 121.7 | 121.9 | 162.7 | 152.7 | 102.3 | 69.7 | 107.4 | 207.0 | 26.6 |
| | | S8 | No | 10% | 87.9 | 65.5 | 58.7 | 56.3 | 429.8 | 455.0 | 252.4 | 206.5 | 282.2 | 244.5 | 196.7 | 111.6 | 203.9 | 455.0 | 56.3 |
| | Post-Closure | S8 | No | 90% | 34.9 | 26.9 | 20.7 | 19.0 | 85.2 | 133.0 | 68.0 | 67.1 | 82.7 | 89.0 | 63.7 | 46.3 | 61.4 | 133.0 | 19.0 |
| | | S8 | No | 50% | 51.0 | 38.5 | 29.8 | 26.6 | 207.0 | 205.5 | 121.7 | 121.9 | 162.7 | 152.7 | 102.3 | 69.7 | 107.5 | 207.0 | 26.6 |
| | | S8 | No | 10% | 87.9 | 65.5 | 58.7 | 56.3 | 429.8 | 455.0 | 252.4 | 206.5 | 282.2 | 244.5 | 196.7 | 111.6 | 203.9 | 455.0 | 56.3 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -0.3 | -0.3 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.4 | -0.4 | -0.4 | -0.3 | -0.3 | -0.2 | -0.4 |
| | | S8 | No | 50% | -0.3 | -0.3 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.4 | -0.4 | -0.4 | -0.3 | -0.3 | -0.2 | -0.4 |
| | | S8 | No | 10% | -0.3 | -0.3 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.4 | -0.4 | -0.4 | -0.3 | -0.3 | -0.2 | -0.4 |

**Table K4.16-28: Upper Talarik Creek Change in Streamflow End of Mine and Post-Closure—Scenario S8—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S8 | No | 90% | -0.3 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.3 | -0.4 | -0.3 | -0.3 | -0.3 | -0.2 | -0.4 |
| | | S8 | No | 50% | -0.3 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.3 | -0.4 | -0.3 | -0.3 | -0.3 | -0.2 | -0.4 |
| | | S8 | No | 10% | -0.3 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.3 | -0.4 | -0.3 | -0.3 | -0.3 | -0.2 | -0.4 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -0.8 | -0.9 | -1.1 | -1.0 | -0.3 | -0.2 | -0.5 | -0.5 | -0.4 | -0.4 | -0.6 | -0.7 | -0.6 | -0.2 | -1.1 |
| | | S8 | No | 50% | -0.6 | -0.7 | -0.7 | -0.7 | -0.1 | -0.1 | -0.3 | -0.3 | -0.2 | -0.2 | -0.4 | -0.5 | -0.4 | -0.1 | -0.7 |
| | | S8 | No | 10% | -0.3 | -0.4 | -0.4 | -0.3 | -0.1 | -0.1 | -0.1 | -0.2 | -0.1 | -0.1 | -0.2 | -0.3 | -0.2 | -0.1 | -0.4 |
| | Post-Closure | S8 | No | 90% | .8 | -0.9 | -1.0 | -1.0 | -0.2 | -0.2 | -0.5 | -0.5 | -0.4 | -0.4 | -0.5 | -0.7 | -0.6 | -0.2 | -1.0 |
| | | S8 | No | 50% | -0.6 | -0.6 | -0.7 | -0.7 | -0.1 | -0.1 | -0.3 | -0.3 | -0.2 | -0.2 | -0.3 | -0.5 | -0.4 | -0.1 | -0.7 |
| | | S8 | No | 10% | -0.3 | -0.4 | -0.4 | -0.3 | 0.0 | -0.1 | -0.1 | -0.2 | -0.1 | -0.1 | -0.2 | -0.3 | -0.2 | 0.0 | -0.4 |
| **UT-F** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | No | 90% | 6.1 | 5.1 | 4.2 | 3.7 | 14.7 | 21.1 | 9.8 | 9.4 | 12.0 | 12.6 | 9.5 | 7.5 | 9.7 | 21.1 | 3.7 |
| | | S8 | No | 50% | 8.2 | 6.7 | 5.6 | 4.9 | 35.6 | 33.1 | 17.5 | 18.7 | 25.6 | 22.9 | 15.3 | 10.4 | 17.0 | 35.6 | 4.9 |
| | | S8 | No | 10% | 14.1 | 10.8 | 9.9 | 9.1 | 67.8 | 75.6 | 39.5 | 32.1 | 43.6 | 38.5 | 29.6 | 16.7 | 32.3 | 75.6 | 9.1 |
| | End of Mine | S8 | No | 90% | 6.0 | 5.0 | 4.1 | 3.6 | 14.6 | 21.0 | 9.6 | 9.2 | 11.9 | 12.4 | 9.3 | 7.4 | 9.5 | 21.0 | 3.6 |
| | | S8 | No | 50% | 8.0 | 6.5 | 5.5 | 4.8 | 35.5 | 33.0 | 17.3 | 18.6 | 25.4 | 22.7 | 15.2 | 10.2 | 16.9 | 35.5 | 4.8 |
| | | S8 | No | 10% | 14.0 | 10.7 | 9.8 | 9.1 | 67.7 | 75.5 | 39.4 | 31.9 | 43.5 | 38.3 | 29.5 | 16.5 | 32.1 | 75.5 | 9.1 |
| | Post-Closure | S8 | No | 90% | 6.0 | 5.0 | 4.1 | 3.7 | 14.6 | 21.0 | 9.7 | 9.2 | 11.9 | 12.4 | 9.3 | 7.4 | 9.5 | 21.0 | 3.7 |
| | | S8 | No | 50% | 8.0 | 6.5 | 5.5 | 4.8 | 35.5 | 33.0 | 17.3 | 18.6 | 25.4 | 22.7 | 15.2 | 10.2 | 16.9 | 35.5 | 4.8 |
| | | S8 | No | 10% | 14.0 | 10.7 | 9.8 | 9.1 | 67.7 | 75.5 | 39.4 | 31.9 | 43.5 | 38.3 | 29.5 | 16.5 | 32.1 | 75.5 | 9.1 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.1 | -0.1 | -0.2 |
| | | S8 | No | 50% | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.1 | -0.1 | -0.2 |
| | | S8 | No | 10% | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.1 | -0.1 | -0.2 |
| | Post-Closure | S8 | No | 90% | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.1 | -0.1 | -0.2 |
| | | S8 | No | 50% | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.1 | -0.1 | -0.2 |
| | | S8 | No | 10% | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.1 | -0.1 | -0.2 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -2.4 | -2.5 | -2.7 | -2.6 | -0.7 | -0.7 | -1.7 | -1.8 | -1.5 | -1.5 | -1.9 | -2.2 | -1.8 | -0.7 | -2.7 |
| | | S8 | No | 50% | -1.8 | -1.9 | -2.0 | -2.0 | -0.3 | -0.5 | -1.0 | -0.9 | -0.7 | -0.8 | -1.2 | -1.6 | -1.2 | -0.3 | -2.0 |
| | | S8 | No | 10% | -1.0 | -1.2 | -1.1 | -1.1 | -0.2 | -0.2 | -0.4 | -0.5 | -0.4 | -0.5 | -0.6 | -1.0 | -0.7 | -0.2 | -1.2 |
| | Post-Closure | S8 | No | 90% | -2.3 | -2.4 | -2.6 | -2.5 | -0.7 | -0.7 | -1.7 | -1.8 | -1.4 | -1.4 | -1.8 | -2.1 | -1.8 | -0.7 | -2.6 |
| | | S8 | No | 50% | -1.7 | -1.9 | -1.9 | -1.9 | -0.3 | -0.4 | -0.9 | -0.9 | -0.7 | -0.8 | -1.1 | -1.6 | -1.2 | -0.3 | -1.9 |
| | | S8 | No | 10% | -1.0 | -1.1 | -1.1 | -1.0 | -0.2 | -0.2 | -0.4 | -0.5 | -0.4 | -0.5 | -0.6 | -1.0 | -0.7 | -0.2 | -1.1 |
| **Tributary 1.19** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | No | 90% | 25.5 | 24.8 | 25.4 | 25.0 | 26.4 | 27.6 | 26.5 | 26.4 | 26.6 | 26.4 | 25.8 | 25.8 | 26.0 | 27.6 | 24.8 |
| | | S8 | No | 50% | 26.4 | 26.1 | 26.0 | 25.9 | 30.8 | 33.7 | 29.8 | 28.5 | 28.8 | 28.3 | 27.6 | 26.8 | 28.2 | 33.7 | 25.9 |
| | | S8 | No | 10% | 27.7 | 27.2 | 27.1 | 26.9 | 39.5 | 39.9 | 36.7 | 32.0 | 32.0 | 32.7 | 30.9 | 29.2 | 31.8 | 39.9 | 26.9 |
| | End of Mine | S8 | No | 90% | 25.4 | 24.6 | 25.2 | 24.8 | 26.2 | 27.4 | 26.3 | 26.2 | 26.5 | 26.2 | 25.7 | 25.7 | 25.8 | 27.4 | 24.6 |
| | | S8 | No | 50% | 26.2 | 25.9 | 25.8 | 25.7 | 30.6 | 33.6 | 29.6 | 28.3 | 28.6 | 28.1 | 27.4 | 26.7 | 28.0 | 33.6 | 25.7 |
| | | S8 | No | 10% | 27.6 | 27.1 | 26.9 | 26.7 | 39.4 | 39.7 | 36.5 | 31.9 | 31.8 | 32.5 | 30.7 | 29.0 | 31.7 | 39.7 | 26.7 |
| | Post-Closure | S8 | No | 90% | 25.4 | 24.6 | 25.2 | 24.8 | 26.2 | 27.4 | 26.3 | 26.2 | 26.4 | 26.2 | 25.7 | 25.7 | 25.8 | 27.4 | 24.6 |
| | | S8 | No | 50% | 26.2 | 25.9 | 25.8 | 25.7 | 30.6 | 33.5 | 29.6 | 28.3 | 28.6 | 28.1 | 27.4 | 26.7 | 28.0 | 33.5 | 25.7 |
| | | S8 | No | 10% | 27.6 | 27.1 | 26.9 | 26.7 | 39.4 | 39.7 | 36.5 | 31.9 | 31.8 | 32.5 | 30.7 | 29.0 | 31.7 | 39.7 | 26.7 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -0.2 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.1 | -0.2 |
| | | S8 | No | 50% | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 |
| | | S8 | No | 10% | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 |
| | Post-Closure | S8 | No | 90% | -0.2 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.1 | -0.2 |
| | | S8 | No | 50% | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.1 | -0.2 |
| | | S8 | No | 10% | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.1 | -0.2 |

**Table K4.16-28: Upper Talarik Creek Change in Streamflow End of Mine and Post-Closure—Scenario S8—Without Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | No | 90% | -0.7 | -0.6 | -0.6 | -0.7 | -0.7 | -0.6 | -0.7 | -0.6 | -0.6 | -0.6 | -0.7 | -0.6 | -0.6 | -0.6 | -0.7 |
| | | S8 | No | 50% | -0.6 | -0.6 | -0.7 | -0.7 | -0.6 | -0.5 | -0.6 | -0.6 | -0.5 | -0.6 | -0.6 | -0.6 | -0.6 | -0.5 | -0.7 |
| | | S8 | No | 10% | -0.6 | -0.6 | -0.6 | -0.6 | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.6 | -0.5 | -0.4 | -0.6 |
| | Post-Closure | S8 | No | 90% | -0.7 | -0.6 | -0.6 | -0.7 | -0.7 | -0.6 | -0.7 | -0.6 | -0.6 | -0.6 | -0.7 | -0.6 | -0.6 | -0.6 | -0.7 |
| | | S8 | No | 50% | -0.6 | -0.6 | -0.7 | -0.7 | -0.6 | -0.5 | -0.6 | -0.6 | -0.5 | -0.6 | -0.6 | -0.6 | -0.6 | -0.5 | -0.7 |
| | | S8 | No | 10% | -0.6 | -0.6 | -0.6 | -0.6 | -0.4 | -0.4 | -0.5 | -0.4 | -0.5 | -0.6 | -0.5 | -0.6 | -0.5 | -0.4 | -0.6 |

Notes:

cfs = cubic feet per second
UTC = Upper Talarik Creek

Source: Knight Piésold 2019q, r

**Table K4.16-29: North Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S0—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| NFK-A | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | Yes | 90% | 51.0 | 40.3 | 32.6 | 30.2 | 184.2 | 226.7 | 114.0 | 113.6 | 162.5 | 138.4 | 98.5 | 69.0 | 105.1 | 226.7 | 30.2 |
| | | S0 | Yes | 50% | 70.3 | 54.2 | 43.2 | 39.7 | 434.0 | 377.9 | 235.3 | 241.8 | 316.5 | 267.5 | 154.2 | 94.2 | 194.1 | 434.0 | 39.7 |
| | | S0 | Yes | 10% | 114.9 | 102.0 | 82.5 | 93.5 | 831.7 | 979.6 | 435.1 | 447.1 | 539.9 | 421.3 | 296.9 | 155.5 | 375.0 | 979.6 | 82.5 |
| | End of Mine | S0 | Yes | 90% | 57.2 | 49.1 | 43.3 | 41.2 | 188.3 | 217.6 | 111.8 | 110.7 | 161.5 | 135.7 | 96.9 | 72.1 | 107.1 | 217.6 | 41.2 |
| | | S0 | Yes | 50% | 71.9 | 60.0 | 51.5 | 49.1 | 407.2 | 332.2 | 214.9 | 219.6 | 291.2 | 248.3 | 148.9 | 91.1 | 182.2 | 407.2 | 49.1 |
| | | S0 | Yes | 10% | 110.8 | 99.6 | 82.4 | 100.7 | 758.1 | 823.5 | 382.7 | 398.0 | 474.1 | 379.8 | 270.5 | 150.4 | 335.9 | 823.5 | 82.4 |
| | Post-Closure | S0 | Yes | 90% | 51.5 | 42.6 | 36.2 | 34.7 | 187.6 | 220.2 | 114.1 | 113.0 | 160.2 | 134.9 | 93.3 | 67.0 | 104.6 | 220.2 | 34.7 |
| | | S0 | Yes | 50% | 69.8 | 55.9 | 46.2 | 43.7 | 429.2 | 371.1 | 234.1 | 234.6 | 308.8 | 252.4 | 149.8 | 92.1 | 190.6 | 429.2 | 43.7 |
| | | S0 | Yes | 10% | 114.0 | 101.8 | 82.4 | 97.8 | 819.1 | 956.3 | 429.6 | 434.3 | 523.6 | 409.6 | 282.7 | 156.3 | 367.3 | 956.3 | 82.4 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 6.2 | 8.8 | 10.7 | 11.0 | 4.1 | -9.1 | -2.2 | -2.9 | -1.0 | -2.7 | -1.6 | 3.1 | 2.0 | 11.0 | -9.1 |
| | | S0 | Yes | 50% | 1.6 | 5.7 | 8.2 | 9.4 | -26.8 | -45.7 | -20.4 | -22.2 | -25.3 | -19.2 | -5.3 | -3.1 | -11.9 | 9.4 | -45.7 |
| | | S0 | Yes | 10% | -4.1 | -2.4 | -0.1 | 7.2 | -73.6 | -156.1 | -52.4 | -49.1 | -65.8 | -41.6 | -26.3 | -5.1 | -39.1 | 7.2 | -156.1 |
| | Post-Closure | S0 | Yes | 90% | 0.5 | 2.3 | 3.6 | 4.5 | 3.5 | -6.5 | 0.2 | -0.6 | -2.3 | -3.5 | -5.1 | -2.0 | -0.5 | 4.5 | -6.5 |
| | | S0 | Yes | 50% | -0.5 | 1.6 | 3.0 | 4.0 | -4.8 | -6.7 | -1.2 | -7.3 | -7.7 | -15.1 | -4.5 | -2.1 | -3.4 | 4.0 | -15.1 |
| | | S0 | Yes | 10% | -0.8 | -0.2 | -0.1 | 4.3 | -12.6 | -23.4 | -5.5 | -12.8 | -16.3 | -11.8 | -14.2 | 0.7 | -7.7 | 4.3 | -23.4 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 12.1 | 21.9 | 32.9 | 36.6 | 2.2 | -4.0 | -1.9 | -2.5 | -0.6 | -2.0 | -1.6 | 4.5 | 8.1 | 36.6 | -4.0 |
| | | S0 | Yes | 50% | 2.2 | 10.6 | 19.1 | 23.5 | -6.2 | -12.1 | -8.7 | -9.2 | -8.0 | -7.2 | -3.5 | -3.3 | -0.2 | 23.5 | -12.1 |
| | | S0 | Yes | 10% | -3.6 | -2.4 | -0.1 | 7.7 | -8.9 | -15.9 | -12.0 | -11.0 | -12.2 | -9.9 | -8.9 | -3.3 | -6.7 | 7.7 | -15.9 |
| | Post-Closure | S0 | Yes | 90% | 0.9 | 5.8 | 11.1 | 15.0 | 1.9 | -2.9 | 0.2 | -0.5 | -1.4 | -2.6 | -5.2 | -2.9 | 1.6 | 15.0 | -5.2 |
| | | S0 | Yes | 50% | -0.7 | 3.0 | 6.9 | 10.0 | -1.1 | -1.8 | -0.5 | -3.0 | -2.4 | -5.6 | -2.9 | -2.2 | 0.0 | 10.0 | -5.6 |
| | | S0 | Yes | 10% | -0.7 | -0.2 | -0.1 | 4.6 | -1.5 | -2.4 | -1.3 | -2.9 | -3.0 | -2.8 | -4.8 | 0.5 | -1.2 | 4.6 | -4.8 |
| NFK-B | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | Yes | 90% | 47.0 | 37.0 | 29.8 | 27.1 | 150.1 | 195.9 | 101.3 | 102.4 | 141.5 | 122.8 | 87.9 | 62.5 | 92.1 | 195.9 | 27.1 |
| | | S0 | Yes | 50% | 65.0 | 49.9 | 39.6 | 34.9 | 379.7 | 332.5 | 203.8 | 213.4 | 274.3 | 234.7 | 133.1 | 85.9 | 170.6 | 379.7 | 34.9 |
| | | S0 | Yes | 10% | 105.4 | 89.1 | 76.3 | 77.3 | 720.4 | 868.9 | 387.7 | 389.6 | 477.6 | 368.3 | 264.9 | 136.1 | 330.1 | 868.9 | 76.3 |
| | End of Mine | S0 | Yes | 90% | 53.2 | 45.8 | 40.5 | 38.6 | 154.7 | 187.9 | 99.2 | 100.5 | 139.8 | 119.7 | 87.3 | 65.6 | 94.4 | 187.9 | 38.6 |
| | | S0 | Yes | 50% | 66.8 | 55.6 | 48.1 | 45.1 | 345.7 | 287.8 | 184.4 | 191.5 | 249.2 | 215.6 | 128.8 | 83.0 | 158.5 | 345.7 | 45.1 |
| | | S0 | Yes | 10% | 101.8 | 89.0 | 76.3 | 84.1 | 647.6 | 712.2 | 336.0 | 340.6 | 412.5 | 327.2 | 234.8 | 131.1 | 291.1 | 712.2 | 76.3 |
| | Post-Closure | S0 | Yes | 90% | 47.5 | 39.5 | 33.4 | 32.1 | 153.4 | 189.8 | 101.1 | 102.0 | 139.4 | 119.0 | 84.1 | 60.0 | 91.8 | 189.8 | 32.1 |
| | | S0 | Yes | 50% | 64.5 | 51.6 | 42.8 | 39.4 | 374.3 | 326.5 | 203.7 | 206.4 | 266.8 | 220.3 | 129.6 | 83.5 | 167.5 | 374.3 | 39.4 |
| | | S0 | Yes | 10% | 104.6 | 89.8 | 76.3 | 81.4 | 708.6 | 847.8 | 382.5 | 377.6 | 462.1 | 357.1 | 251.1 | 135.4 | 322.9 | 847.8 | 76.3 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 6.3 | 8.9 | 10.8 | 11.5 | 4.6 | -8.0 | -2.1 | -1.9 | -1.7 | -3.0 | -0.6 | 3.1 | 2.3 | 11.5 | -8.0 |
| | | S0 | Yes | 50% | 1.9 | 5.8 | 8.5 | 10.1 | -34.0 | -44.7 | -19.4 | -21.8 | -25.1 | -19.1 | -4.3 | -3.0 | -12.1 | 10.1 | -44.7 |
| | | S0 | Yes | 10% | -3.6 | -0.1 | 0.0 | 6.7 | -72.8 | -156.8 | -51.7 | -49.0 | -65.1 | -41.0 | -30.1 | -5.0 | -39.0 | 6.7 | -156.8 |
| | Post-Closure | S0 | Yes | 90% | 0.5 | 2.5 | 3.6 | 5.0 | 3.3 | -6.0 | -0.2 | -0.3 | -2.1 | -3.8 | -3.8 | -2.5 | -0.3 | 5.0 | -6.0 |
| | | S0 | Yes | 50% | -0.5 | 1.7 | 3.3 | 4.5 | -5.4 | -6.0 | -0.1 | -7.0 | -7.5 | -14.4 | -3.6 | -2.4 | -3.1 | 4.5 | -14.4 |
| | | S0 | Yes | 10% | -0.8 | 0.7 | 0.0 | 4.1 | -11.8 | -21.2 | -5.2 | -12.0 | -15.5 | -11.2 | -13.8 | -0.7 | -7.3 | 4.1 | -21.2 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 13.3 | 24.0 | 36.3 | 42.3 | 3.1 | -4.1 | -2.0 | -1.8 | -1.2 | -2.5 | -0.7 | 4.9 | 9.3 | 42.3 | -4.1 |
| | | S0 | Yes | 50% | 2.9 | 11.6 | 21.5 | 29.0 | -9.0 | -13.5 | -9.5 | -10.2 | -9.1 | -8.1 | -3.2 | -3.4 | -0.1 | 29.0 | -13.5 |
| | | S0 | Yes | 10% | -3.4 | -0.1 | 0.0 | 8.7 | -10.1 | -18.0 | -13.3 | -12.6 | -13.6 | -11.1 | -11.4 | -3.7 | -7.4 | 8.7 | -18.0 |
| | Post-Closure | S0 | Yes | 90% | 1.1 | 6.9 | 12.1 | 18.3 | 2.2 | -3.1 | -0.2 | -0.3 | -1.5 | -3.1 | -4.4 | -3.9 | 2.0 | 18.3 | -4.4 |
| | | S0 | Yes | 50% | -0.7 | 3.4 | 8.2 | 13.0 | -1.4 | -1.8 | -0.1 | -3.3 | -2.7 | -6.1 | -2.7 | -2.8 | 0.3 | 13.0 | -6.1 |
| | | S0 | Yes | 10% | -0.7 | 0.8 | 0.0 | 5.3 | -1.6 | -2.4 | -1.3 | -3.1 | -3.3 | -3.0 | -5.2 | -0.5 | -1.3 | 5.3 | -5.2 |
| NFK-C | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | Yes | 90% | 19.7 | 11.4 | 5.7 | 3.2 | 84.2 | 132.8 | 63.5 | 65.7 | 87.2 | 79.5 | 52.8 | 31.5 | 53.1 | 132.8 | 3.2 |
| | | S0 | Yes | 50% | 34.7 | 22.4 | 13.8 | 9.8 | 258.8 | 245.3 | 140.2 | 149.4 | 189.2 | 161.2 | 84.5 | 53.0 | 113.5 | 258.8 | 9.8 |
| | | S0 | Yes | 10% | 67.9 | 50.5 | 45.1 | 41.3 | 514.6 | 656.9 | 295.7 | 278.8 | 359.7 | 266.4 | 194.4 | 87.5 | 238.2 | 656.9 | 41.3 |
| | End of Mine | S0 | Yes | 90% | 26.2 | 20.8 | 16.7 | 15.6 | 89.3 | 123.7 | 62.4 | 63.4 | 85.4 | 74.7 | 52.1 | 34.5 | 55.4 | 123.7 | 15.6 |
| | | S0 | Yes | 50% | 37.5 | 28.9 | 23.1 | 20.7 | 224.3 | 195.1 | 118.3 | 124.9 | 162.9 | 139.7 | 79.1 | 50.1 | 100.4 | 224.3 | 20.7 |
| | | S0 | Yes | 10% | 66.7 | 53.9 | 46.8 | 46.3 | 437.3 | 491.7 | 237.3 | 224.2 | 289.9 | 222.4 | 161.8 | 82.6 | 196.8 | 491.7 | 46.3 |

**Table K4.16-29: North Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S0—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S0 | Yes | 90% | 19.8 | 14.2 | 9.3 | 8.3 | 87.2 | 123.9 | 62.0 | 63.7 | 83.8 | 73.2 | 48.1 | 28.6 | 51.9 | 123.9 | 8.3 |
| | | S0 | Yes | 50% | 34.4 | 24.2 | 17.5 | 14.3 | 252.8 | 233.6 | 137.7 | 140.6 | 178.4 | 148.7 | 80.9 | 50.0 | 109.4 | 252.8 | 14.3 |
| | | S0 | Yes | 10% | 67.6 | 51.5 | 46.5 | 44.1 | 499.0 | 626.8 | 285.5 | 262.9 | 339.9 | 252.0 | 179.0 | 85.4 | 228.4 | 626.8 | 44.1 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 6.6 | 9.4 | 11.1 | 12.4 | 5.1 | -9.1 | -1.1 | -2.3 | -1.9 | -4.8 | -0.7 | 3.0 | 2.3 | 12.4 | -9.1 |
| | | S0 | Yes | 50% | 2.8 | 6.5 | 9.4 | 10.8 | -34.4 | -50.1 | -21.9 | -24.5 | -26.4 | -21.6 | -5.3 | -2.8 | -13.1 | 10.8 | -50.1 |
| | | S0 | Yes | 10% | -1.2 | 3.3 | 1.7 | 5.1 | -77.3 | -165.2 | -58.4 | -54.6 | -69.8 | -44.0 | -32.6 | -4.8 | -41.5 | 5.1 | -165.2 |
| | Post-Closure | S0 | Yes | 90% | 0.2 | 2.8 | 3.6 | 5.1 | 3.0 | -8.9 | -1.5 | -2.0 | -3.4 | -6.3 | -4.7 | -2.9 | -1.2 | 5.1 | -8.9 |
| | | S0 | Yes | 50% | -0.3 | 1.8 | 3.7 | 4.5 | -6.0 | -11.7 | -2.4 | -8.8 | -10.8 | -12.5 | -3.6 | -3.0 | -4.1 | 4.5 | -12.5 |
| | | S0 | Yes | 10% | -0.3 | 1.0 | 1.4 | 2.9 | -15.6 | -30.1 | -10.2 | -15.9 | -19.8 | -14.4 | -15.4 | -2.0 | -9.9 | 2.9 | -30.1 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 33.4 | 82.3 | 195.6 | 385.2 | 6.1 | -6.9 | -1.7 | -3.5 | -2.1 | -6.0 | -1.3 | 9.5 | 57.5 | 385.2 | -6.9 |
| | | S0 | Yes | 50% | 8.2 | 29.0 | 68.1 | 110.2 | -13.3 | -20.4 | -15.6 | -16.4 | -13.9 | -13.4 | -6.3 | -5.4 | 9.2 | 110.2 | -20.4 |
| | | S0 | Yes | 10% | -1.7 | 6.6 | 3.8 | 12.3 | -15.0 | -25.1 | -19.7 | -19.6 | -19.4 | -16.5 | -16.8 | -5.5 | -9.7 | 12.3 | -25.1 |
| | Post-Closure | S0 | Yes | 90% | 0.8 | 24.6 | 63.8 | 159.6 | 3.6 | -6.7 | -2.3 | -3.1 | -3.9 | -7.9 | -8.8 | -9.2 | 17.5 | 159.6 | -9.2 |
| | | S0 | Yes | 50% | -1.0 | 7.8 | 26.8 | 45.7 | -2.3 | -4.8 | -1.7 | -5.9 | -5.7 | -7.7 | -4.2 | -5.7 | 3.4 | 45.7 | -7.7 |
| | | S0 | Yes | 10% | -0.5 | 2.0 | 3.0 | 6.9 | -3.0 | -4.6 | -3.4 | -5.7 | -5.5 | -5.4 | -7.9 | -2.3 | -2.2 | 6.9 | -7.9 |
| | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | Yes | 90% | 13.8 | 11.4 | 9.2 | 7.9 | 35.8 | 58.7 | 27.2 | 23.0 | 27.1 | 29.5 | 22.2 | 17.2 | 23.6 | 58.7 | 7.9 |
| | | S0 | Yes | 50% | 20.3 | 16.4 | 13.3 | 11.5 | 83.0 | 94.6 | 54.2 | 48.2 | 61.9 | 57.6 | 39.9 | 26.8 | 44.0 | 94.6 | 11.5 |
| | | S0 | Yes | 10% | 33.7 | 27.5 | 23.7 | 21.6 | 177.1 | 207.3 | 117.2 | 85.1 | 111.4 | 101.5 | 81.7 | 43.9 | 86.0 | 207.3 | 21.6 |
| | End of Mine | S0 | Yes | 90% | 34.8 | 32.7 | 30.5 | 27.8 | 60.6 | 82.7 | 52.3 | 46.7 | 51.0 | 51.2 | 41.1 | 37.5 | 45.7 | 82.7 | 27.8 |
| | | S0 | Yes | 50% | 40.9 | 37.3 | 34.3 | 31.1 | 105.4 | 116.4 | 78.1 | 70.5 | 84.3 | 77.4 | 57.6 | 46.4 | 65.0 | 116.4 | 31.1 |
| | | S0 | Yes | 10% | 53.3 | 47.6 | 43.8 | 40.4 | 193.8 | 226.4 | 137.3 | 106.0 | 131.0 | 118.9 | 96.6 | 62.2 | 104.8 | 226.4 | 40.4 |
| | Post-Closure | S0 | Yes | 90% | 22.6 | 20.5 | 18.1 | 17.9 | 35.8 | 58.7 | 36.7 | 23.0 | 27.1 | 29.5 | 29.5 | 25.4 | 28.7 | 58.7 | 17.9 |
| | | S0 | Yes | 50% | 29.1 | 25.5 | 22.2 | 21.5 | 83.0 | 94.6 | 63.7 | 48.2 | 61.9 | 57.6 | 47.2 | 35.0 | 49.1 | 94.6 | 21.5 |
| | | S0 | Yes | 10% | 42.5 | 36.6 | 32.6 | 31.6 | 177.1 | 207.3 | 126.7 | 85.1 | 111.4 | 101.5 | 89.0 | 52.1 | 91.1 | 207.3 | 31.6 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| **NFK-D[1]** | End of Mine | S0 | Yes | 90% | 21.0 | 21.3 | 21.3 | 19.9 | 24.9 | 24.0 | 25.1 | 23.7 | 23.9 | 21.6 | 18.9 | 20.3 | 22.2 | 25.1 | 18.9 |
| | | S0 | Yes | 50% | 20.6 | 20.9 | 21.0 | 19.6 | 22.4 | 21.8 | 23.9 | 22.2 | 22.4 | 19.8 | 17.7 | 19.6 | 21.0 | 23.9 | 17.7 |
| | | S0 | Yes | 10% | 19.6 | 20.1 | 20.1 | 18.8 | 16.7 | 19.1 | 20.1 | 20.9 | 19.6 | 17.5 | 14.9 | 18.3 | 18.8 | 20.9 | 14.9 |
| | Post-Closure | S0 | Yes | 90% | 8.8 | 9.1 | 8.9 | 10.0 | 0.0 | 0.0 | 9.5 | 0.0 | 0.0 | 0.0 | 7.3 | 8.2 | 5.2 | 10.0 | 0.0 |
| | | S0 | Yes | 50% | 8.8 | 9.1 | 8.9 | 10.0 | 0.0 | 0.0 | 9.5 | 0.0 | 0.0 | 0.0 | 7.3 | 8.2 | 5.2 | 10.0 | 0.0 |
| | | S0 | Yes | 10% | 8.8 | 9.1 | 8.9 | 10.0 | 0.0 | 0.0 | 9.5 | 0.0 | 0.0 | 0.0 | 7.3 | 8.2 | 5.2 | 10.0 | 0.0 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 152.8 | 187.0 | 231.7 | 250.8 | 69.5 | 40.8 | 92.4 | 102.9 | 88.2 | 73.2 | 85.2 | 117.9 | 124.4 | 250.8 | 40.8 |
| | | S0 | Yes | 50% | 101.2 | 127.9 | 157.6 | 170.0 | 26.9 | 23.1 | 44.2 | 46.1 | 36.1 | 34.3 | 44.4 | 73.2 | 73.7 | 170.0 | 23.1 |
| | | S0 | Yes | 10% | 58.2 | 72.9 | 84.7 | 87.1 | 9.4 | 9.1 | 17.2 | 24.6 | 17.6 | 17.2 | 18.2 | 41.7 | 38.2 | 87.1 | 9.2 |
| | Post-Closure | S0 | Yes | 90% | 64.0 | 79.9 | 96.9 | 126.1 | 0.0 | 0.0 | 35.0 | 0.0 | 0.0 | 0.0 | 32.9 | 47.7 | 40.2 | 126.1 | 0.0 |
| | | S0 | Yes | 50% | 43.3 | 55.6 | 66.8 | 86.8 | 0.0 | 0.0 | 17.5 | 0.0 | 0.0 | 0.0 | 18.3 | 30.6 | 26.6 | 86.8 | 0.0 |
| | | S0 | Yes | 10% | 26.1 | 33.1 | 37.5 | 46.3 | 0.0 | 0.0 | 8.1 | 0.0 | 0.0 | 0.0 | 8.9 | 18.7 | 14.9 | 46.3 | 0.0 |
| **Tributary 1.19** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | Yes | 90% | 3.4 | 2.8 | 2.3 | 2.1 | 12.6 | 24.2 | 13.5 | 11.9 | 19.7 | 13.6 | 6.3 | 4.3 | 9.7 | 24.2 | 2.1 |
| | | S0 | Yes | 50% | 4.6 | 3.7 | 3.0 | 2.6 | 49.9 | 63.4 | 28.4 | 29.9 | 35.8 | 24.8 | 13.6 | 6.3 | 22.2 | 63.4 | 2.6 |
| | | S0 | Yes | 10% | 7.0 | 6.3 | 5.7 | 8.0 | 89.0 | 140.6 | 52.5 | 58.0 | 62.7 | 46.0 | 23.5 | 9.1 | 42.4 | 140.6 | 5.7 |
| | End of Mine | S0 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S0 | Yes | 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S0 | Yes | 10% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Post-Closure | S0 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S0 | Yes | 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S0 | Yes | 10% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | -3.4 | -2.8 | -2.3 | -2.1 | -12.6 | -24.2 | -13.5 | -11.9 | -19.7 | -13.6 | -6.3 | -4.3 | -9.7 | -2.1 | -24.2 |
| | | S0 | Yes | 50% | -4.6 | -3.7 | -3.0 | -2.6 | -49.9 | -63.4 | -28.4 | -29.9 | -35.8 | -24.8 | -13.6 | -6.3 | -22.2 | -2.6 | -63.4 |
| | | S0 | Yes | 10% | -7.0 | -6.3 | -5.7 | -8.0 | -89.0 | -140.6 | -52.5 | -58.0 | -62.7 | -46.0 | -23.5 | -9.1 | -42.4 | -5.7 | -140.6 |

**Table K4.16-29: North Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S0—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S0 | Yes | 90% | -3.4 | -2.8 | -2.3 | -2.1 | -12.6 | -24.2 | -13.5 | -11.9 | -19.7 | -13.6 | -6.3 | -4.3 | -9.7 | -2.1 | -24.2 |
| | | S0 | Yes | 50% | -4.6 | -3.7 | -3.0 | -2.6 | -49.9 | -63.4 | -28.4 | -29.9 | -35.8 | -24.8 | -13.6 | -6.3 | -22.2 | -2.6 | -63.4 |
| | | S0 | Yes | 10% | -7.0 | -6.3 | -5.7 | -8.0 | -89.0 | -140.6 | -52.5 | -58.0 | -62.7 | -46.0 | -23.5 | -9.1 | -42.4 | -5.7 | -140.6 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | | S0 | Yes | 50% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | | S0 | Yes | 10% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | Post-Closure | S0 | Yes | 90% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | | S0 | Yes | 50% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | | S0 | Yes | 10% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |

Notes:

cfs = cubic feet per second
NFK = North Fork Koktuli

Source: Knight Piésold 2019q, r

[1] Source: PLP 2020-RFI 161

**Table K4.16-30: South Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S0—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| **SFK-A** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | Yes | 90% | 37.1 | 25.4 | 15.9 | 10.4 | 140.6 | 141.2 | 87.2 | 93.4 | 129.0 | 115.2 | 77.5 | 51.1 | 77.0 | 141.2 | 10.4 |
| | | S0 | Yes | 50% | 56.9 | 42.0 | 30.6 | 24.3 | 323.0 | 294.3 | 182.3 | 212.4 | 252.4 | 212.7 | 130.6 | 82.1 | 153.6 | 323.0 | 24.3 |
| | | S0 | Yes | 10% | 129.4 | 93.5 | 71.5 | 78.0 | 568.6 | 704.8 | 352.8 | 360.5 | 437.8 | 335.1 | 254.7 | 154.0 | 295.0 | 704.8 | 71.5 |
| | End of Mine | S0 | Yes | 90% | 36.1 | 24.8 | 15.8 | 10.7 | 139.9 | 138.3 | 85.8 | 91.7 | 126.1 | 112.2 | 75.3 | 49.6 | 75.5 | 139.9 | 10.7 |
| | | S0 | Yes | 50% | 55.4 | 40.8 | 29.9 | 24.2 | 318.5 | 289.5 | 177.3 | 207.3 | 246.5 | 207.4 | 127.6 | 79.9 | 150.3 | 318.5 | 24.2 |
| | | S0 | Yes | 10% | 126.9 | 91.8 | 69.9 | 77.6 | 560.6 | 692.2 | 345.5 | 354.0 | 428.9 | 327.9 | 249.3 | 150.3 | 289.6 | 692.2 | 69.9 |
| | Post-Closure | S0 | Yes | 90% | 38.0 | 27.2 | 17.7 | 12.1 | 145.8 | 145.7 | 88.6 | 96.8 | 134.7 | 120.6 | 79.5 | 52.5 | 79.9 | 145.8 | 12.1 |
| | | S0 | Yes | 50% | 58.3 | 42.2 | 31.7 | 25.8 | 325.8 | 297.0 | 181.8 | 214.9 | 255.7 | 216.3 | 132.0 | 83.2 | 155.4 | 325.8 | 25.8 |
| | | S0 | Yes | 10% | 129.8 | 94.0 | 71.8 | 78.7 | 567.7 | 697.4 | 348.8 | 361.3 | 437.0 | 336.5 | 253.8 | 154.6 | 294.3 | 697.4 | 71.8 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | -1.0 | -0.6 | -0.1 | 0.4 | -0.7 | -2.9 | -1.4 | -1.7 | -2.8 | -3.1 | -2.2 | -1.5 | -1.5 | 0.4 | -3.1 |
| | | S0 | Yes | 50% | -1.6 | -1.1 | -0.6 | -0.2 | -4.5 | -4.8 | -5.0 | -5.1 | -5.9 | -5.4 | -3.0 | -2.2 | -3.3 | -0.2 | -5.9 |
| | | S0 | Yes | 10% | -2.5 | -1.7 | -1.6 | -0.4 | -8.0 | -12.6 | -7.3 | -6.5 | -8.9 | -7.2 | -5.4 | -3.7 | -5.5 | -0.4 | -12.6 |
| | Post-Closure | S0 | Yes | 90% | 0.9 | 1.7 | 1.8 | 1.7 | 5.2 | 4.5 | 1.3 | 3.4 | 5.7 | 5.4 | 2.0 | 1.5 | 2.9 | 5.7 | 0.9 |
| | | S0 | Yes | 50% | 1.3 | 0.3 | 1.1 | 1.4 | 2.8 | 2.7 | -0.5 | 2.6 | 3.4 | 3.6 | 1.5 | 1.2 | 1.8 | 3.6 | -0.5 |
| | | S0 | Yes | 10% | 0.4 | 0.5 | 0.3 | 0.7 | -0.9 | -7.4 | -4.0 | 0.8 | -0.8 | 1.4 | -0.9 | 0.6 | -0.8 | 1.4 | -7.4 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | -2.7 | -2.4 | -0.6 | 3.6 | -0.5 | -2.1 | -1.6 | -1.9 | -2.2 | -2.6 | -2.9 | -2.9 | -1.6 | 3.6 | -2.9 |
| | | S0 | Yes | 50% | -2.7 | -2.7 | -2.1 | -0.8 | -1.4 | -1.6 | -2.8 | -2.4 | -2.3 | -2.5 | -2.3 | -2.7 | -2.2 | -0.8 | -2.8 |
| | | S0 | Yes | 10% | -1.9 | -1.9 | -2.2 | -0.6 | -1.4 | -1.8 | -2.1 | -1.8 | -2.0 | -2.2 | -2.1 | -2.4 | -1.9 | -0.6 | -2.4 |
| | Post-Closure | S0 | Yes | 90% | 2.4 | 6.8 | 11.4 | 16.3 | 3.7 | 3.2 | 1.5 | 3.6 | 4.4 | 4.7 | 2.5 | 2.8 | 5.3 | 16.3 | 1.5 |
| | | S0 | Yes | 50% | 2.3 | 0.6 | 3.5 | 5.8 | 0.9 | 0.9 | -0.3 | 1.2 | 1.3 | 1.7 | 1.1 | 1.4 | 1.7 | 5.8 | -0.3 |
| | | S0 | Yes | 10% | 0.3 | 0.5 | 0.5 | 0.9 | -0.2 | -1.0 | -1.1 | 0.2 | -0.2 | 0.4 | -0.3 | 0.4 | 0.0 | 0.9 | -1.1 |
| **SFK-B** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | Yes | 90% | 35.1 | 27.7 | 20.3 | 15.3 | 92.8 | 122.4 | 71.0 | 72.2 | 94.3 | 86.0 | 59.4 | 42.3 | 61.6 | 122.4 | 15.3 |
| | | S0 | Yes | 50% | 43.7 | 35.8 | 29.2 | 24.1 | 240.6 | 244.1 | 143.5 | 159.6 | 190.6 | 164.5 | 99.9 | 62.7 | 119.9 | 244.1 | 24.1 |
| | | S0 | Yes | 10% | 86.2 | 62.3 | 51.7 | 48.6 | 435.8 | 583.4 | 283.3 | 276.4 | 342.1 | 251.5 | 202.5 | 115.2 | 228.2 | 583.4 | 48.6 |
| | End of Mine | S0 | Yes | 90% | 34.4 | 27.5 | 20.7 | 16.2 | 92.1 | 119.1 | 69.5 | 70.7 | 92.6 | 83.4 | 57.6 | 41.3 | 60.4 | 119.1 | 16.2 |
| | | S0 | Yes | 50% | 42.8 | 35.2 | 29.0 | 24.4 | 234.9 | 237.9 | 138.8 | 154.9 | 184.5 | 160.0 | 97.4 | 61.2 | 116.7 | 237.9 | 24.4 |
| | | S0 | Yes | 10% | 84.3 | 61.1 | 50.7 | 47.9 | 426.7 | 568.2 | 275.6 | 269.3 | 332.9 | 244.2 | 196.4 | 112.4 | 222.5 | 568.2 | 47.9 |
| | Post-Closure | S0 | Yes | 90% | 35.6 | 29.0 | 22.4 | 17.5 | 99.9 | 127.2 | 72.6 | 75.7 | 101.2 | 92.4 | 61.7 | 43.1 | 64.9 | 127.2 | 17.5 |
| | | S0 | Yes | 50% | 44.8 | 35.8 | 30.2 | 25.6 | 243.4 | 246.2 | 142.7 | 163.2 | 194.9 | 169.1 | 101.3 | 64.0 | 121.8 | 246.2 | 25.6 |
| | | S0 | Yes | 10% | 86.3 | 62.8 | 51.9 | 48.4 | 434.6 | 572.7 | 278.6 | 276.8 | 341.0 | 253.5 | 200.2 | 115.9 | 226.9 | 572.7 | 48.4 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | -0.7 | -0.2 | 0.3 | 0.9 | -0.7 | -3.2 | -1.5 | -1.4 | -1.7 | -2.6 | -1.8 | -1.0 | -1.1 | 0.9 | -3.2 |
| | | S0 | Yes | 50% | -1.0 | -0.6 | -0.1 | 0.3 | -5.8 | -6.2 | -4.7 | -4.8 | -6.1 | -4.5 | -2.5 | -1.5 | -3.1 | 0.3 | -6.2 |
| | | S0 | Yes | 10% | -1.9 | -1.2 | -1.1 | -0.7 | -9.1 | -15.1 | -7.6 | -7.1 | -9.2 | -7.3 | -6.1 | -2.8 | -5.8 | -0.7 | -15.1 |
| | Post-Closure | S0 | Yes | 90% | 0.5 | 1.4 | 2.1 | 2.3 | 7.2 | 4.8 | 1.6 | 3.5 | 6.9 | 6.3 | 2.3 | 0.7 | 3.3 | 7.2 | 0.5 |
| | | S0 | Yes | 50% | 1.0 | -0.1 | 1.1 | 1.5 | 2.8 | 2.1 | -0.8 | 3.6 | 4.3 | 4.6 | 1.4 | 1.2 | 1.9 | 4.6 | -0.8 |
| | | S0 | Yes | 10% | 0.1 | 0.5 | 0.2 | -0.2 | -1.2 | -10.6 | -4.7 | 0.4 | -1.1 | 2.1 | -2.3 | 0.6 | -1.4 | 2.1 | -10.6 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | -1.9 | -0.7 | 1.7 | 5.8 | -0.7 | -2.6 | -2.1 | -2.0 | -1.8 | -3.0 | -3.1 | -2.3 | -1.1 | 5.8 | -3.1 |
| | | S0 | Yes | 50% | -2.2 | -1.7 | -0.5 | 1.3 | -2.4 | -2.6 | -3.3 | -3.0 | -3.2 | -2.7 | -2.5 | -2.4 | -2.1 | 1.3 | -3.3 |
| | | S0 | Yes | 10% | -2.1 | -2.0 | -2.0 | -1.5 | -2.1 | -2.6 | -2.7 | -2.6 | -2.7 | -2.9 | -3.0 | -2.5 | -2.4 | -1.5 | -3.0 |
| | Post-Closure | S0 | Yes | 90% | 1.5 | 5.0 | 10.1 | 14.9 | 7.8 | 4.0 | 2.2 | 4.9 | 7.3 | 7.4 | 3.8 | 1.8 | 5.9 | 14.9 | 1.5 |
| | | S0 | Yes | 50% | 2.4 | -0.2 | 3.7 | 6.1 | 1.2 | 0.8 | -0.6 | 2.3 | 2.3 | 2.8 | 1.4 | 2.0 | 2.0 | 6.1 | -0.6 |
| | | S0 | Yes | 10% | 0.1 | 0.8 | 0.3 | -0.3 | -0.3 | -1.8 | -1.6 | 0.2 | -0.3 | 0.8 | -1.1 | 0.5 | -0.2 | 0.8 | -1.8 |
| **SFK-C** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 28.6 | 43.9 | 8.2 | 7.8 | 16.7 | 22.0 | 8.6 | 0.3 | 11.3 | 43.9 | 0.0 |
| | | S0 | Yes | 50% | 1.9 | 0.1 | 0.0 | 0.0 | 117.7 | 100.3 | 47.4 | 54.9 | 76.7 | 63.9 | 36.1 | 13.2 | 42.7 | 117.7 | 0.0 |
| | | S0 | Yes | 10% | 29.9 | 16.4 | 7.0 | 5.6 | 240.6 | 288.9 | 133.5 | 117.1 | 159.9 | 126.5 | 93.8 | 49.0 | 105.7 | 288.9 | 5.6 |
| | End of Mine | S0 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 28.1 | 42.1 | 7.5 | 7.9 | 16.3 | 20.6 | 8.0 | 0.3 | 10.9 | 42.1 | 0.0 |
| | | S0 | Yes | 50% | 2.0 | 0.1 | 0.0 | 0.0 | 114.8 | 97.5 | 45.3 | 52.8 | 73.2 | 61.9 | 35.6 | 13.1 | 41.3 | 114.8 | 0.0 |
| | | S0 | Yes | 10% | 29.3 | 15.6 | 7.0 | 5.7 | 233.9 | 283.1 | 128.8 | 114.4 | 155.1 | 122.6 | 92.2 | 48.4 | 103.0 | 283.1 | 5.7 |

**Table K4.16-30: South Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S0—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S0 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 35.0 | 50.7 | 11.3 | 13.1 | 25.5 | 30.4 | 12.2 | 1.4 | 15.0 | 50.7 | 0.0 |
| | | S0 | Yes | 50% | 4.4 | 0.1 | 0.0 | 0.0 | 122.6 | 107.2 | 49.8 | 62.0 | 83.9 | 72.0 | 39.6 | 15.8 | 46.4 | 122.6 | 0.0 |
| | | S0 | Yes | 10% | 31.4 | 17.4 | 8.1 | 6.1 | 243.1 | 293.0 | 134.0 | 123.6 | 165.5 | 132.7 | 97.0 | 51.5 | 108.6 | 293.0 | 6.1 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | -0.5 | -1.8 | -0.6 | 0.1 | -0.4 | -1.4 | -0.6 | 0.0 | -0.4 | 0.1 | -1.8 |
| | | S0 | Yes | 50% | 0.1 | 0.0 | 0.0 | 0.0 | -3.0 | -2.8 | -2.1 | -2.1 | -3.5 | -2.0 | -0.5 | -0.2 | -1.3 | 0.1 | -3.5 |
| | | S0 | Yes | 10% | -0.6 | -0.7 | 0.0 | 0.1 | -6.6 | -5.8 | -4.7 | -2.6 | -4.8 | -3.9 | -1.5 | -0.6 | -2.6 | 0.1 | -6.6 |
| | Post-Closure | S0 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 6.4 | 6.8 | 3.1 | 5.3 | 8.8 | 8.4 | 3.6 | 1.1 | 3.6 | 8.8 | 0.0 |
| | | S0 | Yes | 50% | 2.4 | 0.0 | 0.0 | 0.0 | 4.9 | 6.9 | 2.4 | 7.1 | 7.2 | 8.1 | 3.5 | 2.6 | 3.8 | 8.1 | 0.0 |
| | | S0 | Yes | 10% | 1.5 | 1.1 | 1.1 | 0.6 | 2.5 | 4.1 | 0.5 | 6.5 | 5.7 | 6.2 | 3.2 | 2.5 | 3.0 | 6.5 | 0.5 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | -1.7 | -4.1 | -7.6 | 1.4 | -2.5 | -6.2 | -6.6 | 0.0 | -2.3 | 1.4 | -7.6 |
| | | S0 | Yes | 50% | 3.8 | 0.0 | 0.0 | 0.0 | -2.5 | -2.8 | -4.5 | -3.9 | -4.6 | -3.1 | -1.5 | -1.2 | -1.7 | 3.8 | -4.6 |
| | | S0 | Yes | 10% | -2.0 | -4.6 | 0.1 | 2.4 | -2.8 | -2.0 | -3.5 | -2.3 | -3.0 | -3.1 | -1.6 | -1.2 | -2.0 | 2.4 | -4.6 |
| | Post-Closure | S0 | Yes | 90% | 67.7 | 0.0 | 0.0 | 0.0 | 22.5 | 15.5 | 38.0 | 67.6 | 52.5 | 38.4 | 42.2 | 377.3 | 60.1 | 377.3 | 0.0 |
| | | S0 | Yes | 50% | 125.0 | 2.7 | 0.0 | 0.0 | 4.1 | 6.9 | 5.2 | 13.0 | 9.3 | 12.7 | 9.7 | 19.5 | 17.3 | 125.0 | 0.0 |
| | | S0 | Yes | 10% | 5.1 | 6.6 | 15.5 | 10.3 | 1.0 | 1.4 | 0.4 | 5.6 | 3.5 | 4.9 | 3.4 | 5.2 | 5.2 | 15.5 | 0.4 |
| **SFK-D** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | Yes | 90% | 6.4 | 4.6 | 3.3 | 2.6 | 21.7 | 35.8 | 16.6 | 15.2 | 20.7 | 19.9 | 13.1 | 8.9 | 14.1 | 35.8 | 2.6 |
| | | S0 | Yes | 50% | 9.3 | 6.5 | 4.8 | 3.9 | 61.6 | 54.7 | 36.0 | 32.5 | 44.1 | 38.6 | 23.2 | 13.3 | 27.4 | 61.6 | 3.9 |
| | | S0 | Yes | 10% | 19.2 | 13.1 | 12.7 | 10.9 | 112.8 | 137.5 | 67.3 | 59.0 | 77.3 | 61.0 | 49.0 | 23.4 | 53.6 | 137.5 | 10.9 |
| | End of Mine | S0 | Yes | 90% | 8.1 | 6.6 | 5.9 | 7.0 | 18.1 | 29.1 | 13.4 | 13.2 | 17.6 | 18.5 | 15.5 | 10.7 | 13.6 | 29.1 | 5.9 |
| | | S0 | Yes | 50% | 10.7 | 8.3 | 7.3 | 8.1 | 53.3 | 46.5 | 31.3 | 28.7 | 38.6 | 34.7 | 24.1 | 14.5 | 25.5 | 53.3 | 7.3 |
| | | S0 | Yes | 10% | 19.1 | 14.0 | 14.0 | 14.3 | 97.3 | 124.1 | 57.5 | 53.1 | 67.7 | 54.1 | 46.4 | 23.5 | 48.8 | 124.1 | 14.0 |
| | Post-Closure | S0 | Yes | 90% | 8.9 | 7.1 | 6.2 | 5.3 | 32.9 | 44.4 | 17.9 | 25.7 | 31.1 | 30.2 | 16.6 | 11.7 | 19.8 | 44.4 | 5.3 |
| | | S0 | Yes | 50% | 11.6 | 8.8 | 7.6 | 6.4 | 69.3 | 62.2 | 36.2 | 41.6 | 52.6 | 46.9 | 25.5 | 15.6 | 32.0 | 69.3 | 6.4 |
| | | S0 | Yes | 10% | 20.3 | 14.7 | 14.5 | 12.7 | 114.7 | 141.4 | 63.4 | 66.6 | 82.7 | 67.1 | 48.5 | 24.9 | 56.0 | 141.4 | 12.7 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 1.7 | 2.0 | 2.7 | 4.4 | -3.6 | -6.7 | -3.2 | -2.1 | -3.1 | -1.4 | 2.3 | 1.8 | -0.4 | 4.4 | -6.7 |
| | | S0 | Yes | 50% | 1.4 | 1.8 | 2.5 | 4.2 | -8.3 | -8.2 | -4.6 | -3.9 | -5.5 | -3.9 | 0.9 | 1.2 | -1.9 | 4.2 | -8.3 |
| | | S0 | Yes | 10% | -0.1 | 0.9 | 1.2 | 3.4 | -15.4 | -13.4 | -9.8 | -6.0 | -9.5 | -6.9 | -2.6 | 0.1 | -4.8 | 3.4 | -15.4 |
| | Post-Closure | S0 | Yes | 90% | 2.5 | 2.5 | 3.0 | 2.7 | 11.2 | 8.6 | 1.3 | 10.5 | 10.4 | 10.3 | 3.5 | 2.8 | 5.8 | 11.2 | 1.3 |
| | | S0 | Yes | 50% | 2.2 | 2.3 | 2.8 | 2.5 | 7.7 | 7.5 | 0.2 | 9.1 | 8.5 | 8.3 | 2.3 | 2.4 | 4.7 | 9.1 | 0.2 |
| | | S0 | Yes | 10% | 1.1 | 1.6 | 1.8 | 1.9 | 2.0 | 3.8 | -3.8 | 7.6 | 5.4 | 6.0 | -0.4 | 1.5 | 2.4 | 7.6 | -3.8 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 27.3 | 43.9 | 81.9 | 167.5 | -16.4 | -18.8 | -19.0 | -13.5 | -14.9 | -7.2 | 17.8 | 19.9 | 22.4 | 167.5 | -19.0 |
| | | S0 | Yes | 50% | 14.6 | 27.5 | 50.9 | 109.0 | -13.5 | -15.0 | -12.9 | -11.9 | -12.5 | -10.2 | 3.7 | 9.3 | 11.6 | 109.0 | -15.0 |
| | | S0 | Yes | 10% | -0.4 | 6.7 | 9.8 | 31.5 | -13.7 | -9.8 | -14.5 | -10.1 | -12.3 | -11.3 | -5.3 | 0.3 | -2.4 | 31.5 | -14.5 |
| | Post-Closure | S0 | Yes | 90% | 39.6 | 54.7 | 91.6 | 101.7 | 51.6 | 24.1 | 8.0 | 68.8 | 50.3 | 51.6 | 26.5 | 30.9 | 49.9 | 101.7 | 8.0 |
| | | S0 | Yes | 50% | 24.0 | 35.9 | 58.8 | 65.4 | 12.4 | 13.8 | 0.6 | 28.1 | 19.3 | 21.5 | 10.0 | 17.8 | 25.6 | 65.4 | 0.6 |
| | | S0 | Yes | 10% | 5.7 | 12.1 | 14.3 | 17.3 | 1.7 | 2.8 | -5.7 | 12.8 | 7.0 | 9.9 | -0.9 | 6.2 | 6.9 | 17.3 | -5.7 |
| **SFK-E** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | Yes | 90% | 4.2 | 3.5 | 2.8 | 2.6 | 10.2 | 16.9 | 8.1 | 7.6 | 9.4 | 9.8 | 7.0 | 5.3 | 7.3 | 16.9 | 2.6 |
| | | S0 | Yes | 50% | 5.6 | 4.4 | 3.7 | 3.2 | 25.2 | 24.3 | 15.3 | 14.6 | 19.0 | 17.1 | 11.7 | 7.3 | 12.6 | 25.2 | 3.2 |
| | | S0 | Yes | 10% | 9.6 | 7.2 | 7.0 | 6.1 | 47.3 | 55.7 | 30.7 | 24.0 | 31.9 | 28.1 | 22.5 | 12.3 | 23.6 | 55.7 | 6.1 |
| | End of Mine | S0 | Yes | 90% | 1.7 | 1.4 | 1.1 | 1.0 | 6.4 | 10.5 | 4.2 | 4.0 | 5.3 | 5.4 | 3.3 | 2.3 | 3.9 | 10.5 | 1.0 |
| | | S0 | Yes | 50% | 2.8 | 2.2 | 1.7 | 1.5 | 17.1 | 16.3 | 10.0 | 9.2 | 12.3 | 10.5 | 6.5 | 3.7 | 7.8 | 17.1 | 1.5 |
| | | S0 | Yes | 10% | 5.4 | 4.2 | 3.9 | 3.5 | 32.5 | 41.7 | 20.4 | 16.3 | 21.3 | 18.1 | 14.1 | 7.1 | 15.7 | 41.7 | 3.5 |
| | Post-Closure | S0 | Yes | 90% | 2.3 | 1.9 | 1.5 | 1.4 | 7.3 | 11.9 | 5.0 | 4.8 | 6.2 | 6.4 | 4.2 | 3.0 | 4.7 | 11.9 | 1.4 |
| | | S0 | Yes | 50% | 3.4 | 2.7 | 2.2 | 1.9 | 19.0 | 18.1 | 11.2 | 10.4 | 13.8 | 11.9 | 7.6 | 4.5 | 8.9 | 19.0 | 1.9 |
| | | S0 | Yes | 10% | 6.3 | 5.0 | 4.5 | 4.0 | 36.0 | 45.4 | 22.7 | 18.1 | 23.7 | 20.3 | 15.9 | 8.3 | 17.5 | 45.4 | 4.0 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | -2.5 | -2.1 | -1.7 | -1.5 | -3.9 | -6.4 | -3.9 | -3.6 | -4.1 | -4.4 | -3.7 | -3.0 | -3.4 | -1.5 | -6.4 |
| | | S0 | Yes | 50% | -2.8 | -2.3 | -1.9 | -1.7 | -8.1 | -8.1 | -5.3 | -5.5 | -6.8 | -6.6 | -5.3 | -3.6 | -4.8 | -1.7 | -8.1 |
| | | S0 | Yes | 10% | -4.3 | -3.0 | -3.1 | -2.7 | -14.8 | -14.0 | -10.4 | -7.6 | -10.6 | -10.0 | -8.4 | -5.2 | -7.8 | -2.7 | -14.8 |

**Table K4.16-30: South Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S0—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S0 | Yes | 90% | -1.9 | -1.6 | -1.3 | -1.1 | -2.9 | -5.0 | -3.0 | -2.8 | -3.2 | -3.4 | -2.9 | -2.3 | -2.6 | -1.1 | -5.0 |
| | | S0 | Yes | 50% | -2.2 | -1.7 | -1.5 | -1.3 | -6.1 | -6.2 | -4.1 | -4.2 | -5.2 | -5.2 | -4.1 | -2.8 | -3.7 | -1.3 | -6.2 |
| | | S0 | Yes | 10% | -3.3 | -2.3 | -2.5 | -2.1 | -11.3 | -10.3 | -8.0 | -5.9 | -8.2 | -7.8 | -6.6 | -4.0 | -6.0 | -2.1 | -11.3 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | -59.0 | -60.1 | -61.2 | -59.2 | -37.7 | -38.0 | -48.1 | -47.1 | -43.8 | -44.7 | -52.7 | -56.9 | -50.7 | -37.7 | -61.2 |
| | | S0 | Yes | 50% | -50.7 | -51.5 | -53.0 | -52.2 | -32.1 | -33.1 | -34.6 | -37.4 | -35.6 | -38.8 | -44.9 | -49.4 | -42.8 | -32.1 | -53.0 |
| | | S0 | Yes | 10% | -44.5 | -41.5 | -44.7 | -43.3 | -31.3 | -25.1 | -33.7 | -31.9 | -33.2 | -35.7 | -37.5 | -42.2 | -37.0 | -25.1 | -44.7 |
| | Post-Closure | S0 | Yes | 90% | -45.2 | -45.9 | -46.4 | -44.7 | -28.8 | -29.6 | -37.7 | -36.5 | -33.7 | -34.5 | -40.7 | -43.8 | -39.0 | -28.8 | -46.4 |
| | | S0 | Yes | 50% | -38.8 | -39.2 | -40.3 | -39.5 | -24.4 | -25.5 | -26.8 | -28.6 | -27.3 | -30.2 | -35.1 | -38.1 | -32.8 | -24.4 | -40.3 |
| | | S0 | Yes | 10% | -34.3 | -31.3 | -35.1 | -34.2 | -23.9 | -18.5 | -26.2 | -24.5 | -25.6 | -27.7 | -29.1 | -32.5 | -28.6 | -18.5 | -35.1 |
| **Tributary 1.19** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | Yes | 90% | 4.9 | 3.4 | 2.2 | 1.5 | 22.3 | 35.6 | 20.8 | 18.9 | 28.5 | 21.5 | 11.4 | 7.2 | 14.8 | 35.6 | 1.5 |
| | | S0 | Yes | 50% | 7.1 | 4.9 | 3.3 | 2.6 | 67.8 | 83.1 | 41.8 | 44.3 | 51.0 | 38.6 | 20.7 | 10.6 | 31.3 | 83.1 | 2.6 |
| | | S0 | Yes | 10% | 13.0 | 9.6 | 8.6 | 10.5 | 123.4 | 184.7 | 78.5 | 84.2 | 89.1 | 66.3 | 38.2 | 17.1 | 60.3 | 184.7 | 8.6 |
| | End of Mine | S0 | Yes | 90% | 4.1 | 2.8 | 1.7 | 1.1 | 21.9 | 33.4 | 19.0 | 17.1 | 26.6 | 19.1 | 10.0 | 6.2 | 13.6 | 33.4 | 1.1 |
| | | S0 | Yes | 50% | 6.1 | 4.2 | 2.8 | 2.1 | 65.3 | 79.1 | 38.8 | 41.4 | 48.3 | 35.5 | 18.5 | 9.2 | 29.3 | 79.1 | 2.1 |
| | | S0 | Yes | 10% | 11.8 | 8.6 | 7.5 | 10.0 | 118.6 | 175.8 | 74.4 | 79.7 | 84.6 | 62.4 | 34.5 | 15.6 | 57.0 | 175.8 | 7.5 |
| | Post-Closure | S0 | Yes | 90% | 4.1 | 2.8 | 1.7 | 1.1 | 21.4 | 32.6 | 18.7 | 17.0 | 26.0 | 19.0 | 10.0 | 6.2 | 13.4 | 32.6 | 1.1 |
| | | S0 | Yes | 50% | 6.1 | 4.2 | 2.8 | 2.1 | 63.8 | 76.1 | 38.0 | 40.6 | 47.1 | 35.1 | 18.5 | 9.2 | 28.6 | 76.1 | 2.1 |
| | | S0 | Yes | 10% | 11.8 | 8.6 | 7.5 | 9.6 | 115.8 | 171.3 | 72.5 | 77.8 | 82.5 | 61.1 | 34.3 | 15.6 | 55.7 | 171.3 | 7.5 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | -0.7 | -0.6 | -0.5 | -0.4 | -0.4 | -2.2 | -1.8 | -1.8 | -1.8 | -2.4 | -1.4 | -1.0 | -1.2 | -0.4 | -2.4 |
| | | S0 | Yes | 50% | -0.9 | -0.7 | -0.6 | -0.5 | -2.5 | -4.0 | -3.0 | -2.9 | -2.7 | -3.1 | -2.2 | -1.3 | -2.0 | -0.5 | -4.0 |
| | | S0 | Yes | 10% | -1.1 | -1.0 | -1.1 | -0.5 | -4.9 | -8.9 | -4.1 | -4.5 | -4.5 | -3.9 | -3.7 | -1.5 | -3.3 | -0.5 | -8.9 |
| | Post-Closure | S0 | Yes | 90% | -0.7 | -0.6 | -0.5 | -0.4 | -0.9 | -3.0 | -2.1 | -2.0 | -2.5 | -2.5 | -1.4 | -1.0 | -1.5 | -0.4 | -3.0 |
| | | S0 | Yes | 50% | -0.9 | -0.7 | -0.6 | -0.5 | -4.0 | -7.0 | -3.8 | -3.7 | -3.9 | -3.5 | -2.2 | -1.3 | -2.7 | -0.5 | -7.0 |
| | | S0 | Yes | 10% | -1.1 | -1.0 | -1.1 | -0.9 | -7.6 | -13.3 | -6.0 | -6.3 | -6.5 | -5.2 | -3.9 | -1.5 | -4.6 | -0.9 | -13.3 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | -15.0 | -17.2 | -21.2 | -26.0 | -2.0 | -6.1 | -8.6 | -9.4 | -6.5 | -11.2 | -12.3 | -13.6 | -12.4 | -2.0 | -26.0 |
| | | S0 | Yes | 50% | -13.4 | -15.2 | -17.1 | -19.0 | -3.7 | -4.8 | -7.2 | -6.6 | -5.3 | -8.1 | -10.6 | -12.6 | -10.3 | -3.7 | -19.0 |
| | | S0 | Yes | 10% | -8.7 | -10.7 | -12.6 | -4.8 | -3.9 | -4.8 | -5.2 | -5.3 | -5.0 | -5.8 | -9.7 | -8.7 | -7.1 | -3.9 | -12.6 |
| | Post-Closure | S0 | Yes | 90% | -15.0 | -17.3 | -21.2 | -26.0 | -4.2 | -8.3 | -10.1 | -10.3 | -8.8 | -11.6 | -12.3 | -13.6 | -13.2 | -4.2 | -26.0 |
| | | S0 | Yes | 50% | -13.4 | -15.3 | -17.1 | -19.0 | -5.9 | -8.4 | -9.1 | -8.4 | -7.7 | -9.2 | -10.8 | -12.7 | -11.4 | -5.9 | -19.0 |
| | | S0 | Yes | 10% | -8.8 | -10.8 | -12.6 | -8.3 | -6.2 | -7.2 | -7.7 | -7.5 | -7.3 | -7.9 | -10.2 | -8.8 | -8.6 | -6.2 | -12.6 |
| **Tributary 1.24** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | Yes | 90% | 0.4 | 0.0 | 0.0 | 0.0 | 18.5 | 12.0 | 6.0 | 7.3 | 14.8 | 9.4 | 4.2 | 2.0 | 6.2 | 18.5 | 0.0 |
| | | S0 | Yes | 50% | 2.0 | 0.4 | 0.0 | 0.0 | 51.6 | 47.3 | 16.6 | 27.7 | 31.8 | 18.8 | 8.7 | 4.1 | 17.4 | 51.6 | 0.0 |
| | | S0 | Yes | 10% | 6.9 | 4.2 | 2.8 | 5.9 | 93.8 | 128.6 | 40.3 | 53.9 | 60.4 | 42.9 | 19.1 | 9.0 | 39.0 | 128.6 | 2.8 |
| | End of Mine | S0 | Yes | 90% | 0.7 | 0.0 | 0.0 | 0.0 | 18.9 | 13.4 | 6.9 | 8.0 | 15.8 | 10.1 | 4.5 | 2.3 | 6.7 | 18.9 | 0.0 |
| | | S0 | Yes | 50% | 2.4 | 0.8 | 0.0 | 0.0 | 53.0 | 50.9 | 18.4 | 29.3 | 33.3 | 19.5 | 9.3 | 4.4 | 18.4 | 53.0 | 0.0 |
| | | S0 | Yes | 10% | 7.3 | 4.7 | 3.1 | 6.4 | 96.6 | 134.2 | 43.7 | 56.2 | 62.9 | 44.8 | 20.2 | 9.4 | 40.8 | 134.2 | 3.1 |
| | Post-Closure | S0 | Yes | 90% | 0.4 | 0.0 | 0.0 | 0.0 | 18.6 | 12.3 | 6.1 | 7.4 | 15.0 | 9.4 | 4.2 | 2.0 | 6.3 | 18.6 | 0.0 |
| | | S0 | Yes | 50% | 2.1 | 0.4 | 0.0 | 0.0 | 51.9 | 48.2 | 16.9 | 28.0 | 32.2 | 18.8 | 8.8 | 4.2 | 17.6 | 51.9 | 0.0 |
| | | S0 | Yes | 10% | 7.0 | 4.3 | 2.9 | 6.0 | 94.4 | 130.0 | 41.1 | 54.4 | 61.0 | 43.3 | 19.3 | 9.0 | 39.4 | 130.0 | 2.9 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 0.3 | 0.0 | 0.0 | 0.0 | 0.3 | 1.4 | 0.9 | 0.7 | 1.0 | 0.7 | 0.3 | 0.3 | 0.5 | 1.4 | 0.0 |
| | | S0 | Yes | 50% | 0.4 | 0.4 | 0.0 | 0.0 | 1.4 | 3.6 | 1.8 | 1.6 | 1.5 | 0.7 | 0.6 | 0.3 | 1.0 | 3.6 | 0.0 |
| | | S0 | Yes | 10% | 0.4 | 0.5 | 0.3 | 0.5 | 2.8 | 5.7 | 3.4 | 2.4 | 2.5 | 1.9 | 1.1 | 0.5 | 1.8 | 5.7 | 0.3 |
| | Post-Closure | S0 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.1 | 0.1 | 0.2 | 0.1 | 0.0 | 0.0 | 0.1 | 0.3 | 0.0 |
| | | S0 | Yes | 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 1.0 | 0.3 | 0.3 | 0.3 | 0.1 | 0.1 | 0.0 | 0.2 | 1.0 | 0.0 |
| | | S0 | Yes | 10% | 0.1 | 0.1 | 0.0 | 0.1 | 0.6 | 1.4 | 0.8 | 0.6 | 0.6 | 0.4 | 0.1 | 0.1 | 0.4 | 1.4 | 0.0 |

**Table K4.16-30: South Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S0—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 86.0 | 54.2 | 0.0 | 0.0 | 1.7 | 11.9 | 15.6 | 9.9 | 6.6 | 7.9 | 7.2 | 16.7 | 18.1 | 86.0 | 0.0 |
| | | S0 | Yes | 50% | 18.4 | 97.9 | 0.0 | 2.2 | 2.7 | 7.7 | 11.0 | 5.8 | 4.8 | 4.0 | 7.0 | 7.3 | 14.1 | 97.9 | 0.0 |
| | | S0 | Yes | 10% | 6.2 | 11.1 | 9.6 | 8.1 | 3.0 | 4.4 | 8.5 | 4.4 | 4.1 | 4.5 | 5.7 | 5.4 | 6.3 | 11.1 | 3.0 |
| | Post-Closure | S0 | Yes | 90% | 7.9 | 0.0 | 0.0 | 0.0 | 0.2 | 2.5 | 2.2 | 1.4 | 1.2 | 0.8 | 1.1 | 1.9 | 1.6 | 7.9 | 0.0 |
| | | S0 | Yes | 50% | 2.0 | 8.2 | 0.0 | 0.0 | 0.6 | 2.0 | 1.7 | 1.3 | 1.1 | 0.4 | 0.9 | 1.2 | 1.6 | 8.2 | 0.0 |
| | | S0 | Yes | 10% | 1.0 | 1.3 | 1.0 | 1.6 | 0.7 | 1.1 | 2.1 | 1.0 | 1.0 | 1.0 | 0.8 | 1.0 | 1.1 | 2.1 | 0.7 |

Notes:

cfs = cubic feet per second
SFK = South Fork Koktuli

Source: Knight Piésold 2019q, r

**Table K4.16-31: Upper Talarik Creek Change in Streamflow End of Mine and Post-Closure—Scenario S0—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| **UTC-A** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | Yes | 90% | 119.2 | 104.7 | 93.3 | 89.3 | 228.2 | 291.6 | 175.6 | 173.6 | 209.2 | 218.3 | 171.5 | 140.4 | 167.9 | 291.6 | 89.3 |
| | | S0 | Yes | 50% | 146.3 | 127.0 | 112.6 | 109.7 | 537.2 | 437.7 | 265.5 | 294.0 | 392.1 | 350.1 | 245.8 | 180.0 | 266.5 | 537.2 | 109.7 |
| | | S0 | Yes | 10% | 241.1 | 185.8 | 166.7 | 188.7 | 1013.4 | 917.8 | 504.9 | 481.6 | 650.7 | 525.5 | 433.2 | 272.3 | 465.1 | 1013.4 | 166.7 |
| | End of Mine | S0 | Yes | 90% | 119.8 | 105.5 | 94.1 | 90.1 | 228.5 | 291.1 | 175.1 | 173.5 | 209.1 | 217.9 | 171.6 | 140.8 | 168.1 | 291.1 | 90.1 |
| | | S0 | Yes | 50% | 146.9 | 127.6 | 113.3 | 110.5 | 537.5 | 437.2 | 265.0 | 293.9 | 391.9 | 349.7 | 245.9 | 180.3 | 266.7 | 537.5 | 110.5 |
| | | S0 | Yes | 10% | 241.7 | 186.5 | 167.4 | 189.5 | 1013.7 | 917.3 | 504.4 | 481.5 | 650.6 | 525.2 | 433.3 | 272.7 | 465.3 | 1013.7 | 167.4 |
| | Post-Closure | S0 | Yes | 90% | 119.8 | 105.4 | 94.0 | 89.4 | 228.2 | 291.5 | 175.6 | 174.1 | 209.4 | 218.3 | 171.7 | 140.9 | 168.2 | 291.5 | 89.4 |
| | | S0 | Yes | 50% | 146.9 | 127.6 | 113.3 | 109.8 | 537.2 | 437.6 | 265.5 | 294.5 | 392.2 | 350.0 | 246.0 | 180.5 | 266.8 | 537.2 | 109.8 |
| | | S0 | Yes | 10% | 241.7 | 186.5 | 167.4 | 188.8 | 1013.4 | 917.7 | 505.0 | 482.1 | 650.9 | 525.5 | 433.4 | 272.8 | 465.4 | 1013.4 | 167.4 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 0.6 | 0.7 | 0.7 | 0.8 | 0.3 | -0.5 | -0.4 | 0.0 | -0.1 | -0.3 | 0.1 | 0.4 | 0.2 | 0.8 | -0.5 |
| | | S0 | Yes | 50% | 0.6 | 0.7 | 0.7 | 0.8 | 0.3 | -0.5 | -0.5 | 0.0 | -0.1 | -0.3 | 0.1 | 0.4 | 0.2 | 0.8 | -0.5 |
| | | S0 | Yes | 10% | 0.6 | 0.7 | 0.8 | 0.8 | 0.3 | -0.5 | -0.5 | -0.1 | -0.1 | -0.3 | 0.1 | 0.4 | 0.2 | 0.8 | -0.5 |
| | Post-Closure | S0 | Yes | 90% | 0.6 | 0.7 | 0.7 | 0.1 | 0.0 | -0.1 | 0.1 | 0.5 | 0.2 | 0.0 | 0.2 | 0.5 | 0.3 | 0.7 | -0.1 |
| | | S0 | Yes | 50% | 0.6 | 0.6 | 0.7 | 0.1 | 0.0 | -0.1 | 0.1 | 0.5 | 0.2 | 0.0 | 0.2 | 0.5 | 0.3 | 0.7 | -0.1 |
| | | S0 | Yes | 10% | 0.6 | 0.6 | 0.7 | 0.1 | 0.0 | -0.1 | 0.1 | 0.5 | 0.2 | 0.0 | 0.2 | 0.5 | 0.3 | 0.7 | -0.1 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 0.5 | 0.7 | 0.8 | 0.9 | 0.1 | -0.2 | -0.3 | 0.0 | 0.0 | -0.1 | 0.1 | 0.3 | 0.2 | 0.9 | -0.3 |
| | | S0 | Yes | 50% | 0.4 | 0.5 | 0.7 | 0.8 | 0.0 | -0.1 | -0.2 | 0.0 | 0.0 | -0.1 | 0.0 | 0.2 | 0.2 | 0.8 | -0.2 |
| | | S0 | Yes | 10% | 0.3 | 0.4 | 0.5 | 0.4 | 0.0 | -0.1 | -0.1 | 0.0 | 0.0 | -0.1 | 0.0 | 0.1 | 0.1 | 0.5 | -0.1 |
| | Post-Closure | S0 | Yes | 90% | 0.5 | 0.6 | 0.7 | 0.1 | 0.0 | 0.0 | 0.1 | 0.3 | 0.1 | 0.0 | 0.1 | 0.4 | 0.2 | 0.7 | 0.0 |
| | | S0 | Yes | 50% | 0.4 | 0.5 | 0.6 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.1 | 0.3 | 0.2 | 0.6 | 0.0 |
| | | S0 | Yes | 10% | 0.3 | 0.3 | 0.4 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.4 | 0.0 |
| **UTC-B** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | Yes | 90% | 131.3 | 115.4 | 102.8 | 98.4 | 251.4 | 321.3 | 193.4 | 191.2 | 230.5 | 240.5 | 189.0 | 154.7 | 185.0 | 321.3 | 98.4 |
| | | S0 | Yes | 50% | 161.2 | 139.9 | 124.1 | 120.8 | 591.8 | 482.2 | 292.5 | 323.9 | 431.9 | 385.7 | 270.8 | 198.3 | 293.6 | 591.8 | 120.8 |
| | | S0 | Yes | 10% | 265.6 | 204.7 | 183.6 | 207.9 | 1116.5 | 1011.2 | 556.2 | 530.6 | 716.9 | 579.0 | 477.3 | 300.0 | 512.5 | 1116.5 | 183.6 |
| | End of Mine | S0 | Yes | 90% | 131.9 | 116.1 | 103.6 | 99.2 | 251.7 | 320.8 | 193.0 | 191.2 | 230.4 | 240.2 | 189.1 | 155.1 | 185.2 | 320.8 | 99.2 |
| | | S0 | Yes | 50% | 161.8 | 140.6 | 124.8 | 121.7 | 592.1 | 481.7 | 292.0 | 323.8 | 431.8 | 385.4 | 270.9 | 198.6 | 293.8 | 592.1 | 121.7 |
| | | S0 | Yes | 10% | 266.2 | 205.4 | 184.4 | 208.7 | 1116.8 | 1010.7 | 555.8 | 530.5 | 716.8 | 578.7 | 477.4 | 300.4 | 512.6 | 1116.8 | 184.4 |
| | Post-Closure | S0 | Yes | 90% | 131.9 | 116.1 | 103.5 | 98.5 | 251.4 | 321.2 | 193.5 | 191.7 | 230.7 | 240.5 | 189.2 | 155.2 | 185.3 | 321.2 | 98.5 |
| | | S0 | Yes | 50% | 161.8 | 140.5 | 124.8 | 120.9 | 591.8 | 482.2 | 292.5 | 324.4 | 432.1 | 385.7 | 271.0 | 198.8 | 293.9 | 591.8 | 120.9 |
| | | S0 | Yes | 10% | 266.2 | 205.4 | 184.3 | 208.0 | 1116.5 | 1011.1 | 556.3 | 531.1 | 717.1 | 579.0 | 477.5 | 300.5 | 512.7 | 1116.5 | 184.3 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 0.6 | 0.7 | 0.7 | 0.8 | 0.3 | -0.5 | -0.4 | 0.0 | -0.1 | -0.3 | 0.1 | 0.4 | 0.2 | 0.8 | -0.5 |
| | | S0 | Yes | 50% | 0.6 | 0.7 | 0.7 | 0.8 | 0.3 | -0.5 | -0.5 | 0.0 | -0.1 | -0.3 | 0.1 | 0.4 | 0.2 | 0.8 | -0.5 |
| | | S0 | Yes | 10% | 0.6 | 0.7 | 0.8 | 0.8 | 0.3 | -0.5 | -0.5 | -0.1 | -0.1 | -0.3 | 0.1 | 0.4 | 0.2 | 0.8 | -0.5 |
| | Post-Closure | S0 | Yes | 90% | 0.6 | 0.7 | 0.7 | 0.1 | 0.0 | -0.1 | 0.1 | 0.5 | 0.2 | 0.0 | 0.2 | 0.5 | 0.3 | 0.7 | -0.1 |
| | | S0 | Yes | 50% | 0.6 | 0.6 | 0.7 | 0.1 | 0.0 | -0.1 | 0.1 | 0.5 | 0.2 | 0.0 | 0.2 | 0.5 | 0.3 | 0.7 | -0.1 |
| | | S0 | Yes | 10% | 0.6 | 0.6 | 0.7 | 0.1 | 0.0 | -0.1 | 0.1 | 0.5 | 0.2 | 0.0 | 0.2 | 0.5 | 0.3 | 0.7 | -0.1 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 0.5 | 0.6 | 0.7 | 0.9 | 0.1 | -0.2 | -0.2 | 0.0 | 0.0 | -0.1 | 0.1 | 0.2 | 0.2 | 0.9 | -0.2 |
| | | S0 | Yes | 50% | 0.4 | 0.5 | 0.6 | 0.7 | 0.0 | -0.1 | -0.2 | 0.0 | 0.0 | -0.1 | 0.0 | 0.2 | 0.2 | 0.7 | -0.2 |
| | | S0 | Yes | 10% | 0.2 | 0.3 | 0.4 | 0.4 | 0.0 | -0.1 | -0.1 | 0.0 | 0.0 | -0.1 | 0.0 | 0.1 | 0.1 | 0.4 | -0.1 |
| | Post-Closure | S0 | Yes | 90% | 0.5 | 0.6 | 0.7 | 0.1 | 0.0 | 0.0 | 0.0 | 0.3 | 0.1 | 0.0 | 0.1 | 0.3 | 0.2 | 0.7 | 0.0 |
| | | S0 | Yes | 50% | 0.4 | 0.4 | 0.6 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.1 | 0.2 | 0.2 | 0.6 | 0.0 |
| | | S0 | Yes | 10% | 0.2 | 0.3 | 0.4 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.4 | 0.0 |
| **UTC-C** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | Yes | 90% | 96.7 | 85.8 | 76.8 | 74.1 | 179.4 | 235.3 | 142.7 | 141.4 | 167.4 | 174.4 | 138.2 | 114.0 | 135.5 | 235.3 | 74.1 |
| | | S0 | Yes | 50% | 118.9 | 103.1 | 91.9 | 88.6 | 407.0 | 355.2 | 215.1 | 232.2 | 299.0 | 275.3 | 195.4 | 145.0 | 210.6 | 407.0 | 88.6 |
| | | S0 | Yes | 10% | 189.4 | 145.7 | 134.1 | 142.1 | 774.7 | 722.0 | 407.5 | 370.7 | 496.9 | 418.6 | 337.6 | 210.7 | 362.5 | 774.7 | 134.1 |
| | End of Mine | S0 | Yes | 90% | 97.3 | 86.5 | 77.6 | 74.9 | 179.7 | 234.8 | 142.2 | 141.4 | 167.3 | 174.1 | 138.3 | 114.4 | 135.7 | 234.8 | 74.9 |
| | | S0 | Yes | 50% | 119.5 | 103.9 | 92.6 | 89.5 | 407.2 | 354.7 | 214.7 | 232.2 | 298.9 | 274.9 | 195.4 | 145.4 | 210.8 | 407.2 | 89.5 |
| | | S0 | Yes | 10% | 190.1 | 146.4 | 134.9 | 143.0 | 775.0 | 721.5 | 407.1 | 370.6 | 496.8 | 418.3 | 337.7 | 211.1 | 362.7 | 775.0 | 134.9 |

**Table K4.16-31: Upper Talarik Creek Change in Streamflow End of Mine and Post-Closure—Scenario S0—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S0 | Yes | 90% | 97.4 | 86.5 | 77.5 | 74.2 | 179.4 | 235.2 | 142.8 | 141.9 | 167.6 | 174.4 | 138.4 | 114.5 | 135.8 | 235.2 | 74.2 |
| | | S0 | Yes | 50% | 119.6 | 103.8 | 92.6 | 88.8 | 407.0 | 355.2 | 215.2 | 232.7 | 299.2 | 275.2 | 195.5 | 145.5 | 210.9 | 407.0 | 88.8 |
| | | S0 | Yes | 10% | 190.1 | 146.4 | 134.9 | 142.2 | 774.7 | 722.0 | 407.6 | 371.2 | 497.0 | 418.6 | 337.8 | 211.2 | 362.8 | 774.7 | 134.9 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 0.6 | 0.7 | 0.7 | 0.8 | 0.3 | -0.5 | -0.4 | -0.1 | -0.1 | -0.3 | 0.1 | 0.4 | 0.2 | 0.8 | -0.5 |
| | | S0 | Yes | 50% | 0.6 | 0.7 | 0.8 | 0.8 | 0.2 | -0.5 | -0.5 | 0.0 | -0.1 | -0.3 | 0.1 | 0.4 | 0.2 | 0.8 | -0.5 |
| | | S0 | Yes | 10% | 0.6 | 0.7 | 0.8 | 0.8 | 0.3 | -0.5 | -0.5 | -0.1 | -0.1 | -0.3 | 0.1 | 0.4 | 0.2 | 0.8 | -0.5 |
| | Post-Closure | S0 | Yes | 90% | 0.6 | 0.7 | 0.7 | 0.1 | 0.0 | -0.1 | 0.1 | 0.5 | 0.2 | 0.0 | 0.2 | 0.5 | 0.3 | 0.7 | -0.1 |
| | | S0 | Yes | 50% | 0.6 | 0.7 | 0.7 | 0.2 | 0.0 | -0.1 | 0.1 | 0.5 | 0.2 | 0.0 | 0.2 | 0.5 | 0.3 | 0.7 | -0.1 |
| | | S0 | Yes | 10% | 0.6 | 0.6 | 0.7 | 0.1 | 0.0 | -0.1 | 0.1 | 0.5 | 0.2 | 0.0 | 0.2 | 0.5 | 0.3 | 0.7 | -0.1 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 0.6 | 0.8 | 1.0 | 1.1 | 0.2 | -0.2 | -0.3 | 0.0 | -0.1 | -0.2 | 0.1 | 0.3 | 0.3 | 1.1 | -0.3 |
| | | S0 | Yes | 50% | 0.5 | 0.7 | 0.8 | 0.9 | 0.1 | -0.1 | -0.2 | 0.0 | 0.0 | -0.1 | 0.0 | 0.3 | 0.2 | 0.9 | -0.2 |
| | | S0 | Yes | 10% | 0.3 | 0.5 | 0.6 | 0.6 | 0.0 | -0.1 | -0.1 | 0.0 | 0.0 | -0.1 | 0.0 | 0.2 | 0.2 | 0.6 | -0.1 |
| | Post-Closure | S0 | Yes | 90% | 0.7 | 0.8 | 0.9 | 0.2 | 0.0 | 0.0 | 0.1 | 0.3 | 0.1 | 0.0 | 0.1 | 0.4 | 0.3 | 0.9 | 0.0 |
| | | S0 | Yes | 50% | 0.5 | 0.6 | 0.8 | 0.2 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 | 0.1 | 0.4 | 0.2 | 0.8 | 0.0 |
| | | S0 | Yes | 10% | 0.3 | 0.4 | 0.5 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.2 | 0.2 | 0.5 | 0.0 |
| **UTC-D** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | Yes | 90% | 58.8 | 50.8 | 43.3 | 41.1 | 117.9 | 167.1 | 94.8 | 93.4 | 109.0 | 116.7 | 89.5 | 70.6 | 87.7 | 167.1 | 41.1 |
| | | S0 | Yes | 50% | 79.3 | 66.2 | 56.5 | 51.5 | 285.2 | 261.6 | 155.2 | 158.6 | 206.6 | 191.5 | 133.4 | 99.4 | 145.4 | 285.2 | 51.5 |
| | | S0 | Yes | 10% | 121.2 | 96.2 | 87.0 | 83.5 | 569.6 | 563.6 | 310.3 | 259.2 | 354.7 | 303.1 | 247.6 | 147.9 | 262.0 | 569.6 | 83.5 |
| | End of Mine | S0 | Yes | 90% | 59.5 | 51.5 | 44.0 | 41.9 | 118.1 | 166.6 | 94.4 | 93.4 | 108.9 | 116.3 | 89.6 | 71.0 | 87.9 | 166.6 | 41.9 |
| | | S0 | Yes | 50% | 79.9 | 66.9 | 57.2 | 52.3 | 285.5 | 261.1 | 154.8 | 158.5 | 206.5 | 191.1 | 133.5 | 99.8 | 145.6 | 285.5 | 52.3 |
| | | S0 | Yes | 10% | 121.9 | 97.0 | 87.7 | 84.4 | 569.9 | 563.1 | 309.9 | 259.2 | 354.6 | 302.7 | 247.7 | 148.3 | 262.2 | 569.9 | 84.4 |
| | Post-Closure | S0 | Yes | 90% | 59.3 | 51.2 | 43.8 | 41.0 | 117.7 | 166.8 | 94.7 | 93.7 | 109.0 | 116.4 | 89.4 | 70.9 | 87.8 | 166.8 | 41.0 |
| | | S0 | Yes | 50% | 79.7 | 66.6 | 57.0 | 51.4 | 285.0 | 261.4 | 155.1 | 158.9 | 206.6 | 191.2 | 133.3 | 99.8 | 145.5 | 285.0 | 51.4 |
| | | S0 | Yes | 10% | 121.7 | 96.7 | 87.5 | 83.5 | 569.4 | 563.3 | 310.2 | 259.5 | 354.7 | 302.8 | 247.6 | 148.2 | 262.1 | 569.4 | 83.5 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 0.6 | 0.7 | 0.8 | 0.8 | 0.3 | -0.5 | -0.4 | -0.1 | -0.1 | -0.3 | 0.1 | 0.4 | 0.2 | 0.8 | -0.5 |
| | | S0 | Yes | 50% | 0.6 | 0.7 | 0.8 | 0.9 | 0.3 | -0.5 | -0.5 | -0.1 | -0.1 | -0.3 | 0.1 | 0.4 | 0.2 | 0.9 | -0.5 |
| | | S0 | Yes | 10% | 0.6 | 0.7 | 0.8 | 0.9 | 0.3 | -0.5 | -0.5 | -0.1 | -0.1 | -0.3 | 0.1 | 0.4 | 0.2 | 0.9 | -0.5 |
| | Post-Closure | S0 | Yes | 90% | 0.4 | 0.5 | 0.5 | -0.1 | -0.2 | -0.3 | -0.1 | 0.3 | 0.0 | -0.2 | 0.0 | 0.3 | 0.1 | 0.5 | -0.3 |
| | | S0 | Yes | 50% | 0.4 | 0.5 | 0.5 | -0.1 | -0.2 | -0.3 | -0.1 | 0.3 | 0.0 | -0.2 | 0.0 | 0.3 | 0.1 | 0.5 | -0.3 |
| | | S0 | Yes | 10% | 0.4 | 0.5 | 0.5 | -0.1 | -0.2 | -0.3 | -0.1 | 0.3 | 0.0 | -0.2 | 0.0 | 0.3 | 0.1 | 0.5 | -0.3 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 1.0 | 1.5 | 1.7 | 2.0 | 0.2 | -0.3 | -0.5 | -0.1 | -0.1 | -0.3 | 0.1 | 0.5 | 0.5 | 2.0 | -0.5 |
| | | S0 | Yes | 50% | 0.8 | 1.1 | 1.3 | 1.7 | 0.1 | -0.2 | -0.3 | 0.0 | 0.0 | -0.2 | 0.1 | 0.4 | 0.4 | 1.7 | -0.3 |
| | | S0 | Yes | 10% | 0.5 | 0.8 | 0.9 | 1.0 | 0.0 | -0.1 | -0.1 | 0.0 | 0.0 | -0.1 | 0.0 | 0.3 | 0.3 | 1.0 | -0.1 |
| | Post-Closure | S0 | Yes | 90% | 0.7 | 0.9 | 1.2 | -0.2 | -0.2 | -0.2 | -0.1 | 0.3 | 0.0 | -0.2 | 0.0 | 0.4 | 0.2 | 1.2 | -0.2 |
| | | S0 | Yes | 50% | 0.6 | 0.7 | 0.9 | -0.1 | -0.1 | -0.1 | -0.1 | 0.2 | 0.0 | -0.1 | 0.0 | 0.3 | 0.2 | 0.9 | -0.1 |
| | | S0 | Yes | 10% | 0.4 | 0.5 | 0.6 | -0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | -0.1 | 0.0 | 0.2 | 0.1 | 0.6 | -0.1 |
| **UTC-E** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | Yes | 90% | 35.2 | 27.2 | 20.9 | 19.1 | 85.4 | 133.3 | 68.4 | 67.4 | 83.0 | 89.3 | 64.0 | 46.6 | 61.7 | 133.3 | 19.1 |
| | | S0 | Yes | 50% | 51.3 | 38.8 | 30.1 | 26.8 | 207.2 | 205.8 | 122.0 | 122.3 | 163.0 | 153.0 | 102.6 | 70.0 | 107.7 | 207.2 | 26.8 |
| | | S0 | Yes | 10% | 88.2 | 65.8 | 58.9 | 56.5 | 430.0 | 455.3 | 252.8 | 206.9 | 282.6 | 244.9 | 197.1 | 112.0 | 204.2 | 455.3 | 56.5 |
| | End of Mine | S0 | Yes | 90% | 35.8 | 27.9 | 21.7 | 20.0 | 85.6 | 132.8 | 67.9 | 67.3 | 82.9 | 89.0 | 64.1 | 47.0 | 61.8 | 132.8 | 20.0 |
| | | S0 | Yes | 50% | 51.9 | 39.5 | 30.8 | 27.6 | 207.4 | 205.3 | 121.5 | 122.2 | 162.9 | 152.7 | 102.7 | 70.4 | 107.9 | 207.4 | 27.6 |
| | | S0 | Yes | 10% | 88.8 | 66.5 | 59.6 | 57.4 | 430.3 | 454.7 | 252.3 | 206.8 | 282.5 | 244.6 | 197.2 | 112.3 | 204.4 | 454.7 | 57.4 |
| | Post-Closure | S0 | Yes | 90% | 35.7 | 27.6 | 21.4 | 19.1 | 85.2 | 133.0 | 68.3 | 67.7 | 83.0 | 89.1 | 64.0 | 46.9 | 61.7 | 133.0 | 19.1 |
| | | S0 | Yes | 50% | 51.7 | 39.3 | 30.6 | 26.7 | 207.0 | 205.5 | 121.9 | 122.5 | 163.0 | 152.8 | 102.6 | 70.3 | 107.8 | 207.0 | 26.7 |
| | | S0 | Yes | 10% | 88.6 | 66.2 | 59.4 | 56.5 | 429.8 | 455.0 | 252.7 | 207.2 | 282.5 | 244.6 | 197.0 | 112.3 | 204.3 | 455.0 | 56.5 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 0.6 | 0.7 | 0.8 | 0.8 | 0.3 | -0.5 | -0.5 | -0.1 | -0.1 | -0.3 | 0.1 | 0.4 | 0.2 | 0.8 | -0.5 |
| | | S0 | Yes | 50% | 0.6 | 0.7 | 0.8 | 0.9 | 0.3 | -0.5 | -0.5 | -0.1 | -0.1 | -0.3 | 0.1 | 0.4 | 0.2 | 0.9 | -0.5 |
| | | S0 | Yes | 10% | 0.6 | 0.7 | 0.8 | 0.9 | 0.3 | -0.5 | -0.5 | -0.1 | -0.1 | -0.3 | 0.1 | 0.4 | 0.2 | 0.9 | -0.5 |

**Table K4.16-31: Upper Talarik Creek Change in Streamflow End of Mine and Post-Closure—Scenario S0—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S0 | Yes | 90% | 0.4 | 0.5 | 0.5 | -0.1 | -0.2 | -0.3 | -0.1 | 0.3 | 0.0 | -0.2 | 0.0 | 0.3 | 0.1 | 0.5 | -0.3 |
| | | S0 | Yes | 50% | 0.4 | 0.5 | 0.5 | -0.1 | -0.2 | -0.3 | -0.1 | 0.3 | 0.0 | -0.2 | 0.0 | 0.3 | 0.1 | 0.5 | -0.3 |
| | | S0 | Yes | 10% | 0.4 | 0.5 | 0.5 | -0.1 | -0.2 | -0.3 | -0.1 | 0.3 | 0.0 | -0.2 | 0.0 | 0.3 | 0.1 | 0.5 | -0.3 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 1.7 | 2.7 | 3.6 | 4.4 | 0.3 | -0.4 | -0.7 | -0.1 | -0.1 | -0.4 | 0.1 | 0.8 | 1.0 | 4.4 | -0.7 |
| | | S0 | Yes | 50% | 1.2 | 1.9 | 2.5 | 3.2 | 0.1 | -0.2 | -0.4 | -0.1 | -0.1 | -0.2 | 0.1 | 0.6 | 0.7 | 3.2 | -0.4 |
| | | S0 | Yes | 10% | 0.7 | 1.1 | 1.3 | 1.5 | 0.1 | -0.1 | -0.2 | 0.0 | 0.0 | -0.1 | 0.0 | 0.3 | 0.4 | 1.5 | -0.2 |
| | Post-Closure | S0 | Yes | 90% | 1.2 | 1.7 | 2.4 | -0.4 | -0.2 | -0.2 | -0.2 | 0.4 | 0.0 | -0.3 | 0.0 | 0.7 | 0.4 | 2.4 | -0.4 |
| | | S0 | Yes | 50% | 0.9 | 1.2 | 1.7 | -0.3 | -0.1 | -0.1 | -0.1 | 0.2 | 0.0 | -0.1 | 0.0 | 0.4 | 0.3 | 1.7 | -0.3 |
| | | S0 | Yes | 10% | 0.5 | 0.7 | 0.8 | -0.1 | 0.0 | -0.1 | 0.0 | 0.1 | 0.0 | -0.1 | 0.0 | 0.3 | 0.2 | 0.8 | -0.1 |
| **UTC-F** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | Yes | 90% | 6.1 | 5.1 | 4.2 | 3.7 | 14.7 | 21.1 | 9.8 | 9.4 | 12.0 | 12.6 | 9.5 | 7.5 | 9.7 | 21.1 | 3.7 |
| | | S0 | Yes | 50% | 8.2 | 6.7 | 5.6 | 4.9 | 35.6 | 33.1 | 17.5 | 18.7 | 25.6 | 22.9 | 15.3 | 10.4 | 17.0 | 35.6 | 4.9 |
| | | S0 | Yes | 10% | 14.1 | 10.8 | 9.9 | 9.1 | 67.8 | 75.6 | 39.5 | 32.1 | 43.6 | 38.5 | 29.6 | 16.7 | 32.3 | 75.6 | 9.1 |
| | End of Mine | S0 | Yes | 90% | 6.5 | 5.5 | 4.6 | 4.2 | 14.8 | 20.9 | 9.6 | 9.4 | 12.0 | 12.4 | 9.6 | 7.7 | 9.8 | 20.9 | 4.2 |
| | | S0 | Yes | 50% | 8.5 | 7.0 | 6.0 | 5.4 | 35.8 | 32.9 | 17.3 | 18.7 | 25.5 | 22.7 | 15.4 | 10.6 | 17.1 | 35.8 | 5.4 |
| | | S0 | Yes | 10% | 14.4 | 11.2 | 10.3 | 9.6 | 67.9 | 75.4 | 39.3 | 32.0 | 43.6 | 38.3 | 29.7 | 16.8 | 32.4 | 75.4 | 9.6 |
| | Post-Closure | S0 | Yes | 90% | 6.4 | 5.3 | 4.4 | 3.7 | 14.6 | 21.0 | 9.8 | 9.5 | 12.0 | 12.5 | 9.5 | 7.7 | 9.7 | 21.0 | 3.7 |
| | | S0 | Yes | 50% | 8.4 | 6.9 | 5.8 | 4.9 | 35.5 | 33.0 | 17.5 | 18.9 | 25.6 | 22.8 | 15.3 | 10.5 | 17.1 | 35.5 | 4.9 |
| | | S0 | Yes | 10% | 14.3 | 11.0 | 10.1 | 9.1 | 67.7 | 75.5 | 39.5 | 32.2 | 43.6 | 38.3 | 29.6 | 16.8 | 32.3 | 75.5 | 9.1 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 0.3 | 0.4 | 0.4 | 0.4 | 0.1 | -0.3 | -0.2 | 0.0 | 0.0 | -0.2 | 0.0 | 0.2 | 0.1 | 0.4 | -0.3 |
| | | S0 | Yes | 50% | 0.3 | 0.4 | 0.4 | 0.4 | 0.1 | -0.3 | -0.2 | 0.0 | -0.1 | -0.2 | 0.0 | 0.2 | 0.1 | 0.4 | -0.3 |
| | | S0 | Yes | 10% | 0.3 | 0.4 | 0.4 | 0.4 | 0.1 | -0.3 | -0.2 | 0.0 | 0.0 | -0.2 | 0.0 | 0.2 | 0.1 | 0.4 | -0.3 |
| | Post-Closure | S0 | Yes | 90% | 0.2 | 0.2 | 0.3 | 0.0 | -0.1 | -0.1 | -0.1 | 0.1 | 0.0 | -0.1 | 0.0 | 0.2 | 0.0 | 0.3 | -0.1 |
| | | S0 | Yes | 50% | 0.2 | 0.2 | 0.3 | 0.0 | -0.1 | -0.1 | -0.1 | 0.1 | 0.0 | -0.1 | 0.0 | 0.2 | 0.0 | 0.3 | -0.1 |
| | | S0 | Yes | 10% | 0.2 | 0.2 | 0.3 | 0.0 | -0.1 | -0.1 | -0.1 | 0.1 | 0.0 | -0.1 | 0.0 | 0.2 | 0.0 | 0.3 | -0.1 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 5.0 | 7.2 | 9.0 | 11.4 | 0.9 | -1.2 | -2.3 | -0.3 | -0.4 | -1.3 | 0.5 | 2.6 | 2.6 | 11.4 | -2.3 |
| | | S0 | Yes | 50% | 3.8 | 5.5 | 6.8 | 8.6 | 0.4 | -0.8 | -1.3 | -0.2 | -0.2 | -0.7 | 0.3 | 1.9 | 2.0 | 8.6 | -1.3 |
| | | S0 | Yes | 10% | 2.2 | 3.3 | 3.9 | 4.7 | 0.2 | -0.3 | -0.6 | -0.1 | -0.1 | -0.4 | 0.1 | 1.2 | 1.2 | 4.7 | -0.6 |
| | Post-Closure | S0 | Yes | 90% | 3.6 | 4.6 | 6.0 | -1.0 | -0.7 | -0.6 | -0.5 | 1.6 | -0.1 | -0.9 | -0.1 | 2.0 | 1.2 | 6.0 | -1.0 |
| | | S0 | Yes | 50% | 2.7 | 3.5 | 4.5 | -0.7 | -0.3 | -0.4 | -0.3 | 0.8 | 0.0 | -0.5 | -0.1 | 1.5 | 0.9 | 4.5 | -0.7 |
| | | S0 | Yes | 10% | 1.5 | 2.1 | 2.5 | -0.4 | -0.1 | -0.2 | -0.1 | 0.5 | 0.0 | -0.3 | 0.0 | 0.9 | 0.5 | 2.5 | -0.4 |
| **Tributary 1.19** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S0 | Yes | 90% | 25.5 | 24.8 | 25.4 | 25.0 | 26.4 | 27.6 | 26.5 | 26.4 | 26.6 | 26.4 | 25.8 | 25.8 | 26.0 | 27.6 | 24.8 |
| | | S0 | Yes | 50% | 26.4 | 26.1 | 26.0 | 25.9 | 30.8 | 33.7 | 29.8 | 28.5 | 28.8 | 28.3 | 27.6 | 26.8 | 28.2 | 33.7 | 25.9 |
| | | S0 | Yes | 10% | 27.7 | 27.2 | 27.1 | 26.9 | 39.5 | 39.9 | 36.7 | 32.0 | 32.0 | 32.7 | 30.9 | 29.2 | 31.8 | 39.9 | 26.9 |
| | End of Mine | S0 | Yes | 90% | 25.5 | 24.8 | 25.4 | 25.0 | 26.4 | 27.6 | 26.5 | 26.4 | 26.6 | 26.4 | 25.9 | 25.8 | 26.0 | 27.6 | 24.8 |
| | | S0 | Yes | 50% | 26.4 | 26.1 | 26.0 | 25.9 | 30.7 | 33.7 | 29.8 | 28.5 | 28.8 | 28.3 | 27.6 | 26.8 | 28.2 | 33.7 | 25.9 |
| | | S0 | Yes | 10% | 27.7 | 27.2 | 27.1 | 26.9 | 39.5 | 39.9 | 36.7 | 32.0 | 32.0 | 32.7 | 30.9 | 29.2 | 31.8 | 39.9 | 26.9 |
| | Post-Closure | S0 | Yes | 90% | 25.8 | 25.0 | 25.6 | 25.2 | 26.6 | 27.8 | 26.7 | 26.6 | 26.8 | 26.6 | 26.1 | 26.0 | 26.2 | 27.8 | 25.0 |
| | | S0 | Yes | 50% | 26.6 | 26.3 | 26.2 | 26.1 | 30.9 | 33.9 | 30.0 | 28.7 | 29.0 | 28.5 | 27.8 | 27.0 | 28.4 | 33.9 | 26.1 |
| | | S0 | Yes | 10% | 27.9 | 27.4 | 27.3 | 27.1 | 39.7 | 40.1 | 36.9 | 32.2 | 32.2 | 32.9 | 31.1 | 29.4 | 32.0 | 40.1 | 27.1 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S0 | Yes | 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S0 | Yes | 10% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Post-Closure | S0 | Yes | 90% | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| | | S0 | Yes | 50% | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| | | S0 | Yes | 10% | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |

**Table K4.16-31: Upper Talarik Creek Change in Streamflow End of Mine and Post-Closure—Scenario S0—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S0 | Yes | 90% | 0 | 0 | 0 | 0.1 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0.1 | 0 | 0 | 0.1 | 0 |
| | | S0 | Yes | 50% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | S0 | Yes | 10% | 0 | -0.1 | -0.1 | -0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0 | 0.1 | -0.1 |
| | Post-Closure | S0 | Yes | 90% | 0.8 | 0.8 | 0.8 | 0.9 | 0.7 | 0.7 | 0.9 | 0.7 | 0.8 | 0.7 | 0.9 | 0.8 | 0.8 | 0.9 | 0.7 |
| | | S0 | Yes | 50% | 0.7 | 0.8 | 0.8 | 0.8 | 0.6 | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 | 0.7 | 0.8 | 0.6 |
| | | S0 | Yes | 10% | 0.7 | 0.7 | 0.7 | 0.7 | 0.5 | 0.5 | 0.5 | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 | 0.6 | 0.7 | 0.5 |

Notes:

cfs = cubic feet per second
UTC = Upper Talarik Creek

Source: Knight Piésold 2019q, r

**Table K4.16-32: North Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S7—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| **NFK-A** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | Yes | 90% | 51.0 | 40.3 | 32.6 | 30.2 | 184.2 | 226.7 | 114.0 | 113.6 | 162.5 | 138.4 | 98.5 | 69.0 | 105.1 | 226.7 | 30.2 |
| | | S7 | Yes | 50% | 70.3 | 54.2 | 43.2 | 39.7 | 434.0 | 377.9 | 235.3 | 241.8 | 316.5 | 267.5 | 154.2 | 94.2 | 194.1 | 434.0 | 39.7 |
| | | S7 | Yes | 10% | 114.9 | 102.0 | 82.5 | 93.5 | 831.7 | 979.6 | 435.1 | 447.1 | 539.9 | 421.3 | 296.9 | 155.5 | 375.0 | 979.6 | 82.5 |
| | End of Mine | S7 | Yes | 90% | 61.2 | 53.3 | 47.6 | 45.6 | 196.3 | 224.6 | 115.1 | 113.0 | 165.2 | 138.5 | 98.6 | 76.1 | 111.3 | 224.6 | 45.6 |
| | | S7 | Yes | 50% | 75.3 | 63.8 | 55.6 | 53.3 | 414.8 | 339.1 | 220.8 | 225.3 | 297.9 | 253.4 | 151.8 | 93.2 | 187.0 | 414.8 | 53.3 |
| | | S7 | Yes | 10% | 115.4 | 101.9 | 85.0 | 104.7 | 766.1 | 830.5 | 388.9 | 403.6 | 479.7 | 386.2 | 275.0 | 153.4 | 340.9 | 830.5 | 85.0 |
| | Post-Closure | S7 | Yes | 90% | 52.6 | 43.7 | 37.3 | 35.9 | 189.4 | 221.1 | 115.1 | 113.4 | 160.6 | 135.1 | 93.8 | 67.9 | 105.5 | 221.1 | 35.9 |
| | | S7 | Yes | 50% | 70.8 | 57.0 | 47.4 | 44.9 | 433.1 | 371.9 | 236.0 | 235.0 | 309.3 | 252.6 | 150.2 | 92.9 | 191.8 | 433.1 | 44.9 |
| | | S7 | Yes | 10% | 114.6 | 102.6 | 83.2 | 99.6 | 822.8 | 956.9 | 431.7 | 434.7 | 524.0 | 409.9 | 284.1 | 156.7 | 368.4 | 956.9 | 83.2 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | 10.2 | 13.1 | 15.1 | 15.5 | 12.1 | -2.1 | 1.2 | -0.6 | 2.8 | 0.0 | 0.1 | 7.1 | 6.2 | 15.5 | -2.1 |
| | | S7 | Yes | 50% | 4.9 | 9.6 | 12.4 | 13.6 | -19.2 | -38.8 | -14.4 | -16.6 | -18.6 | -14.1 | -2.4 | -1.0 | -7.1 | 13.6 | -38.8 |
| | | S7 | Yes | 10% | 0.5 | -0.1 | 2.6 | 11.2 | -65.6 | -149.2 | -46.2 | -43.5 | -60.2 | -35.2 | -21.9 | -2.1 | -34.1 | 11.2 | -149.2 |
| | Post-Closure | S7 | Yes | 90% | 1.5 | 3.4 | 4.8 | 5.7 | 5.2 | -5.6 | 1.1 | -0.2 | -1.8 | -3.3 | -4.6 | -1.1 | 0.4 | 5.7 | -5.6 |
| | | S7 | Yes | 50% | 0.5 | 2.8 | 4.2 | 5.2 | -0.9 | -5.9 | 0.7 | -6.8 | -7.2 | -14.9 | -4.0 | -1.3 | -2.3 | 5.2 | -14.9 |
| | | S7 | Yes | 10% | -0.3 | 0.5 | 0.8 | 6.1 | -8.9 | -22.7 | -3.4 | -12.5 | -15.9 | -11.4 | -12.8 | 1.2 | -6.6 | 6.1 | -22.7 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | 20.0 | 32.5 | 46.3 | 51.3 | 6.6 | -0.9 | 1.0 | -0.5 | 1.7 | 0.0 | 0.1 | 10.4 | 14.0 | 51.3 | -0.9 |
| | | S7 | Yes | 50% | 7.0 | 17.6 | 28.6 | 34.1 | -4.4 | -10.3 | -6.1 | -6.9 | -5.9 | -5.3 | -1.6 | -1.1 | 3.8 | 34.1 | -10.3 |
| | | S7 | Yes | 10% | 0.5 | -0.1 | 3.1 | 12.0 | -7.9 | -15.2 | -10.6 | -9.7 | -11.1 | -8.3 | -7.4 | -1.3 | -4.7 | 12.0 | -15.2 |
| | Post-Closure | S7 | Yes | 90% | 3.0 | 8.5 | 14.6 | 18.9 | 2.8 | -2.5 | 1.0 | -0.2 | -1.1 | -2.4 | -4.7 | -1.5 | 3.0 | 18.9 | -4.7 |
| | | S7 | Yes | 50% | 0.7 | 5.1 | 9.7 | 13.1 | -0.2 | -1.6 | 0.3 | -2.8 | -2.3 | -5.6 | -2.6 | -1.4 | 1.0 | 13.1 | -5.6 |
| | | S7 | Yes | 10% | -0.2 | 0.5 | 1.0 | 6.5 | -1.1 | -2.3 | -0.8 | -2.8 | -2.9 | -2.7 | -4.3 | 0.8 | -0.7 | 6.5 | -4.3 |
| **NFK-B** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | Yes | 90% | 47.0 | 37.0 | 29.8 | 27.1 | 150.1 | 195.9 | 101.3 | 102.4 | 141.5 | 122.8 | 87.9 | 62.5 | 92.1 | 195.9 | 27.1 |
| | | S7 | Yes | 50% | 65.0 | 49.9 | 39.6 | 34.9 | 379.7 | 332.5 | 203.8 | 213.4 | 274.3 | 234.7 | 133.1 | 85.9 | 170.6 | 379.7 | 34.9 |
| | | S7 | Yes | 10% | 105.4 | 89.1 | 76.3 | 77.3 | 720.4 | 868.9 | 387.7 | 389.6 | 477.6 | 368.3 | 264.9 | 136.1 | 330.1 | 868.9 | 76.3 |
| | End of Mine | S7 | Yes | 90% | 57.3 | 50.1 | 44.9 | 43.0 | 162.8 | 194.9 | 102.6 | 102.9 | 143.6 | 123.1 | 89.4 | 69.4 | 98.7 | 194.9 | 43.0 |
| | | S7 | Yes | 50% | 70.1 | 59.5 | 52.3 | 49.3 | 353.6 | 294.7 | 190.4 | 197.1 | 255.9 | 221.3 | 131.8 | 85.7 | 163.5 | 353.6 | 49.3 |
| | | S7 | Yes | 10% | 106.4 | 91.3 | 79.0 | 88.2 | 655.6 | 719.1 | 342.4 | 346.2 | 418.1 | 333.6 | 239.2 | 134.1 | 296.1 | 719.1 | 79.0 |
| | Post-Closure | S7 | Yes | 90% | 48.5 | 40.6 | 34.5 | 33.3 | 155.2 | 190.8 | 102.0 | 102.5 | 139.8 | 119.2 | 84.6 | 60.9 | 92.7 | 190.8 | 33.3 |
| | | S7 | Yes | 50% | 65.5 | 52.7 | 44.0 | 40.7 | 378.0 | 327.4 | 205.6 | 206.8 | 267.2 | 220.5 | 130.0 | 84.3 | 168.6 | 378.0 | 40.7 |
| | | S7 | Yes | 10% | 105.1 | 90.8 | 77.2 | 83.2 | 712.4 | 848.4 | 384.6 | 378.0 | 462.5 | 357.4 | 252.4 | 135.9 | 324.0 | 848.4 | 77.2 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | 10.3 | 13.1 | 15.2 | 15.9 | 12.7 | -1.0 | 1.3 | 0.6 | 2.1 | 0.3 | 1.5 | 6.9 | 6.6 | 15.9 | -1.0 |
| | | S7 | Yes | 50% | 5.2 | 9.7 | 12.7 | 14.4 | -26.1 | -37.8 | -13.5 | -16.3 | -18.4 | -13.4 | -1.3 | -0.2 | -7.1 | 14.4 | -37.8 |
| | | S7 | Yes | 10% | 1.0 | 2.2 | 2.6 | 10.9 | -64.8 | -149.9 | -45.3 | -43.4 | -59.5 | -34.6 | -25.7 | -2.0 | -34.0 | 10.9 | -149.9 |
| | Post-Closure | S7 | Yes | 90% | 1.6 | 3.6 | 4.7 | 6.2 | 5.1 | -5.1 | 0.7 | 0.1 | -1.7 | -3.6 | -3.4 | -1.6 | 0.6 | 6.2 | -5.1 |
| | | S7 | Yes | 50% | 0.6 | 2.8 | 4.5 | 5.8 | -1.7 | -5.1 | 1.7 | -6.5 | -7.1 | -14.2 | -3.2 | -1.6 | -2.0 | 5.8 | -14.2 |
| | | S7 | Yes | 10% | -0.3 | 1.7 | 0.8 | 5.9 | -8.0 | -20.5 | -3.1 | -11.6 | -15.2 | -10.8 | -12.5 | -0.3 | -6.1 | 5.9 | -20.5 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | 22.0 | 35.5 | 51.0 | 58.6 | 8.4 | -0.5 | 1.3 | 0.5 | 1.5 | 0.3 | 1.7 | 11.1 | 15.9 | 58.6 | -0.5 |
| | | S7 | Yes | 50% | 8.0 | 19.4 | 32.1 | 41.3 | -6.9 | -11.4 | -6.6 | -7.6 | -6.7 | -5.7 | -1.0 | -0.2 | 4.6 | 41.3 | -11.4 |
| | | S7 | Yes | 10% | 0.9 | 2.5 | 3.5 | 14.1 | -9.0 | -17.2 | -11.7 | -11.1 | -12.5 | -9.4 | -9.7 | -1.5 | -5.1 | 14.1 | -17.2 |
| | Post-Closure | S7 | Yes | 90% | 3.4 | 9.8 | 15.9 | 22.8 | 3.4 | -2.6 | 0.7 | 0.1 | -1.2 | -2.9 | -3.8 | -2.5 | 3.6 | 22.8 | -3.8 |
| | | S7 | Yes | 50% | 0.9 | 5.7 | 11.3 | 16.7 | -0.5 | -1.5 | 0.9 | -3.1 | -2.6 | -6.1 | -2.4 | -1.8 | 1.5 | 16.7 | -6.1 |
| | | S7 | Yes | 10% | -0.3 | 1.9 | 1.1 | 7.6 | -1.1 | -2.4 | -0.8 | -3.0 | -3.2 | -2.9 | -4.7 | -0.2 | -0.7 | 7.6 | -4.7 |
| **NFK-C** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | Yes | 90% | 19.7 | 11.4 | 5.7 | 3.2 | 84.2 | 132.8 | 63.5 | 65.7 | 87.2 | 79.5 | 52.8 | 31.5 | 53.1 | 132.8 | 3.2 |
| | | S7 | Yes | 50% | 34.7 | 22.4 | 13.8 | 9.8 | 258.8 | 245.3 | 140.2 | 149.4 | 189.2 | 161.2 | 84.5 | 53.0 | 113.5 | 258.8 | 9.8 |
| | | S7 | Yes | 10% | 67.9 | 50.5 | 45.1 | 41.3 | 514.6 | 656.9 | 295.7 | 278.8 | 359.7 | 266.4 | 194.4 | 87.5 | 238.2 | 656.9 | 41.3 |

**Table K4.16-32: North Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S7—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | End of Mine | S7 | Yes | 90% | 30.4 | 25.1 | 21.2 | 20.0 | 97.0 | 130.4 | 65.6 | 66.0 | 88.4 | 77.2 | 54.8 | 38.9 | 59.6 | 130.4 | 20.0 |
| | | S7 | Yes | 50% | 41.2 | 33.1 | 27.4 | 25.0 | 231.7 | 201.8 | 124.3 | 130.4 | 168.2 | 146.0 | 81.9 | 53.2 | 105.4 | 231.7 | 25.0 |
| | | S7 | Yes | 10% | 70.7 | 57.7 | 49.6 | 50.4 | 445.3 | 498.4 | 243.3 | 229.7 | 295.4 | 228.0 | 166.1 | 85.7 | 201.7 | 498.4 | 49.6 |
| | Post-Closure | S7 | Yes | 90% | 20.9 | 15.3 | 10.4 | 9.7 | 89.1 | 124.7 | 62.9 | 64.4 | 84.2 | 73.3 | 48.7 | 29.5 | 52.8 | 124.7 | 9.7 |
| | | S7 | Yes | 50% | 35.4 | 25.4 | 18.7 | 15.7 | 256.6 | 234.4 | 139.6 | 141.0 | 178.6 | 148.9 | 81.4 | 50.9 | 110.6 | 256.6 | 15.7 |
| | | S7 | Yes | 10% | 68.4 | 52.8 | 47.4 | 45.9 | 502.7 | 627.4 | 287.5 | 263.2 | 340.2 | 252.3 | 180.4 | 85.9 | 229.5 | 627.4 | 45.9 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | 10.7 | 13.7 | 15.5 | 16.8 | 12.8 | -2.4 | 2.1 | 0.2 | 1.2 | -2.2 | 2.0 | 7.3 | 6.5 | 16.8 | -2.4 |
| | | S7 | Yes | 50% | 6.5 | 10.6 | 13.7 | 15.2 | -27.0 | -43.5 | -15.9 | -19.0 | -21.0 | -15.2 | -2.5 | 0.3 | -8.2 | 15.2 | -43.5 |
| | | S7 | Yes | 10% | 2.8 | 7.2 | 4.5 | 9.2 | -69.3 | -158.5 | -52.4 | -49.2 | -64.3 | -38.4 | -28.3 | -1.8 | -36.5 | 9.2 | -158.5 |
| | Post-Closure | S7 | Yes | 90% | 1.3 | 3.9 | 4.7 | 6.5 | 4.9 | -8.1 | -0.5 | -1.3 | -3.1 | -6.2 | -4.1 | -2.0 | -0.3 | 6.5 | -8.1 |
| | | S7 | Yes | 50% | 0.7 | 3.0 | 5.0 | 5.9 | -2.2 | -10.8 | -0.6 | -8.4 | -10.6 | -12.3 | -3.1 | -2.1 | -3.0 | 5.9 | -12.3 |
| | | S7 | Yes | 10% | 0.5 | 2.3 | 2.3 | 4.6 | -11.9 | -29.5 | -8.1 | -15.6 | -19.5 | -14.1 | -14.0 | -1.6 | -8.7 | 4.6 | -29.5 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | 54.6 | 120.6 | 274.5 | 522.8 | 15.2 | -1.8 | 3.3 | 0.4 | 1.3 | -2.8 | 3.8 | 23.2 | 84.6 | 522.8 | -2.8 |
| | | S7 | Yes | 50% | 18.7 | 47.4 | 99.3 | 154.4 | -10.5 | -17.7 | -11.3 | -12.7 | -11.1 | -9.4 | -3.0 | 0.5 | 20.4 | 154.4 | -17.7 |
| | | S7 | Yes | 10% | 4.1 | 14.2 | 9.9 | 22.2 | -13.5 | -24.1 | -17.7 | -17.6 | -17.9 | -14.4 | -14.5 | -2.1 | -6.0 | 22.2 | -24.1 |
| | Post-Closure | S7 | Yes | 90% | 6.4 | 34.4 | 83.6 | 203.3 | 5.9 | -6.1 | -0.8 | -2.0 | -3.5 | -7.8 | -7.8 | -6.5 | 24.9 | 203.3 | -7.8 |
| | | S7 | Yes | 50% | 2.1 | 13.2 | 36.1 | 60.1 | -0.8 | -4.4 | -0.4 | -5.6 | -5.6 | -7.6 | -3.7 | -4.0 | 6.6 | 60.1 | -7.6 |
| | | S7 | Yes | 10% | 0.7 | 4.6 | 5.1 | 11.1 | -2.3 | -4.5 | -2.8 | -5.6 | -5.4 | -5.3 | -7.2 | -1.8 | -1.1 | 11.1 | -7.2 |
| | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | Yes | 90% | 13.8 | 11.4 | 9.2 | 7.9 | 35.8 | 58.7 | 27.2 | 23.0 | 27.1 | 29.5 | 22.2 | 17.2 | 23.6 | 58.7 | 7.9 |
| | | S7 | Yes | 50% | 20.3 | 16.4 | 13.3 | 11.5 | 83.0 | 94.6 | 54.2 | 48.2 | 61.9 | 57.6 | 39.9 | 26.8 | 44.0 | 94.6 | 11.5 |
| | | S7 | Yes | 10% | 33.7 | 27.5 | 23.7 | 21.6 | 177.1 | 207.3 | 117.2 | 85.1 | 111.4 | 101.5 | 81.7 | 43.9 | 86.0 | 207.3 | 21.6 |
| | End of Mine | S7 | Yes | 90% | 39.3 | 37.2 | 35.0 | 32.0 | 66.1 | 88.3 | 57.7 | 51.9 | 56.3 | 56.1 | 45.4 | 41.9 | 50.6 | 88.3 | 32.0 |
| | | S7 | Yes | 50% | 45.4 | 41.9 | 38.9 | 35.3 | 110.9 | 122.0 | 83.6 | 75.6 | 89.6 | 82.3 | 61.8 | 50.8 | 69.8 | 122.0 | 35.3 |
| | | S7 | Yes | 10% | 57.8 | 52.1 | 48.3 | 44.6 | 199.3 | 232.0 | 142.8 | 111.2 | 136.2 | 123.8 | 100.8 | 66.7 | 109.6 | 232.0 | 44.6 |
| | Post-Closure | S7 | Yes | 90% | 24.1 | 22.1 | 19.6 | 19.7 | 35.7 | 58.7 | 38.3 | 23.0 | 27.0 | 29.5 | 30.8 | 26.8 | 29.6 | 58.7 | 19.6 |
| | | S7 | Yes | 50% | 30.7 | 27.1 | 23.8 | 23.3 | 83.0 | 94.5 | 65.3 | 48.2 | 61.9 | 57.6 | 48.4 | 36.4 | 50.0 | 94.5 | 23.3 |
| | | S7 | Yes | 10% | 44.0 | 38.2 | 34.2 | 33.4 | 177.1 | 207.2 | 128.3 | 85.0 | 111.3 | 101.4 | 90.2 | 53.5 | 92.0 | 207.2 | 33.4 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| **NFK-D[1]** | End of Mine | S7 | Yes | 90% | 25.6 | 25.9 | 25.8 | 24.1 | 30.4 | 29.6 | 30.5 | 28.8 | 29.2 | 26.5 | 23.2 | 24.7 | 27.0 | 30.5 | 23.2 |
| | | S7 | Yes | 50% | 25.1 | 25.5 | 25.5 | 23.8 | 27.9 | 27.4 | 29.4 | 27.4 | 27.6 | 24.7 | 21.9 | 24.0 | 25.9 | 29.4 | 21.9 |
| | | S7 | Yes | 10% | 24.1 | 24.6 | 24.6 | 23.0 | 22.2 | 24.7 | 25.6 | 26.1 | 24.8 | 22.4 | 19.1 | 22.7 | 23.7 | 26.1 | 19.1 |
| | Post-Closure | S7 | Yes | 90% | 10.3 | 10.7 | 10.5 | 11.8 | 0.0 | -0.1 | 11.1 | -0.1 | -0.1 | -0.1 | 8.5 | 9.6 | 6.0 | 11.8 | -0.1 |
| | | S7 | Yes | 50% | 10.3 | 10.7 | 10.5 | 11.8 | 0.0 | -0.1 | 11.1 | -0.1 | -0.1 | -0.1 | 8.5 | 9.6 | 6.0 | 11.8 | -0.1 |
| | | S7 | Yes | 10% | 10.3 | 10.7 | 10.5 | 11.8 | 0.0 | -0.1 | 11.1 | -0.1 | -0.1 | -0.1 | 8.5 | 9.6 | 6.0 | 11.8 | -0.1 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | 185.8 | 227.0 | 280.8 | 304.0 | 84.9 | 50.4 | 112.5 | 125.3 | 107.6 | 89.8 | 104.3 | 143.7 | 151.3 | 304.0 | 50.4 |
| | | S7 | Yes | 50% | 123.5 | 155.7 | 191.5 | 206.5 | 33.6 | 29.0 | 54.2 | 56.8 | 44.6 | 42.8 | 55.0 | 89.8 | 90.3 | 206.5 | 29.0 |
| | | S7 | Yes | 10% | 71.6 | 89.4 | 103.7 | 106.6 | 12.5 | 11.9 | 21.8 | 30.7 | 22.3 | 22.0 | 23.4 | 51.8 | 47.3 | 106.6 | 11.9 |
| | Post-Closure | S7 | Yes | 90% | 75.0 | 93.8 | 113.8 | 148.2 | -0.1 | -0.1 | 41.0 | -0.3 | -0.2 | -0.2 | 38.5 | 55.9 | 47.1 | 148.2 | -0.3 |
| | | S7 | Yes | 50% | 50.8 | 65.2 | 78.4 | 102.0 | -0.1 | -0.1 | 20.6 | -0.1 | -0.1 | -0.1 | 21.4 | 35.9 | 31.1 | 102.0 | -0.1 |
| | | S7 | Yes | 10% | 30.6 | 38.8 | 44.1 | 54.4 | 0.0 | 0.0 | 9.5 | -0.1 | -0.1 | -0.1 | 10.5 | 21.9 | 17.5 | 54.4 | -0.1 |
| **Tributary 1.19** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | Yes | 90% | 3.4 | 2.8 | 2.3 | 2.1 | 12.6 | 24.2 | 13.5 | 11.9 | 19.7 | 13.6 | 6.3 | 4.3 | 9.7 | 24.2 | 2.1 |
| | | S7 | Yes | 50% | 4.6 | 3.7 | 3.0 | 2.6 | 49.9 | 63.4 | 28.4 | 29.9 | 35.8 | 24.8 | 13.6 | 6.3 | 22.2 | 63.4 | 2.6 |
| | | S7 | Yes | 10% | 7.0 | 6.3 | 5.7 | 8.0 | 89.0 | 140.6 | 52.5 | 58.0 | 62.7 | 46.0 | 23.5 | 9.1 | 42.4 | 140.6 | 5.7 |
| | End of Mine | S7 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S7 | Yes | 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S7 | Yes | 10% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Post-Closure | S7 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S7 | Yes | 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S7 | Yes | 10% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

**Table K4.16-32: North Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S7—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | -3.4 | -2.8 | -2.3 | -2.1 | -12.6 | -24.2 | -13.5 | -11.9 | -19.7 | -13.6 | -6.3 | -4.3 | -9.7 | -2.1 | -24.2 |
| | | S7 | Yes | 50% | -4.6 | -3.7 | -3.0 | -2.6 | -49.9 | -63.4 | -28.4 | -29.9 | -35.8 | -24.8 | -13.6 | -6.3 | -22.2 | -2.6 | -63.4 |
| | | S7 | Yes | 10% | -7.0 | -6.3 | -5.7 | -8.0 | -89.0 | -140.6 | -52.5 | -58.0 | -62.7 | -46.0 | -23.5 | -9.1 | -42.4 | -5.7 | -140.6 |
| | Post-Closure | S7 | Yes | 90% | -3.4 | -2.8 | -2.3 | -2.1 | -12.6 | -24.2 | -13.5 | -11.9 | -19.7 | -13.6 | -6.3 | -4.3 | -9.7 | -2.1 | -24.2 |
| | | S7 | Yes | 50% | -4.6 | -3.7 | -3.0 | -2.6 | -49.9 | -63.4 | -28.4 | -29.9 | -35.8 | -24.8 | -13.6 | -6.3 | -22.2 | -2.6 | -63.4 |
| | | S7 | Yes | 10% | -7.0 | -6.3 | -5.7 | -8.0 | -89.0 | -140.6 | -52.5 | -58.0 | -62.7 | -46.0 | -23.5 | -9.1 | -42.4 | -5.7 | -140.6 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | | S7 | Yes | 50% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | | S7 | Yes | 10% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | Post-Closure | S7 | Yes | 90% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | | S7 | Yes | 50% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | | S7 | Yes | 10% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |

Notes:

cfs = cubic feet per second
NFK = North Fork Koktuli

Source: Knight Piésold 2019

[1] Source: PLP 2020 RFI 161

**Table K4.16-33: South Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S7—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| **SFK-A** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | Yes | 90% | 37.1 | 25.4 | 15.9 | 10.4 | 140.6 | 141.2 | 87.2 | 93.4 | 129.0 | 115.2 | 77.5 | 51.1 | 77.0 | 141.2 | 10.4 |
| | | S7 | Yes | 50% | 56.9 | 42.0 | 30.6 | 24.3 | 323.0 | 294.3 | 182.3 | 212.4 | 252.4 | 212.7 | 130.6 | 82.1 | 153.6 | 323.0 | 24.3 |
| | | S7 | Yes | 10% | 129.4 | 93.5 | 71.5 | 78.0 | 568.6 | 704.8 | 352.8 | 360.5 | 437.8 | 335.1 | 254.7 | 154.0 | 295.0 | 704.8 | 71.5 |
| | End of Mine | S7 | Yes | 90% | 34.5 | 23.0 | 14.1 | 9.8 | 137.7 | 134.5 | 83.5 | 89.0 | 122.7 | 108.8 | 72.8 | 48.1 | 73.2 | 137.7 | 9.8 |
| | | S7 | Yes | 50% | 53.4 | 39.8 | 28.4 | 22.4 | 315.4 | 284.6 | 173.3 | 203.3 | 241.8 | 203.3 | 123.9 | 77.6 | 147.3 | 315.4 | 22.4 |
| | | S7 | Yes | 10% | 124.5 | 89.7 | 68.2 | 76.0 | 557.0 | 687.9 | 341.1 | 349.9 | 424.7 | 323.6 | 245.5 | 146.9 | 286.3 | 687.9 | 68.2 |
| | Post-Closure | S7 | Yes | 90% | 38.1 | 27.2 | 17.7 | 12.1 | 146.6 | 146.3 | 88.7 | 97.4 | 135.4 | 121.3 | 79.8 | 52.7 | 80.3 | 146.6 | 12.1 |
| | | S7 | Yes | 50% | 58.4 | 42.3 | 31.7 | 25.8 | 326.6 | 297.7 | 181.7 | 215.6 | 256.4 | 217.0 | 132.2 | 83.4 | 155.7 | 326.6 | 25.8 |
| | | S7 | Yes | 10% | 129.8 | 94.1 | 71.9 | 78.7 | 568.5 | 698.2 | 348.7 | 361.9 | 437.7 | 337.3 | 254.0 | 154.7 | 294.6 | 698.2 | 71.9 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | -2.6 | -2.5 | -1.8 | -0.6 | -2.9 | -6.7 | -3.7 | -4.4 | -6.3 | -6.4 | -4.8 | -3.0 | -3.8 | -0.6 | -6.7 |
| | | S7 | Yes | 50% | -3.6 | -2.2 | -2.1 | -2.0 | -7.6 | -9.7 | -9.0 | -9.0 | -10.6 | -9.5 | -6.7 | -4.5 | -6.4 | -2.0 | -10.6 |
| | | S7 | Yes | 10% | -4.9 | -3.7 | -3.3 | -2.0 | -11.6 | -16.8 | -11.7 | -10.6 | -13.1 | -11.5 | -9.2 | -7.1 | -8.8 | -2.0 | -16.8 |
| | Post-Closure | S7 | Yes | 90% | 1.0 | 1.8 | 1.8 | 1.7 | 6.0 | 5.1 | 1.5 | 4.0 | 6.4 | 6.1 | 2.2 | 1.6 | 3.3 | 6.4 | 1.0 |
| | | S7 | Yes | 50% | 1.4 | 0.3 | 1.1 | 1.4 | 3.6 | 3.5 | -0.5 | 3.2 | 4.0 | 4.3 | 1.6 | 1.3 | 2.1 | 4.3 | -0.5 |
| | | S7 | Yes | 10% | 0.4 | 0.6 | 0.4 | 0.7 | -0.1 | -6.5 | -4.1 | 1.4 | 0.0 | 2.2 | -0.7 | 0.7 | -0.4 | 2.2 | -6.5 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | -7.1 | -9.6 | -11.5 | -5.7 | -2.1 | -4.7 | -4.2 | -4.7 | -4.9 | -5.6 | -6.2 | -5.9 | -6.0 | -2.1 | -11.5 |
| | | S7 | Yes | 50% | -6.2 | -5.2 | -7.0 | -8.0 | -2.4 | -3.3 | -4.9 | -4.3 | -4.2 | -4.5 | -5.1 | -5.4 | -5.0 | -2.4 | -8.0 |
| | | S7 | Yes | 10% | -3.8 | -4.0 | -4.6 | -2.6 | -2.0 | -2.4 | -3.3 | -2.9 | -3.0 | -3.4 | -3.6 | -4.6 | -3.3 | -2.0 | -4.6 |
| | Post-Closure | S7 | Yes | 90% | 2.7 | 7.0 | 11.5 | 16.4 | 4.3 | 3.6 | 1.7 | 4.2 | 5.0 | 5.3 | 2.9 | 3.1 | 5.6 | 16.4 | 1.7 |
| | | S7 | Yes | 50% | 2.5 | 0.8 | 3.6 | 5.9 | 1.1 | 1.2 | -0.3 | 1.5 | 1.6 | 2.0 | 1.2 | 1.6 | 1.9 | 5.9 | -0.3 |
| | | S7 | Yes | 10% | 0.3 | 0.6 | 0.5 | 0.9 | 0.0 | -0.9 | -1.2 | 0.4 | 0.0 | 0.6 | -0.3 | 0.5 | 0.1 | 0.9 | -1.2 |
| **SFK-B** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | Yes | 90% | 35.1 | 27.7 | 20.3 | 15.3 | 92.8 | 122.4 | 71.0 | 72.2 | 94.3 | 86.0 | 59.4 | 42.3 | 61.6 | 122.4 | 15.3 |
| | | S7 | Yes | 50% | 43.7 | 35.8 | 29.2 | 24.1 | 240.6 | 244.1 | 143.5 | 159.6 | 190.6 | 164.5 | 99.9 | 62.7 | 119.9 | 244.1 | 24.1 |
| | | S7 | Yes | 10% | 86.2 | 62.3 | 51.7 | 48.6 | 435.8 | 583.4 | 283.3 | 276.4 | 342.1 | 251.5 | 202.5 | 115.2 | 228.2 | 583.4 | 48.6 |
| | End of Mine | S7 | Yes | 90% | 32.8 | 25.5 | 18.6 | 14.3 | 90.3 | 115.1 | 67.3 | 68.1 | 89.1 | 80.7 | 55.0 | 40.6 | 58.1 | 115.1 | 14.3 |
| | | S7 | Yes | 50% | 41.4 | 34.7 | 27.8 | 23.0 | 232.2 | 233.2 | 134.6 | 151.0 | 180.0 | 155.5 | 93.8 | 59.0 | 113.9 | 233.2 | 23.0 |
| | | S7 | Yes | 10% | 82.3 | 59.3 | 49.5 | 47.0 | 422.6 | 563.8 | 270.9 | 264.9 | 328.6 | 239.6 | 192.7 | 109.4 | 219.2 | 563.8 | 47.0 |
| | Post-Closure | S7 | Yes | 90% | 35.6 | 29.0 | 22.4 | 17.5 | 100.9 | 127.9 | 72.7 | 76.3 | 101.9 | 93.1 | 61.9 | 43.1 | 65.2 | 127.9 | 17.5 |
| | | S7 | Yes | 50% | 44.8 | 35.8 | 30.2 | 25.6 | 244.3 | 247.1 | 142.5 | 164.0 | 195.6 | 169.9 | 101.4 | 64.1 | 122.1 | 247.1 | 25.6 |
| | | S7 | Yes | 10% | 86.3 | 62.8 | 51.9 | 48.5 | 435.5 | 573.7 | 278.4 | 277.5 | 341.7 | 254.3 | 200.3 | 115.9 | 227.2 | 573.7 | 48.5 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | -2.2 | -2.1 | -1.7 | -1.0 | -2.5 | -7.2 | -3.6 | -4.1 | -5.1 | -5.4 | -4.5 | -1.8 | -3.4 | -1.0 | -7.2 |
| | | S7 | Yes | 50% | -2.4 | -1.1 | -1.3 | -1.1 | -8.4 | -10.9 | -8.9 | -8.7 | -10.6 | -9.0 | -6.1 | -3.7 | -6.0 | -1.1 | -10.9 |
| | | S7 | Yes | 10% | -3.9 | -3.0 | -2.2 | -1.6 | -13.2 | -19.5 | -12.4 | -11.5 | -13.5 | -11.8 | -9.8 | -5.8 | -9.0 | -1.6 | -19.5 |
| | Post-Closure | S7 | Yes | 90% | 0.5 | 1.4 | 2.0 | 2.2 | 8.1 | 5.6 | 1.7 | 4.2 | 7.6 | 7.1 | 2.5 | 0.8 | 3.6 | 8.1 | 0.5 |
| | | S7 | Yes | 50% | 1.1 | -0.1 | 1.1 | 1.4 | 3.7 | 3.0 | -1.0 | 4.4 | 5.0 | 5.4 | 1.5 | 1.3 | 2.2 | 5.4 | -1.0 |
| | | S7 | Yes | 10% | 0.1 | 0.5 | 0.2 | -0.1 | -0.2 | -9.7 | -4.9 | 1.1 | -0.4 | 2.9 | -2.2 | 0.7 | -1.0 | 2.9 | -9.7 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | -6.4 | -7.6 | -8.5 | -6.7 | -2.7 | -5.9 | -5.1 | -5.6 | -5.5 | -6.2 | -7.5 | -4.1 | -6.0 | -2.7 | -8.5 |
| | | S7 | Yes | 50% | -5.4 | -3.0 | -4.6 | -4.6 | -3.5 | -4.5 | -6.2 | -5.4 | -5.5 | -5.5 | -6.1 | -5.9 | -5.0 | -3.0 | -6.2 |
| | | S7 | Yes | 10% | -4.6 | -4.8 | -4.3 | -3.2 | -3.0 | -3.3 | -4.4 | -4.1 | -4.0 | -4.7 | -4.8 | -5.1 | -4.2 | -3.0 | -5.1 |
| | Post-Closure | S7 | Yes | 90% | 1.5 | 4.9 | 9.9 | 14.7 | 8.8 | 4.5 | 2.4 | 5.8 | 8.1 | 8.3 | 4.2 | 1.8 | 6.2 | 14.7 | 1.5 |
| | | S7 | Yes | 50% | 2.4 | -0.2 | 3.6 | 6.0 | 1.5 | 1.2 | -0.7 | 2.7 | 2.6 | 3.3 | 1.5 | 2.1 | 2.2 | 6.0 | -0.7 |
| | | S7 | Yes | 10% | 0.1 | 0.8 | 0.4 | -0.2 | -0.1 | -1.7 | -1.7 | 0.4 | -0.1 | 1.1 | -1.1 | 0.6 | -0.1 | 1.1 | -1.7 |
| **SFK-C** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 28.6 | 43.9 | 8.2 | 7.8 | 16.7 | 22.0 | 8.6 | 0.3 | 11.3 | 43.9 | 0.0 |
| | | S7 | Yes | 50% | 1.9 | 0.1 | 0.0 | 0.0 | 117.7 | 100.3 | 47.4 | 54.9 | 76.7 | 63.9 | 36.1 | 13.2 | 42.7 | 117.7 | 0.0 |
| | | S7 | Yes | 10% | 29.9 | 16.4 | 7.0 | 5.6 | 240.6 | 288.9 | 133.5 | 117.1 | 159.9 | 126.5 | 93.8 | 49.0 | 105.7 | 288.9 | 5.6 |
| | End of Mine | S7 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 27.6 | 39.0 | 6.6 | 6.4 | 13.9 | 16.2 | 5.5 | 0.2 | 9.6 | 39.0 | 0.0 |
| | | S7 | Yes | 50% | 0.6 | 0.1 | 0.0 | 0.0 | 113.2 | 93.8 | 41.1 | 49.0 | 68.8 | 57.7 | 32.7 | 11.0 | 39.0 | 113.2 | 0.0 |
| | | S7 | Yes | 10% | 27.2 | 14.1 | 6.2 | 5.0 | 231.6 | 279.3 | 124.5 | 110.3 | 150.8 | 118.5 | 88.2 | 45.0 | 100.0 | 279.3 | 5.0 |

**Table K4.16-33: South Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S7—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S7 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 35.9 | 51.4 | 11.4 | 13.7 | 26.2 | 31.2 | 12.4 | 1.4 | 15.3 | 51.4 | 0.0 |
| | | S7 | Yes | 50% | 4.4 | 0.1 | 0.0 | 0.0 | 123.5 | 108.1 | 49.7 | 62.7 | 84.6 | 72.8 | 39.7 | 15.9 | 46.8 | 123.5 | 0.0 |
| | | S7 | Yes | 10% | 31.5 | 17.5 | 8.1 | 6.2 | 244.0 | 293.9 | 133.9 | 124.2 | 166.3 | 133.5 | 97.0 | 51.5 | 109.0 | 293.9 | 6.2 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | -1.0 | -4.9 | -1.5 | -1.4 | -2.8 | -5.8 | -3.1 | 0.0 | -1.7 | 0.0 | -5.8 |
| | | S7 | Yes | 50% | -1.3 | 0.0 | 0.0 | 0.0 | -4.5 | -6.5 | -6.3 | -5.9 | -7.9 | -6.1 | -3.4 | -2.2 | -3.7 | 0.0 | -7.9 |
| | | S7 | Yes | 10% | -2.7 | -2.3 | -0.8 | -0.6 | -9.0 | -9.6 | -9.0 | -6.7 | -9.1 | -8.0 | -5.6 | -4.0 | -5.6 | -0.6 | -9.6 |
| | Post-Closure | S7 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 7.3 | 7.5 | 3.2 | 5.9 | 9.5 | 9.2 | 3.8 | 1.1 | 4.0 | 9.5 | 0.0 |
| | | S7 | Yes | 50% | 2.5 | 0.0 | 0.0 | 0.0 | 5.8 | 7.8 | 2.3 | 7.8 | 7.9 | 8.9 | 3.6 | 2.7 | 4.1 | 8.9 | 0.0 |
| | | S7 | Yes | 10% | 1.6 | 1.1 | 1.1 | 0.6 | 3.5 | 5.0 | 0.4 | 7.2 | 6.4 | 7.0 | 3.2 | 2.5 | 3.3 | 7.2 | 0.4 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | -3.5 | -11.2 | -18.7 | -18.0 | -16.7 | -26.6 | -35.7 | -17.2 | -12.3 | 0.0 | -35.7 |
| | | S7 | Yes | 50% | -67.6 | 0.0 | 0.0 | 0.0 | -3.8 | -6.5 | -13.3 | -10.7 | -10.3 | -9.6 | -9.5 | -17.0 | -12.4 | 0.0 | -67.6 |
| | | S7 | Yes | 10% | -9.0 | -14.0 | -12.0 | -10.5 | -3.7 | -3.3 | -6.8 | -5.8 | -5.7 | -6.3 | -5.9 | -8.2 | -7.6 | -3.3 | -14.0 |
| | Post-Closure | S7 | Yes | 90% | 67.7 | 0.0 | 0.0 | 0.0 | 25.7 | 17.1 | 39.5 | 75.5 | 56.9 | 41.9 | 44.7 | 393.4 | 63.5 | 393.4 | 0.0 |
| | | S7 | Yes | 50% | 126.5 | 2.7 | 0.0 | 0.0 | 4.9 | 7.8 | 4.8 | 14.3 | 10.3 | 13.9 | 9.8 | 20.3 | 17.9 | 126.5 | 0.0 |
| | | S7 | Yes | 10% | 5.3 | 7.0 | 15.6 | 11.3 | 1.4 | 1.7 | 0.3 | 6.1 | 4.0 | 5.5 | 3.5 | 5.2 | 5.6 | 15.6 | 0.3 |
| **SFK-D** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | Yes | 90% | 6.4 | 4.6 | 3.3 | 2.6 | 21.7 | 35.8 | 16.6 | 15.2 | 20.7 | 19.9 | 13.1 | 8.9 | 14.1 | 35.8 | 2.6 |
| | | S7 | Yes | 50% | 9.3 | 6.5 | 4.8 | 3.9 | 61.6 | 54.7 | 36.0 | 32.5 | 44.1 | 38.6 | 23.2 | 13.3 | 27.4 | 61.6 | 3.9 |
| | | S7 | Yes | 10% | 19.2 | 13.1 | 12.7 | 10.9 | 112.8 | 137.5 | 67.3 | 59.0 | 77.3 | 61.0 | 49.0 | 23.4 | 53.6 | 137.5 | 10.9 |
| | End of Mine | S7 | Yes | 90% | 6.3 | 5.8 | 5.9 | 7.7 | 16.2 | 26.2 | 10.2 | 10.1 | 14.4 | 15.6 | 13.3 | 8.6 | 11.7 | 26.2 | 5.8 |
| | | S7 | Yes | 50% | 8.9 | 6.9 | 6.5 | 8.1 | 51.5 | 43.6 | 28.0 | 25.6 | 35.3 | 31.8 | 21.9 | 12.4 | 23.4 | 51.5 | 6.5 |
| | | S7 | Yes | 10% | 17.3 | 12.6 | 13.1 | 14.0 | 95.4 | 121.2 | 54.2 | 50.0 | 64.5 | 51.2 | 44.1 | 21.4 | 46.6 | 121.2 | 12.6 |
| | Post-Closure | S7 | Yes | 90% | 8.6 | 7.0 | 6.4 | 5.7 | 34.6 | 45.8 | 17.3 | 26.8 | 32.2 | 31.3 | 16.4 | 11.4 | 20.3 | 45.8 | 5.7 |
| | | S7 | Yes | 50% | 11.3 | 8.7 | 7.7 | 6.5 | 71.1 | 63.6 | 35.6 | 42.7 | 53.7 | 48.0 | 25.4 | 15.3 | 32.5 | 71.1 | 6.5 |
| | | S7 | Yes | 10% | 20.1 | 14.7 | 14.7 | 12.9 | 116.5 | 142.7 | 62.9 | 67.7 | 83.9 | 68.2 | 48.4 | 24.7 | 56.4 | 142.7 | 12.9 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | 0.0 | 1.2 | 2.6 | 5.0 | -5.5 | -9.6 | -6.4 | -5.1 | -6.3 | -4.3 | 0.1 | -0.3 | -2.4 | 5.0 | -9.6 |
| | | S7 | Yes | 50% | -0.4 | 0.4 | 1.6 | 4.2 | -10.1 | -11.1 | -7.9 | -6.9 | -8.8 | -6.8 | -1.3 | -0.9 | -4.0 | 4.2 | -11.1 |
| | | S7 | Yes | 10% | -1.9 | -0.5 | 0.4 | 3.1 | -17.4 | -16.4 | -13.0 | -9.0 | -12.8 | -9.8 | -4.9 | -2.1 | -7.0 | 3.1 | -17.4 |
| | Post-Closure | S7 | Yes | 90% | 2.3 | 2.4 | 3.1 | 3.1 | 12.9 | 10.0 | 0.7 | 11.5 | 11.5 | 11.4 | 3.3 | 2.5 | 6.2 | 12.9 | 0.7 |
| | | S7 | Yes | 50% | 2.0 | 2.2 | 2.9 | 2.6 | 9.5 | 8.9 | -0.4 | 10.2 | 9.6 | 9.4 | 2.1 | 2.1 | 5.1 | 10.2 | -0.4 |
| | | S7 | Yes | 10% | 0.9 | 1.6 | 2.0 | 2.1 | 3.7 | 5.2 | -4.4 | 8.6 | 6.6 | 7.1 | -0.6 | 1.3 | 2.8 | 8.6 | -4.4 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | -0.5 | 25.6 | 80.6 | 191.0 | -25.5 | -26.9 | -38.4 | -33.5 | -30.4 | -21.8 | 1.0 | -3.5 | 9.8 | 191.0 | -38.4 |
| | | S7 | Yes | 50% | -4.5 | 6.6 | 34.2 | 108.2 | -16.5 | -20.3 | -22.0 | -21.2 | -19.8 | -17.7 | -5.8 | -6.7 | 1.2 | 108.2 | -22.0 |
| | | S7 | Yes | 10% | -9.7 | -3.8 | 2.8 | 28.7 | -15.4 | -11.9 | -19.4 | -15.3 | -16.5 | -16.1 | -9.9 | -8.8 | -7.9 | 28.7 | -19.4 |
| | Post-Closure | S7 | Yes | 90% | 35.8 | 51.9 | 96.5 | 116.9 | 59.6 | 27.8 | 4.5 | 75.8 | 55.6 | 57.2 | 25.0 | 27.7 | 52.8 | 116.9 | 4.5 |
| | | S7 | Yes | 50% | 21.5 | 34.3 | 59.8 | 67.7 | 15.3 | 16.2 | -1.0 | 31.5 | 21.8 | 24.3 | 9.2 | 15.6 | 26.4 | 67.7 | -1.0 |
| | | S7 | Yes | 10% | 4.8 | 11.9 | 15.9 | 19.0 | 3.3 | 3.8 | -6.5 | 14.6 | 8.6 | 11.7 | -1.2 | 5.4 | 7.6 | 19.0 | -6.5 |
| **SFK-E** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | Yes | 90% | 4.2 | 3.5 | 2.8 | 2.6 | 10.2 | 16.9 | 8.1 | 7.6 | 9.4 | 9.8 | 7.0 | 5.3 | 7.3 | 16.9 | 2.6 |
| | | S7 | Yes | 50% | 5.6 | 4.4 | 3.7 | 3.2 | 25.2 | 24.3 | 15.3 | 14.6 | 19.0 | 17.1 | 11.7 | 7.3 | 12.6 | 25.2 | 3.2 |
| | | S7 | Yes | 10% | 9.6 | 7.2 | 7.0 | 6.1 | 47.3 | 55.7 | 30.7 | 24.0 | 31.9 | 28.1 | 22.5 | 12.3 | 23.6 | 55.7 | 6.1 |
| | End of Mine | S7 | Yes | 90% | 1.1 | 0.8 | 0.6 | 0.6 | 5.8 | 9.8 | 3.6 | 3.3 | 4.5 | 4.5 | 2.5 | 1.6 | 3.2 | 9.8 | 0.6 |
| | | S7 | Yes | 50% | 2.0 | 1.5 | 1.2 | 1.0 | 16.6 | 15.6 | 9.2 | 8.4 | 11.4 | 9.6 | 5.6 | 2.9 | 7.1 | 16.6 | 1.0 |
| | | S7 | Yes | 10% | 4.5 | 3.5 | 3.3 | 3.0 | 31.9 | 41.0 | 19.5 | 15.4 | 20.4 | 17.1 | 13.1 | 6.2 | 14.9 | 41.0 | 3.0 |
| | Post-Closure | S7 | Yes | 90% | 2.1 | 1.7 | 1.3 | 1.2 | 7.1 | 11.6 | 4.9 | 4.6 | 6.0 | 6.1 | 3.9 | 2.7 | 4.4 | 11.6 | 1.2 |
| | | S7 | Yes | 50% | 3.1 | 2.4 | 2.0 | 1.7 | 18.8 | 17.9 | 10.9 | 10.2 | 13.5 | 11.6 | 7.3 | 4.2 | 8.6 | 18.8 | 1.7 |
| | | S7 | Yes | 10% | 6.0 | 4.7 | 4.4 | 3.9 | 35.7 | 45.1 | 22.4 | 17.7 | 23.3 | 19.9 | 15.5 | 7.9 | 17.2 | 45.1 | 3.9 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | -3.1 | -2.6 | -2.2 | -2.0 | -4.4 | -7.0 | -4.5 | -4.3 | -4.8 | -5.3 | -4.5 | -3.7 | -4.0 | -2.0 | -7.0 |
| | | S7 | Yes | 50% | -3.6 | -2.9 | -2.5 | -2.2 | -8.6 | -8.7 | -6.1 | -6.2 | -7.6 | -7.5 | -6.2 | -4.4 | -5.5 | -2.2 | -8.7 |
| | | S7 | Yes | 10% | -5.1 | -3.8 | -3.7 | -3.2 | -15.4 | -14.8 | -11.2 | -8.6 | -11.5 | -11.0 | -9.4 | -6.1 | -8.7 | -3.2 | -15.4 |

**Table K4.16-33: South Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S7—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S7 | Yes | 90% | -2.1 | -1.8 | -1.5 | -1.3 | -3.2 | -5.2 | -3.2 | -3.0 | -3.4 | -3.8 | -3.1 | -2.6 | -2.9 | -1.3 | -5.2 |
| | | S7 | Yes | 50% | -2.5 | -2.0 | -1.7 | -1.5 | -6.4 | -6.4 | -4.4 | -4.5 | -5.5 | -5.5 | -4.5 | -3.1 | -4.0 | -1.5 | -6.4 |
| | | S7 | Yes | 10% | -3.7 | -2.6 | -2.7 | -2.3 | -11.6 | -10.7 | -8.4 | -6.3 | -8.6 | -8.2 | -7.0 | -4.4 | -6.4 | -2.3 | -11.6 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | -73.6 | -76.5 | -79.3 | -77.2 | -43.2 | -41.7 | -55.6 | -56.9 | -51.6 | -53.9 | -63.8 | -70.3 | -62.0 | -41.7 | -79.3 |
| | | S7 | Yes | 50% | -64.1 | -66.3 | -68.6 | -68.0 | -34.1 | -35.8 | -39.7 | -42.6 | -40.1 | -43.7 | -52.6 | -60.3 | -51.3 | -34.1 | -68.6 |
| | | S7 | Yes | 10% | -53.1 | -52.2 | -53.2 | -51.8 | -32.6 | -26.5 | -36.5 | -35.9 | -36.1 | -39.1 | -41.7 | -49.8 | -42.4 | -26.5 | -53.2 |
| | Post-Closure | S7 | Yes | 90% | -50.2 | -52.0 | -53.2 | -51.9 | -30.9 | -30.9 | -39.8 | -39.9 | -36.1 | -38.2 | -44.8 | -48.5 | -43.1 | -30.9 | -53.2 |
| | | S7 | Yes | 50% | -44.4 | -45.0 | -46.5 | -45.9 | -25.4 | -26.5 | -28.8 | -30.4 | -29.1 | -31.9 | -38.2 | -42.5 | -36.2 | -25.4 | -46.5 |
| | | S7 | Yes | 10% | -37.9 | -35.6 | -37.9 | -37.1 | -24.5 | -19.1 | -27.3 | -26.3 | -26.8 | -29.2 | -31.1 | -35.8 | -30.7 | -19.1 | -37.9 |
| **Tributary 1.19** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | Yes | 90% | 4.9 | 3.4 | 2.2 | 1.5 | 22.3 | 35.6 | 20.8 | 18.9 | 28.5 | 21.5 | 11.4 | 7.2 | 14.8 | 35.6 | 1.5 |
| | | S7 | Yes | 50% | 7.1 | 4.9 | 3.3 | 2.6 | 67.8 | 83.1 | 41.8 | 44.3 | 51.0 | 38.6 | 20.7 | 10.6 | 31.3 | 83.1 | 2.6 |
| | | S7 | Yes | 10% | 13.0 | 9.6 | 8.6 | 10.5 | 123.4 | 184.7 | 78.5 | 84.2 | 89.1 | 66.3 | 38.2 | 17.1 | 60.3 | 184.7 | 8.6 |
| | End of Mine | S7 | Yes | 90% | 4.1 | 2.8 | 1.7 | 1.1 | 21.9 | 33.4 | 19.0 | 17.1 | 26.6 | 19.1 | 10.0 | 6.2 | 13.6 | 33.4 | 1.1 |
| | | S7 | Yes | 50% | 6.1 | 4.2 | 2.8 | 2.1 | 65.3 | 79.1 | 38.8 | 41.4 | 48.3 | 35.5 | 18.5 | 9.2 | 29.3 | 79.1 | 2.1 |
| | | S7 | Yes | 10% | 11.8 | 8.6 | 7.5 | 10.0 | 118.6 | 175.8 | 74.4 | 79.7 | 84.6 | 62.4 | 34.5 | 15.6 | 57.0 | 175.8 | 7.5 |
| | Post-Closure | S7 | Yes | 90% | 4.1 | 2.8 | 1.7 | 1.1 | 21.4 | 32.6 | 18.7 | 17.0 | 26.0 | 19.0 | 10.0 | 6.2 | 13.4 | 32.6 | 1.1 |
| | | S7 | Yes | 50% | 6.1 | 4.2 | 2.8 | 2.1 | 63.8 | 76.1 | 38.0 | 40.6 | 47.1 | 35.1 | 18.5 | 9.2 | 28.6 | 76.1 | 2.1 |
| | | S7 | Yes | 10% | 11.8 | 8.6 | 7.5 | 9.6 | 115.8 | 171.3 | 72.5 | 77.8 | 82.5 | 61.1 | 34.3 | 15.6 | 55.7 | 171.3 | 7.5 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | -0.7 | -0.6 | -0.5 | -0.4 | -0.4 | -2.2 | -1.8 | -1.8 | -1.8 | -2.4 | -1.4 | -1.0 | -1.2 | -0.4 | -2.4 |
| | | S7 | Yes | 50% | -0.9 | -0.7 | -0.6 | -0.5 | -2.5 | -4.0 | -3.0 | -2.9 | -2.7 | -3.1 | -2.2 | -1.3 | -2.0 | -0.5 | -4.0 |
| | | S7 | Yes | 10% | -1.1 | -1.0 | -1.1 | -0.5 | -4.9 | -8.9 | -4.1 | -4.5 | -4.5 | -3.9 | -3.7 | -1.5 | -3.3 | -0.5 | -8.9 |
| | Post-Closure | S7 | Yes | 90% | -0.7 | -0.6 | -0.5 | -0.4 | -0.9 | -3.0 | -2.1 | -2.0 | -2.5 | -2.5 | -1.4 | -1.0 | -1.5 | -0.4 | -3.0 |
| | | S7 | Yes | 50% | -0.9 | -0.7 | -0.6 | -0.5 | -4.0 | -7.0 | -3.8 | -3.7 | -3.9 | -3.5 | -2.2 | -1.3 | -2.7 | -0.5 | -7.0 |
| | | S7 | Yes | 10% | -1.1 | -1.0 | -1.1 | -0.9 | -7.6 | -13.3 | -6.0 | -6.3 | -6.5 | -5.2 | -3.9 | -1.5 | -4.6 | -0.9 | -13.3 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | -15.0 | -17.2 | -21.2 | -26.0 | -2.0 | -6.1 | -8.6 | -9.4 | -6.5 | -11.2 | -12.3 | -13.6 | -12.4 | -2.0 | -26.0 |
| | | S7 | Yes | 50% | -13.4 | -15.2 | -17.1 | -19.0 | -3.7 | -4.8 | -7.2 | -6.6 | -5.3 | -8.1 | -10.6 | -12.6 | -10.3 | -3.7 | -19.0 |
| | | S7 | Yes | 10% | -8.7 | -10.7 | -12.6 | -4.8 | -3.9 | -4.8 | -5.2 | -5.3 | -5.0 | -5.8 | -9.7 | -8.7 | -7.1 | -3.9 | -12.6 |
| | Post-Closure | S7 | Yes | 90% | -15.0 | -17.3 | -21.2 | -26.0 | -4.2 | -8.3 | -10.1 | -10.3 | -8.8 | -11.6 | -12.3 | -13.6 | -13.2 | -4.2 | -26.0 |
| | | S7 | Yes | 50% | -13.4 | -15.3 | -17.1 | -19.0 | -5.9 | -8.4 | -9.1 | -8.4 | -7.7 | -9.2 | -10.8 | -12.7 | -11.4 | -5.9 | -19.0 |
| | | S7 | Yes | 10% | -8.8 | -10.8 | -12.6 | -8.3 | -6.2 | -7.2 | -7.7 | -7.5 | -7.3 | -7.9 | -10.2 | -8.8 | -8.6 | -6.2 | -12.6 |
| **Tributary 1.24** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | Yes | 90% | 0.4 | 0.0 | 0.0 | 0.0 | 18.5 | 12.0 | 6.0 | 7.3 | 14.8 | 9.4 | 4.2 | 2.0 | 6.2 | 18.5 | 0.0 |
| | | S7 | Yes | 50% | 2.0 | 0.4 | 0.0 | 0.0 | 51.6 | 47.3 | 16.6 | 27.7 | 31.8 | 18.8 | 8.7 | 4.1 | 17.4 | 51.6 | 0.0 |
| | | S7 | Yes | 10% | 6.9 | 4.2 | 2.8 | 5.9 | 93.8 | 128.6 | 40.3 | 53.9 | 60.4 | 42.9 | 19.1 | 9.0 | 39.0 | 128.6 | 2.8 |
| | End of Mine | S7 | Yes | 90% | 0.1 | 0.0 | 0.0 | 0.0 | 18.3 | 12.1 | 5.4 | 6.6 | 14.4 | 8.7 | 4.0 | 1.7 | 5.9 | 18.3 | 0.0 |
| | | S7 | Yes | 50% | 1.9 | 0.2 | 0.0 | 0.0 | 52.1 | 49.6 | 17.0 | 27.9 | 32.0 | 18.2 | 8.4 | 4.0 | 17.6 | 52.1 | 0.0 |
| | | S7 | Yes | 10% | 7.0 | 4.3 | 2.8 | 6.1 | 95.7 | 133.0 | 42.3 | 54.9 | 61.5 | 43.5 | 19.0 | 9.1 | 39.9 | 133.0 | 2.8 |
| | Post-Closure | S7 | Yes | 90% | 0.4 | 0.0 | 0.0 | 0.0 | 18.5 | 12.2 | 6.0 | 7.2 | 14.9 | 9.3 | 4.2 | 1.9 | 6.2 | 18.5 | 0.0 |
| | | S7 | Yes | 50% | 2.0 | 0.4 | 0.0 | 0.0 | 51.8 | 48.1 | 16.8 | 27.9 | 32.0 | 18.7 | 8.7 | 4.1 | 17.5 | 51.8 | 0.0 |
| | | S7 | Yes | 10% | 6.9 | 4.2 | 2.8 | 6.0 | 94.3 | 129.9 | 41.0 | 54.3 | 60.9 | 43.2 | 19.2 | 9.0 | 39.3 | 129.9 | 2.8 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | -0.3 | 0.0 | 0.0 | 0.0 | -0.2 | 0.1 | -0.6 | -0.7 | -0.5 | -0.6 | -0.2 | -0.3 | -0.3 | 0.1 | -0.7 |
| | | S7 | Yes | 50% | -0.2 | -0.2 | 0.0 | 0.0 | 0.5 | 2.3 | 0.4 | 0.2 | 0.2 | -0.5 | -0.4 | -0.1 | 0.2 | 2.3 | -0.5 |
| | | S7 | Yes | 10% | 0.1 | 0.0 | 0.0 | 0.2 | 2.0 | 4.4 | 2.0 | 1.0 | 1.1 | 0.6 | -0.1 | 0.2 | 1.0 | 4.4 | -0.1 |
| | Post-Closure | S7 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | 0.2 | -0.1 |
| | | S7 | Yes | 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.8 | 0.2 | 0.2 | 0.2 | -0.1 | 0.0 | 0.0 | 0.1 | 0.8 | -0.1 |
| | | S7 | Yes | 10% | 0.0 | 0.0 | 0.0 | 0.1 | 0.6 | 1.3 | 0.7 | 0.4 | 0.5 | 0.3 | 0.0 | 0.1 | 0.3 | 1.3 | 0.0 |

**Table K4.16-33: South Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S7—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | -82.1 | 0.0 | 0.0 | 0.0 | -1.1 | 1.1 | -9.7 | -9.4 | -3.1 | -6.7 | -5.3 | -14.4 | -10.9 | 1.1 | -82.1 |
| | | S7 | Yes | 50% | -8.5 | -57.5 | 0.0 | 0.0 | 1.0 | 4.9 | 2.4 | 0.9 | 0.6 | -2.9 | -4.1 | -1.9 | -5.4 | 4.9 | -57.5 |
| | | S7 | Yes | 10% | 0.8 | 1.1 | -1.2 | 3.4 | 2.1 | 3.4 | 5.0 | 1.9 | 1.8 | 1.4 | -0.5 | 1.8 | 1.8 | 5.0 | -1.2 |
| | Post-Closure | S7 | Yes | 90% | -8.2 | 0.0 | 0.0 | 0.0 | -0.1 | 1.4 | -0.2 | -0.5 | 0.2 | -0.6 | 0.2 | -1.0 | -0.7 | 1.4 | -8.2 |
| | | S7 | Yes | 50% | -0.4 | -5.4 | 0.0 | 0.0 | 0.4 | 1.8 | 0.9 | 0.8 | 0.7 | -0.3 | 0.0 | 0.3 | -0.1 | 1.8 | -5.4 |
| | | S7 | Yes | 10% | 0.6 | 0.6 | 0.2 | 1.2 | 0.6 | 1.0 | 1.8 | 0.8 | 0.8 | 0.7 | 0.2 | 0.7 | 0.8 | 1.8 | 0.2 |

Notes:

cfs = cubic feet per second
SFK = South Fork Koktuli

Source: Knight Piésold 2019q, r

**Table K4.16-34: Upper Talarik Creek Change in Streamflow End of Mine and Post-Closure—Scenario S7—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| **UTC-A** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | Yes | 90% | 119.2 | 104.7 | 93.3 | 89.3 | 228.2 | 291.6 | 175.6 | 173.6 | 209.2 | 218.3 | 171.5 | 140.4 | 167.9 | 291.6 | 89.3 |
| | | S7 | Yes | 50% | 146.3 | 127.0 | 112.6 | 109.7 | 537.2 | 437.7 | 265.5 | 294.0 | 392.1 | 350.1 | 245.8 | 180.0 | 266.5 | 537.2 | 109.7 |
| | | S7 | Yes | 10% | 241.1 | 185.8 | 166.7 | 188.7 | 1013.4 | 917.8 | 504.9 | 481.6 | 650.7 | 525.5 | 433.2 | 272.3 | 465.1 | 1013.4 | 166.7 |
| | End of Mine | S7 | Yes | 90% | 119.1 | 104.9 | 93.6 | 89.7 | 227.9 | 290.1 | 174.1 | 172.5 | 208.1 | 216.8 | 170.6 | 139.9 | 167.3 | 290.1 | 89.7 |
| | | S7 | Yes | 50% | 146.2 | 127.0 | 112.8 | 110.1 | 536.8 | 436.2 | 263.9 | 292.9 | 390.9 | 348.7 | 244.9 | 179.5 | 265.8 | 536.8 | 110.1 |
| | | S7 | Yes | 10% | 241.0 | 185.9 | 166.9 | 189.1 | 1013.0 | 916.4 | 503.4 | 480.6 | 649.6 | 524.1 | 432.3 | 271.8 | 464.5 | 1013.0 | 166.9 |
| | Post-Closure | S7 | Yes | 90% | 119.4 | 105.1 | 93.8 | 89.1 | 227.8 | 291.0 | 175.1 | 173.6 | 208.8 | 217.6 | 171.1 | 140.4 | 167.7 | 291.0 | 89.1 |
| | | S7 | Yes | 50% | 146.5 | 127.3 | 113.0 | 109.5 | 536.8 | 437.1 | 265.0 | 294.0 | 391.7 | 349.4 | 245.4 | 180.0 | 266.3 | 536.8 | 109.5 |
| | | S7 | Yes | 10% | 241.3 | 186.1 | 167.1 | 188.5 | 1013.0 | 917.2 | 504.4 | 481.6 | 650.3 | 524.9 | 432.8 | 272.3 | 465.0 | 1013.0 | 167.1 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | -0.1 | 0.1 | 0.2 | 0.4 | -0.3 | -1.5 | -1.5 | -1.0 | -1.1 | -1.4 | -0.9 | -0.5 | -0.6 | 0.4 | -1.5 |
| | | S7 | Yes | 50% | -0.1 | 0.1 | 0.2 | 0.4 | -0.4 | -1.5 | -1.5 | -1.0 | -1.1 | -1.4 | -0.9 | -0.5 | -0.6 | 0.4 | -1.5 |
| | | S7 | Yes | 10% | -0.1 | 0.1 | 0.2 | 0.4 | -0.4 | -1.5 | -1.5 | -1.1 | -1.1 | -1.4 | -0.9 | -0.5 | -0.6 | 0.4 | -1.5 |
| | Post-Closure | S7 | Yes | 90% | 0.2 | 0.3 | 0.4 | -0.2 | -0.4 | -0.6 | -0.5 | 0.0 | -0.4 | -0.6 | -0.4 | 0.0 | -0.2 | 0.4 | -0.6 |
| | | S7 | Yes | 50% | 0.3 | 0.3 | 0.4 | -0.2 | -0.4 | -0.6 | -0.5 | 0.0 | -0.4 | -0.7 | -0.4 | 0.0 | -0.2 | 0.4 | -0.7 |
| | | S7 | Yes | 10% | 0.3 | 0.3 | 0.4 | -0.2 | -0.4 | -0.6 | -0.5 | 0.0 | -0.4 | -0.7 | -0.4 | 0.0 | -0.2 | 0.4 | -0.7 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | -0.1 | 0.1 | 0.2 | 0.4 | -0.2 | -0.5 | -0.8 | -0.6 | -0.5 | -0.7 | -0.5 | -0.3 | -0.3 | 0.4 | -0.8 |
| | | S7 | Yes | 50% | -0.1 | 0.0 | 0.2 | 0.4 | -0.1 | -0.3 | -0.6 | -0.4 | -0.3 | -0.4 | -0.4 | -0.3 | -0.2 | 0.4 | -0.6 |
| | | S7 | Yes | 10% | 0.0 | 0.0 | 0.1 | 0.2 | 0.0 | -0.2 | -0.3 | -0.2 | -0.2 | -0.3 | -0.2 | -0.2 | -0.1 | 0.2 | -0.3 |
| | Post-Closure | S7 | Yes | 90% | 0.2 | 0.3 | 0.5 | -0.2 | -0.2 | -0.2 | -0.3 | 0.0 | -0.2 | -0.3 | -0.2 | 0.0 | 0.0 | 0.5 | -0.3 |
| | | S7 | Yes | 50% | 0.2 | 0.2 | 0.4 | -0.2 | -0.1 | -0.1 | -0.2 | 0.0 | -0.1 | -0.2 | -0.2 | 0.0 | 0.0 | 0.4 | -0.2 |
| | | S7 | Yes | 10% | 0.1 | 0.2 | 0.3 | -0.1 | 0.0 | -0.1 | -0.1 | 0.0 | -0.1 | -0.1 | -0.1 | 0.0 | 0.0 | 0.3 | -0.1 |
| **UTC-B** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | Yes | 90% | 131.3 | 115.4 | 102.8 | 98.4 | 251.4 | 321.3 | 193.4 | 191.2 | 230.5 | 240.5 | 189.0 | 154.7 | 185.0 | 321.3 | 98.4 |
| | | S7 | Yes | 50% | 161.2 | 139.9 | 124.1 | 120.8 | 591.8 | 482.2 | 292.5 | 323.9 | 431.9 | 385.7 | 270.8 | 198.3 | 293.6 | 591.8 | 120.8 |
| | | S7 | Yes | 10% | 265.6 | 204.7 | 183.6 | 207.9 | 1116.5 | 1011.2 | 556.2 | 530.6 | 716.9 | 579.0 | 477.3 | 300.0 | 512.5 | 1116.5 | 183.6 |
| | End of Mine | S7 | Yes | 90% | 131.2 | 115.5 | 103.1 | 98.8 | 251.1 | 319.8 | 191.9 | 190.2 | 229.4 | 239.0 | 188.1 | 154.2 | 184.4 | 319.8 | 98.8 |
| | | S7 | Yes | 50% | 161.0 | 139.9 | 124.3 | 121.2 | 591.5 | 480.8 | 291.0 | 322.8 | 430.8 | 384.3 | 269.9 | 197.8 | 292.9 | 591.5 | 121.2 |
| | | S7 | Yes | 10% | 265.5 | 204.8 | 183.8 | 208.3 | 1116.1 | 1009.7 | 554.7 | 529.6 | 715.8 | 577.6 | 476.4 | 299.5 | 511.8 | 1116.1 | 183.8 |
| | Post-Closure | S7 | Yes | 90% | 131.5 | 115.7 | 103.3 | 98.2 | 251.0 | 320.7 | 192.9 | 191.2 | 230.1 | 239.8 | 188.6 | 154.7 | 184.8 | 320.7 | 98.2 |
| | | S7 | Yes | 50% | 161.4 | 140.2 | 124.5 | 120.6 | 591.5 | 481.6 | 292.0 | 323.9 | 431.5 | 385.0 | 270.4 | 198.3 | 293.4 | 591.5 | 120.6 |
| | | S7 | Yes | 10% | 265.9 | 205.0 | 184.0 | 207.7 | 1116.1 | 1010.6 | 555.8 | 530.6 | 716.5 | 578.4 | 476.9 | 300.0 | 512.3 | 1116.1 | 184.0 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | -0.1 | 0.1 | 0.2 | 0.4 | -0.3 | -1.5 | -1.5 | -1.0 | -1.1 | -1.4 | -0.9 | -0.5 | -0.6 | 0.4 | -1.5 |
| | | S7 | Yes | 50% | -0.1 | 0.1 | 0.2 | 0.4 | -0.4 | -1.5 | -1.5 | -1.0 | -1.1 | -1.4 | -0.9 | -0.5 | -0.6 | 0.4 | -1.5 |
| | | S7 | Yes | 10% | -0.1 | 0.1 | 0.2 | 0.4 | -0.4 | -1.5 | -1.5 | -1.1 | -1.1 | -1.4 | -0.9 | -0.5 | -0.6 | 0.4 | -1.5 |
| | Post-Closure | S7 | Yes | 90% | 0.2 | 0.3 | 0.4 | -0.2 | -0.4 | -0.6 | -0.5 | 0.0 | -0.4 | -0.6 | -0.4 | 0.0 | -0.2 | 0.4 | -0.6 |
| | | S7 | Yes | 50% | 0.3 | 0.3 | 0.4 | -0.2 | -0.4 | -0.6 | -0.5 | 0.0 | -0.4 | -0.7 | -0.4 | 0.0 | -0.2 | 0.4 | -0.7 |
| | | S7 | Yes | 10% | 0.3 | 0.3 | 0.4 | -0.2 | -0.4 | -0.6 | -0.5 | 0.0 | -0.4 | -0.7 | -0.4 | 0.0 | -0.2 | 0.4 | -0.7 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | -0.1 | 0.1 | 0.2 | 0.4 | -0.1 | -0.5 | -0.8 | -0.5 | -0.5 | -0.6 | -0.5 | -0.3 | -0.3 | 0.4 | -0.8 |
| | | S7 | Yes | 50% | -0.1 | 0.0 | 0.2 | 0.3 | -0.1 | -0.3 | -0.5 | -0.3 | -0.3 | -0.4 | -0.3 | -0.2 | -0.2 | 0.3 | -0.5 |
| | | S7 | Yes | 10% | 0.0 | 0.0 | 0.1 | 0.2 | 0.0 | -0.1 | -0.3 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.1 | 0.2 | -0.3 |
| | Post-Closure | S7 | Yes | 90% | 0.2 | 0.3 | 0.4 | -0.2 | -0.2 | -0.2 | -0.2 | 0.0 | -0.2 | -0.3 | -0.2 | 0.0 | 0.0 | 0.4 | -0.3 |
| | | S7 | Yes | 50% | 0.2 | 0.2 | 0.3 | -0.2 | -0.1 | -0.1 | -0.2 | 0.0 | -0.1 | -0.2 | -0.2 | 0.0 | 0.0 | 0.3 | -0.2 |
| | | S7 | Yes | 10% | 0.1 | 0.2 | 0.2 | -0.1 | 0.0 | -0.1 | -0.1 | 0.0 | -0.1 | -0.1 | -0.1 | 0.0 | 0.0 | 0.2 | -0.1 |
| **UTC-C** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | Yes | 90% | 96.7 | 85.8 | 76.8 | 74.1 | 179.4 | 235.3 | 142.7 | 141.4 | 167.4 | 174.4 | 138.2 | 114.0 | 135.5 | 235.3 | 74.1 |
| | | S7 | Yes | 50% | 118.9 | 103.1 | 91.9 | 88.6 | 407.0 | 355.2 | 215.1 | 232.2 | 299.0 | 275.3 | 195.4 | 145.0 | 210.6 | 407.0 | 88.6 |
| | | S7 | Yes | 10% | 189.4 | 145.7 | 134.1 | 142.1 | 774.7 | 722.0 | 407.5 | 370.7 | 496.9 | 418.6 | 337.6 | 210.7 | 362.5 | 774.7 | 134.1 |
| | End of Mine | S7 | Yes | 90% | 96.6 | 85.9 | 77.1 | 74.5 | 179.1 | 233.8 | 141.2 | 140.4 | 166.3 | 173.0 | 137.3 | 113.5 | 134.9 | 233.8 | 74.5 |
| | | S7 | Yes | 50% | 118.8 | 103.2 | 92.1 | 89.0 | 406.6 | 353.8 | 213.6 | 231.2 | 297.9 | 273.8 | 194.5 | 144.6 | 209.9 | 406.6 | 89.0 |
| | | S7 | Yes | 10% | 189.3 | 145.8 | 134.4 | 142.5 | 774.3 | 720.6 | 406.0 | 369.6 | 495.7 | 417.2 | 336.7 | 210.3 | 361.9 | 774.3 | 134.4 |

**Table K4.16-34: Upper Talarik Creek Change in Streamflow End of Mine and Post-Closure—Scenario S7—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S7 | Yes | 90% | 97.0 | 86.2 | 77.3 | 73.9 | 179.0 | 234.7 | 142.2 | 141.4 | 167.0 | 173.8 | 137.8 | 114.0 | 135.4 | 234.7 | 73.9 |
| | | S7 | Yes | 50% | 119.2 | 103.5 | 92.3 | 88.4 | 406.6 | 354.6 | 214.6 | 232.2 | 298.6 | 274.6 | 195.0 | 145.1 | 210.4 | 406.6 | 88.4 |
| | | S7 | Yes | 10% | 189.7 | 146.0 | 134.6 | 141.9 | 774.3 | 721.5 | 407.1 | 370.7 | 496.5 | 418.0 | 337.2 | 210.8 | 362.4 | 774.3 | 134.6 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | -0.1 | 0.1 | 0.2 | 0.4 | -0.3 | -1.5 | -1.5 | -1.1 | -1.1 | -1.4 | -0.9 | -0.5 | -0.6 | 0.4 | -1.5 |
| | | S7 | Yes | 50% | -0.1 | 0.1 | 0.2 | 0.3 | -0.4 | -1.5 | -1.5 | -1.0 | -1.1 | -1.4 | -0.9 | -0.5 | -0.6 | 0.3 | -1.5 |
| | | S7 | Yes | 10% | -0.1 | 0.1 | 0.2 | 0.4 | -0.4 | -1.5 | -1.5 | -1.1 | -1.1 | -1.4 | -0.9 | -0.5 | -0.6 | 0.4 | -1.5 |
| | Post-Closure | S7 | Yes | 90% | 0.2 | 0.3 | 0.4 | -0.2 | -0.4 | -0.6 | -0.5 | 0.0 | -0.4 | -0.6 | -0.4 | 0.0 | -0.2 | 0.4 | -0.6 |
| | | S7 | Yes | 50% | 0.2 | 0.3 | 0.4 | -0.2 | -0.4 | -0.6 | -0.5 | 0.0 | -0.4 | -0.7 | -0.4 | 0.0 | -0.2 | 0.4 | -0.7 |
| | | S7 | Yes | 10% | 0.2 | 0.3 | 0.5 | -0.2 | -0.4 | -0.6 | -0.5 | 0.0 | -0.4 | -0.6 | -0.4 | 0.0 | -0.2 | 0.5 | -0.6 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | -0.1 | 0.1 | 0.3 | 0.5 | -0.2 | -0.6 | -1.0 | -0.7 | -0.7 | -0.8 | -0.7 | -0.4 | -0.4 | 0.5 | -1.0 |
| | | S7 | Yes | 50% | -0.1 | 0.1 | 0.3 | 0.4 | -0.1 | -0.4 | -0.7 | -0.5 | -0.4 | -0.5 | -0.5 | -0.3 | -0.2 | 0.4 | -0.7 |
| | | S7 | Yes | 10% | -0.1 | 0.1 | 0.2 | 0.3 | 0.0 | -0.2 | -0.4 | -0.3 | -0.2 | -0.3 | -0.3 | -0.2 | -0.1 | 0.3 | -0.4 |
| | Post-Closure | S7 | Yes | 90% | 0.2 | 0.4 | 0.6 | -0.2 | -0.2 | -0.3 | -0.3 | 0.0 | -0.2 | -0.4 | -0.3 | 0.0 | -0.1 | 0.6 | -0.4 |
| | | S7 | Yes | 50% | 0.2 | 0.3 | 0.5 | -0.2 | -0.1 | -0.2 | -0.2 | 0.0 | -0.1 | -0.2 | -0.2 | 0.0 | 0.0 | 0.5 | -0.2 |
| | | S7 | Yes | 10% | 0.1 | 0.2 | 0.3 | -0.1 | 0.0 | -0.1 | -0.1 | 0.0 | -0.1 | -0.2 | -0.1 | 0.0 | 0.0 | 0.3 | -0.2 |
| **UTC-D** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | Yes | 90% | 58.8 | 50.8 | 43.3 | 41.1 | 117.9 | 167.1 | 94.8 | 93.4 | 109.0 | 116.7 | 89.5 | 70.6 | 87.7 | 167.1 | 41.1 |
| | | S7 | Yes | 50% | 79.3 | 66.2 | 56.5 | 51.5 | 285.2 | 261.6 | 155.2 | 158.6 | 206.6 | 191.5 | 133.4 | 99.4 | 145.4 | 285.2 | 51.5 |
| | | S7 | Yes | 10% | 121.2 | 96.2 | 87.0 | 83.5 | 569.6 | 563.6 | 310.3 | 259.2 | 354.7 | 303.1 | 247.6 | 147.9 | 262.0 | 569.6 | 83.5 |
| | End of Mine | S7 | Yes | 90% | 58.9 | 51.0 | 43.7 | 41.6 | 117.7 | 165.8 | 93.5 | 92.5 | 108.0 | 115.4 | 88.7 | 70.3 | 87.3 | 165.8 | 41.6 |
| | | S7 | Yes | 50% | 79.3 | 66.4 | 56.8 | 52.0 | 285.0 | 260.3 | 153.9 | 157.7 | 205.7 | 190.2 | 132.6 | 99.1 | 144.9 | 285.0 | 52.0 |
| | | S7 | Yes | 10% | 121.3 | 96.5 | 87.4 | 84.1 | 569.4 | 562.3 | 309.0 | 258.3 | 353.7 | 301.8 | 246.9 | 147.6 | 261.5 | 569.4 | 84.1 |
| | Post-Closure | S7 | Yes | 90% | 58.9 | 50.9 | 43.5 | 40.7 | 117.3 | 166.3 | 94.1 | 93.2 | 108.4 | 115.8 | 88.8 | 70.4 | 87.4 | 166.3 | 40.7 |
| | | S7 | Yes | 50% | 79.3 | 66.3 | 56.7 | 51.1 | 284.6 | 260.8 | 154.5 | 158.4 | 206.0 | 190.6 | 132.8 | 99.3 | 145.0 | 284.6 | 51.1 |
| | | S7 | Yes | 10% | 121.3 | 96.4 | 87.2 | 83.1 | 569.0 | 562.8 | 309.6 | 259.0 | 354.1 | 302.2 | 247.0 | 147.7 | 261.6 | 569.0 | 83.1 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | 0.0 | 0.3 | 0.4 | 0.6 | -0.2 | -1.3 | -1.3 | -0.9 | -1.0 | -1.3 | -0.7 | -0.3 | -0.5 | 0.6 | -1.3 |
| | | S7 | Yes | 50% | 0.0 | 0.3 | 0.4 | 0.6 | -0.2 | -1.3 | -1.4 | -0.9 | -1.0 | -1.3 | -0.7 | -0.3 | -0.5 | 0.6 | -1.4 |
| | | S7 | Yes | 10% | 0.1 | 0.3 | 0.4 | 0.6 | -0.2 | -1.3 | -1.4 | -0.9 | -1.0 | -1.3 | -0.8 | -0.3 | -0.5 | 0.6 | -1.4 |
| | Post-Closure | S7 | Yes | 90% | 0.0 | 0.1 | 0.2 | -0.4 | -0.6 | -0.8 | -0.7 | -0.2 | -0.6 | -0.9 | -0.6 | -0.2 | -0.4 | 0.2 | -0.9 |
| | | S7 | Yes | 50% | 0.0 | 0.1 | 0.2 | -0.4 | -0.6 | -0.8 | -0.7 | -0.2 | -0.6 | -0.9 | -0.6 | -0.2 | -0.4 | 0.2 | -0.9 |
| | | S7 | Yes | 10% | 0.0 | 0.1 | 0.2 | -0.4 | -0.6 | -0.8 | -0.7 | -0.2 | -0.6 | -0.9 | -0.6 | -0.2 | -0.4 | 0.2 | -0.9 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | 0.1 | 0.5 | 0.9 | 1.4 | -0.2 | -0.8 | -1.4 | -1.0 | -0.9 | -1.1 | -0.8 | -0.5 | -0.3 | 1.4 | -1.4 |
| | | S7 | Yes | 50% | 0.1 | 0.4 | 0.7 | 1.1 | -0.1 | -0.5 | -0.9 | -0.6 | -0.5 | -0.7 | -0.6 | -0.3 | -0.2 | 1.1 | -0.9 |
| | | S7 | Yes | 10% | 0.0 | 0.3 | 0.5 | 0.7 | 0.0 | -0.2 | -0.4 | -0.4 | -0.3 | -0.4 | -0.3 | -0.2 | -0.1 | 0.7 | -0.4 |
| | Post-Closure | S7 | Yes | 90% | 0.1 | 0.3 | 0.5 | -1.0 | -0.5 | -0.5 | -0.7 | -0.2 | -0.6 | -0.7 | -0.7 | -0.3 | -0.4 | 0.5 | -1.0 |
| | | S7 | Yes | 50% | 0.0 | 0.2 | 0.4 | -0.8 | -0.2 | -0.3 | -0.4 | -0.1 | -0.3 | -0.5 | -0.5 | -0.2 | -0.2 | 0.4 | -0.8 |
| | | S7 | Yes | 10% | 0.0 | 0.1 | 0.3 | -0.5 | -0.1 | -0.1 | -0.2 | -0.1 | -0.2 | -0.3 | -0.2 | -0.1 | -0.1 | 0.3 | -0.5 |
| **UTC-E** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | Yes | 90% | 35.2 | 27.2 | 20.9 | 19.1 | 85.4 | 133.3 | 68.4 | 67.4 | 83.0 | 89.3 | 64.0 | 46.6 | 61.7 | 133.3 | 19.1 |
| | | S7 | Yes | 50% | 51.3 | 38.8 | 30.1 | 26.8 | 207.2 | 205.8 | 122.0 | 122.3 | 163.0 | 153.0 | 102.6 | 70.0 | 107.7 | 207.2 | 26.8 |
| | | S7 | Yes | 10% | 88.2 | 65.8 | 58.9 | 56.5 | 430.0 | 455.3 | 252.8 | 206.9 | 282.6 | 244.9 | 197.1 | 112.0 | 204.2 | 455.3 | 56.5 |
| | End of Mine | S7 | Yes | 90% | 35.3 | 27.4 | 21.3 | 19.7 | 85.2 | 132.0 | 67.0 | 66.5 | 82.0 | 88.1 | 63.3 | 46.3 | 61.2 | 132.0 | 19.7 |
| | | S7 | Yes | 50% | 51.3 | 39.1 | 30.4 | 27.3 | 207.0 | 204.5 | 120.6 | 121.4 | 162.1 | 151.8 | 101.9 | 69.7 | 107.3 | 207.0 | 27.3 |
| | | S7 | Yes | 10% | 88.2 | 66.1 | 59.3 | 57.1 | 429.8 | 453.9 | 251.4 | 206.0 | 281.6 | 243.6 | 196.3 | 111.6 | 203.7 | 453.9 | 57.1 |
| | Post-Closure | S7 | Yes | 90% | 35.3 | 27.3 | 21.2 | 18.7 | 84.8 | 132.5 | 67.7 | 67.2 | 82.4 | 88.5 | 63.4 | 46.4 | 61.3 | 132.5 | 18.7 |
| | | S7 | Yes | 50% | 51.3 | 38.9 | 30.3 | 26.4 | 206.6 | 205.0 | 121.3 | 122.0 | 162.4 | 152.2 | 102.0 | 69.9 | 107.4 | 206.6 | 26.4 |
| | | S7 | Yes | 10% | 88.2 | 65.9 | 59.1 | 56.1 | 429.4 | 454.4 | 252.1 | 206.6 | 282.0 | 244.0 | 196.5 | 111.8 | 203.8 | 454.4 | 56.1 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | 0.0 | 0.3 | 0.4 | 0.6 | -0.2 | -1.3 | -1.4 | -0.9 | -1.0 | -1.3 | -0.7 | -0.3 | -0.5 | 0.6 | -1.4 |
| | | S7 | Yes | 50% | 0.0 | 0.3 | 0.4 | 0.6 | -0.2 | -1.3 | -1.4 | -0.9 | -1.0 | -1.3 | -0.7 | -0.3 | -0.5 | 0.6 | -1.4 |
| | | S7 | Yes | 10% | 0.1 | 0.3 | 0.4 | 0.6 | -0.2 | -1.3 | -1.4 | -0.9 | -1.0 | -1.3 | -0.8 | -0.3 | -0.5 | 0.6 | -1.4 |

**Table K4.16-34: Upper Talarik Creek Change in Streamflow End of Mine and Post-Closure—Scenario S7—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S7 | Yes | 90% | 0.0 | 0.1 | 0.2 | -0.4 | -0.6 | -0.8 | -0.7 | -0.2 | -0.6 | -0.9 | -0.6 | -0.2 | -0.4 | 0.2 | -0.9 |
| | | S7 | Yes | 50% | 0.0 | 0.1 | 0.2 | -0.4 | -0.6 | -0.8 | -0.7 | -0.2 | -0.6 | -0.9 | -0.6 | -0.2 | -0.4 | 0.2 | -0.9 |
| | | S7 | Yes | 10% | 0.0 | 0.1 | 0.2 | -0.4 | -0.6 | -0.8 | -0.7 | -0.2 | -0.6 | -0.9 | -0.6 | -0.2 | -0.4 | 0.2 | -0.9 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | 0.1 | 1.0 | 1.8 | 2.9 | -0.2 | -1.0 | -2.0 | -1.3 | -1.2 | -1.4 | -1.2 | -0.7 | -0.3 | 2.9 | -2.0 |
| | | S7 | Yes | 50% | 0.1 | 0.7 | 1.3 | 2.1 | -0.1 | -0.6 | -1.1 | -0.7 | -0.6 | -0.8 | -0.7 | -0.4 | -0.1 | 2.1 | -1.1 |
| | | S7 | Yes | 10% | 0.1 | 0.4 | 0.6 | 1.0 | 0.0 | -0.3 | -0.5 | -0.4 | -0.3 | -0.5 | -0.4 | -0.3 | -0.1 | 1.0 | -0.5 |
| | Post-Closure | S7 | Yes | 90% | 0.1 | 0.5 | 1.1 | -2.1 | -0.7 | -0.6 | -1.0 | -0.3 | -0.7 | -1.0 | -1.0 | -0.4 | -0.5 | 1.1 | -2.1 |
| | | S7 | Yes | 50% | 0.1 | 0.4 | 0.8 | -1.5 | -0.3 | -0.4 | -0.6 | -0.2 | -0.4 | -0.6 | -0.6 | -0.3 | -0.3 | 0.8 | -1.5 |
| | | S7 | Yes | 10% | 0.1 | 0.2 | 0.4 | -0.7 | -0.1 | -0.2 | -0.3 | -0.1 | -0.2 | -0.4 | -0.3 | -0.2 | -0.1 | 0.4 | -0.7 |
| **UTC-F** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | Yes | 90% | 6.1 | 5.1 | 4.2 | 3.7 | 14.7 | 21.1 | 9.8 | 9.4 | 12.0 | 12.6 | 9.5 | 7.5 | 9.7 | 21.1 | 3.7 |
| | | S7 | Yes | 50% | 8.2 | 6.7 | 5.6 | 4.9 | 35.6 | 33.1 | 17.5 | 18.7 | 25.6 | 22.9 | 15.3 | 10.4 | 17.0 | 35.6 | 4.9 |
| | | S7 | Yes | 10% | 14.1 | 10.8 | 9.9 | 9.1 | 67.8 | 75.6 | 39.5 | 32.1 | 43.6 | 38.5 | 29.6 | 16.7 | 32.3 | 75.6 | 9.1 |
| | End of Mine | S7 | Yes | 90% | 6.2 | 5.2 | 4.4 | 4.0 | 14.6 | 20.5 | 9.1 | 8.9 | 11.6 | 12.0 | 9.1 | 7.4 | 9.4 | 20.5 | 4.0 |
| | | S7 | Yes | 50% | 8.2 | 6.8 | 5.8 | 5.2 | 35.5 | 32.5 | 16.8 | 18.3 | 25.1 | 22.3 | 15.0 | 10.2 | 16.8 | 35.5 | 5.2 |
| | | S7 | Yes | 10% | 14.1 | 10.9 | 10.1 | 9.4 | 67.7 | 75.0 | 38.9 | 31.6 | 43.2 | 37.8 | 29.3 | 16.5 | 32.0 | 75.0 | 9.4 |
| | Post-Closure | S7 | Yes | 90% | 6.2 | 5.2 | 4.3 | 3.5 | 14.4 | 20.7 | 9.5 | 9.3 | 11.7 | 12.2 | 9.2 | 7.4 | 9.5 | 20.7 | 3.5 |
| | | S7 | Yes | 50% | 8.2 | 6.7 | 5.7 | 4.7 | 35.3 | 32.7 | 17.2 | 18.6 | 25.3 | 22.5 | 15.0 | 10.3 | 16.9 | 35.3 | 4.7 |
| | | S7 | Yes | 10% | 14.1 | 10.9 | 10.0 | 8.9 | 67.5 | 75.2 | 39.2 | 32.0 | 43.3 | 38.0 | 29.3 | 16.6 | 32.1 | 75.2 | 8.9 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | 0.0 | 0.1 | 0.2 | 0.3 | -0.1 | -0.7 | -0.7 | -0.4 | -0.5 | -0.6 | -0.4 | -0.2 | -0.2 | 0.3 | -0.7 |
| | | S7 | Yes | 50% | 0.0 | 0.1 | 0.2 | 0.3 | -0.1 | -0.7 | -0.7 | -0.5 | -0.5 | -0.6 | -0.4 | -0.2 | -0.2 | 0.3 | -0.7 |
| | | S7 | Yes | 10% | 0.0 | 0.1 | 0.2 | 0.3 | -0.1 | -0.7 | -0.7 | -0.5 | -0.5 | -0.6 | -0.4 | -0.2 | -0.2 | 0.3 | -0.7 |
| | Post-Closure | S7 | Yes | 90% | 0.0 | 0.1 | 0.1 | -0.2 | -0.3 | -0.4 | -0.3 | -0.1 | -0.3 | -0.4 | -0.3 | -0.1 | -0.2 | 0.1 | -0.4 |
| | | S7 | Yes | 50% | 0.0 | 0.1 | 0.1 | -0.2 | -0.3 | -0.4 | -0.3 | -0.1 | -0.3 | -0.4 | -0.3 | -0.1 | -0.2 | 0.1 | -0.4 |
| | | S7 | Yes | 10% | 0.0 | 0.1 | 0.1 | -0.2 | -0.3 | -0.4 | -0.3 | -0.1 | -0.3 | -0.4 | -0.3 | -0.1 | -0.2 | 0.1 | -0.4 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | 0.3 | 2.7 | 4.4 | 7.6 | -0.7 | -3.1 | -6.8 | -4.8 | -4.0 | -5.1 | -3.9 | -2.2 | -1.3 | 7.6 | -6.8 |
| | | S7 | Yes | 50% | 0.2 | 2.1 | 3.5 | 5.7 | -0.3 | -2.0 | -3.9 | -2.4 | -1.9 | -2.8 | -2.4 | -1.6 | -0.5 | 5.7 | -3.9 |
| | | S7 | Yes | 10% | 0.1 | 1.2 | 2.0 | 3.1 | -0.2 | -0.9 | -1.7 | -1.4 | -1.1 | -1.7 | -1.3 | -1.0 | -0.2 | 3.1 | -1.7 |
| | Post-Closure | S7 | Yes | 90% | 0.3 | 1.3 | 2.7 | -5.3 | -2.0 | -1.9 | -3.5 | -1.2 | -2.5 | -3.4 | -3.2 | -1.2 | -1.7 | 2.7 | -5.3 |
| | | S7 | Yes | 50% | 0.2 | 1.0 | 2.1 | -4.1 | -0.8 | -1.2 | -2.0 | -0.6 | -1.2 | -1.9 | -2.0 | -0.9 | -0.9 | 2.1 | -4.1 |
| | | S7 | Yes | 10% | 0.1 | 0.5 | 1.2 | -2.2 | -0.4 | -0.5 | -0.9 | -0.4 | -0.7 | -1.1 | -1.0 | -0.6 | -0.5 | 1.2 | -2.2 |
| **Tributary 1.19** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S7 | Yes | 90% | 25.5 | 24.8 | 25.4 | 25.0 | 26.4 | 27.6 | 26.5 | 26.4 | 26.6 | 26.4 | 25.8 | 25.8 | 26.0 | 27.6 | 24.8 |
| | | S7 | Yes | 50% | 26.4 | 26.1 | 26.0 | 25.9 | 30.8 | 33.7 | 29.8 | 28.5 | 28.8 | 28.3 | 27.6 | 26.8 | 28.2 | 33.7 | 25.9 |
| | | S7 | Yes | 10% | 27.7 | 27.2 | 27.1 | 26.9 | 39.5 | 39.9 | 36.7 | 32.0 | 32.0 | 32.7 | 30.9 | 29.2 | 31.8 | 39.9 | 26.9 |
| | End of Mine | S7 | Yes | 90% | 25.4 | 24.6 | 25.2 | 24.8 | 26.2 | 27.4 | 26.3 | 26.2 | 26.5 | 26.2 | 25.7 | 25.7 | 25.9 | 27.4 | 24.6 |
| | | S7 | Yes | 50% | 26.2 | 25.9 | 25.9 | 25.7 | 30.6 | 33.6 | 29.6 | 28.4 | 28.6 | 28.1 | 27.4 | 26.7 | 28.1 | 33.6 | 25.7 |
| | | S7 | Yes | 10% | 27.6 | 27.1 | 26.9 | 26.7 | 39.4 | 39.8 | 36.5 | 31.9 | 31.9 | 32.5 | 30.7 | 29.0 | 31.7 | 39.8 | 26.7 |
| | Post-Closure | S7 | Yes | 90% | 25.8 | 25.0 | 25.6 | 25.2 | 26.6 | 27.8 | 26.7 | 26.6 | 26.8 | 26.6 | 26.1 | 26.0 | 26.2 | 27.8 | 25.0 |
| | | S7 | Yes | 50% | 26.6 | 26.3 | 26.2 | 26.1 | 31.0 | 33.9 | 30.0 | 28.7 | 29.0 | 28.5 | 27.8 | 27.0 | 28.4 | 33.9 | 26.1 |
| | | S7 | Yes | 10% | 27.9 | 27.4 | 27.3 | 27.1 | 39.8 | 40.1 | 36.9 | 32.2 | 32.2 | 32.9 | 31.1 | 29.4 | 32.0 | 40.1 | 27.1 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | -0.2 | -0.1 | -0.1 | -0.2 | -0.1 | -0.2 | -0.2 | -0.1 | -0.2 | -0.1 | -0.2 | -0.2 | -0.2 | -0.1 | -0.2 |
| | | S7 | Yes | 50% | -0.1 | -0.1 | -0.1 | -0.2 | -0.2 | -0.1 | -0.1 | -0.2 | -0.1 | -0.1 | -0.1 | -0.2 | -0.1 | -0.1 | -0.2 |
| | | S7 | Yes | 10% | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.1 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.1 | -0.2 |
| | Post-Closure | S7 | Yes | 90% | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| | | S7 | Yes | 50% | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| | | S7 | Yes | 10% | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |

**Table K4.16-34: Upper Talarik Creek Change in Streamflow End of Mine and Post-Closure—Scenario S7—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S7 | Yes | 90% | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 | -0.5 | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 | -0.5 | -0.6 |
| | | S7 | Yes | 50% | -0.6 | -0.6 | -0.6 | -0.6 | -0.5 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.6 | -0.5 | -0.4 | -0.6 |
| | | S7 | Yes | 10% | -0.6 | -0.6 | -0.6 | -0.6 | -0.4 | -0.4 | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.6 |
| | Post-Closure | S7 | Yes | 90% | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.9 | 0.8 |
| | | S7 | Yes | 50% | 0.8 | 0.8 | 0.8 | 0.8 | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 | 0.8 | 0.7 | 0.8 | 0.6 |
| | | S7 | Yes | 10% | 0.7 | 0.7 | 0.7 | 0.7 | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.5 |

Notes:

cfs = cubic feet per second
UTC = Upper Talarik Creek

Source: Knight Piésold 2019q, r

**Table K4.16-35: North Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S8—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| NFK-A | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | Yes | 90% | 51.0 | 40.3 | 32.6 | 30.2 | 184.2 | 226.7 | 114.0 | 113.6 | 162.5 | 138.4 | 98.5 | 69.0 | 105.1 | 226.7 | 30.2 |
| | | S8 | Yes | 50% | 70.3 | 54.2 | 43.2 | 39.7 | 434.0 | 377.9 | 235.3 | 241.8 | 316.5 | 267.5 | 154.2 | 94.2 | 194.1 | 434.0 | 39.7 |
| | | S8 | Yes | 10% | 114.9 | 102.0 | 82.5 | 93.5 | 831.7 | 979.6 | 435.1 | 447.1 | 539.9 | 421.3 | 296.9 | 155.5 | 375.0 | 979.6 | 82.5 |
| | End of Mine | S8 | Yes | 90% | 56.6 | 48.4 | 42.6 | 40.5 | 187.0 | 216.5 | 111.3 | 110.4 | 160.8 | 135.4 | 96.6 | 71.4 | 106.5 | 216.5 | 40.5 |
| | | S8 | Yes | 50% | 71.3 | 59.3 | 50.8 | 48.4 | 405.9 | 331.1 | 214.0 | 218.7 | 290.2 | 247.5 | 148.4 | 90.7 | 181.4 | 405.9 | 48.4 |
| | | S8 | Yes | 10% | 110.1 | 99.3 | 82.0 | 100.1 | 756.8 | 822.4 | 381.7 | 397.1 | 473.2 | 378.7 | 269.8 | 150.0 | 335.1 | 822.4 | 82.0 |
| | Post-Closure | S8 | Yes | 90% | 51.6 | 42.5 | 36.1 | 34.5 | 188.1 | 220.8 | 114.4 | 113.2 | 160.6 | 135.2 | 93.8 | 67.3 | 104.9 | 220.8 | 34.5 |
| | | S8 | Yes | 50% | 69.9 | 55.9 | 46.1 | 43.5 | 431.6 | 371.8 | 234.5 | 235.2 | 309.6 | 253.1 | 150.1 | 92.3 | 191.1 | 431.6 | 43.5 |
| | | S8 | Yes | 10% | 114.2 | 101.9 | 82.5 | 98.1 | 821.4 | 957.0 | 430.3 | 434.9 | 524.3 | 410.3 | 283.1 | 156.4 | 367.9 | 957.0 | 82.5 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 5.6 | 8.2 | 10.0 | 10.3 | 2.8 | -10.2 | -2.6 | -3.2 | -1.6 | -3.0 | -1.9 | 2.5 | 1.4 | 10.3 | -10.2 |
| | | S8 | Yes | 50% | 1.0 | 5.1 | 7.6 | 8.7 | -28.1 | -46.8 | -21.3 | -23.1 | -26.3 | -20.0 | -5.8 | -3.5 | -12.7 | 8.7 | -46.8 |
| | | S8 | Yes | 10% | -4.8 | -2.8 | -0.5 | 6.6 | -74.9 | -157.2 | -53.4 | -50.0 | -66.7 | -42.6 | -27.0 | -5.5 | -39.9 | 6.6 | -157.2 |
| | Post-Closure | S8 | Yes | 90% | 0.5 | 2.2 | 3.5 | 4.4 | 4.0 | -5.9 | 0.5 | -0.4 | -1.8 | -3.2 | -4.7 | -1.6 | -0.2 | 4.4 | -5.9 |
| | | S8 | Yes | 50% | -0.4 | 1.7 | 2.9 | 3.8 | -2.4 | -6.1 | -0.8 | -6.6 | -6.9 | -14.4 | -4.1 | -1.9 | -2.9 | 3.8 | -14.4 |
| | | S8 | Yes | 10% | -0.7 | -0.1 | 0.0 | 4.6 | -10.3 | -22.7 | -4.8 | -12.2 | -15.5 | -11.0 | -13.7 | 0.9 | -7.1 | 4.6 | -22.7 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 11.0 | 20.3 | 30.8 | 34.3 | 1.5 | -4.5 | -2.3 | -2.9 | -1.0 | -2.2 | -1.9 | 3.6 | 7.2 | 34.3 | -4.5 |
| | | S8 | Yes | 50% | 1.4 | 9.4 | 17.5 | 21.9 | -6.5 | -12.4 | -9.1 | -9.5 | -8.3 | -7.5 | -3.8 | -3.7 | -0.9 | 21.9 | -12.4 |
| | | S8 | Yes | 10% | -4.2 | -2.7 | -0.6 | 7.1 | -9.0 | -16.1 | -12.3 | -11.2 | -12.3 | -10.1 | -9.1 | -3.6 | -7.0 | 7.1 | -16.1 |
| | Post-Closure | S8 | Yes | 90% | 1.1 | 5.6 | 10.8 | 14.5 | 2.2 | -2.6 | 0.4 | -0.3 | -1.1 | -2.3 | -4.7 | -2.4 | 1.8 | 14.5 | -4.7 |
| | | S8 | Yes | 50% | -0.6 | 3.1 | 6.7 | 9.7 | -0.6 | -1.6 | -0.3 | -2.7 | -2.2 | -5.4 | -2.6 | -2.0 | 0.1 | 9.7 | -5.4 |
| | | S8 | Yes | 10% | -0.6 | -0.1 | 0.0 | 5.0 | -1.2 | -2.3 | -1.1 | -2.7 | -2.9 | -2.6 | -4.6 | 0.6 | -1.1 | 5.0 | -4.6 |
| NFK-B | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | Yes | 90% | 47.0 | 37.0 | 29.8 | 27.1 | 150.1 | 195.9 | 101.3 | 102.4 | 141.5 | 122.8 | 87.9 | 62.5 | 92.1 | 195.9 | 27.1 |
| | | S8 | Yes | 50% | 65.0 | 49.9 | 39.6 | 34.9 | 379.7 | 332.5 | 203.8 | 213.4 | 274.3 | 234.7 | 133.1 | 85.9 | 170.6 | 379.7 | 34.9 |
| | | S8 | Yes | 10% | 105.4 | 89.1 | 76.3 | 77.3 | 720.4 | 868.9 | 387.7 | 389.6 | 477.6 | 368.3 | 264.9 | 136.1 | 330.1 | 868.9 | 76.3 |
| | End of Mine | S8 | Yes | 90% | 52.6 | 45.2 | 39.8 | 37.9 | 153.4 | 186.8 | 98.8 | 100.1 | 139.1 | 119.3 | 86.9 | 65.0 | 93.7 | 186.8 | 37.9 |
| | | S8 | Yes | 50% | 66.3 | 55.0 | 47.4 | 44.4 | 344.4 | 286.7 | 183.5 | 190.6 | 248.2 | 214.7 | 128.3 | 82.5 | 157.7 | 344.4 | 44.4 |
| | | S8 | Yes | 10% | 101.1 | 88.6 | 75.9 | 83.4 | 646.3 | 711.1 | 335.0 | 339.7 | 411.7 | 326.2 | 234.1 | 130.7 | 290.3 | 711.1 | 75.9 |
| | Post-Closure | S8 | Yes | 90% | 47.6 | 39.4 | 33.2 | 31.9 | 153.9 | 190.5 | 101.4 | 102.3 | 139.8 | 119.3 | 84.5 | 60.3 | 92.0 | 190.5 | 31.9 |
| | | S8 | Yes | 50% | 64.6 | 51.5 | 42.7 | 39.3 | 376.4 | 327.2 | 204.1 | 207.0 | 267.5 | 220.9 | 129.9 | 83.7 | 167.9 | 376.4 | 39.3 |
| | | S8 | Yes | 10% | 104.7 | 90.0 | 76.4 | 81.8 | 710.9 | 848.4 | 383.2 | 378.2 | 462.8 | 357.9 | 251.5 | 135.5 | 323.4 | 848.4 | 76.4 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 5.6 | 8.2 | 10.1 | 10.8 | 3.3 | -9.1 | -2.5 | -2.3 | -2.4 | -3.4 | -1.0 | 2.5 | 1.7 | 10.8 | -9.1 |
| | | S8 | Yes | 50% | 1.3 | 5.1 | 7.8 | 9.5 | -35.2 | -45.8 | -20.4 | -22.7 | -26.1 | -20.0 | -4.8 | -3.4 | -12.9 | 9.5 | -45.8 |
| | | S8 | Yes | 10% | -4.4 | -0.4 | -0.4 | 6.1 | -74.1 | -157.8 | -52.7 | -49.8 | -66.0 | -42.1 | -30.8 | -5.4 | -39.8 | 6.1 | -157.8 |
| | Post-Closure | S8 | Yes | 90% | 0.6 | 2.5 | 3.5 | 4.8 | 3.8 | -5.4 | 0.1 | -0.1 | -1.7 | -3.4 | -3.4 | -2.2 | -0.1 | 4.8 | -5.4 |
| | | S8 | Yes | 50% | -0.3 | 1.7 | 3.2 | 4.4 | -3.3 | -5.3 | 0.2 | -6.3 | -6.8 | -13.8 | -3.2 | -2.2 | -2.6 | 4.4 | -13.8 |
| | | S8 | Yes | 10% | -0.7 | 0.9 | 0.0 | 4.5 | -9.4 | -20.5 | -4.5 | -11.4 | -14.8 | -10.4 | -13.4 | -0.6 | -6.7 | 4.5 | -20.5 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 12.0 | 22.2 | 33.9 | 39.8 | 2.2 | -4.6 | -2.5 | -2.2 | -1.7 | -2.8 | -1.1 | 4.0 | 8.3 | 39.8 | -4.6 |
| | | S8 | Yes | 50% | 2.0 | 10.3 | 19.8 | 27.1 | -9.3 | -13.8 | -10.0 | -10.7 | -9.5 | -8.5 | -3.6 | -4.0 | -0.8 | 27.1 | -13.8 |
| | | S8 | Yes | 10% | -4.1 | -0.5 | -0.6 | 7.9 | -10.3 | -18.2 | -13.6 | -12.8 | -13.8 | -11.4 | -11.6 | -4.0 | -7.7 | 7.9 | -18.2 |
| | Post-Closure | S8 | Yes | 90% | 1.3 | 6.6 | 11.8 | 17.7 | 2.5 | -2.8 | 0.1 | 0.0 | -1.2 | -2.8 | -3.9 | -3.4 | 2.2 | 17.7 | -3.9 |
| | | S8 | Yes | 50% | -0.5 | 3.4 | 8.0 | 12.5 | -0.9 | -1.6 | 0.1 | -3.0 | -2.5 | -5.9 | -2.4 | -2.6 | 0.4 | 12.5 | -5.9 |
| | | S8 | Yes | 10% | -0.7 | 1.0 | 0.0 | 5.8 | -1.3 | -2.4 | -1.2 | -2.9 | -3.1 | -2.8 | -5.1 | -0.4 | -1.1 | 5.8 | -5.1 |
| NFK-C | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | Yes | 90% | 19.7 | 11.4 | 5.7 | 3.2 | 84.2 | 132.8 | 63.5 | 65.7 | 87.2 | 79.5 | 52.8 | 31.5 | 53.1 | 132.8 | 3.2 |
| | | S8 | Yes | 50% | 34.7 | 22.4 | 13.8 | 9.8 | 258.8 | 245.3 | 140.2 | 149.4 | 189.2 | 161.2 | 84.5 | 53.0 | 113.5 | 258.8 | 9.8 |
| | | S8 | Yes | 10% | 67.9 | 50.5 | 45.1 | 41.3 | 514.6 | 656.9 | 295.7 | 278.8 | 359.7 | 266.4 | 194.4 | 87.5 | 238.2 | 656.9 | 41.3 |
| | End of Mine | S8 | Yes | 90% | 25.6 | 20.1 | 16.0 | 14.9 | 88.3 | 122.6 | 61.8 | 62.9 | 84.9 | 74.3 | 51.7 | 33.8 | 54.7 | 122.6 | 14.9 |
| | | S8 | Yes | 50% | 36.9 | 28.3 | 22.5 | 20.0 | 223.1 | 194.0 | 117.4 | 124.1 | 162.0 | 138.6 | 78.7 | 49.6 | 99.6 | 223.1 | 20.0 |
| | | S8 | Yes | 10% | 66.0 | 53.3 | 46.4 | 45.7 | 436.0 | 490.6 | 236.4 | 223.4 | 289.0 | 221.6 | 161.1 | 82.2 | 196.0 | 490.6 | 45.7 |

**Table K4.16-35: North Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S8—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S8 | Yes | 90% | 19.9 | 14.1 | 9.1 | 8.2 | 87.9 | 124.5 | 62.2 | 64.1 | 84.3 | 73.6 | 48.6 | 28.9 | 52.1 | 124.5 | 8.2 |
| | | S8 | Yes | 50% | 34.4 | 24.2 | 17.3 | 14.2 | 255.2 | 234.3 | 138.1 | 141.2 | 179.0 | 149.5 | 81.2 | 50.2 | 109.9 | 255.2 | 14.2 |
| | | S8 | Yes | 10% | 67.7 | 51.7 | 46.6 | 44.4 | 501.3 | 627.5 | 286.2 | 263.5 | 340.6 | 252.8 | 179.5 | 85.6 | 228.9 | 627.5 | 44.4 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 5.9 | 8.7 | 10.4 | 11.7 | 4.1 | -10.2 | -1.7 | -2.8 | -2.4 | -5.2 | -1.1 | 2.3 | 1.6 | 11.7 | -10.2 |
| | | S8 | Yes | 50% | 2.2 | 5.9 | 8.7 | 10.1 | -35.7 | -51.2 | -22.8 | -25.3 | -27.2 | -22.6 | -5.7 | -3.3 | -13.9 | 10.1 | -51.2 |
| | | S8 | Yes | 10% | -1.9 | 2.7 | 1.3 | 4.4 | -78.6 | -166.2 | -59.3 | -55.5 | -70.6 | -44.8 | -33.3 | -5.2 | -42.3 | 4.4 | -166.2 |
| | Post-Closure | S8 | Yes | 90% | 0.2 | 2.7 | 3.5 | 5.0 | 3.7 | -8.3 | -1.2 | -1.6 | -2.9 | -5.9 | -4.2 | -2.7 | -1.0 | 5.0 | -8.3 |
| | | S8 | Yes | 50% | -0.3 | 1.7 | 3.6 | 4.4 | -3.6 | -10.9 | -2.1 | -8.2 | -10.2 | -11.7 | -3.3 | -2.8 | -3.6 | 4.4 | -11.7 |
| | | S8 | Yes | 10% | -0.2 | 1.2 | 1.4 | 3.2 | -13.3 | -29.4 | -9.5 | -15.3 | -19.1 | -13.6 | -14.9 | -1.9 | -9.3 | 3.2 | -29.4 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 30.0 | 76.3 | 183.1 | 363.4 | 4.9 | -7.7 | -2.7 | -4.3 | -2.7 | -6.5 | -2.0 | 7.3 | 53.3 | 363.4 | -7.7 |
| | | S8 | Yes | 50% | 6.4 | 26.1 | 63.2 | 103.2 | -13.8 | -20.9 | -16.3 | -17.0 | -14.4 | -14.0 | -6.8 | -6.3 | 7.5 | 103.2 | -20.9 |
| | | S8 | Yes | 10% | -2.8 | 5.4 | 2.8 | 10.7 | -15.3 | -25.3 | -20.1 | -19.9 | -19.6 | -16.8 | -17.1 | -6.0 | -10.3 | 10.7 | -25.3 |
| | Post-Closure | S8 | Yes | 90% | 1.0 | 23.4 | 61.7 | 156.8 | 4.3 | -6.2 | -1.9 | -2.5 | -3.4 | -7.4 | -8.0 | -8.5 | 17.4 | 156.8 | -8.5 |
| | | S8 | Yes | 50% | -0.8 | 7.8 | 25.9 | 44.3 | -1.4 | -4.5 | -1.5 | -5.5 | -5.4 | -7.3 | -3.9 | -5.3 | 3.6 | 44.3 | -7.3 |
| | | S8 | Yes | 10% | -0.3 | 2.3 | 3.2 | 7.6 | -2.6 | -4.5 | -3.2 | -5.5 | -5.3 | -5.1 | -7.7 | -2.2 | -1.9 | 7.6 | -7.7 |
| NFK-D[1] | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | Yes | 90% | 13.8 | 11.4 | 9.2 | 7.9 | 35.8 | 58.7 | 27.2 | 23.0 | 27.1 | 29.5 | 22.2 | 17.2 | 23.6 | 58.7 | 7.9 |
| | | S8 | Yes | 50% | 20.3 | 16.4 | 13.3 | 11.5 | 83.0 | 94.6 | 54.2 | 48.2 | 61.9 | 57.6 | 39.9 | 26.8 | 44.0 | 94.6 | 11.5 |
| | | S8 | Yes | 10% | 33.7 | 27.5 | 23.7 | 21.6 | 177.1 | 207.3 | 117.2 | 85.1 | 111.4 | 101.5 | 81.7 | 43.9 | 86.0 | 207.3 | 21.6 |
| | End of Mine | S8 | Yes | 90% | 34.1 | 32.0 | 29.7 | 27.1 | 59.8 | 81.8 | 51.4 | 45.9 | 50.2 | 50.4 | 40.5 | 36.8 | 45.0 | 81.8 | 27.1 |
| | | S8 | Yes | 50% | 40.2 | 36.6 | 33.6 | 30.4 | 104.5 | 115.5 | 77.3 | 69.7 | 83.5 | 76.6 | 56.9 | 45.7 | 64.2 | 115.5 | 30.4 |
| | | S8 | Yes | 10% | 52.6 | 46.9 | 43.1 | 39.7 | 192.9 | 225.5 | 136.5 | 105.2 | 130.1 | 118.2 | 95.9 | 61.5 | 104.0 | 225.5 | 39.7 |
| | Post-Closure | S8 | Yes | 90% | 22.3 | 20.2 | 17.8 | 17.6 | 35.8 | 58.7 | 36.4 | 23.0 | 27.1 | 29.5 | 29.3 | 25.2 | 28.6 | 58.7 | 17.6 |
| | | S8 | Yes | 50% | 28.9 | 25.2 | 22.0 | 21.2 | 83.0 | 94.6 | 63.4 | 48.2 | 61.9 | 57.6 | 46.9 | 34.8 | 49.0 | 94.6 | 21.2 |
| | | S8 | Yes | 10% | 42.3 | 36.4 | 32.3 | 31.3 | 177.1 | 207.3 | 126.4 | 85.1 | 111.4 | 101.5 | 88.8 | 51.9 | 91.0 | 207.3 | 31.3 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 20.3 | 20.6 | 20.6 | 19.2 | 24.0 | 23.1 | 24.2 | 22.9 | 23.1 | 20.8 | 18.3 | 19.6 | 21.4 | 24.2 | 18.3 |
| | | S8 | Yes | 50% | 19.9 | 20.2 | 20.3 | 18.9 | 21.5 | 21.0 | 23.1 | 21.4 | 21.6 | 19.0 | 17.0 | 18.9 | 20.2 | 23.1 | 17.0 |
| | | S8 | Yes | 10% | 18.9 | 19.3 | 19.4 | 18.1 | 15.8 | 18.3 | 19.3 | 20.1 | 18.8 | 16.7 | 14.2 | 17.6 | 18.0 | 20.1 | 14.2 |
| | Post-Closure | S8 | Yes | 90% | 8.5 | 8.8 | 8.6 | 9.7 | 0.0 | 0.0 | 9.2 | 0.0 | 0.0 | 0.0 | 7.1 | 8.0 | 5.0 | 9.7 | 0.0 |
| | | S8 | Yes | 50% | 8.5 | 8.8 | 8.6 | 9.7 | 0.0 | 0.0 | 9.2 | 0.0 | 0.0 | 0.0 | 7.1 | 8.0 | 5.0 | 9.7 | 0.0 |
| | | S8 | Yes | 10% | 8.5 | 8.8 | 8.6 | 9.7 | 0.0 | 0.0 | 9.2 | 0.0 | 0.0 | 0.0 | 7.1 | 8.0 | 5.0 | 9.7 | 0.0 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 147.6 | 180.7 | 223.9 | 242.4 | 67.1 | 39.3 | 89.3 | 99.4 | 85.1 | 70.6 | 82.2 | 113.8 | 120.1 | 242.4 | 39.3 |
| | | S8 | Yes | 50% | 97.7 | 123.5 | 152.2 | 164.2 | 25.9 | 22.2 | 42.6 | 44.4 | 34.8 | 33.0 | 42.7 | 70.6 | 71.1 | 164.2 | 22.2 |
| | | S8 | Yes | 10% | 56.0 | 70.3 | 81.7 | 84.0 | 8.9 | 8.8 | 16.4 | 23.7 | 16.8 | 16.5 | 17.4 | 40.1 | 36.7 | 84.0 | 8.8 |
| | Post-Closure | S8 | Yes | 90% | 62.1 | 77.6 | 94.1 | 122.5 | 0.0 | 0.0 | 34.0 | 0.0 | 0.0 | 0.0 | 31.9 | 46.3 | 39.0 | 122.5 | 0.0 |
| | | S8 | Yes | 50% | 42.0 | 54.0 | 64.8 | 84.3 | 0.0 | 0.0 | 17.0 | 0.0 | 0.0 | 0.0 | 17.8 | 29.7 | 25.8 | 84.3 | 0.0 |
| | | S8 | Yes | 10% | 25.4 | 32.1 | 36.5 | 45.0 | 0.0 | 0.0 | 7.9 | 0.0 | 0.0 | 0.0 | 8.7 | 18.1 | 14.5 | 45.0 | 0.0 |
| Tributary 1.19 | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | Yes | 90% | 3.4 | 2.8 | 2.3 | 2.1 | 12.6 | 24.2 | 13.5 | 11.9 | 19.7 | 13.6 | 6.3 | 4.3 | 9.7 | 24.2 | 2.1 |
| | | S8 | Yes | 50% | 4.6 | 3.7 | 3.0 | 2.6 | 49.9 | 63.4 | 28.4 | 29.9 | 35.8 | 24.8 | 13.6 | 6.3 | 22.2 | 63.4 | 2.6 |
| | | S8 | Yes | 10% | 7.0 | 6.3 | 5.7 | 8.0 | 89.0 | 140.6 | 52.5 | 58.0 | 62.7 | 46.0 | 23.5 | 9.1 | 42.4 | 140.6 | 5.7 |
| | End of Mine | S8 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S8 | Yes | 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S8 | Yes | 10% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Post-Closure | S8 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S8 | Yes | 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S8 | Yes | 10% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | -3.4 | -2.8 | -2.3 | -2.1 | -12.6 | -24.2 | -13.5 | -11.9 | -19.7 | -13.6 | -6.3 | -4.3 | -9.7 | -2.1 | -24.2 |
| | | S8 | Yes | 50% | -4.6 | -3.7 | -3.0 | -2.6 | -49.9 | -63.4 | -28.4 | -29.9 | -35.8 | -24.8 | -13.6 | -6.3 | -22.2 | -2.6 | -63.4 |
| | | S8 | Yes | 10% | -7.0 | -6.3 | -5.7 | -8.0 | -89.0 | -140.6 | -52.5 | -58.0 | -62.7 | -46.0 | -23.5 | -9.1 | -42.4 | -5.7 | -140.6 |

**Table K4.16-35: North Fork Koktuli Change in Streamflow End of Mine and Post-Closure—Scenario S8—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S8 | Yes | 90% | -3.4 | -2.8 | -2.3 | -2.1 | -12.6 | -24.2 | -13.5 | -11.9 | -19.7 | -13.6 | -6.3 | -4.3 | -9.7 | -2.1 | -24.2 |
| | | S8 | Yes | 50% | -4.6 | -3.7 | -3.0 | -2.6 | -49.9 | -63.4 | -28.4 | -29.9 | -35.8 | -24.8 | -13.6 | -6.3 | -22.2 | -2.6 | -63.4 |
| | | S8 | Yes | 10% | -7.0 | -6.3 | -5.7 | -8.0 | -89.0 | -140.6 | -52.5 | -58.0 | -62.7 | -46.0 | -23.5 | -9.1 | -42.4 | -5.7 | -140.6 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | | S8 | Yes | 50% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | | S8 | Yes | 10% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | Post-Closure | S8 | Yes | 90% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | | S8 | Yes | 50% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| | | S8 | Yes | 10% | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |

Notes:

cfs = cubic feet per second
NFK = North Fork Koktuli

Source: Knight Piésold 2019q, r

[1] Source: PLP 2020 RFI 161

**Table K4.16-36: South Fork Koktuli Change in Streamflow End of Mining and Post-Closure—Scenario 8—With Water Treatment**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| **SFK-A** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | Yes | 90% | 37.1 | 25.4 | 15.9 | 10.4 | 140.6 | 141.2 | 87.2 | 93.4 | 129.0 | 115.2 | 77.5 | 51.1 | 77.0 | 141.2 | 10.4 |
| | | S8 | Yes | 50% | 56.9 | 42.0 | 30.6 | 24.3 | 323.0 | 294.3 | 182.3 | 212.4 | 252.4 | 212.7 | 130.6 | 82.1 | 153.6 | 323.0 | 24.3 |
| | | S8 | Yes | 10% | 129.4 | 93.5 | 71.5 | 78.0 | 568.6 | 704.8 | 352.8 | 360.5 | 437.8 | 335.1 | 254.7 | 154.0 | 295.0 | 704.8 | 71.5 |
| | End of Mine | S8 | Yes | 90% | 36.4 | 25.2 | 16.2 | 11.0 | 140.3 | 139.1 | 86.2 | 92.1 | 126.8 | 112.7 | 75.8 | 50.1 | 76.0 | 140.3 | 11.0 |
| | | S8 | Yes | 50% | 55.8 | 41.1 | 30.2 | 24.5 | 319.2 | 290.6 | 178.1 | 208.0 | 247.5 | 208.1 | 128.3 | 80.3 | 151.0 | 319.2 | 24.5 |
| | | S8 | Yes | 10% | 127.3 | 92.1 | 70.2 | 77.9 | 561.4 | 692.8 | 346.3 | 354.9 | 429.6 | 328.6 | 249.9 | 151.0 | 290.2 | 692.8 | 70.2 |
| | Post-Closure | S8 | Yes | 90% | 38.0 | 27.2 | 17.8 | 12.1 | 145.7 | 145.6 | 88.6 | 96.7 | 134.7 | 120.6 | 79.5 | 52.6 | 79.9 | 145.7 | 12.1 |
| | | S8 | Yes | 50% | 58.3 | 42.2 | 31.7 | 25.8 | 325.8 | 297.0 | 181.9 | 214.9 | 255.7 | 216.3 | 132.1 | 83.3 | 155.4 | 325.8 | 25.8 |
| | | S8 | Yes | 10% | 129.8 | 94.0 | 71.8 | 78.7 | 567.6 | 697.3 | 348.8 | 361.2 | 437.0 | 336.5 | 253.8 | 154.7 | 294.3 | 697.3 | 71.8 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | -0.7 | -0.2 | 0.3 | 0.6 | -0.3 | -2.1 | -1.0 | -1.3 | -2.1 | -2.5 | -1.8 | -1.0 | -1.0 | 0.6 | -2.5 |
| | | S8 | Yes | 50% | -1.1 | -0.9 | -0.3 | 0.2 | -3.8 | -3.7 | -4.2 | -4.4 | -4.9 | -4.6 | -2.2 | -1.8 | -2.6 | 0.2 | -4.9 |
| | | S8 | Yes | 10% | -2.0 | -1.4 | -1.3 | -0.1 | -7.2 | -12.0 | -6.5 | -5.6 | -8.1 | -6.5 | -4.8 | -3.0 | -4.9 | -0.1 | -12.0 |
| | Post-Closure | S8 | Yes | 90% | 0.9 | 1.8 | 1.9 | 1.7 | 5.1 | 4.5 | 1.4 | 3.3 | 5.7 | 5.3 | 2.0 | 1.5 | 2.9 | 5.7 | 0.9 |
| | | S8 | Yes | 50% | 1.4 | 0.3 | 1.1 | 1.4 | 2.7 | 2.7 | -0.4 | 2.5 | 3.3 | 3.5 | 1.5 | 1.2 | 1.8 | 3.5 | -0.4 |
| | | S8 | Yes | 10% | 0.5 | 0.5 | 0.4 | 0.7 | -1.0 | -7.5 | -3.9 | 0.8 | -0.8 | 1.4 | -0.9 | 0.7 | -0.8 | 1.4 | -7.5 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | -2.0 | -0.8 | 1.9 | 5.8 | -0.2 | -1.5 | -1.1 | -1.4 | -1.7 | -2.2 | -2.3 | -2.0 | -0.6 | 5.8 | -2.3 |
| | | S8 | Yes | 50% | -2.0 | -2.1 | -1.0 | 0.7 | -1.2 | -1.3 | -2.3 | -2.1 | -2.0 | -2.1 | -1.7 | -2.1 | -1.6 | 0.7 | -2.3 |
| | | S8 | Yes | 10% | -1.6 | -1.5 | -1.8 | -0.2 | -1.3 | -1.7 | -1.8 | -1.6 | -1.9 | -1.9 | -1.9 | -2.0 | -1.6 | -0.2 | -2.0 |
| | Post-Closure | S8 | Yes | 90% | 2.5 | 6.9 | 11.7 | 16.7 | 3.7 | 3.2 | 1.6 | 3.6 | 4.4 | 4.6 | 2.5 | 2.9 | 5.3 | 16.7 | 1.6 |
| | | S8 | Yes | 50% | 2.4 | 0.7 | 3.7 | 5.9 | 0.8 | 0.9 | -0.2 | 1.2 | 1.3 | 1.7 | 1.2 | 1.4 | 1.7 | 5.9 | -0.2 |
| | | S8 | Yes | 10% | 0.4 | 0.5 | 0.5 | 0.9 | -0.2 | -1.1 | -1.1 | 0.2 | -0.2 | 0.4 | -0.3 | 0.4 | 0.0 | 0.9 | -1.1 |
| **SFK-B** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | Yes | 90% | 35.1 | 27.7 | 20.3 | 15.3 | 92.8 | 122.4 | 71.0 | 72.2 | 94.3 | 86.0 | 59.4 | 42.3 | 61.6 | 122.4 | 15.3 |
| | | S8 | Yes | 50% | 43.7 | 35.8 | 29.2 | 24.1 | 240.6 | 244.1 | 143.5 | 159.6 | 190.6 | 164.5 | 99.9 | 62.7 | 119.9 | 244.1 | 24.1 |
| | | S8 | Yes | 10% | 86.2 | 62.3 | 51.7 | 48.6 | 435.8 | 583.4 | 283.3 | 276.4 | 342.1 | 251.5 | 202.5 | 115.2 | 228.2 | 583.4 | 48.6 |
| | End of Mine | S8 | Yes | 90% | 34.7 | 27.9 | 21.2 | 16.6 | 92.4 | 120.0 | 69.9 | 71.2 | 93.2 | 83.8 | 58.1 | 41.6 | 60.9 | 120.0 | 16.6 |
| | | S8 | Yes | 50% | 43.0 | 35.3 | 29.3 | 24.8 | 235.6 | 238.8 | 139.6 | 155.5 | 185.3 | 160.9 | 98.1 | 61.6 | 117.3 | 238.8 | 24.8 |
| | | S8 | Yes | 10% | 84.6 | 61.4 | 50.9 | 48.0 | 427.6 | 569.0 | 276.5 | 270.1 | 333.7 | 245.0 | 196.9 | 112.9 | 223.0 | 569.0 | 48.0 |
| | Post-Closure | S8 | Yes | 90% | 35.6 | 29.1 | 22.5 | 17.6 | 99.9 | 127.2 | 72.5 | 75.7 | 101.2 | 92.3 | 61.7 | 43.1 | 64.9 | 127.2 | 17.6 |
| | | S8 | Yes | 50% | 44.8 | 35.8 | 30.3 | 25.6 | 243.4 | 246.1 | 142.8 | 163.2 | 194.8 | 169.1 | 101.3 | 64.0 | 121.8 | 246.1 | 25.6 |
| | | S8 | Yes | 10% | 86.3 | 62.8 | 52.0 | 48.5 | 434.5 | 572.6 | 278.7 | 276.8 | 340.9 | 253.4 | 200.2 | 115.9 | 226.9 | 572.6 | 48.5 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | -0.4 | 0.2 | 0.9 | 1.3 | -0.3 | -2.4 | -1.1 | -1.0 | -1.1 | -2.2 | -1.3 | -0.8 | -0.7 | 1.3 | -2.4 |
| | | S8 | Yes | 50% | -0.7 | -0.5 | 0.1 | 0.7 | -5.0 | -5.3 | -4.0 | -4.2 | -5.3 | -3.6 | -1.8 | -1.1 | -2.6 | 0.7 | -5.3 |
| | | S8 | Yes | 10% | -1.6 | -0.8 | -0.8 | -0.6 | -8.2 | -14.4 | -6.8 | -6.3 | -8.4 | -6.5 | -5.6 | -2.4 | -5.2 | -0.6 | -14.4 |
| | Post-Closure | S8 | Yes | 90% | 0.5 | 1.4 | 2.1 | 2.3 | 7.1 | 4.8 | 1.6 | 3.5 | 6.9 | 6.3 | 2.2 | 0.8 | 3.3 | 7.1 | 0.5 |
| | | S8 | Yes | 50% | 1.1 | -0.1 | 1.1 | 1.5 | 2.7 | 2.0 | -0.8 | 3.5 | 4.3 | 4.6 | 1.4 | 1.2 | 1.9 | 4.6 | -0.8 |
| | | S8 | Yes | 10% | 0.1 | 0.5 | 0.2 | -0.1 | -1.3 | -10.7 | -4.6 | 0.4 | -1.2 | 2.0 | -2.3 | 0.6 | -1.4 | 2.0 | -10.7 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | -1.0 | 0.9 | 4.2 | 8.7 | -0.3 | -1.9 | -1.6 | -1.3 | -1.1 | -2.5 | -2.2 | -1.8 | 0.0 | 8.7 | -2.5 |
| | | S8 | Yes | 50% | -1.6 | -1.4 | 0.4 | 2.8 | -2.1 | -2.2 | -2.8 | -2.6 | -2.8 | -2.2 | -1.8 | -1.8 | -1.5 | 2.8 | -2.8 |
| | | S8 | Yes | 10% | -1.8 | -1.4 | -1.6 | -1.2 | -1.9 | -2.5 | -2.4 | -2.3 | -2.5 | -2.6 | -2.8 | -2.1 | -2.1 | -1.2 | -2.8 |
| | Post-Closure | S8 | Yes | 90% | 1.6 | 5.1 | 10.4 | 15.3 | 7.7 | 3.9 | 2.2 | 4.9 | 7.3 | 7.3 | 3.8 | 1.8 | 5.9 | 15.3 | 1.6 |
| | | S8 | Yes | 50% | 2.5 | -0.1 | 3.8 | 6.3 | 1.1 | 0.8 | -0.5 | 2.2 | 2.2 | 2.8 | 1.4 | 2.0 | 2.0 | 6.3 | -0.5 |
| | | S8 | Yes | 10% | 0.1 | 0.8 | 0.4 | -0.3 | -0.3 | -1.8 | -1.6 | 0.1 | -0.3 | 0.8 | -1.1 | 0.5 | -0.2 | 0.8 | -1.8 |
| **SFK-C** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 28.6 | 43.9 | 8.2 | 7.8 | 16.7 | 22.0 | 8.6 | 0.3 | 11.3 | 43.9 | 0.0 |
| | | S8 | Yes | 50% | 1.9 | 0.1 | 0.0 | 0.0 | 117.7 | 100.3 | 47.4 | 54.9 | 76.7 | 63.9 | 36.1 | 13.2 | 42.7 | 117.7 | 0.0 |
| | | S8 | Yes | 10% | 29.9 | 16.4 | 7.0 | 5.6 | 240.6 | 288.9 | 133.5 | 117.1 | 159.9 | 126.5 | 93.8 | 49.0 | 105.7 | 288.9 | 5.6 |
| | End of Mine | S8 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 28.2 | 42.7 | 7.9 | 8.2 | 16.8 | 21.7 | 8.5 | 0.3 | 11.2 | 42.7 | 0.0 |
| | | S8 | Yes | 50% | 2.5 | 0.1 | 0.0 | 0.0 | 115.0 | 98.2 | 46.0 | 53.5 | 74.0 | 62.7 | 36.3 | 13.4 | 41.8 | 115.0 | 0.0 |
| | | S8 | Yes | 10% | 29.6 | 15.9 | 7.2 | 5.8 | 234.4 | 283.7 | 129.6 | 115.2 | 155.8 | 123.4 | 93.0 | 49.0 | 103.5 | 283.7 | 5.8 |

**Table K4.16-36: South Fork Koktuli Change in Streamflow End of Mining and Post-Closure—Scenario 8—With Water Treatment**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S8 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 34.8 | 50.7 | 11.3 | 13.1 | 25.4 | 30.4 | 12.2 | 1.4 | 14.9 | 50.7 | 0.0 |
| | | S8 | Yes | 50% | 4.4 | 0.1 | 0.0 | 0.0 | 122.5 | 107.1 | 49.9 | 62.0 | 83.8 | 71.9 | 39.7 | 15.8 | 46.4 | 122.5 | 0.0 |
| | | S8 | Yes | 10% | 31.4 | 17.5 | 8.2 | 6.2 | 243.0 | 292.9 | 134.1 | 123.5 | 165.5 | 132.6 | 97.0 | 51.6 | 108.6 | 292.9 | 6.2 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | -0.4 | -1.2 | -0.2 | 0.4 | 0.1 | -0.3 | -0.1 | 0.0 | -0.1 | 0.4 | -1.2 |
| | | S8 | Yes | 50% | 0.5 | 0.0 | 0.0 | 0.0 | -2.7 | -2.1 | -1.4 | -1.4 | -2.7 | -1.2 | 0.2 | 0.2 | -0.9 | 0.5 | -2.7 |
| | | S8 | Yes | 10% | -0.3 | -0.5 | 0.2 | 0.3 | -6.2 | -5.2 | -3.9 | -1.9 | -4.0 | -3.2 | -0.8 | 0.0 | -2.1 | 0.3 | -6.2 |
| | Post-Closure | S8 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 6.3 | 6.8 | 3.1 | 5.3 | 8.7 | 8.4 | 3.6 | 1.1 | 3.6 | 8.7 | 0.0 |
| | | S8 | Yes | 50% | 2.5 | 0.0 | 0.0 | 0.0 | 4.7 | 6.8 | 2.5 | 7.1 | 7.1 | 8.0 | 3.5 | 2.6 | 3.7 | 8.0 | 0.0 |
| | | S8 | Yes | 10% | 1.5 | 1.1 | 1.1 | 0.6 | 2.4 | 4.0 | 0.6 | 6.5 | 5.6 | 6.1 | 3.2 | 2.6 | 2.9 | 6.5 | 0.6 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | -1.3 | -2.8 | -2.8 | 4.6 | 0.7 | -1.4 | -0.6 | 0.0 | -0.3 | 4.6 | -2.8 |
| | | S8 | Yes | 50% | 27.2 | 2.7 | 0.0 | 0.0 | -2.3 | -2.1 | -2.9 | -2.5 | -3.5 | -1.9 | 0.4 | 1.6 | 1.4 | 27.2 | -3.5 |
| | | S8 | Yes | 10% | -1.0 | -2.9 | 2.5 | 4.6 | -2.6 | -1.8 | -2.9 | -1.6 | -2.5 | -2.5 | -0.8 | 0.0 | -1.0 | 4.6 | -2.9 |
| | Post-Closure | S8 | Yes | 90% | 67.7 | 0.0 | 0.0 | 0.0 | 22.0 | 15.4 | 38.0 | 67.2 | 52.2 | 38.2 | 42.3 | 381.3 | 60.4 | 381.3 | 0.0 |
| | | S8 | Yes | 50% | 127.2 | 2.7 | 0.0 | 0.0 | 4.0 | 6.8 | 5.3 | 12.9 | 9.3 | 12.6 | 9.8 | 19.5 | 17.5 | 127.2 | 0.0 |
| | | S8 | Yes | 10% | 5.2 | 6.7 | 16.1 | 10.5 | 1.0 | 1.4 | 0.5 | 5.5 | 3.5 | 4.8 | 3.4 | 5.2 | 5.3 | 16.1 | 0.5 |
| **SFK-D** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | Yes | 90% | 6.4 | 4.6 | 3.3 | 2.6 | 21.7 | 35.8 | 16.6 | 15.2 | 20.7 | 19.9 | 13.1 | 8.9 | 14.1 | 35.8 | 2.6 |
| | | S8 | Yes | 50% | 9.3 | 6.5 | 4.8 | 3.9 | 61.6 | 54.7 | 36.0 | 32.5 | 44.1 | 38.6 | 23.2 | 13.3 | 27.4 | 61.6 | 3.9 |
| | | S8 | Yes | 10% | 19.2 | 13.1 | 12.7 | 10.9 | 112.8 | 137.5 | 67.3 | 59.0 | 77.3 | 61.0 | 49.0 | 23.4 | 53.6 | 137.5 | 10.9 |
| | End of Mine | S8 | Yes | 90% | 8.7 | 7.2 | 6.4 | 7.3 | 18.6 | 29.9 | 14.3 | 13.9 | 18.5 | 19.3 | 16.2 | 11.4 | 14.3 | 29.9 | 6.4 |
| | | S8 | Yes | 50% | 11.3 | 8.8 | 7.7 | 8.4 | 53.8 | 47.2 | 32.1 | 29.4 | 39.4 | 35.5 | 24.7 | 15.2 | 26.1 | 53.8 | 7.7 |
| | | S8 | Yes | 10% | 19.6 | 14.3 | 14.3 | 14.5 | 97.9 | 124.7 | 58.3 | 53.8 | 68.4 | 54.8 | 46.8 | 23.9 | 49.3 | 124.7 | 14.3 |
| | Post-Closure | S8 | Yes | 90% | 9.0 | 7.2 | 6.3 | 5.4 | 32.7 | 44.3 | 18.1 | 25.6 | 31.0 | 30.1 | 16.7 | 11.8 | 19.8 | 44.3 | 5.4 |
| | | S8 | Yes | 50% | 11.7 | 8.9 | 7.7 | 6.5 | 69.0 | 62.1 | 36.3 | 41.5 | 52.5 | 46.9 | 25.6 | 15.8 | 32.0 | 69.0 | 6.5 |
| | | S8 | Yes | 10% | 20.4 | 14.7 | 14.6 | 12.8 | 114.5 | 141.2 | 63.6 | 66.5 | 82.6 | 66.9 | 48.6 | 24.9 | 55.9 | 141.2 | 12.8 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 2.4 | 2.6 | 3.1 | 4.7 | -3.1 | -5.9 | -2.3 | -1.3 | -2.2 | -0.6 | 3.1 | 2.5 | 0.2 | 4.7 | -5.9 |
| | | S8 | Yes | 50% | 2.0 | 2.3 | 2.9 | 4.5 | -7.8 | -7.4 | -3.8 | -3.1 | -4.7 | -3.1 | 1.5 | 1.9 | -1.2 | 4.5 | -7.8 |
| | | S8 | Yes | 10% | 0.4 | 1.2 | 1.5 | 3.6 | -14.9 | -12.8 | -9.0 | -5.2 | -8.9 | -6.2 | -2.2 | 0.5 | -4.3 | 3.6 | -14.9 |
| | Post-Closure | S8 | Yes | 90% | 2.6 | 2.6 | 3.1 | 2.7 | 11.0 | 8.5 | 1.5 | 10.4 | 10.3 | 10.2 | 3.6 | 2.9 | 5.8 | 11.0 | 1.5 |
| | | S8 | Yes | 50% | 2.4 | 2.4 | 2.9 | 2.6 | 7.4 | 7.4 | 0.4 | 9.0 | 8.4 | 8.2 | 2.4 | 2.5 | 4.7 | 9.0 | 0.4 |
| | | S8 | Yes | 10% | 1.2 | 1.6 | 1.8 | 1.9 | 1.7 | 3.7 | -3.7 | 7.5 | 5.3 | 5.9 | -0.4 | 1.5 | 2.3 | 7.5 | -3.7 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 37.2 | 55.8 | 95.6 | 178.3 | -14.1 | -16.6 | -14.0 | -8.5 | -10.7 | -3.3 | 23.3 | 27.9 | 29.2 | 178.3 | -16.6 |
| | | S8 | Yes | 50% | 21.0 | 35.0 | 59.4 | 116.0 | -12.7 | -13.6 | -10.7 | -9.4 | -10.7 | -8.0 | 6.4 | 14.6 | 15.6 | 116.0 | -13.6 |
| | | S8 | Yes | 10% | 2.0 | 9.4 | 12.1 | 33.3 | -13.2 | -9.3 | -13.4 | -8.8 | -11.5 | -10.2 | -4.4 | 2.2 | -1.0 | 33.3 | -13.4 |
| | Post-Closure | S8 | Yes | 90% | 41.6 | 56.9 | 93.8 | 104.0 | 50.6 | 23.7 | 8.9 | 68.1 | 49.8 | 51.1 | 27.5 | 32.5 | 50.7 | 104.0 | 8.9 |
| | | S8 | Yes | 50% | 25.3 | 37.5 | 60.1 | 66.6 | 12.1 | 13.5 | 1.0 | 27.8 | 19.1 | 21.3 | 10.3 | 18.9 | 26.1 | 66.6 | 1.0 |
| | | S8 | Yes | 10% | 6.1 | 12.4 | 14.5 | 17.6 | 1.5 | 2.7 | -5.5 | 12.6 | 6.8 | 9.7 | -0.8 | 6.5 | 7.0 | 17.6 | -5.5 |
| **SFK-E** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | Yes | 90% | 4.2 | 3.5 | 2.8 | 2.6 | 10.2 | 16.9 | 8.1 | 7.6 | 9.4 | 9.8 | 7.0 | 5.3 | 7.3 | 16.9 | 2.6 |
| | | S8 | Yes | 50% | 5.6 | 4.4 | 3.7 | 3.2 | 25.2 | 24.3 | 15.3 | 14.6 | 19.0 | 17.1 | 11.7 | 7.3 | 12.6 | 25.2 | 3.2 |
| | | S8 | Yes | 10% | 9.6 | 7.2 | 7.0 | 6.1 | 47.3 | 55.7 | 30.7 | 24.0 | 31.9 | 28.1 | 22.5 | 12.3 | 23.6 | 55.7 | 6.1 |
| | End of Mine | S8 | Yes | 90% | 2.5 | 2.1 | 1.7 | 1.5 | 6.9 | 11.2 | 5.1 | 4.9 | 6.2 | 6.4 | 4.2 | 3.1 | 4.6 | 11.2 | 1.5 |
| | | S8 | Yes | 50% | 3.5 | 2.8 | 2.2 | 2.0 | 17.6 | 17.0 | 10.8 | 10.0 | 13.1 | 11.4 | 7.3 | 4.6 | 8.5 | 17.6 | 2.0 |
| | | S8 | Yes | 10% | 6.0 | 4.7 | 4.3 | 3.9 | 33.0 | 42.4 | 21.2 | 17.1 | 22.1 | 18.9 | 14.8 | 7.8 | 16.3 | 42.4 | 3.9 |
| | Post-Closure | S8 | Yes | 90% | 2.6 | 2.1 | 1.7 | 1.6 | 7.5 | 12.1 | 5.3 | 5.1 | 6.5 | 6.7 | 4.5 | 3.2 | 4.9 | 12.1 | 1.6 |
| | | S8 | Yes | 50% | 3.7 | 2.9 | 2.4 | 2.1 | 19.2 | 18.4 | 11.5 | 10.7 | 14.1 | 12.2 | 7.9 | 4.8 | 9.2 | 19.2 | 2.1 |
| | | S8 | Yes | 10% | 6.5 | 5.1 | 4.7 | 4.2 | 36.2 | 45.7 | 23.0 | 18.4 | 24.0 | 20.6 | 16.2 | 8.5 | 17.8 | 45.7 | 4.2 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | -1.7 | -1.4 | -1.1 | -1.0 | -3.4 | -5.6 | -3.0 | -2.7 | -3.2 | -3.5 | -2.8 | -2.2 | -2.6 | -1.0 | -5.6 |
| | | S8 | Yes | 50% | -2.1 | -1.7 | -1.4 | -1.2 | -7.5 | -7.3 | -4.4 | -4.6 | -5.9 | -5.7 | -4.4 | -2.8 | -4.1 | -1.2 | -7.5 |
| | | S8 | Yes | 10% | -3.7 | -2.5 | -2.7 | -2.3 | -14.3 | -13.3 | -9.6 | -6.9 | -9.8 | -9.2 | -7.7 | -4.5 | -7.2 | -2.3 | -14.3 |

**Table K4.16-36: South Fork Koktuli Change in Streamflow End of Mining and Post-Closure—Scenario 8—With Water Treatment**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S8 | Yes | 90% | -1.7 | -1.4 | -1.1 | -1.0 | -2.8 | -4.7 | -2.7 | -2.5 | -2.8 | -3.1 | -2.5 | -2.0 | -2.4 | -1.0 | -4.7 |
| | | S8 | Yes | 50% | -1.9 | -1.5 | -1.3 | -1.1 | -6.0 | -5.9 | -3.8 | -3.9 | -4.9 | -4.8 | -3.8 | -2.5 | -3.5 | -1.1 | -6.0 |
| | | S8 | Yes | 10% | -3.1 | -2.1 | -2.3 | -2.0 | -11.1 | -10.1 | -7.7 | -5.6 | -7.9 | -7.5 | -6.3 | -3.8 | -5.8 | -2.0 | -11.1 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | -40.8 | -40.6 | -40.6 | -39.7 | -32.8 | -33.4 | -37.0 | -35.7 | -33.8 | -35.4 | -39.6 | -40.8 | -37.5 | -32.8 | -40.8 |
| | | S8 | Yes | 50% | -37.8 | -38.0 | -38.9 | -38.0 | -30.0 | -29.9 | -29.0 | -31.7 | -31.2 | -33.6 | -37.6 | -37.6 | -34.4 | -29.0 | -38.9 |
| | | S8 | Yes | 10% | -38.2 | -35.2 | -38.4 | -37.1 | -30.2 | -23.8 | -31.1 | -28.8 | -30.8 | -32.9 | -34.1 | -36.7 | -33.1 | -23.8 | -38.4 |
| | Post-Closure | S8 | Yes | 90% | -39.2 | -39.4 | -39.5 | -38.1 | -27.0 | -28.1 | -34.0 | -32.7 | -30.3 | -31.3 | -36.3 | -38.5 | -34.5 | -27.0 | -39.5 |
| | | S8 | Yes | 50% | -34.3 | -34.5 | -35.6 | -34.5 | -23.7 | -24.4 | -24.9 | -26.7 | -25.8 | -28.4 | -32.6 | -34.1 | -30.0 | -23.7 | -35.6 |
| | | S8 | Yes | 10% | -32.2 | -29.2 | -33.0 | -32.0 | -23.5 | -18.1 | -25.2 | -23.4 | -24.7 | -26.7 | -28.0 | -30.6 | -27.2 | -18.1 | -33.0 |
| **Tributary 1.19** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | Yes | 90% | 4.9 | 3.4 | 2.2 | 1.5 | 22.3 | 35.6 | 20.8 | 18.9 | 28.5 | 21.5 | 11.4 | 7.2 | 14.8 | 35.6 | 1.5 |
| | | S8 | Yes | 50% | 7.1 | 4.9 | 3.3 | 2.6 | 67.8 | 83.1 | 41.8 | 44.3 | 51.0 | 38.6 | 20.7 | 10.6 | 31.3 | 83.1 | 2.6 |
| | | S8 | Yes | 10% | 13.0 | 9.6 | 8.6 | 10.5 | 123.4 | 184.7 | 78.5 | 84.2 | 89.1 | 66.3 | 38.2 | 17.1 | 60.3 | 184.7 | 8.6 |
| | End of Mine | S8 | Yes | 90% | 4.1 | 2.8 | 1.7 | 1.1 | 21.9 | 33.4 | 19.0 | 17.1 | 26.6 | 19.1 | 10.0 | 6.2 | 13.6 | 33.4 | 1.1 |
| | | S8 | Yes | 50% | 6.1 | 4.2 | 2.8 | 2.1 | 65.3 | 79.1 | 38.8 | 41.4 | 48.3 | 35.5 | 18.5 | 9.2 | 29.3 | 79.1 | 2.1 |
| | | S8 | Yes | 10% | 11.8 | 8.6 | 7.5 | 10.0 | 118.6 | 175.8 | 74.4 | 79.7 | 84.6 | 62.4 | 34.5 | 15.6 | 57.0 | 175.8 | 7.5 |
| | Post-Closure | S8 | Yes | 90% | 4.1 | 2.8 | 1.7 | 1.1 | 21.4 | 32.6 | 18.7 | 17.0 | 26.0 | 19.0 | 10.0 | 6.2 | 13.4 | 32.6 | 1.1 |
| | | S8 | Yes | 50% | 6.1 | 4.2 | 2.8 | 2.1 | 63.8 | 76.1 | 38.0 | 40.6 | 47.1 | 35.1 | 18.5 | 9.2 | 28.6 | 76.1 | 2.1 |
| | | S8 | Yes | 10% | 11.8 | 8.6 | 7.5 | 9.6 | 115.8 | 171.3 | 72.5 | 77.8 | 82.5 | 61.1 | 34.3 | 15.6 | 55.7 | 171.3 | 7.5 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | -0.7 | -0.6 | -0.5 | -0.4 | -0.4 | -2.2 | -1.8 | -1.8 | -1.8 | -2.4 | -1.4 | -1.0 | -1.2 | -0.4 | -2.4 |
| | | S8 | Yes | 50% | -0.9 | -0.7 | -0.6 | -0.5 | -2.5 | -4.0 | -3.0 | -2.9 | -2.7 | -3.1 | -2.2 | -1.3 | -2.0 | -0.5 | -4.0 |
| | | S8 | Yes | 10% | -1.1 | -1.0 | -1.1 | -0.5 | -4.9 | -8.9 | -4.1 | -4.5 | -4.5 | -3.9 | -3.7 | -1.5 | -3.3 | -0.5 | -8.9 |
| | Post-Closure | S8 | Yes | 90% | -0.7 | -0.6 | -0.5 | -0.4 | -0.9 | -3.0 | -2.1 | -2.0 | -2.5 | -2.5 | -1.4 | -1.0 | -1.5 | -0.4 | -3.0 |
| | | S8 | Yes | 50% | -0.9 | -0.7 | -0.6 | -0.5 | -4.0 | -7.0 | -3.8 | -3.7 | -3.9 | -3.5 | -2.2 | -1.3 | -2.7 | -0.5 | -7.0 |
| | | S8 | Yes | 10% | -1.1 | -1.0 | -1.1 | -0.9 | -7.6 | -13.3 | -6.0 | -6.3 | -6.5 | -5.2 | -3.9 | -1.5 | -4.6 | -0.9 | -13.3 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | -15.0 | -17.2 | -21.2 | -26.0 | -2.0 | -6.1 | -8.6 | -9.4 | -6.5 | -11.2 | -12.3 | -13.6 | -12.4 | -2.0 | -26.0 |
| | | S8 | Yes | 50% | -13.4 | -15.2 | -17.1 | -19.0 | -3.7 | -4.8 | -7.2 | -6.6 | -5.3 | -8.1 | -10.6 | -12.6 | -10.3 | -3.7 | -19.0 |
| | | S8 | Yes | 10% | -8.7 | -10.7 | -12.6 | -4.8 | -3.9 | -4.8 | -5.2 | -5.3 | -5.0 | -5.8 | -9.7 | -8.7 | -7.1 | -3.9 | -12.6 |
| | Post-Closure | S8 | Yes | 90% | -15.0 | -17.3 | -21.2 | -26.0 | -4.2 | -8.3 | -10.1 | -10.3 | -8.8 | -11.6 | -12.3 | -13.6 | -13.2 | -4.2 | -26.0 |
| | | S8 | Yes | 50% | -13.4 | -15.3 | -17.1 | -19.0 | -5.9 | -8.4 | -9.1 | -8.4 | -7.7 | -9.2 | -10.8 | -12.7 | -11.4 | -5.9 | -19.0 |
| | | S8 | Yes | 10% | -8.8 | -10.8 | -12.6 | -8.3 | -6.2 | -7.2 | -7.7 | -7.5 | -7.3 | -7.9 | -10.2 | -8.8 | -8.6 | -6.2 | -12.6 |
| **Tributary 1.24** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | Yes | 90% | 0.4 | 0.0 | 0.0 | 0.0 | 18.5 | 12.0 | 6.0 | 7.3 | 14.8 | 9.4 | 4.2 | 2.0 | 6.2 | 18.5 | 0.0 |
| | | S8 | Yes | 50% | 2.0 | 0.4 | 0.0 | 0.0 | 51.6 | 47.3 | 16.6 | 27.7 | 31.8 | 18.8 | 8.7 | 4.1 | 17.4 | 51.6 | 0.0 |
| | | S8 | Yes | 10% | 6.9 | 4.2 | 2.8 | 5.9 | 93.8 | 128.6 | 40.3 | 53.9 | 60.4 | 42.9 | 19.1 | 9.0 | 39.0 | 128.6 | 2.8 |
| | End of Mine | S8 | Yes | 90% | 0.7 | 0.0 | 0.0 | 0.0 | 18.9 | 13.4 | 6.9 | 8.0 | 15.8 | 10.1 | 4.5 | 2.3 | 6.7 | 18.9 | 0.0 |
| | | S8 | Yes | 50% | 2.4 | 0.8 | 0.0 | 0.0 | 53.0 | 50.9 | 18.4 | 29.3 | 33.3 | 19.5 | 9.3 | 4.4 | 18.4 | 53.0 | 0.0 |
| | | S8 | Yes | 10% | 7.3 | 4.7 | 3.1 | 6.4 | 96.6 | 134.2 | 43.7 | 56.2 | 62.9 | 44.8 | 20.2 | 9.4 | 40.8 | 134.2 | 3.1 |
| | Post-Closure | S8 | Yes | 90% | 0.4 | 0.0 | 0.0 | 0.0 | 18.6 | 12.3 | 6.1 | 7.4 | 15.0 | 9.4 | 4.2 | 2.0 | 6.3 | 18.6 | 0.0 |
| | | S8 | Yes | 50% | 2.1 | 0.4 | 0.0 | 0.0 | 51.9 | 48.2 | 16.9 | 28.0 | 32.2 | 18.8 | 8.8 | 4.2 | 17.6 | 51.9 | 0.0 |
| | | S8 | Yes | 10% | 7.0 | 4.3 | 2.9 | 6.0 | 94.4 | 130.0 | 41.1 | 54.4 | 61.0 | 43.3 | 19.3 | 9.0 | 39.4 | 130.0 | 2.9 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 0.3 | 0.0 | 0.0 | 0.0 | 0.3 | 1.4 | 0.9 | 0.7 | 1.0 | 0.7 | 0.3 | 0.3 | 0.5 | 1.4 | 0.0 |
| | | S8 | Yes | 50% | 0.4 | 0.4 | 0.0 | 0.0 | 1.4 | 3.6 | 1.8 | 1.6 | 1.5 | 0.7 | 0.6 | 0.3 | 1.0 | 3.6 | 0.0 |
| | | S8 | Yes | 10% | 0.4 | 0.5 | 0.3 | 0.5 | 2.8 | 5.7 | 3.4 | 2.4 | 2.5 | 1.9 | 1.1 | 0.5 | 1.8 | 5.7 | 0.3 |
| | Post-Closure | S8 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.1 | 0.1 | 0.2 | 0.1 | 0.0 | 0.0 | 0.1 | 0.3 | 0.0 |
| | | S8 | Yes | 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 1.0 | 0.3 | 0.3 | 0.3 | 0.1 | 0.1 | 0.0 | 0.2 | 1.0 | 0.0 |
| | | S8 | Yes | 10% | 0.1 | 0.1 | 0.0 | 0.1 | 0.6 | 1.4 | 0.8 | 0.6 | 0.6 | 0.4 | 0.1 | 0.1 | 0.4 | 1.4 | 0.0 |

**Table K4.16-36: South Fork Koktuli Change in Streamflow End of Mining and Post-Closure—Scenario 8—With Water Treatment**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 86.0 | 54.2 | 0.0 | 0.0 | 1.7 | 11.9 | 15.6 | 9.9 | 6.6 | 7.9 | 7.2 | 16.7 | 18.1 | 86.0 | 0.0 |
| | | S8 | Yes | 50% | 18.4 | 97.9 | 0.0 | 2.2 | 2.7 | 7.7 | 11.0 | 5.8 | 4.8 | 4.0 | 7.0 | 7.3 | 14.1 | 97.9 | 0.0 |
| | | S8 | Yes | 10% | 6.2 | 11.1 | 9.6 | 8.1 | 3.0 | 4.4 | 8.5 | 4.4 | 4.1 | 4.5 | 5.7 | 5.4 | 6.3 | 11.1 | 3.0 |
| | Post-Closure | S8 | Yes | 90% | 7.9 | 0.0 | 0.0 | 0.0 | 0.2 | 2.5 | 2.2 | 1.4 | 1.2 | 0.8 | 1.1 | 1.9 | 1.6 | 7.9 | 0.0 |
| | | S8 | Yes | 50% | 2.0 | 8.2 | 0.0 | 0.0 | 0.6 | 2.0 | 1.7 | 1.3 | 1.1 | 0.4 | 0.9 | 1.2 | 1.6 | 8.2 | 0.0 |
| | | S8 | Yes | 10% | 1.0 | 1.3 | 1.0 | 1.6 | 0.7 | 1.1 | 2.1 | 1.0 | 1.0 | 1.0 | 0.8 | 1.0 | 1.1 | 2.1 | 0.7 |

Notes:

cfs = cubic feet per second
SFK = South Fork Koktuli

Source: Knight Piésold 2019q, r

**Table K4.16-37: Upper Talarik Creek Change in Streamflow End of Mine and Post-Closure—Scenario S8—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| UTC-A | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | Yes | 90% | 119.2 | 104.7 | 93.3 | 89.3 | 228.2 | 291.6 | 175.6 | 173.6 | 209.2 | 218.3 | 171.5 | 140.4 | 167.9 | 291.6 | 89.3 |
| | | S8 | Yes | 50% | 146.3 | 127.0 | 112.6 | 109.7 | 537.2 | 437.7 | 265.5 | 294.0 | 392.1 | 350.1 | 245.8 | 180.0 | 266.5 | 537.2 | 109.7 |
| | | S8 | Yes | 10% | 241.1 | 185.8 | 166.7 | 188.7 | 1013.4 | 917.8 | 504.9 | 481.6 | 650.7 | 525.5 | 433.2 | 272.3 | 465.1 | 1013.4 | 166.7 |
| | End of Mine | S8 | Yes | 90% | 120.4 | 106.1 | 94.6 | 90.6 | 229.0 | 291.8 | 175.9 | 174.3 | 210.0 | 218.8 | 172.5 | 141.5 | 168.8 | 291.8 | 90.6 |
| | | S8 | Yes | 50% | 147.6 | 128.2 | 113.9 | 110.9 | 538.0 | 437.9 | 265.8 | 294.7 | 392.8 | 350.6 | 246.7 | 181.1 | 267.3 | 538.0 | 110.9 |
| | | S8 | Yes | 10% | 242.4 | 187.1 | 167.9 | 190.0 | 1014.2 | 918.0 | 505.3 | 482.4 | 651.4 | 526.1 | 434.1 | 273.4 | 466.0 | 1014.2 | 167.9 |
| | Post-Closure | S8 | Yes | 90% | 119.8 | 105.4 | 94.0 | 89.4 | 228.2 | 291.5 | 175.6 | 174.0 | 209.4 | 218.2 | 171.7 | 140.8 | 168.2 | 291.5 | 89.4 |
| | | S8 | Yes | 50% | 146.9 | 127.6 | 113.3 | 109.8 | 537.2 | 437.6 | 265.5 | 294.4 | 392.2 | 350.0 | 245.9 | 180.4 | 266.7 | 537.2 | 109.8 |
| | | S8 | Yes | 10% | 241.7 | 186.4 | 167.3 | 188.8 | 1013.4 | 917.7 | 505.0 | 482.1 | 650.9 | 525.5 | 433.4 | 272.7 | 465.4 | 1013.4 | 167.3 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 1.3 | 1.3 | 1.3 | 1.3 | 0.8 | 0.2 | 0.4 | 0.8 | 0.7 | 0.5 | 0.9 | 1.1 | 0.9 | 1.3 | 0.2 |
| | | S8 | Yes | 50% | 1.3 | 1.2 | 1.3 | 1.3 | 0.8 | 0.2 | 0.3 | 0.8 | 0.7 | 0.5 | 0.9 | 1.1 | 0.9 | 1.3 | 0.2 |
| | | S8 | Yes | 10% | 1.3 | 1.3 | 1.3 | 1.3 | 0.8 | 0.2 | 0.4 | 0.7 | 0.7 | 0.5 | 0.9 | 1.1 | 0.9 | 1.3 | 0.2 |
| | Post-Closure | S8 | Yes | 90% | 0.6 | 0.6 | 0.7 | 0.1 | 0.0 | -0.1 | 0.1 | 0.5 | 0.1 | 0.0 | 0.2 | 0.5 | 0.3 | 0.7 | -0.1 |
| | | S8 | Yes | 50% | 0.6 | 0.6 | 0.7 | 0.1 | 0.0 | -0.1 | 0.0 | 0.5 | 0.1 | -0.1 | 0.1 | 0.4 | 0.3 | 0.7 | -0.1 |
| | | S8 | Yes | 10% | 0.6 | 0.6 | 0.7 | 0.1 | 0.0 | -0.1 | 0.1 | 0.4 | 0.1 | -0.1 | 0.1 | 0.5 | 0.3 | 0.7 | -0.1 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 1.1 | 1.3 | 1.3 | 1.4 | 0.3 | 0.1 | 0.2 | 0.4 | 0.4 | 0.3 | 0.5 | 0.8 | 0.7 | 1.4 | 0.1 |
| | | S8 | Yes | 50% | 0.9 | 1.0 | 1.1 | 1.2 | 0.1 | 0.0 | 0.1 | 0.3 | 0.2 | 0.2 | 0.4 | 0.6 | 0.5 | 1.2 | 0.0 |
| | | S8 | Yes | 10% | 0.5 | 0.7 | 0.8 | 0.7 | 0.1 | 0.0 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.4 | 0.3 | 0.8 | 0.0 |
| | Post-Closure | S8 | Yes | 90% | 0.5 | 0.6 | 0.7 | 0.1 | 0.0 | 0.0 | 0.0 | 0.3 | 0.1 | 0.0 | 0.1 | 0.3 | 0.2 | 0.7 | 0.0 |
| | | S8 | Yes | 50% | 0.4 | 0.5 | 0.6 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.1 | 0.2 | 0.2 | 0.6 | 0.0 |
| | | S8 | Yes | 10% | 0.3 | 0.3 | 0.4 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.4 | 0.0 |
| UTC-B | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | Yes | 90% | 131.3 | 115.4 | 102.8 | 98.4 | 251.4 | 321.3 | 193.4 | 191.2 | 230.5 | 240.5 | 189.0 | 154.7 | 185.0 | 321.3 | 98.4 |
| | | S8 | Yes | 50% | 161.2 | 139.9 | 124.1 | 120.8 | 591.8 | 482.2 | 292.5 | 323.9 | 431.9 | 385.7 | 270.8 | 198.3 | 293.6 | 591.8 | 120.8 |
| | | S8 | Yes | 10% | 265.6 | 204.7 | 183.6 | 207.9 | 1116.5 | 1011.2 | 556.2 | 530.6 | 716.9 | 579.0 | 477.3 | 300.0 | 512.5 | 1116.5 | 183.6 |
| | End of Mine | S8 | Yes | 90% | 132.6 | 116.7 | 104.1 | 99.7 | 252.2 | 321.5 | 193.8 | 192.0 | 231.3 | 241.0 | 189.9 | 155.8 | 185.9 | 321.5 | 99.7 |
| | | S8 | Yes | 50% | 162.4 | 141.1 | 125.3 | 122.1 | 592.6 | 482.4 | 292.8 | 324.6 | 432.7 | 386.2 | 271.7 | 199.4 | 294.5 | 592.6 | 122.1 |
| | | S8 | Yes | 10% | 266.9 | 206.0 | 184.9 | 209.2 | 1117.3 | 1011.4 | 556.6 | 531.4 | 717.6 | 579.5 | 478.2 | 301.1 | 513.3 | 1117.3 | 184.9 |
| | Post-Closure | S8 | Yes | 90% | 131.9 | 116.0 | 103.5 | 98.5 | 251.4 | 321.2 | 193.5 | 191.7 | 230.7 | 240.4 | 189.1 | 155.1 | 185.3 | 321.2 | 98.5 |
| | | S8 | Yes | 50% | 161.8 | 140.5 | 124.7 | 120.9 | 591.8 | 482.1 | 292.5 | 324.3 | 432.1 | 385.6 | 270.9 | 198.7 | 293.8 | 591.8 | 120.9 |
| | | S8 | Yes | 10% | 266.2 | 205.3 | 184.3 | 208.0 | 1116.5 | 1011.1 | 556.3 | 531.1 | 717.1 | 578.9 | 477.4 | 300.4 | 512.7 | 1116.5 | 184.3 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 1.3 | 1.3 | 1.3 | 1.3 | 0.8 | 0.2 | 0.4 | 0.8 | 0.7 | 0.5 | 0.9 | 1.1 | 0.9 | 1.3 | 0.2 |
| | | S8 | Yes | 50% | 1.3 | 1.2 | 1.3 | 1.3 | 0.8 | 0.2 | 0.3 | 0.8 | 0.7 | 0.5 | 0.9 | 1.1 | 0.9 | 1.3 | 0.2 |
| | | S8 | Yes | 10% | 1.3 | 1.3 | 1.3 | 1.3 | 0.8 | 0.2 | 0.4 | 0.7 | 0.7 | 0.5 | 0.9 | 1.1 | 0.9 | 1.3 | 0.2 |
| | Post-Closure | S8 | Yes | 90% | 0.6 | 0.6 | 0.7 | 0.1 | 0.0 | -0.1 | 0.1 | 0.5 | 0.1 | 0.0 | 0.2 | 0.5 | 0.3 | 0.7 | -0.1 |
| | | S8 | Yes | 50% | 0.6 | 0.6 | 0.7 | 0.1 | 0.0 | -0.1 | 0.0 | 0.5 | 0.1 | -0.1 | 0.1 | 0.4 | 0.3 | 0.7 | -0.1 |
| | | S8 | Yes | 10% | 0.6 | 0.6 | 0.7 | 0.1 | 0.0 | -0.1 | 0.1 | 0.4 | 0.1 | -0.1 | 0.1 | 0.5 | 0.3 | 0.7 | -0.1 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 1.0 | 1.1 | 1.2 | 1.3 | 0.3 | 0.1 | 0.2 | 0.4 | 0.3 | 0.2 | 0.5 | 0.7 | 0.6 | 1.3 | 0.1 |
| | | S8 | Yes | 50% | 0.8 | 0.9 | 1.0 | 1.1 | 0.1 | 0.0 | 0.1 | 0.2 | 0.2 | 0.1 | 0.3 | 0.6 | 0.5 | 1.1 | 0.0 |
| | | S8 | Yes | 10% | 0.5 | 0.6 | 0.7 | 0.6 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.4 | 0.3 | 0.7 | 0.0 |
| | Post-Closure | S8 | Yes | 90% | 0.4 | 0.5 | 0.6 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 | 0.1 | 0.3 | 0.2 | 0.6 | 0.0 |
| | | S8 | Yes | 50% | 0.4 | 0.4 | 0.5 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 | 0.5 | 0.0 |
| | | S8 | Yes | 10% | 0.2 | 0.3 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.4 | 0.0 |
| UTC-C | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | Yes | 90% | 96.7 | 85.8 | 76.8 | 74.1 | 179.4 | 235.3 | 142.7 | 141.4 | 167.4 | 174.4 | 138.2 | 114.0 | 135.5 | 235.3 | 74.1 |
| | | S8 | Yes | 50% | 118.9 | 103.1 | 91.9 | 88.6 | 407.0 | 355.2 | 215.1 | 232.2 | 299.0 | 275.3 | 195.4 | 145.0 | 210.6 | 407.0 | 88.6 |
| | | S8 | Yes | 10% | 189.4 | 145.7 | 134.1 | 142.1 | 774.7 | 722.0 | 407.5 | 370.7 | 496.9 | 418.6 | 337.6 | 210.7 | 362.5 | 774.7 | 134.1 |
| | End of Mine | S8 | Yes | 90% | 98.0 | 87.1 | 78.1 | 75.4 | 180.2 | 235.5 | 143.0 | 142.2 | 168.2 | 175.0 | 139.2 | 115.2 | 136.4 | 235.5 | 75.4 |
| | | S8 | Yes | 50% | 120.2 | 104.4 | 93.1 | 90.0 | 407.7 | 355.4 | 215.5 | 233.0 | 299.8 | 275.8 | 196.3 | 146.2 | 211.5 | 407.7 | 90.0 |
| | | S8 | Yes | 10% | 190.7 | 147.0 | 135.4 | 143.4 | 775.5 | 722.3 | 407.9 | 371.4 | 497.6 | 419.1 | 338.6 | 211.9 | 363.4 | 775.5 | 135.4 |

**Table K4.16-37: Upper Talarik Creek Change in Streamflow End of Mine and Post-Closure—Scenario S8—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S8 | Yes | 90% | 97.3 | 86.4 | 77.5 | 74.2 | 179.4 | 235.2 | 142.7 | 141.9 | 167.6 | 174.4 | 138.4 | 114.5 | 135.8 | 235.2 | 74.2 |
| | | S8 | Yes | 50% | 119.5 | 103.8 | 92.5 | 88.8 | 407.0 | 355.1 | 215.2 | 232.7 | 299.2 | 275.2 | 195.5 | 145.5 | 210.8 | 407.0 | 88.8 |
| | | S8 | Yes | 10% | 190.0 | 146.3 | 134.8 | 142.2 | 774.7 | 722.0 | 407.6 | 371.1 | 497.0 | 418.6 | 337.8 | 211.2 | 362.8 | 774.7 | 134.8 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 1.3 | 1.3 | 1.2 | 1.3 | 0.8 | 0.2 | 0.4 | 0.7 | 0.7 | 0.5 | 0.9 | 1.1 | 0.9 | 1.3 | 0.2 |
| | | S8 | Yes | 50% | 1.3 | 1.3 | 1.3 | 1.3 | 0.8 | 0.2 | 0.3 | 0.8 | 0.7 | 0.5 | 0.9 | 1.2 | 0.9 | 1.3 | 0.2 |
| | | S8 | Yes | 10% | 1.3 | 1.3 | 1.3 | 1.3 | 0.8 | 0.2 | 0.4 | 0.7 | 0.7 | 0.5 | 0.9 | 1.1 | 0.9 | 1.3 | 0.2 |
| | Post-Closure | S8 | Yes | 90% | 0.6 | 0.6 | 0.7 | 0.1 | 0.0 | -0.1 | 0.1 | 0.5 | 0.1 | 0.0 | 0.2 | 0.5 | 0.3 | 0.7 | -0.1 |
| | | S8 | Yes | 50% | 0.6 | 0.6 | 0.7 | 0.1 | 0.0 | -0.1 | 0.0 | 0.5 | 0.1 | -0.1 | 0.1 | 0.5 | 0.3 | 0.7 | -0.1 |
| | | S8 | Yes | 10% | 0.6 | 0.6 | 0.7 | 0.1 | 0.0 | -0.1 | 0.1 | 0.4 | 0.1 | -0.1 | 0.1 | 0.5 | 0.3 | 0.7 | -0.1 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 1.3 | 1.5 | 1.6 | 1.7 | 0.4 | 0.1 | 0.3 | 0.5 | 0.4 | 0.3 | 0.7 | 1.0 | 0.8 | 1.7 | 0.1 |
| | | S8 | Yes | 50% | 1.1 | 1.3 | 1.4 | 1.5 | 0.2 | 0.1 | 0.2 | 0.3 | 0.2 | 0.2 | 0.5 | 0.8 | 0.6 | 1.5 | 0.1 |
| | | S8 | Yes | 10% | 0.7 | 0.9 | 0.9 | 0.9 | 0.1 | 0.0 | 0.1 | 0.2 | 0.1 | 0.1 | 0.3 | 0.5 | 0.4 | 0.9 | 0.0 |
| | Post-Closure | S8 | Yes | 90% | 0.6 | 0.7 | 0.9 | 0.2 | 0.0 | 0.0 | 0.0 | 0.3 | 0.1 | 0.0 | 0.1 | 0.4 | 0.3 | 0.9 | 0.0 |
| | | S8 | Yes | 50% | 0.5 | 0.6 | 0.7 | 0.2 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.1 | 0.3 | 0.2 | 0.7 | 0.0 |
| | | S8 | Yes | 10% | 0.3 | 0.4 | 0.5 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.5 | 0.0 |
| **UTC-D** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | Yes | 90% | 58.8 | 50.8 | 43.3 | 41.1 | 117.9 | 167.1 | 94.8 | 93.4 | 109.0 | 116.7 | 89.5 | 70.6 | 87.7 | 167.1 | 41.1 |
| | | S8 | Yes | 50% | 79.3 | 66.2 | 56.5 | 51.5 | 285.2 | 261.6 | 155.2 | 158.6 | 206.6 | 191.5 | 133.4 | 99.4 | 145.4 | 285.2 | 51.5 |
| | | S8 | Yes | 10% | 121.2 | 96.2 | 87.0 | 83.5 | 569.6 | 563.6 | 310.3 | 259.2 | 354.7 | 303.1 | 247.6 | 147.9 | 262.0 | 569.6 | 83.5 |
| | End of Mine | S8 | Yes | 90% | 60.1 | 52.0 | 44.5 | 42.3 | 118.6 | 167.3 | 95.2 | 94.2 | 109.7 | 117.2 | 90.4 | 71.7 | 88.6 | 167.3 | 42.3 |
| | | S8 | Yes | 50% | 80.5 | 67.5 | 57.7 | 52.7 | 286.0 | 261.8 | 155.6 | 159.3 | 207.3 | 192.0 | 134.3 | 100.6 | 146.3 | 286.0 | 52.7 |
| | | S8 | Yes | 10% | 122.5 | 97.5 | 88.2 | 84.8 | 570.4 | 563.8 | 310.6 | 259.9 | 355.4 | 303.6 | 248.5 | 149.0 | 262.9 | 570.4 | 84.8 |
| | Post-Closure | S8 | Yes | 90% | 59.2 | 51.2 | 43.8 | 41.0 | 117.7 | 166.8 | 94.7 | 93.7 | 108.9 | 116.4 | 89.4 | 70.9 | 87.8 | 166.8 | 41.0 |
| | | S8 | Yes | 50% | 79.7 | 66.6 | 56.9 | 51.4 | 285.0 | 261.3 | 155.1 | 158.9 | 206.6 | 191.2 | 133.3 | 99.7 | 145.5 | 285.0 | 51.4 |
| | | S8 | Yes | 10% | 121.6 | 96.7 | 87.4 | 83.4 | 569.4 | 563.3 | 310.2 | 259.5 | 354.7 | 302.8 | 247.6 | 148.2 | 262.1 | 569.4 | 83.4 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 1.3 | 1.3 | 1.2 | 1.2 | 0.8 | 0.2 | 0.3 | 0.7 | 0.7 | 0.5 | 0.9 | 1.1 | 0.9 | 1.3 | 0.2 |
| | | S8 | Yes | 50% | 1.3 | 1.3 | 1.2 | 1.3 | 0.7 | 0.2 | 0.3 | 0.7 | 0.7 | 0.5 | 0.9 | 1.1 | 0.9 | 1.3 | 0.2 |
| | | S8 | Yes | 10% | 1.3 | 1.3 | 1.2 | 1.3 | 0.7 | 0.2 | 0.3 | 0.7 | 0.7 | 0.5 | 0.9 | 1.1 | 0.9 | 1.3 | 0.2 |
| | Post-Closure | S8 | Yes | 90% | 0.4 | 0.4 | 0.5 | -0.1 | -0.2 | -0.3 | -0.1 | 0.2 | -0.1 | -0.3 | -0.1 | 0.3 | 0.1 | 0.5 | -0.3 |
| | | S8 | Yes | 50% | 0.4 | 0.4 | 0.5 | -0.1 | -0.2 | -0.3 | -0.1 | 0.2 | -0.1 | -0.3 | -0.1 | 0.3 | 0.1 | 0.5 | -0.3 |
| | | S8 | Yes | 10% | 0.4 | 0.4 | 0.5 | -0.1 | -0.2 | -0.3 | -0.1 | 0.2 | -0.1 | -0.3 | -0.1 | 0.3 | 0.1 | 0.5 | -0.3 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 2.1 | 2.5 | 2.8 | 3.0 | 0.6 | 0.1 | 0.4 | 0.8 | 0.7 | 0.4 | 1.0 | 1.6 | 1.3 | 3.0 | 0.1 |
| | | S8 | Yes | 50% | 1.6 | 2.0 | 2.2 | 2.4 | 0.3 | 0.1 | 0.2 | 0.5 | 0.3 | 0.3 | 0.7 | 1.1 | 1.0 | 2.4 | 0.1 |
| | | S8 | Yes | 10% | 1.0 | 1.3 | 1.4 | 1.5 | 0.1 | 0.0 | 0.1 | 0.3 | 0.2 | 0.2 | 0.4 | 0.8 | 0.6 | 1.5 | 0.0 |
| | Post-Closure | S8 | Yes | 90% | 0.7 | 0.9 | 1.1 | -0.2 | -0.2 | -0.2 | -0.1 | 0.3 | 0.0 | -0.2 | -0.1 | 0.4 | 0.2 | 1.1 | -0.2 |
| | | S8 | Yes | 50% | 0.5 | 0.7 | 0.8 | -0.2 | -0.1 | -0.1 | -0.1 | 0.2 | 0.0 | -0.1 | 0.0 | 0.3 | 0.1 | 0.8 | -0.2 |
| | | S8 | Yes | 10% | 0.3 | 0.4 | 0.5 | -0.1 | 0.0 | -0.1 | 0.0 | 0.1 | 0.0 | -0.1 | 0.0 | 0.2 | 0.1 | 0.5 | -0.1 |
| **UTC-E** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | Yes | 90% | 35.2 | 27.2 | 20.9 | 19.1 | 85.4 | 133.3 | 68.4 | 67.4 | 83.0 | 89.3 | 64.0 | 46.6 | 61.7 | 133.3 | 19.1 |
| | | S8 | Yes | 50% | 51.3 | 38.8 | 30.1 | 26.8 | 207.2 | 205.8 | 122.0 | 122.3 | 163.0 | 153.0 | 102.6 | 70.0 | 107.7 | 207.2 | 26.8 |
| | | S8 | Yes | 10% | 88.2 | 65.8 | 58.9 | 56.5 | 430.0 | 455.3 | 252.8 | 206.9 | 282.6 | 244.9 | 197.1 | 112.0 | 204.2 | 455.3 | 56.5 |
| | End of Mine | S8 | Yes | 90% | 36.5 | 28.4 | 22.2 | 20.4 | 86.1 | 133.5 | 68.7 | 68.1 | 83.7 | 89.9 | 64.9 | 47.7 | 62.5 | 133.5 | 20.4 |
| | | S8 | Yes | 50% | 52.6 | 40.1 | 31.3 | 28.0 | 207.9 | 206.0 | 122.3 | 123.0 | 163.7 | 153.5 | 103.5 | 71.2 | 108.6 | 207.9 | 28.0 |
| | | S8 | Yes | 10% | 89.4 | 67.1 | 60.1 | 57.8 | 430.8 | 455.4 | 253.1 | 207.6 | 283.3 | 245.4 | 198.0 | 113.1 | 205.1 | 455.4 | 57.8 |
| | Post-Closure | S8 | Yes | 90% | 35.6 | 27.6 | 21.4 | 19.0 | 85.2 | 133.0 | 68.2 | 67.6 | 82.9 | 89.1 | 64.0 | 46.8 | 61.7 | 133.0 | 19.0 |
| | | S8 | Yes | 50% | 51.7 | 39.2 | 30.5 | 26.7 | 207.0 | 205.5 | 121.9 | 122.5 | 163.0 | 152.8 | 102.6 | 70.3 | 107.8 | 207.0 | 26.7 |
| | | S8 | Yes | 10% | 88.6 | 66.2 | 59.4 | 56.4 | 429.8 | 455.0 | 252.6 | 207.1 | 282.5 | 244.6 | 197.0 | 112.2 | 204.3 | 455.0 | 56.4 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 1.3 | 1.3 | 1.2 | 1.2 | 0.8 | 0.2 | 0.3 | 0.7 | 0.7 | 0.5 | 0.9 | 1.1 | 0.9 | 1.3 | 0.2 |
| | | S8 | Yes | 50% | 1.3 | 1.3 | 1.2 | 1.3 | 0.7 | 0.2 | 0.3 | 0.7 | 0.7 | 0.5 | 0.9 | 1.1 | 0.9 | 1.3 | 0.2 |
| | | S8 | Yes | 10% | 1.3 | 1.3 | 1.2 | 1.3 | 0.7 | 0.2 | 0.3 | 0.7 | 0.7 | 0.5 | 0.9 | 1.1 | 0.9 | 1.3 | 0.2 |

**Table K4.16-37: Upper Talarik Creek Change in Streamflow End of Mine and Post-Closure—Scenario S8—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | Post-Closure | S8 | Yes | 90% | 0.4 | 0.4 | 0.5 | -0.1 | -0.2 | -0.3 | -0.1 | 0.2 | -0.1 | -0.3 | -0.1 | 0.3 | 0.1 | 0.5 | -0.3 |
| | | S8 | Yes | 50% | 0.4 | 0.4 | 0.5 | -0.1 | -0.2 | -0.3 | -0.1 | 0.2 | -0.1 | -0.3 | -0.1 | 0.3 | 0.1 | 0.5 | -0.3 |
| | | S8 | Yes | 10% | 0.4 | 0.4 | 0.5 | -0.1 | -0.2 | -0.3 | -0.1 | 0.2 | -0.1 | -0.3 | -0.1 | 0.3 | 0.1 | 0.5 | -0.3 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 3.6 | 4.8 | 5.9 | 6.5 | 0.9 | 0.1 | 0.5 | 1.1 | 0.9 | 0.6 | 1.4 | 2.4 | 2.4 | 6.5 | 0.1 |
| | | S8 | Yes | 50% | 2.5 | 3.3 | 4.1 | 4.7 | 0.4 | 0.1 | 0.3 | 0.6 | 0.4 | 0.3 | 0.9 | 1.6 | 1.6 | 4.7 | 0.1 |
| | | S8 | Yes | 10% | 1.4 | 2.0 | 2.1 | 2.2 | 0.2 | 0.0 | 0.1 | 0.3 | 0.2 | 0.2 | 0.4 | 1.0 | 0.9 | 2.2 | 0.0 |
| | Post-Closure | S8 | Yes | 90% | 1.1 | 1.6 | 2.2 | -0.5 | -0.2 | -0.2 | -0.2 | 0.4 | -0.1 | -0.3 | -0.1 | 0.6 | 0.4 | 2.2 | -0.5 |
| | | S8 | Yes | 50% | 0.8 | 1.1 | 1.5 | -0.3 | -0.1 | -0.1 | -0.1 | 0.2 | 0.0 | -0.2 | -0.1 | 0.4 | 0.3 | 1.5 | -0.3 |
| | | S8 | Yes | 10% | 0.5 | 0.7 | 0.8 | -0.2 | 0.0 | -0.1 | -0.1 | 0.1 | 0.0 | -0.1 | 0.0 | 0.2 | 0.1 | 0.8 | -0.2 |
| **UTC-F** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | Yes | 90% | 6.1 | 5.1 | 4.2 | 3.7 | 14.7 | 21.1 | 9.8 | 9.4 | 12.0 | 12.6 | 9.5 | 7.5 | 9.7 | 21.1 | 3.7 |
| | | S8 | Yes | 50% | 8.2 | 6.7 | 5.6 | 4.9 | 35.6 | 33.1 | 17.5 | 18.7 | 25.6 | 22.9 | 15.3 | 10.4 | 17.0 | 35.6 | 4.9 |
| | | S8 | Yes | 10% | 14.1 | 10.8 | 9.9 | 9.1 | 67.8 | 75.6 | 39.5 | 32.1 | 43.6 | 38.5 | 29.6 | 16.7 | 32.3 | 75.6 | 9.1 |
| | End of Mine | S8 | Yes | 90% | 6.8 | 5.7 | 4.8 | 4.4 | 15.1 | 21.2 | 10.0 | 9.7 | 12.4 | 12.9 | 10.0 | 8.1 | 10.1 | 21.2 | 4.4 |
| | | S8 | Yes | 50% | 8.8 | 7.3 | 6.2 | 5.6 | 36.0 | 33.2 | 17.7 | 19.1 | 25.9 | 23.2 | 15.8 | 10.9 | 17.5 | 36.0 | 5.6 |
| | | S8 | Yes | 10% | 14.8 | 11.5 | 10.5 | 9.8 | 68.2 | 75.7 | 39.7 | 32.4 | 44.0 | 38.7 | 30.1 | 17.2 | 32.7 | 75.7 | 9.8 |
| | Post-Closure | S8 | Yes | 90% | 6.3 | 5.3 | 4.4 | 3.7 | 14.6 | 21.0 | 9.7 | 9.5 | 12.0 | 12.5 | 9.5 | 7.7 | 9.7 | 21.0 | 3.7 |
| | | S8 | Yes | 50% | 8.4 | 6.9 | 5.8 | 4.9 | 35.5 | 33.0 | 17.4 | 18.9 | 25.6 | 22.8 | 15.3 | 10.5 | 17.1 | 35.5 | 4.9 |
| | | S8 | Yes | 10% | 14.3 | 11.0 | 10.1 | 9.1 | 67.7 | 75.5 | 39.5 | 32.2 | 43.6 | 38.3 | 29.6 | 16.8 | 32.3 | 75.5 | 9.1 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 0.6 | 0.6 | 0.6 | 0.6 | 0.4 | 0.1 | 0.2 | 0.4 | 0.4 | 0.3 | 0.4 | 0.6 | 0.4 | 0.6 | 0.1 |
| | | S8 | Yes | 50% | 0.6 | 0.6 | 0.6 | 0.6 | 0.4 | 0.1 | 0.2 | 0.4 | 0.3 | 0.3 | 0.4 | 0.6 | 0.4 | 0.6 | 0.1 |
| | | S8 | Yes | 10% | 0.6 | 0.6 | 0.6 | 0.6 | 0.4 | 0.1 | 0.2 | 0.4 | 0.4 | 0.3 | 0.4 | 0.6 | 0.4 | 0.6 | 0.1 |
| | Post-Closure | S8 | Yes | 90% | 0.2 | 0.2 | 0.2 | 0.0 | -0.1 | -0.1 | -0.1 | 0.1 | 0.0 | -0.1 | 0.0 | 0.1 | 0.0 | 0.2 | -0.1 |
| | | S8 | Yes | 50% | 0.2 | 0.2 | 0.2 | 0.0 | -0.1 | -0.1 | -0.1 | 0.1 | 0.0 | -0.1 | 0.0 | 0.1 | 0.0 | 0.2 | -0.1 |
| | | S8 | Yes | 10% | 0.2 | 0.2 | 0.2 | 0.0 | -0.1 | -0.1 | -0.1 | 0.1 | 0.0 | -0.1 | 0.0 | 0.1 | 0.0 | 0.2 | -0.1 |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 10.2 | 12.7 | 14.7 | 16.8 | 2.6 | 0.4 | 1.7 | 3.8 | 2.9 | 2.0 | 4.7 | 7.4 | 6.7 | 16.8 | 0.4 |
| | | S8 | Yes | 50% | 7.7 | 9.7 | 11.0 | 12.8 | 1.1 | 0.3 | 1.0 | 1.9 | 1.4 | 1.1 | 2.9 | 5.4 | 4.7 | 12.8 | 0.3 |
| | | S8 | Yes | 10% | 4.4 | 5.9 | 6.2 | 6.9 | 0.6 | 0.1 | 0.4 | 1.1 | 0.8 | 0.7 | 1.5 | 3.4 | 2.7 | 6.9 | 0.1 |
| | Post-Closure | S8 | Yes | 90% | 3.2 | 4.2 | 5.5 | -1.2 | -0.7 | -0.7 | -0.7 | 1.3 | -0.2 | -1.0 | -0.3 | 1.7 | 0.9 | 5.5 | -1.2 |
| | | S8 | Yes | 50% | 2.4 | 3.2 | 4.2 | -0.9 | -0.3 | -0.4 | -0.4 | 0.7 | -0.1 | -0.6 | -0.2 | 1.3 | 0.7 | 4.2 | -0.9 |
| | | S8 | Yes | 10% | 1.4 | 1.9 | 2.4 | -0.5 | -0.2 | -0.2 | -0.2 | 0.4 | -0.1 | -0.3 | -0.1 | 0.8 | 0.4 | 2.4 | -0.5 |
| **Tributary 1.19** | **Streamflow During Baseline, Operations, and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | Baseline | S8 | Yes | 90% | 25.5 | 24.8 | 25.4 | 25.0 | 26.4 | 27.6 | 26.5 | 26.4 | 26.6 | 26.4 | 25.8 | 25.8 | 26.0 | 27.6 | 24.8 |
| | | S8 | Yes | 50% | 26.4 | 26.1 | 26.0 | 25.9 | 30.8 | 33.7 | 29.8 | 28.5 | 28.8 | 28.3 | 27.6 | 26.8 | 28.2 | 33.7 | 25.9 |
| | | S8 | Yes | 10% | 27.7 | 27.2 | 27.1 | 26.9 | 39.5 | 39.9 | 36.7 | 32.0 | 32.0 | 32.7 | 30.9 | 29.2 | 31.8 | 39.9 | 26.9 |
| | End of Mine | S8 | Yes | 90% | 25.6 | 24.8 | 25.4 | 25.0 | 26.4 | 27.6 | 26.5 | 26.4 | 26.7 | 26.4 | 25.9 | 25.8 | 26.0 | 27.6 | 24.8 |
| | | S8 | Yes | 50% | 26.4 | 26.1 | 26.0 | 25.9 | 30.8 | 33.7 | 29.8 | 28.5 | 28.8 | 28.3 | 27.6 | 26.9 | 28.2 | 33.7 | 25.9 |
| | | S8 | Yes | 10% | 27.7 | 27.2 | 27.1 | 26.9 | 39.6 | 39.9 | 36.7 | 32.0 | 32.0 | 32.7 | 30.9 | 29.2 | 31.8 | 39.9 | 26.9 |
| | Post-Closure | S8 | Yes | 90% | 25.8 | 25.0 | 25.6 | 25.2 | 26.6 | 27.8 | 26.7 | 26.6 | 26.8 | 26.6 | 26.1 | 26.0 | 26.2 | 27.8 | 25.0 |
| | | S8 | Yes | 50% | 26.6 | 26.3 | 26.2 | 26.1 | 30.9 | 33.9 | 30.0 | 28.7 | 29.0 | 28.5 | 27.8 | 27.0 | 28.4 | 33.9 | 26.1 |
| | | S8 | Yes | 10% | 27.9 | 27.4 | 27.3 | 27.1 | 39.7 | 40.1 | 36.9 | 32.2 | 32.2 | 32.9 | 31.1 | 29.4 | 32.0 | 40.1 | 27.1 |
| | **Change in Streamflow During Operations and Post-Closure (cfs)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 |
| | | S8 | Yes | 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | S8 | Yes | 10% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Post-Closure | S8 | Yes | 90% | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| | | S8 | Yes | 50% | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| | | S8 | Yes | 10% | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |

**Table K4.16-37: Upper Talarik Creek Change in Streamflow End of Mine and Post-Closure—Scenario S8—With Treated Water**

| Reach | Stage in Mine Life | Scenario | Treated Water | Probability of Exceedance | Month | | | | | | | | | | | | Annual | Monthly Max | Monthly Min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | | | |
| | **Change in Streamflow During Operations and Post-Closure as a Percent of Baseline Streamflow (%)** | | | | | | | | | | | | | | | | | | |
| | End of Mine | S8 | Yes | 90% | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 |
| | | S8 | Yes | 50% | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| | | S8 | Yes | 10% | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.0 |
| | Post-Closure | S8 | Yes | 90% | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.7 | 0.9 | 0.7 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.9 | 0.7 |
| | | S8 | Yes | 50% | 0.7 | 0.8 | 0.8 | 0.8 | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 | 0.7 | 0.8 | 0.6 |
| | | S8 | Yes | 10% | 0.7 | 0.7 | 0.7 | 0.7 | 0.5 | 0.5 | 0.5 | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 | 0.6 | 0.7 | 0.5 |

Notes:

cfs = cubic feet per second
UTC = Upper Talarik Creek

Source: Knight Piésold 2019q, r

**Table K4.16-38: Water Treatment Plant Discharges at End of Mine, Scenario S0 (Base Case)**

| Month | Flow Releases from WTP (cfs) | | | |
|---|---|---|---|---|
| | NFK | SFK | UTC | Total |
| January | 22.6 | 4.2 | 1.6 | 28.4 |
| February | 22.7 | 4.1 | 1.6 | 28.4 |
| March | 22.5 | 4.4 | 1.5 | 28.4 |
| April | 21.0 | 5.9 | 1.5 | 28.4 |
| May | 27.4 | 0.0 | 1.0 | 28.4 |
| June | 27.9 | 0.0 | 0.5 | 28.4 |
| July | 27.1 | 0.6 | 0.7 | 28.4 |
| August | 25.7 | 1.6 | 1.1 | 28.4 |
| September | 26.2 | 1.1 | 1.1 | 28.4 |
| October | 24.4 | 3.1 | 0.9 | 28.4 |
| November | 21.1 | 6.0 | 1.3 | 28.4 |
| December | 22.1 | 4.8 | 1.5 | 28.4 |
| Annual Average | 24.2 | 3.0 | 1.2 | 28.4 |

Notes:
cfs = cubic feet per second
NFK = North Fork Koktuli
SFK = South Fork Koktuli
UTC = Upper Talarik Creek
WTP = water treatment plant
Base case K results in a total withdrawal (i.e., dewatering) rate of 1,540 gpm during mining.
Water Treatment Plants discharge to Reach D on NFK, Reach E on SFK, and Reach F on UTC.
Source: Knight Piésold 2019r

**Table K4.16-39: Water Treatment Plant Discharges at End of Mine, Scenario S7 (High K Scenario)**

| Month | Flow Releases from WTP (cfs) | | | |
|---|---|---|---|---|
| | NFK | SFK | UTC | Total |
| January | 27.1 | 5.0 | 1.9 | 34.1 |
| February | 27.3 | 4.9 | 1.9 | 34.1 |
| March | 27.0 | 5.3 | 1.8 | 34.1 |
| April | 25.2 | 7.1 | 1.8 | 34.1 |
| May | 32.9 | 0.0 | 1.2 | 34.1 |
| June | 33.5 | 0.0 | 0.6 | 34.1 |
| July | 32.5 | 0.7 | 0.8 | 34.1 |
| August | 30.9 | 1.9 | 1.3 | 34.1 |
| September | 31.5 | 1.3 | 1.3 | 34.1 |
| October | 29.3 | 3.7 | 1.1 | 34.1 |
| November | 25.3 | 7.2 | 1.6 | 34.1 |
| December | 26.5 | 5.8 | 1.8 | 34.1 |
| Annual Average | 29.1 | 3.6 | 1.4 | 34.1 |

Notes:
cfs = cubic feet per second
NFK = North Fork Koktuli
SFK = South Fork Koktuli
UTC = Upper Talarik Creek
WTP = water treatment plant
High K (Base Case K × 10) results in a total withdrawal (i.e., dewatering) rate of 4,320 gpm during mining.
Water Treatment Plants discharge to Reach D on NFK, Reach E on SFK, and Reach F on UTC.
Source: Knight Piésold 2019r.

**Table K4.16-40: Water Treatment Plant Discharges at End of Mine, Scenario S8 (Low K Scenario)**

| Month | Flow Releases from WTP (cfs) | | | |
|---|---|---|---|---|
| | NFK | SFK | UTC | Total |
| January | 21.9 | 4.1 | 1.5 | 27.5 |
| February | 22.0 | 4.0 | 1.5 | 27.5 |
| March | 21.8 | 4.3 | 1.5 | 27.5 |
| April | 20.3 | 5.7 | 1.5 | 27.5 |
| May | 26.5 | 0.0 | 1.0 | 27.5 |
| June | 27.0 | 0.0 | 0.5 | 27.5 |
| July | 26.2 | 0.6 | 0.7 | 27.5 |
| August | 24.9 | 1.5 | 1.1 | 27.5 |
| September | 25.4 | 1.1 | 1.1 | 27.5 |
| October | 23.6 | 3.0 | 0.9 | 27.5 |
| November | 20.4 | 5.8 | 1.3 | 27.5 |
| December | 21.4 | 4.6 | 1.5 | 27.5 |
| Annual Average | 23.5 | 2.9 | 1.2 | 27.5 |

Notes:
cfs = cubic feet per second
NFK = North Fork Koktuli
SFK = South Fork Koktuli
UTC = Upper Talarik Creek
WTP = water treatment plant
Low K (Base Case K × 0.1) results in a total withdrawal (i.e., dewatering) rate of 600 gpm during mining.
Water Treatment Plants discharge to Reach D on NFK, Reach E on SFK, and Reach F on UTC.
Source: Knight Piésold 2019r

**Table K4.16-41: Water Treatment Plant Discharges Post-Closure, Scenario S0 (Base Case)**

| Month | Flow Releases from WTP (cfs) | | | |
|---|---|---|---|---|
| | NFK | SFK | UT | Total |
| January | 8.8 | 4.4 | 0.7 | 13.9 |
| February | 9.1 | 4.1 | 0.7 | 13.9 |
| March | 8.9 | 4.3 | 0.7 | 13.9 |
| April | 10.0 | 3.8 | 0.1 | 13.9 |
| May | 0.0 | 13.9 | 0.0 | 13.9 |
| June | 0.0 | 13.9 | 0.0 | 13.9 |
| July | 9.5 | 4.2 | 0.2 | 13.9 |
| August | 0.0 | 13.3 | 0.6 | 13.9 |
| September | 0.0 | 13.6 | 0.3 | 13.9 |
| October | 0.0 | 13.8 | 0.1 | 13.9 |
| November | 7.3 | 6.3 | 0.3 | 13.9 |
| December | 8.2 | 5.1 | 0.6 | 13.9 |
| Annual Average | 5.2 | 8.4 | 0.3 | 13.9 |

Notes:
cfs = cubic feet per second
NFK = North Fork Koktuli
SFK = South Fork Koktuli
UTC = Upper Talarik Creek
WTP = water treatment plant
Base Case K results in a total withdrawal (i.e., dewatering) rate of 1,540 gpm during mining.
Water Treatment Plants discharge to Reach D on NFK, Reach E on SFK, and Reach F on UTC.
Source: Knight Piésold 2019q

**Table K4.16-42: Water Treatment Plant Discharges Post-Closure, Scenario S7 (High K Scenario)**

| Month | Flow Releases from WTP (cfs) | | | |
|---|---|---|---|---|
| | NFK | SFK | UT | Total |
| January | 10.4 | 5.2 | 0.8 | 16.4 |
| February | 10.7 | 4.8 | 0.8 | 16.4 |
| March | 10.5 | 5.1 | 0.8 | 16.4 |
| April | 11.8 | 4.5 | 0.1 | 16.4 |
| May | 0.0 | 16.4 | 0.0 | 16.4 |
| June | 0.0 | 16.4 | 0.0 | 16.4 |
| July | 11.2 | 5.0 | 0.2 | 16.4 |
| August | 0.0 | 15.7 | 0.7 | 16.4 |
| September | 0.0 | 16.0 | 0.4 | 16.4 |
| October | 0.0 | 16.3 | 0.1 | 16.4 |
| November | 8.6 | 7.4 | 0.4 | 16.4 |
| December | 9.7 | 6.0 | 0.7 | 16.4 |
| Annual Average | 6.1 | 9.9 | 0.47 | 16.4 |

Notes:
cfs = cubic feet per second
NFK = North Fork Koktuli
SFK = South Fork Koktuli
UTC = Upper Talarik Creek
WTP = water treatment plant
High K (Base Case K × 10) results in a total withdrawal (i.e., dewatering) rate of 4,320 gpm during mining.
Water Treatment Plants discharge to Reach D on NFK, Reach E on SFK, and Reach F on UTC.
Source: Knight Piésold 2019q

**Table K4.16-43: Water Treatment Plant Discharges Post-Closure, Scenario S8 (Low K Scenario)**

| Month | Flow Releases from WTP (cfs) | | | |
|---|---|---|---|---|
| | NFK | SFK | UT | Total |
| January | 8.5 | 4.3 | 0.7 | 13.5 |
| February | 8.8 | 4.0 | 0.7 | 13.5 |
| March | 8.6 | 4.2 | 0.7 | 13.5 |
| April | 9.7 | 3.7 | 0.1 | 13.5 |
| May | 0.0 | 13.5 | 0.0 | 13.5 |
| June | 0.0 | 13.5 | 0.0 | 13.5 |
| July | 9.2 | 4.1 | 0.2 | 13.5 |
| August | 0.0 | 12.9 | 0.6 | 13.5 |
| September | 0.0 | 13.2 | 0.3 | 13.5 |
| October | 0.0 | 13.4 | 0.1 | 13.5 |
| November | 7.1 | 6.1 | 0.3 | 13.5 |
| December | 8.0 | 5.0 | 0.6 | 13.5 |
| Annual Average | 5.0 | 8.2 | 0.3 | 13.5 |

Notes:
cfs = cubic feet per second
NFK = North Fork Koktuli
SFK = South Fork Koktuli
UTC = Upper Talarik Creek
WTP = water treatment plant
Low K (Base Case K × 0.1) results in a total withdrawal (i.e., dewatering) rate of 600 gpm during mining.
Water Treatment Plants discharge to Reach D on NFK, Reach E on SFK, and Reach F on UTC.
Source: Knight Piésold 2019q

**Table K4.16-44: Change in the 50 Percent Probability of Exceedance Streamflow between Baseline and End of Mine with Water Treatment Plant Discharge Based on Scenario S0 (Base Case K)**

| Location | Change in Average Monthly Streamflow from Baseline to End of Mine in Percent (50th Percentile Probability) | | | | | | | | | | | | Annual Mean Monthly Change |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | |
| NFK, Reach A | 2.2 | 10.6 | 19.1 | 23.5 | -6.2 | -12.1 | -8.7 | -9.2 | -8.0 | -7.2 | -3.5 | -3.3 | -0.2 |
| NFK, Reach B | 2.9 | 11.6 | 21.5 | 29.0 | -9.0 | -13.5 | -9.5 | -10.2 | -9.1 | -8.1 | -3.2 | -3.4 | -0.1 |
| NFK, Reach C | 8.2 | 29.0 | 68.1 | 110.2 | -13.3 | -20.4 | -15.6 | -16.4 | -13.9 | -13.4 | -6.3 | -5.4 | 9.2 |
| NFK, Reach D[1] | 101.2 | 127.9 | 157.6 | 170.0 | 26.9 | 23.1 | 44.2 | 46.1 | 36.1 | 34.3 | 44.4 | 73.2 | 73.7 |
| NFK, Trib 1.19 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| SFK, Reach A | -2.7 | -2.7 | -2.1 | -0.8 | -1.4 | -1.6 | -2.8 | -2.4 | -2.3 | -2.5 | -2.3 | -2.7 | -2.2 |
| SFK, Reach B | -2.2 | -1.7 | -0.5 | 1.3 | -2.4 | -2.6 | -3.3 | -3.0 | -3.2 | -2.7 | -2.5 | -2.4 | -2.1 |
| SFK, Reach C | 3.8 | 0.0 | 0.0 | 0.0 | -2.5 | -2.8 | -4.5 | -3.9 | -4.6 | -3.1 | -1.5 | -1.2 | -1.7 |
| SFK, Reach D | 14.6 | 27.5 | 50.9 | 109.0 | -13.5 | -15.0 | -12.9 | -11.9 | -12.5 | -10.2 | 3.7 | 9.3 | 11.6 |
| SFK, Reach E | -50.7 | -51.5 | -53.0 | -52.2 | -32.1 | -33.1 | -34.6 | -37.4 | -35.6 | -38.8 | -44.9 | -49.4 | -42.8 |
| SFK, Trib 1.19 | -13.4 | -15.2 | -17.1 | -19.0 | -3.7 | -4.8 | -7.2 | -6.6 | -5.3 | -8.1 | -10.6 | -12.6 | -10.3 |
| SFK, Trib 1.24 | 18.4 | 97.9 | 0.0 | 2.2 | 2.7 | 7.7 | 11.0 | 5.8 | 4.8 | 4.0 | 7.0 | 7.3 | 14.1 |
| UTC, Reach A | 0.4 | 0.5 | 0.7 | 0.8 | 0.0 | -0.1 | -0.2 | 0.0 | 0.0 | -0.1 | 0.0 | 0.2 | 0.2 |
| UTC, Reach B | 0.4 | 0.5 | 0.6 | 0.7 | 0.0 | -0.1 | -0.2 | 0.0 | 0.0 | -0.1 | 0.0 | 0.2 | 0.2 |
| UTC, Reach C | 0.5 | 0.7 | 0.8 | 0.9 | 0.1 | -0.1 | -0.2 | 0.0 | 0.0 | -0.1 | 0.0 | 0.3 | 0.2 |
| UTC, Reach D | 0.8 | 1.1 | 1.3 | 1.7 | 0.1 | -0.2 | -0.3 | 0.0 | 0.0 | -0.2 | 0.1 | 0.4 | 0.4 |
| UTC, Reach E | 1.2 | 1.9 | 2.5 | 3.2 | 0.1 | -0.2 | -0.4 | -0.1 | -0.1 | -0.2 | 0.1 | 0.6 | 0.7 |
| UTC, Reach F | 3.8 | 5.5 | 6.8 | 8.6 | 0.4 | -0.8 | -1.3 | -0.2 | -0.2 | -0.7 | 0.3 | 1.9 | 2.0 |
| UTC, Trib 1.19 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Notes:
NFK = North Fork Koktuli
SFK = South Fork Koktuli
UTC = Upper Talarik Creek
Values for streamflow change are a percentage of the baseline streamflow
A negative streamflow change means that streamflow during operations would be less than the baseline streamflow; a positive streamflow change means that the streamflow during operations would be greater than the baseline streamflow
Base case K results in a total withdrawal (i.e., dewatering) rate of 1,540 gpm during mining
Water Treatment Plants discharge to Reach D on NFK, Reach E on SFK, and Reach F on UTC
Source: Knight Piésold 2019l, [1] Source: PLP 2020 RFI 161

**Table K4.16-45: Change in the 50 Percent Probability of Exceedance Streamflow between Baseline and End of Mine with Water Treatment Plant Discharge Based on Scenario S7 (High K Scenario)**

| Location | Change in Average Monthly Streamflow from Baseline to End of Mine in Percent (50th Percentile Probability) | | | | | | | | | | | | Annual Mean Monthly Change |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | |
| NFK, Reach A | 7.0 | 17.6 | 28.6 | 34.1 | -4.4 | -10.3 | -6.1 | -6.9 | -5.9 | -5.3 | -1.6 | -1.1 | 3.8 |
| NFK, Reach B | 8.0 | 19.4 | 32.1 | 41.3 | -6.9 | -11.4 | -6.6 | -7.6 | -6.7 | -5.7 | -1.0 | -0.2 | 4.6 |
| NFK, Reach C | 18.7 | 47.4 | 99.3 | 154.4 | -10.5 | -17.7 | -11.3 | -12.7 | -11.1 | -9.4 | -3.0 | 0.5 | 20.4 |
| NFK, Reach D[1] | 123.5 | 155.7 | 191.5 | 206.5 | 33.6 | 29.0 | 54.2 | 56.8 | 44.6 | 42.8 | 55.0 | 89.8 | 90.3 |
| NFK, Trib 1.19 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| SFK, Reach A | -6.2 | -5.2 | -7.0 | -8.0 | -2.4 | -3.3 | -4.9 | -4.3 | -4.2 | -4.5 | -5.1 | -5.4 | -5.0 |
| SFK, Reach B | -5.4 | -3.0 | -4.6 | -4.6 | -3.5 | -4.5 | -6.2 | -5.4 | -5.5 | -5.5 | -6.1 | -5.9 | -5.0 |
| SFK, Reach C | -67.6 | 0.0 | 0.0 | 0.0 | -3.8 | -6.5 | -13.3 | -10.7 | -10.3 | -9.6 | -9.5 | -17.0 | -12.4 |
| SFK, Reach D | -4.5 | 6.6 | 34.2 | 108.2 | -16.5 | -20.3 | -22.0 | -21.2 | -19.8 | -17.7 | -5.8 | -6.7 | 1.2 |
| SFK, Reach E | -64.1 | -66.3 | -68.6 | -68.0 | -34.1 | -35.8 | -39.7 | -42.6 | -40.1 | -43.7 | -52.6 | -60.3 | -51.3 |
| SFK, Trib 1.19 | -13.4 | -15.2 | -17.1 | -19.0 | -3.7 | -4.8 | -7.2 | -6.6 | -5.3 | -8.1 | -10.6 | -12.6 | -10.3 |
| SFK, Trib 1.24 | -8.5 | -57.5 | 0.0 | 0.0 | 1.0 | 4.9 | 2.4 | 0.9 | 0.6 | -2.9 | -4.1 | -1.9 | -5.4 |
| UTC, Reach A | -0.1 | 0.0 | 0.2 | 0.4 | -0.1 | -0.3 | -0.6 | -0.4 | -0.3 | -0.4 | -0.4 | -0.3 | -0.2 |
| UTC, Reach B | -0.1 | 0.0 | 0.2 | 0.3 | -0.1 | -0.3 | -0.5 | -0.3 | -0.3 | -0.4 | -0.3 | -0.2 | -0.2 |
| UTC, Reach C | -0.1 | 0.1 | 0.3 | 0.4 | -0.1 | -0.4 | -0.7 | -0.5 | -0.4 | -0.5 | -0.5 | -0.3 | -0.2 |
| UTC, Reach D | 0.1 | 0.4 | 0.7 | 1.1 | -0.1 | -0.5 | -0.9 | -0.6 | -0.5 | -0.7 | -0.6 | -0.3 | -0.2 |
| UTC, Reach E | 0.1 | 0.7 | 1.3 | 2.1 | -0.1 | -0.6 | -1.1 | -0.7 | -0.6 | -0.8 | -0.7 | -0.4 | -0.1 |
| UTC, Reach F | 0.2 | 2.1 | 3.5 | 5.7 | -0.3 | -2.0 | -3.9 | -2.4 | -1.9 | -2.8 | -2.4 | -1.6 | -0.5 |
| UTC, Trib 1.19 | -0.6 | -0.6 | -0.6 | -0.6 | -0.5 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.6 | -0.5 |

Notes:
NFK = North Fork Koktuli
SFK = South Fork Koktuli
UTC = Upper Talarik Creek
Values for streamflow change are a percentage of the baseline streamflow
A negative streamflow change means that streamflow during operations would be less than the baseline streamflow; a positive streamflow change means that the streamflow during operations would be greater than the baseline streamflow
High K (Base Case K × 10) results in a total withdrawal (i.e., dewatering) rate of 4,320 gpm during mining
Water Treatment Plants discharge to Reach D on NFK, Reach E on SFK, and Reach F on UTC
Source: Knight Piésold 2019l, [1] Source: PLP 2020 RFI 161

**Table K4.16-46: Change in the 50 Percent Probability of Exceedance Streamflow between Baseline and End of Mine with Water Treatment Plant Discharge Based on Scenario S8 (Low K Scenario)**

| Location | Change in Average Monthly Streamflow from Baseline to End of Mine in Percent (50th Percentile Probability) | | | | | | | | | | | | Annual Mean Monthly Change |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | |
| NFK, Reach A | 1.4 | 9.4 | 17.5 | 21.9 | -6.5 | -12.4 | -9.1 | -9.5 | -8.3 | -7.5 | -3.8 | -3.7 | -0.9 |
| NFK, Reach B | 2.0 | 10.3 | 19.8 | 27.1 | -9.3 | -13.8 | -10.0 | -10.7 | -9.5 | -8.5 | -3.6 | -4.0 | -0.8 |
| NFK, Reach C | 6.4 | 26.1 | 63.2 | 103.2 | -13.8 | -20.9 | -16.3 | -17.0 | -14.4 | -14.0 | -6.8 | -6.3 | 7.5 |
| NFK, Reach D[1] | 97.7 | 123.5 | 152.2 | 164.2 | 25.9 | 22.2 | 42.6 | 44.4 | 34.8 | 33.0 | 42.7 | 70.6 | 71.1 |
| NFK, Trib 1.19 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| SFK, Reach A | -2.0 | -2.1 | -1.0 | 0.7 | -1.2 | -1.3 | -2.3 | -2.1 | -2.0 | -2.1 | -1.7 | -2.1 | -1.6 |
| SFK, Reach B | -1.6 | -1.4 | 0.4 | 2.8 | -2.1 | -2.2 | -2.8 | -2.6 | -2.8 | -2.2 | -1.8 | -1.8 | -1.5 |
| SFK, Reach C | 27.2 | 2.7 | 0.0 | 0.0 | -2.3 | -2.1 | -2.9 | -2.5 | -3.5 | -1.9 | 0.4 | 1.6 | 1.4 |
| SFK, Reach D | 21.0 | 35.0 | 59.4 | 116.0 | -12.7 | -13.6 | -10.7 | -9.4 | -10.7 | -8.0 | 6.4 | 14.6 | 15.6 |
| SFK, Reach E | -37.8 | -38.0 | -38.9 | -38.0 | -30.0 | -29.9 | -29.0 | -31.7 | -31.2 | -33.6 | -37.6 | -37.6 | -34.4 |
| SFK, Trib 1.19 | -13.4 | -15.2 | -17.1 | -19.0 | -3.7 | -4.8 | -7.2 | -6.6 | -5.3 | -8.1 | -10.6 | -12.6 | -10.3 |
| SFK, Trib 1.24 | 18.4 | 97.9 | 0.0 | 2.2 | 2.7 | 7.7 | 11.0 | 5.8 | 4.8 | 4.0 | 7.0 | 7.3 | 14.1 |
| UTC, Reach A | 0.9 | 1.0 | 1.1 | 1.2 | 0.1 | 0.0 | 0.1 | 0.3 | 0.2 | 0.2 | 0.4 | 0.6 | 0.5 |
| UTC, Reach B | 0.8 | 0.9 | 1.0 | 1.1 | 0.1 | 0.0 | 0.1 | 0.2 | 0.2 | 0.1 | 0.3 | 0.6 | 0.5 |
| UTC, Reach C | 1.1 | 1.3 | 1.4 | 1.5 | 0.2 | 0.1 | 0.2 | 0.3 | 0.2 | 0.2 | 0.5 | 0.8 | 0.6 |
| UTC, Reach D | 1.6 | 2.0 | 2.2 | 2.4 | 0.3 | 0.1 | 0.2 | 0.5 | 0.3 | 0.3 | 0.7 | 1.1 | 1.0 |
| UTC, Reach E | 2.5 | 3.3 | 4.1 | 4.7 | 0.4 | 0.1 | 0.3 | 0.6 | 0.4 | 0.3 | 0.9 | 1.6 | 1.6 |
| UTC, Reach F | 7.7 | 9.7 | 11.0 | 12.8 | 1.1 | 0.3 | 1.0 | 1.9 | 1.4 | 1.1 | 2.9 | 5.4 | 4.7 |
| UTC, Trib 1.19 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |

Notes:
NFK = North Fork Koktuli
SFK = South Fork Koktuli
UTC = Upper Talarik Creek
Values for streamflow change are a percentage of the baseline streamflow
A negative streamflow change means that streamflow during operations would be less than the baseline streamflow; a positive streamflow change means that the streamflow during operations would be greater than the baseline streamflow
Low K (Base case K × 0.1) results in a total withdrawal (i.e., dewatering) rate of 600 gpm during mining
Water Treatment Plants discharge to Reach D on NFK, Reach E on SFK, and Reach F on UTC

Source: Knight Piésold 2019l, [1] Source: PLP 2020 RFI 161

**Table K4.16-47: Change in the 50 Percent Probability of Exceedance Streamflow between Baseline and End of Mine without Water Treatment Plant Discharge Based on Scenario S0 (Base Case K)**

| Location | Change in Average Monthly Streamflow from Baseline to End of Mine in Percent (50th Percentile Probability) | | | | | | | | | | | | Annual Mean Monthly Change |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | |
| NFK, Reach A | -24.5 | -27.9 | -30.7 | -30.6 | -15.5 | -21.3 | -20.7 | -19.6 | -18.4 | -16.1 | -15.3 | -19.9 | -21.7 |
| NFK, Reach B | -27.4 | -30.0 | -33.0 | -32.4 | -19.5 | -23.9 | -23.3 | -22.0 | -20.7 | -18.8 | -17.6 | -21.7 | -24.2 |
| NFK, Reach C | -50.6 | -66.6 | -91.1 | -100.0 | -28.1 | -34.1 | -33.9 | -32.3 | -29.3 | -28.5 | -26.0 | -37.5 | -46.5 |
| NFK, Reach D[1] | -9.9 | -10.8 | -11.2 | -12.3 | -6.1 | -6.4 | -5.8 | -7.2 | -6.2 | -8.0 | -8.5 | -9.3 | -8.5 |
| NFK, Trib 1.19 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| SFK, Reach A | -6.5 | -5.8 | -9.0 | -11.9 | -2.4 | -3.1 | -4.2 | -3.7 | -3.4 | -4.0 | -5.0 | -5.5 | -5.4 |
| SFK, Reach B | -6.1 | -4.1 | -7.6 | -9.2 | -3.3 | -4.3 | -5.1 | -4.3 | -4.4 | -4.7 | -5.8 | -6.2 | -5.4 |
| SFK, Reach C | -80.2 | 0.0 | 0.0 | 0.0 | -2.5 | -5.3 | -9.0 | -8.0 | -7.1 | -7.6 | -9.4 | -19.5 | -12.4 |
| SFK, Reach D | -30.4 | -35.6 | -40.5 | -42.5 | -13.5 | -15.0 | -14.6 | -16.8 | -15.0 | -18.2 | -22.1 | -26.9 | -24.3 |
| SFK, Reach E | -50.7 | -51.5 | -53.0 | -52.2 | -32.1 | -33.1 | -34.6 | -37.4 | -35.6 | -38.8 | -44.9 | 49.4 | -42.8 |
| SFK, Trib 1.19 | -13.4 | -15.2 | -17.1 | -19.0 | -3.7 | -4.8 | -7.2 | -6.6 | -5.3 | -8.1 | -10.6 | -12.6 | -10.3 |
| SFK, Trib 1.24 | 18.4 | 97.9 | 0.0 | 2.2 | 2.7 | 7.7 | 11.0 | 5.8 | 4.8 | 4.0 | 7.0 | 7.3 | 14.1 |
| UTC, Reach A | -0.8 | -0.8 | -0.9 | -0.8 | -0.2 | -0.3 | -0.5 | -0.5 | -0.4 | -0.4 | -0.6 | -0.7 | -0.6 |
| UTC, Reach B | -0.7 | -0.8 | -0.8 | -0.7 | -0.2 | -0.2 | -0.5 | -0.4 | -0.3 | -0.4 | -0.5 | -0.7 | -0.5 |
| UTC, Reach C | -1.0 | -1.1 | -1.0 | -1.0 | -0.2 | -0.3 | -0.6 | -0.6 | -0.5 | -0.5 | -0.7 | -0.9 | -0.7 |
| UTC, Reach D | -1.2 | -1.3 | -1.3 | -1.3 | -0.3 | -0.4 | -0.7 | -0.7 | -0.6 | -0.6 | -0.9 | -1.1 | -0.9 |
| UTC, Reach E | -1.9 | -2.2 | -2.5 | -2.4 | -0.4 | -0.5 | -0.9 | -1.0 | -0.7 | -0.8 | -1.2 | -1.6 | -1.3 |
| UTC, Reach F | -6.0 | -6.4 | -6.6 | -6.6 | -1.0 | -1.5 | -3.3 | -3.1 | -2.3 | -2.7 | -3.9 | -5.4 | -4.1 |
| UTC, Trib 1.19 | -0.7 | -0.8 | -0.8 | -0.8 | -0.7 | -0.7 | -0.7 | -0.7 | -0.7 | -0.8 | -07 | -0.7 | -0.7 |

Notes:
NFK = North Fork Koktuli
SFK = South Fork Koktuli
UTC = Upper Talarik Creek
Values for streamflow change are a percentage of the baseline streamflow
A negative streamflow change means that streamflow during operations would be less than the baseline streamflow; a positive streamflow change means that the streamflow during operations would be greater than the baseline streamflow
Base case K results in a total withdrawal (i.e., dewatering) rate of 1,540 gpm during mining
Water Treatment Plants discharge to Reach D on NFK, Reach E on SFK, and Reach F on UTC
Source: Knight Piésold 2019l, [1] Source: PLP 2020 RFI 161

**Table K4.16-48: Change in the 50 Percent Probability of Exceedance Streamflow between Baseline and End of Mine without Water Treatment Plant Discharge Based on Scenario S7 (High K Scenario)**

| Location | Change in Average Monthly Streamflow from Baseline to End of Mine in Percent (50th Percentile Probability) | | | | | | | | | | | | Annual Mean Monthly Change |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | |
| NFK, Reach A | -24.5 | -27.9 | -30.7 | -30.6 | -15.5 | -21.3 | -20.7 | -19.6 | -18.4 | -16.1 | -15.3 | -19.9 | -21.7 |
| NFK, Reach B | -27.4 | -30.0 | -33.0 | -32.4 | -19.5 | -23.9 | -23.3 | -22.0 | -20.7 | -18.8 | -17.6 | -21.7 | -24.2 |
| NFK, Reach C | -50.6 | -66.6 | -91.1 | -100.0 | -28.1 | -34.1 | -33.9 | -32.3 | -29.3 | -28.5 | -26.0 | -37.5 | -46.5 |
| NFK, Reach D[1] | -9.9 | -10.8 | -11.2 | -12.3 | -6.1 | -6.4 | -5.8 | -7.2 | -6.2 | -8.0 | -8.5 | -9.3 | -8.5 |
| NFK, Trib 1.19 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| SFK, Reach A | -8.7 | -10.3 | -16.5 | -18.9 | -3.6 | -4.8 | -6.6 | -5.8 | -5.7 | -6.2 | -7.6 | -9.1 | -8.7 |
| SFK, Reach B | -8.0 | -8.3 | -14.9 | -17.3 | -4.5 | -6.7 | -8.6 | -7.3 | -7.1 | -7.8 | -8.8 | -10.6 | -9.2 |
| SFK, Reach C | -81.0 | 0.0 | 0.0 | 0.0 | -3.8 | -9.1 | -17.9 | -14.9 | -13.4 | -15.1 | -17.0 | -38.9 | -17.6 |
| SFK, Reach D | -58.5 | -69.1 | -75.5 | -73.6 | -16.5 | -20.3 | -24.0 | -27.1 | -22.8 | -27.3 | -36.8 | -50.1 | -41.8 |
| SFK, Reach E | -64.1 | -66.3 | -68.6 | -68.0 | -34.1 | -35.8 | -39.7 | -42.6 | -40.1 | -43.7 | -52.6 | -60.3 | -51.3 |
| SFK, Trib 1.19 | -13.4 | -15.4 | -17.1 | -19.0 | -3.7 | -4.8 | -7.2 | -6.6 | -5.3 | -8.1 | -10.6 | -12.6 | -10.3 |
| SFK, Trib 1.24 | -8.5 | -57.5 | 0.0 | 0.0 | 1.0 | 4.9 | 2.4 | 0.9 | 0.6 | -2.9 | -4.1 | -1.9 | -5.4 |
| UTC, Reach A | -1.6 | -1.7 | -1.7 | -1.5 | -0.3 | -0.5 | -1.0 | -0.9 | -0.7 | -0.8 | -1.1 | -1.4 | -1.1 |
| UTC, Reach B | -1.5 | -1.5 | -1.6 | -1.4 | -0.3 | -0.5 | -0.9 | -0.8 | -0.6 | -0.7 | -1.0 | -1.3 | -1.0 |
| UTC, Reach C | -1.9 | -2.1 | -2.0 | -2.0 | -0.5 | -0.7 | -1.2 | -1.2 | -0.9 | -1.0 | -1.4 | -1.8 | -1.4 |
| UTC, Reach D | -2.4 | -2.5 | -2.5 | -2.4 | -0.5 | -0.7 | -1.4 | -1.4 | -1.1 | -1.2 | -1.7 | -2.1 | -1.7 |
| UTC, Reach E | -3.7 | -4.2 | -4.7 | -4.6 | -0.7 | -0.9 | -1.8 | -1.8 | -1.4 | -1.5 | -2.3 | -3.0 | -2.6 |
| UTC, Reach F | -11.5 | -12.3 | -12.6 | -12.6 | -2.0 | -2.9 | -6.3 | -5.9 | -4.4 | -5.1 | -7.5 | -10.3 | -7.8 |
| UTC, Trib 1.19 | -1.5 | -1.7 | -1.8 | -1.7 | -1.6 | -1.6 | -1.6 | -1.5 | -1.5 | -1.5 | -1.6 | -1.7 | -1.6 |

Notes:
NFK = North Fork Koktuli
SFK = South Fork Koktuli
UTC = Upper Talarik Creek
Values for streamflow change are a percentage of the baseline streamflow
A negative streamflow change means that streamflow during operations would be less than the baseline streamflow; a positive streamflow change means that the streamflow during operations would be greater than the baseline streamflow
High K (Base Case K × 10) results in a total withdrawal (i.e., dewatering) rate of 4,320 gpm during mining
Water Treatment Plants discharge to Reach D on NFK, Reach E on SFK, and Reach F on UTC
Source: Knight Piésold 2019l, [1] Source: PLP 2020 RFI 161

**Table K4.16-49: Change in the 50 Percent Probability of Exceedance Streamflow between Baseline and End of Mine without Water Treatment Plant Discharge Based on Scenario S8 (Low K Scenario)**

| Location | Change in Average Monthly Streamflow from Baseline to End of Mine in Percent (50th Percentile Probability) | | | | | | | | | | | | Annual Mean Monthly Change |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | |
| NFK, Reach A | -24.5 | -27.9 | -30.7 | -30.6 | -15.5 | -21.3 | -20.7 | -19.6 | -18.4 | -16.1 | -15.3 | -19.9 | -21.7 |
| NFK, Reach B | -27.4 | -30.0 | -33.0 | -32.4 | -19.5 | -23.9 | -23.3 | -22.0 | -20.7 | -18.8 | -17.6 | -21.7 | -24.2 |
| NFK, Reach C | -50.6 | -66.6 | -91.1 | -100.0 | -28.1 | -34.1 | -33.9 | -32.3 | -29.3 | -28.5 | -26.0 | -37.5 | -46.5 |
| NFK, Reach D[1] | -9.9 | -10.8 | -11.2 | -12.3 | -6.1 | -6.4 | -5.8 | -7.2 | -6.2 | -8.0 | -8.5 | -9.3 | -8.5 |
| NFK, Trib 1.19 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| SFK, Reach A | -6.0 | -5.0 | -7.6 | -9.9 | -2.2 | -2.8 | -3.7 | -3.3 | -3.0 | -3.5 | -4.6 | -4.9 | -4.7 |
| SFK, Reach B | -5.6 | -3.4 | -6.0 | -7.5 | -3.1 | -3.9 | -4.5 | -3.9 | -3.9 | -4.1 | -5.3 | -5.3 | -4.7 |
| SFK, Reach C | -73.3 | 0.0 | 0.0 | 0.0 | -2.3 | -4.5 | -7.4 | -6.5 | -6.0 | -6.2 | -8.1 | -15.9 | -10.9 |
| SFK, Reach D | -22.6 | -26.1 | -29.1 | -30.7 | -12.7 | -13.6 | -12.3 | -14.2 | -13.1 | -15.8 | -18.7 | -20.4 | -19.1 |
| SFK, Reach E | -37.8 | -38.0 | -38.9 | -38.0 | -30.0 | -29.9 | -29.0 | -31.7 | -31.2 | -33.6 | -37.6 | -37.6 | -34.4 |
| SFK, Trib 1.19 | -13.4 | -15.2 | -17.1 | -19.0 | -3.7 | -4.8 | -7.2 | -6.6 | -5.3 | -8.1 | -10.6 | -12.6 | -10.3 |
| SFK, Trib 1.24 | 18.4 | 97.9 | 0.0 | 2.2 | 2.7 | 7.7 | 11.0 | 5.8 | 4.8 | 4.0 | 7.0 | 7.3 | 14.1 |
| UTC, Reach A | -0.3 | -0.3 | -0.4 | -0.3 | -0.1 | -0.1 | -0.2 | -0.2 | -0.1 | -0.1 | -0.2 | -0.3 | -0.2 |
| UTC, Reach B | -0.3 | -0.3 | -0.3 | -0.3 | -0.1 | -0.1 | -0.2 | -0.2 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 |
| UTC, Reach C | -0.4 | -0.4 | -0.4 | -0.4 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 |
| UTC, Reach D | -0.4 | -0.4 | -0.4 | -0.4 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 |
| UTC, Reach E | -0.6 | -0.7 | -0.7 | -0.7 | -0.1 | -0.1 | -0.3 | -0.3 | -0.2 | -0.2 | -0.4 | -0.5 | -0.4 |
| UTC, Reach F | -1.8 | -1.9 | -2.0 | -2.0 | -0.3 | -0.5 | -1.0 | -0.9 | -0.7 | -0.8 | -1.2 | -1.6 | -1.2 |
| UTC, Trib 1.19 | -0.6 | -0.6 | -0.7 | -0.7 | -0.6 | -0.5 | -0.6 | -0.6 | -0.5 | -0.6 | -0.6 | -0.6 | -0.6 |

Notes:
NFK = North Fork Koktuli
SFK = South Fork Koktuli
UTC = Upper Talarik Creek
Values for streamflow change are a percentage of the baseline streamflow
A negative streamflow change means that streamflow during operations would be less than the baseline streamflow; a positive streamflow change means that the streamflow during operations would be greater than the baseline streamflow
Low K (Base case K × 0.1) results in a total withdrawal (i.e., dewatering) rate of 600 gpm during mining
Water Treatment Plants discharge to Reach D on NFK, Reach E on SFK, and Reach F on UTC
Source: Knight Piésold 2019l, [1] Source: PLP 2020 RFI 161

**Table K4.16-50: Change in the 50 Percent Probability of Exceedance Streamflow between Baseline and Post-Closure with Water Treatment Plant Discharge Based on Scenario S0 (Base Case K)**

| Location | Change in Average Monthly Streamflow from Baseline to Post-Closure in Percent (50th Percentile Probability) | | | | | | | | | | | | Annual Mean Monthly Change |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | |
| NFK, Reach A | -0.7 | 3.0 | 6.9 | 10.0 | -1.1 | -1.8 | -0.5 | -3.0 | -2.4 | -5.6 | -2.9 | -2.2 | 0.0 |
| NFK, Reach B | -0.7 | 3.4 | 8.2 | 13.0 | -1.4 | -1.8 | -0.1 | -3.3 | -2.7 | -6.1 | -2.7 | -2.8 | 0.3 |
| NFK, Reach C | -1.0 | 7.8 | 26.8 | 45.7 | -2.3 | -4.8 | -1.7 | -5.9 | -5.7 | -7.7 | -4.2 | -5.7 | 3.4 |
| NFK, Reach D[1] | 43.3 | 55.6 | 66.8 | 86.8 | 0.0 | 0.0 | 17.5 | 0.0 | 0.0 | 0.0 | 18.3 | 30.6 | 26.6 |
| NFK, Trib 1.19 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| SFK, Reach A | 2.3 | 0.6 | 3.5 | 5.8 | 0.9 | 0.9 | -0.3 | 1.2 | 1.3 | 1.7 | 1.1 | 1.4 | 1.7 |
| SFK, Reach B | 2.4 | -0.2 | 3.7 | 6.1 | 1.2 | 0.8 | -0.6 | 2.3 | 2.3 | 2.8 | 1.4 | 2.0 | 2.0 |
| SFK, Reach C | 125.0 | 2.7 | 0.0 | 0.0 | 4.1 | 6.9 | 5.2 | 13.0 | 9.3 | 12.7 | 9.7 | 19.5 | 17.3 |
| SFK, Reach D | 24.0 | 35.9 | 58.8 | 65.4 | 12.4 | 13.8 | 0.6 | 28.1 | 19.3 | 21.5 | 10.0 | 17.8 | 25.6 |
| SFK, Reach E | -38.8 | -39.2 | -40.3 | -39.5 | -24.4 | -25.5 | -26.8 | -28.6 | -27.3 | -30.2 | -35.1 | -38.1 | -32.8 |
| SFK, Trib 1.19 | -13.4 | -15.3 | -17.1 | -19.0 | -5.9 | -8.4 | -9.1 | -8.4 | -7.7 | -9.2 | -10.8 | -12.7 | -11.4 |
| SFK, Trib 1.24 | 2.0 | 8.2 | 0.0 | 0.0 | 0.6 | 2.0 | 1.7 | 1.3 | 1.1 | 0.4 | 0.9 | 1.2 | 1.6 |
| UTC, Reach A | 0.4 | 0.5 | 0.6 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.1 | 0.3 | 0.2 |
| UTC, Reach B | 0.4 | 0.4 | 0.6 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.1 | 0.2 | 0.2 |
| UTC, Reach C | 0.5 | 0.6 | 0.8 | 0.2 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 | 0.1 | 0.4 | 0.2 |
| UTC, Reach D | 0.6 | 0.7 | 0.9 | -0.1 | -0.1 | -0.1 | -0.1 | 0.2 | 0.0 | -0.1 | 0.0 | 0.3 | 0.2 |
| UTC, Reach E | 0.9 | 1.2 | 1.7 | -0.3 | -0.1 | -0.1 | -0.1 | 0.2 | 0.0 | -0.1 | 0.0 | 0.4 | 0.3 |
| UTC, Reach F | 2.7 | 3.5 | 4.5 | -0.7 | -0.3 | -0.4 | -0.3 | 0.8 | 0.0 | -0.5 | -0.1 | 1.5 | 0.9 |
| UTC, Trib 1.19 | 0.7 | 0.8 | 0.8 | 0.8 | 0.6 | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 | 0.7 |

Notes:
NFK = North Fork Koktuli
SFK = South Fork Koktuli
UTC = Upper Talarik Creek
Values for streamflow change are a percentage of the baseline streamflow
A negative streamflow change means that streamflow during operations would be less than the baseline streamflow; a positive streamflow change means that the streamflow during operations would be greater than the baseline streamflow
Base case K results in a total withdrawal (i.e., dewatering) rate of 1,540 gpm during mining
Water Treatment Plants discharge to Reach D on NFK, Reach E on SFK, and Reach F on UTC
Source: Knight Piésold 2019l, [1] Source: PLP 2020 RFI 161

**Table K4.16-51: Change in the 50 Percent Probability of Exceedance Streamflow between Baseline and Post-Closure with Water Treatment Plant Discharge Based on Scenario S7 (High K Scenario)**

| Location | Change in Average Monthly Streamflow from Baseline to Post-Closure in Percent (50th Percentile Probability) | | | | | | | | | | | | Annual Mean Monthly Change |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | |
| NFK, Reach A | 0.7 | 5.1 | 9.7 | 13.1 | -0.2 | -1.6 | 0.3 | -2.8 | -2.3 | -5.6 | -2.6 | -1.4 | 1.0 |
| NFK, Reach B | 0.9 | 5.7 | 11.3 | 16.7 | -0.5 | -1.5 | 0.9 | -3.1 | -2.6 | -6.1 | -2.4 | -1.8 | 1.5 |
| NFK, Reach C | 2.1 | 13.2 | 36.1 | 60.1 | -0.8 | -4.4 | -0.4 | -5.6 | -5.6 | -7.6 | -3.7 | -4.0 | 6.6 |
| NFK, Reach D[1] | 50.8 | 65.2 | 78.4 | 102.0 | -0.1 | -0.1 | 20.6 | -0.1 | -0.1 | -0.1 | 21.4 | 35.9 | 31.1 |
| NFK, Trib 1.19 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| SFK, Reach A | 2.5 | 0.8 | 3.6 | 5.9 | 1.1 | 1.2 | -0.3 | 1.5 | 1.6 | 2.0 | 1.2 | 1.6 | 1.9 |
| SFK, Reach B | 2.4 | -0.2 | 3.6 | 6.0 | 1.5 | 1.2 | -0.7 | 2.7 | 2.6 | 3.3 | 1.5 | 2.1 | 2.2 |
| SFK, Reach C | 126.5 | 2.7 | 0.0 | 0.0 | 4.9 | 7.8 | 4.8 | 14.3 | 10.3 | 13.9 | 9.8 | 20.3 | 17.9 |
| SFK, Reach D | 21.5 | 34.3 | 59.8 | 67.7 | 15.3 | 16.2 | -1.0 | 31.5 | 21.8 | 24.3 | 9.2 | 15.6 | 26.4 |
| SFK, Reach E | -44.4 | -45.0 | -46.5 | -45.9 | -25.4 | -26.5 | -28.8 | -30.4 | -29.1 | -31.9 | -38.2 | -42.5 | -25.4 |
| SFK, Trib 1.19 | -13.4 | -15.3 | -17.1 | -19.0 | -5.9 | -8.4 | -9.1 | -8.4 | -7.7 | -9.2 | -10.8 | -12.7 | -11.4 |
| SFK, Trib 1.24 | -0.4 | -5.4 | 0.0 | 0.0 | 0.4 | 1.8 | 0.9 | 0.8 | 0.7 | -0.3 | 0.0 | 0.3 | -0.1 |
| UTC, Reach A | 0.2 | 0.2 | 0.4 | -0.2 | -0.1 | -0.1 | -0.2 | 0.0 | -0.1 | -0.2 | -0.2 | 0.0 | 0.0 |
| UTC, Reach B | 0.2 | 0.2 | 0.3 | -0.2 | -0.1 | -0.1 | -0.2 | 0.0 | -0.1 | -0.2 | -0.2 | 0.0 | 0.0 |
| UTC, Reach C | 0.2 | 0.3 | 0.5 | -0.2 | -0.1 | -0.2 | -0.2 | 0.0 | -0.1 | -0.2 | -0.2 | 0.0 | 0.0 |
| UTC, Reach D | 0.0 | 0.2 | 0.4 | -0.8 | -0.2 | -0.3 | -0.4 | -0.1 | -0.3 | -0.5 | -0.5 | -0.2 | -0.2 |
| UTC, Reach E | 0.1 | 0.4 | 0.8 | -1.5 | -0.3 | -0.4 | -0.6 | -0.2 | -0.4 | -0.6 | -0.6 | -0.3 | -0.3 |
| UTC, Reach F | 0.2 | 1.0 | 2.1 | -4.1 | -0.8 | -1.2 | -2.0 | -0.6 | -1.2 | -1.9 | -2.0 | -0.9 | -0.9 |
| UTC, Trib 1.19 | 0.8 | 0.8 | 0.8 | 0.8 | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 | 0.8 | 0.7 |

Notes:
NFK = North Fork Koktuli
SFK = South Fork Koktuli
UTC = Upper Talarik Creek
Values for streamflow change are a percentage of the baseline streamflow
A negative streamflow change means that streamflow during operations would be less than the baseline streamflow; a positive streamflow change means that the streamflow during operations would be greater than the baseline streamflow
High K (Base Case K × 10) results in a total withdrawal (i.e., dewatering) rate of 4,320 gpm during mining
Water Treatment Plants discharge to Reach D on NFK, Reach E on SFK, and Reach F on UTC
Source: Knight Piésold 2019l, [1] Source: PLP 2020 RFI 161

**Table K4.16-52: Change in the 50 Percent Probability of Exceedance Streamflow between Baseline and Post-Closure with Water Treatment Plant Discharge Based on Scenario S8 (Low K Scenario)**

| Location | Change in Average Monthly Streamflow from Baseline to Post-Closure in Percent (50th Percentile Probability) | | | | | | | | | | | | Annual Mean Monthly Change |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | |
| NFK, Reach A | -0.6 | 3.1 | 6.7 | 9.7 | -0.6 | -1.6 | -0.3 | -2.7 | -2.2 | -5.4 | -2.6 | -2.0 | 0.1 |
| NFK, Reach B | -0.5 | 3.4 | 8.0 | 12.5 | -0.9 | -1.6 | 0.1 | -3.0 | -2.5 | -5.9 | -2.4 | -2.6 | 0.4 |
| NFK, Reach C | -0.8 | 7.8 | 25.9 | 44.3 | -1.4 | -4.5 | -1.5 | -5.5 | -5.4 | -7.3 | -3.9 | -5.3 | 3.6 |
| NFK, Reach D[1] | 42.0 | 54.0 | 64.8 | 84.3 | 0.0 | 0.0 | 17.0 | 0.0 | 0.0 | 0.0 | 17.8 | 29.7 | 25.8 |
| NFK, Trib 1.19 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| SFK, Reach A | 2.4 | 0.7 | 3.7 | 5.9 | 0.8 | 0.9 | -0.2 | 1.2 | 1.3 | 1.7 | 1.2 | 1.4 | 1.7 |
| SFK, Reach B | 2.5 | -0.1 | 3.8 | 6.3 | 1.1 | 0.8 | -0.5 | 2.2 | 2.2 | 2.8 | 1.4 | 2.0 | 2.0 |
| SFK, Reach C | 127.2 | 2.7 | 0.0 | 0.0 | 4.0 | 6.8 | 5.3 | 12.9 | 9.3 | 12.6 | 9.8 | 19.5 | 17.5 |
| SFK, Reach D | 25.3 | 37.5 | 60.1 | 66.6 | 12.1 | 13.5 | 1.0 | 27.8 | 19.1 | 21.3 | 10.3 | 18.9 | 26.1 |
| SFK, Reach E | -34.3 | -34.5 | -35.6 | -34.5 | -23.7 | -24.4 | -24.9 | -26.7 | -25.8 | -28.4 | -32.6 | -34.1 | -30.0 |
| SFK, Trib 1.19 | -13.4 | -15.3 | -17.1 | -19.0 | -5.9 | -8.4 | -9.1 | -8.4 | -7.7 | -9.2 | -10.8 | -12.7 | -11.4 |
| SFK, Trib 1.24 | 2.0 | 8.2 | 0.0 | 0.0 | 0.6 | 2.0 | 1.7 | 1.3 | 1.1 | 0.4 | 0.9 | 1.2 | 1.6 |
| UTC, Reach A | 0.5 | 0.7 | 0.8 | 0.7 | 0.1 | 0.0 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.4 | 0.3 |
| UTC, Reach B | 0.4 | 0.4 | 0.5 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 |
| UTC, Reach C | 0.5 | 0.6 | 0.7 | 0.2 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.1 | 0.3 | 0.2 |
| UTC, Reach D | 0.5 | 0.7 | 0.8 | -0.2 | -0.1 | -0.1 | -0.1 | 0.2 | 0.0 | -0.1 | 0.0 | 0.3 | 0.1 |
| UTC, Reach E | 0.8 | 1.1 | 1.5 | -0.3 | -0.1 | -0.1 | -0.1 | 0.2 | 0.0 | -0.2 | -0.1 | 0.4 | 0.3 |
| UTC, Reach F | 2.4 | 3.2 | 4.2 | -0.9 | -0.3 | -0.4 | -0.4 | 0.7 | -0.1 | -0.6 | -0.2 | 1.3 | 0.7 |
| UTC, Trib 1.19 | 0.7 | 0.8 | 0.8 | 0.8 | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 | 0.7 |

Notes:
NFK = North Fork Koktuli
SFK = South Fork Koktuli
UTC = Upper Talarik Creek
Values for streamflow change are a percentage of the baseline streamflow
A negative streamflow change means that streamflow during operations would be less than the baseline streamflow; a positive streamflow change means that the streamflow during operations would be greater than the baseline streamflow
Low K (Base case K × 0.1) results in a total withdrawal (i.e., dewatering) rate of 600 gpm during mining
Water Treatment Plants discharge to Reach D on NFK, Reach E on SFK, and Reach F on UTC
Source: Knight Piésold 2019l, [1] Source: PLP 2020 RFI 161

**Table K4.16-53: Change in the 50 Percent Probability of Exceedance Streamflow between Baseline and Post-Closure without Water Treatment Plant Discharge Based on Scenario S0 (Base Case K)**

| Location | Change in Average Monthly Streamflow from Baseline to Post-Closure in Percent (50th Percentile Probability) | | | | | | | | | | | | Annual Mean Monthly Change |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | |
| NFK, Reach A | -9.8 | -10.8 | -11.6 | -11.6 | -2.7 | -2.8 | -4.7 | -3.7 | -2.9 | -5.8 | -4.3 | -7.2 | -6.5 |
| NFK, Reach B | -10.5 | -11.3 | -12.5 | -12.0 | -3.0 | -2.9 | -4.9 | -4.0 | -3.2 | -6.3 | -4.1 | -8.2 | -6.9 |
| NFK, Reach C | -20.9 | -27.3 | -34.9 | -45.9 | -5.0 | -6.1 | -8.5 | -7.0 | -6.0 | -8.1 | -6.6 | -15.3 | -16.0 |
| NFK, Reach D[1], | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| NFK, Trib 1.19 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| SFK, Reach A | -6.4 | -5.5 | -8.5 | -10.8 | -2.7 | -3.9 | -4.5 | -4.0 | -3.6 | -4.0 | -5.1 | -5.5 | -5.4 |
| SFK, Reach B | -5.8 | -3.6 | -6.6 | -8.2 | -3.5 | -5.1 | -5.6 | -4.9 | -4.8 | -5.0 | -5.9 | -5.8 | -5.4 |
| SFK, Reach C | -1.5 | 0.0 | 0.0 | 0.0 | -2.8 | -5.3 | -4.0 | -4.2 | -5.0 | -4.4 | -3.3 | -2.4 | -2.7 |
| SFK, Reach D | -23.2 | -27.1 | -30.5 | -32.2 | -10.1 | -11.7 | -11.1 | -12.8 | -11.5 | -14.2 | -17.1 | -20.6 | -18.5 |
| SFK, Reach E | -38.8 | -39.2 | -40.3 | -39.5 | -24.4 | -25.5 | -26.8 | -28.6 | -27.3 | -30.2 | -35.1 | -38.1 | -32.8 |
| SFK, Trib 1.19 | -13.4 | -15.3 | -17.1 | -19.0 | -5.9 | -8.4 | -9.1 | -8.4 | -7.7 | -9.2 | -10.8 | -12.7 | -11.4 |
| SFK, Trib 1.24 | 3.8 | 18.7 | 0.0 | 0.0 | 0.7 | 2.2 | 2.3 | 1.6 | 1.3 | 0.8 | 1.5 | 1.7 | 2.9 |
| UTC, Reach A | -0.3 | -0.3 | -0.3 | -0.3 | -0.1 | -0.1 | -0.2 | -0.2 | -0.1 | -0.1 | -0.2 | -0.3 | -0.2 |
| UTC, Reach B | -0.3 | -0.3 | -0.3 | -0.3 | -0.1 | -0.1 | -0.2 | -0.2 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 |
| UTC, Reach C | -0.4 | -0.4 | -0.4 | -0.4 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 |
| UTC, Reach D | -0.3 | -0.3 | -0.4 | -0.3 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.2 |
| UTC, Reach E | -0.5 | -0.6 | -0.7 | -0.6 | -0.1 | -0.1 | -0.3 | -0.3 | -0.2 | -0.2 | -0.3 | -0.4 | -0.4 |
| UTC, Reach F | -1.6 | -1.7 | -1.8 | -1.8 | -0.3 | -0.4 | -0.9 | -0.8 | -0.6 | -0.7 | -1.1 | -1.4 | -1.1 |
| UTC, Trib 1.19 | -0.6 | -0.7 | -0.7 | -0.8 | -0.6 | -0.6 | -0.6 | -0.6 | -0.6 | -0.7 | -0.6 | -0.7 | -0.7 |

Notes:
NFK = North Fork Koktuli
SFK = South Fork Koktuli
UTC = Upper Talarik Creek
Values for streamflow change are a percentage of the baseline streamflow
A negative streamflow change means that streamflow during operations would be less than the baseline streamflow; a positive streamflow change means that the streamflow during operations would be greater than the baseline streamflow
Base case K results in a total withdrawal (i.e., dewatering) rate of 1,540 gpm during mining
Water Treatment Plants discharge to Reach D on NFK, Reach E on SFK, and Reach F on UTC
Source: Knight Piésold 2019l, [1] Source: PLP 2020 RFI 161

**Table K4.16-54: Change in the 50 Percent Probability of Exceedance Streamflow between Baseline and Post-Closure without Water Treatment Plant Discharge Based on Scenario S7 (High K Scenario)**

| Location | Change in Average Monthly Streamflow from Baseline to Post-Closure in Percent (50th Percentile Probability) | | | | | | | | | | | | Annual Mean Monthly Change |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | |
| NFK, Reach A | -10.0 | -11.2 | -12.2 | -12.3 | -2.1 | -2.8 | -4.6 | -3.6 | -2.9 | -5.8 | -4.2 | -7.3 | -6.6 |
| NFK, Reach B | -10.7 | -11.8 | -13.2 | -12.9 | -2.4 | -2.9 | -4.8 | -4.0 | -3.2 | -6.3 | -4.0 | -8.2 | -7.0 |
| NFK, Reach C | -21.4 | -28.6 | -36.8 | -47.6 | -4.0 | -5.9 | -8.4 | -6.9 | -6.0 | -8.1 | -6.5 | -15.3 | -16.3 |
| NFK, Reach D[1] | -0.3 | -0.3 | -0.4 | -0.4 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 |
| NFK, Trib 1.19 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| SFK, Reach A | -4.1 | -2.9 | -3.3 | -3.3 | -9.9 | -13.0 | -9.7 | -9.9 | -11.0 | -10.0 | -7.6 | -5.4 | -7.5 |
| SFK, Reach B | -6.7 | -4.6 | -9.0 | -10.8 | -3.9 | -5.9 | -6.7 | -5.8 | -5.6 | -6.0 | -6.6 | -7.2 | -6.6 |
| SFK, Reach C | -80.2 | 0.0 | 0.0 | 0.0 | -2.7 | -6.6 | -11.0 | -10.2 | -8.5 | -9.2 | -11.3 | -23.9 | -13.6 |
| SFK, Reach D | -34.1 | -40.1 | -45.6 | -47.4 | -11.3 | -13.8 | -14.8 | -16.8 | -14.6 | -17.8 | -22.8 | -29.8 | -25.7 |
| SFK, Reach E | -44.4 | -45.0 | -46.5 | -45.9 | -25.4 | -26.5 | -28.8 | -30.4 | -29.1 | -31.9 | -38.2 | -42.5 | -36.2 |
| SFK, Trib 1.19 | -13.4 | -15.3 | -17.1 | -19.0 | -5.9 | -8.4 | -9.1 | -8.4 | -7.7 | -9.2 | -10.8 | -12.7 | -11.4 |
| SFK, Trib 1.24 | 1.3 | 4.4 | 0.0 | 0.0 | 0.5 | 1.9 | 1.5 | 1.1 | 0.9 | 0.1 | 0.7 | 0.9 | 1.1 |
| UTC, Reach A | -0.7 | -0.7 | -0.8 | -0.7 | -0.2 | -0.2 | -0.4 | -0.4 | -0.3 | -0.3 | -0.5 | -0.6 | -0.5 |
| UTC, Reach B | -0.6 | -0.7 | -0.7 | -0.6 | -0.1 | -0.2 | -0.4 | -0.4 | -0.3 | -0.3 | -0.4 | -0.6 | -0.4 |
| UTC, Reach C | -0.9 | -0.9 | -0.9 | -0.9 | -0.2 | -0.3 | -0.5 | -0.5 | -0.4 | -0.4 | -0.6 | -0.8 | -0.6 |
| UTC, Reach D | -1.0 | -1.0 | -1.1 | -1.0 | -0.2 | -0.3 | -0.6 | -0.6 | -0.5 | -0.5 | -0.7 | -0.9 | -0.7 |
| UTC, Reach E | -0.8 | -0.7 | -0.6 | -0.5 | -0.6 | -0.8 | -0.9 | -0.9 | -1.0 | -1.0 | -1.0 | -0.9 | -0.8 |
| UTC, Reach F | -4.8 | -5.2 | -5.3 | -5.3 | -0.8 | -1.2 | -2.6 | -2.5 | -1.9 | -2.2 | -3.2 | -4.3 | -3.3 |
| UTC, Trib 1.19 | -0.9 | -0.9 | -1.0 | -1.0 | -0.9 | -0.8 | -0.9 | -0.9 | -0.8 | -0.9 | -.09 | -0.9 | -0.9 |

Notes:
NFK = North Fork Koktuli
SFK = South Fork Koktuli
UTC = Upper Talarik Creek
Values for streamflow change are a percentage of the baseline streamflow
A negative streamflow change means that streamflow during operations would be less than the baseline streamflow; a positive streamflow change means that the streamflow during operations would be greater than the baseline streamflow
High K (Base Case K × 10) results in a total withdrawal (i.e., dewatering) rate of 4,320 gpm during mining
Water Treatment Plants discharge to Reach D on NFK, Reach E on SFK, and Reach F on UTC
Source: Knight Piésold 2019l, [1] Source: PLP 2020 RFI 161

**Table K4.16-55: Change in the 50 Percent Probability of Exceedance Streamflow between Baseline and Post-Closure without Water Treatment Plant Discharge Based on Scenario S8 (Low K Scenario)**

| Location | Change in Average Monthly Streamflow from Baseline to Post-Closure in Percent (50th Percentile Probability) | | | | | | | | | | | | Annual Mean Monthly Change |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | |
| NFK, Reach A | -9.4 | -10.4 | -11.4 | -11.3 | -2.1 | -2.6 | -4.4 | -3.4 | -2.7 | -5.6 | -4.0 | -6.9 | -6.2 |
| NFK, Reach B | -10.1 | -10.9 | -12.2 | -11.8 | -2.4 | -2.7 | -4.6 | -3.7 | -3.0 | -6.1 | -3.8 | -7.8 | -6.6 |
| NFK, Reach C | -20.1 | -26.3 | -34.0 | -44.3 | -4.0 | -5.7 | -8.1 | -6.5 | -5.7 | -7.6 | -6.2 | -14.6 | -15.3 |
| NFK, Reach D[1] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| NFK, Trib 1.19 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| SFK, Reach A | -6.2 | -5.3 | -8.0 | -10.2 | -2.6 | -3.8 | -4.3 | -3.9 | -3.5 | -3.9 | -4.9 | -5.3 | -5.2 |
| SFK, Reach B | -5.6 | -3.4 | -6.1 | -7.6 | -3.4 | -4.9 | -5.4 | -4.7 | -4.6 | -4.8 | -5.7 | -5.5 | -5.1 |
| SFK, Reach C | -72.9 | 0.0 | 0.0 | 0.0 | -2.3 | -5.0 | -7.9 | -7.1 | -6.2 | -6.4 | -8.7 | -16.7 | -11.1 |
| SFK, Reach D | -20.5 | -23.8 | -26.6 | -28.2 | -9.9 | -11.2 | -10.3 | -12.0 | -10.9 | -13.4 | -16.0 | -18.4 | -16.8 |
| SFK, Reach E | -34.3 | -34.5 | -35.6 | -34.5 | -23.7 | -24.4 | -24.9 | -26.7 | -25.8 | -28.4 | -32.6 | -34.1 | -30.0 |
| SFK, Trib 1.19 | -13.4 | -15.3 | -17.1 | -19.0 | -5.9 | -8.4 | -9.1 | -8.4 | -7.7 | -9.2 | -10.8 | -12.7 | -11.4 |
| SFK, Trib 1.24 | 3.8 | 18.7 | 0.0 | 0.0 | 0.7 | 2.2 | 2.3 | 1.6 | 1.3 | 0.8 | 1.5 | 1.7 | 2.9 |
| UTC, Reach A | -0.3 | -0.3 | -0.3 | -0.3 | -0.1 | -0.1 | -0.2 | -0.2 | -0.1 | -0.1 | -0.2 | -0.3 | -0.2 |
| UTC, Reach B | -0.3 | -0.3 | -0.3 | -0.3 | -0.1 | -0.1 | -0.2 | -0.2 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 |
| UTC, Reach C | -0.4 | -0.4 | -0.4 | -0.4 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 |
| UTC, Reach D | -0.4 | -0.4 | -0.4 | -0.4 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 |
| UTC, Reach E | -0.6 | -0.6 | -0.7 | -0.7 | -0.1 | -0.1 | -0.2 | -0.3 | -0.2 | -0.2 | -0.3 | -0.5 | -0.4 |
| UTC, Reach F | -1.7 | -1.9 | -1.9 | -1.9 | -0.3 | -0.4 | -0.9 | -0.9 | -0.7 | -0.8 | -1.1 | -1.6 | -1.2 |
| UTC, Trib 1.19 | -0.6 | -0.6 | -0.7 | -0.7 | -0.6 | -0.5 | -0.6 | -0.6 | -0.5 | -0.6 | -0.6 | -0.6 | -0.6 |

Notes:
NFK = North Fork Koktuli
SFK = South Fork Koktuli
UTC = Upper Talarik Creek
Values for streamflow change are a percentage of the baseline streamflow
A negative streamflow change means that streamflow during operations would be less than the baseline streamflow; a positive streamflow change means that the streamflow during operations would be greater than the baseline streamflow
Low K (Base case K × 0.1) results in a total withdrawal (i.e., dewatering) rate of 600 gpm during mining
Water Treatment Plants discharge to Reach D on NFK, Reach E on SFK, and Reach F on UTC
Source: Knight Piésold 2019l, [1] Source: PLP 2020 RFI 161

**Table K4.16-56: Summary North Fork Koktuli River, End of Mine, Reaches A and C**

| Reach | Scenario | Treated Water Discharge | Probability of Exceedance | Range in Average Monthly Streamflow Change (%) | | | Annual Average Monthly Streamflow Change (%) |
|---|---|---|---|---|---|---|---|
| A | S0 – Base Case | No | 90% | -11.5 | to | -36.9 | -22.8 |
| | S0 – Base Case | Yes | 90% | +36.6 | to | -4.0 | +8.1 |
| | S0 – Base Case | No | 50% | -15.3 | to | -30.7 | -21.7 |
| | S0 – Base Case | Yes | 50% | +23.5 | to | -12.1 | -0.2 |
| | S0 – Base Case | No | 10% | -11.4 | to | -22.3 | -16.7 |
| | S0 – Base Case | Yes | 10% | +7.7 | to | -15.9 | -6.7 |
| | S7 – High K | No | 90% | -11.5 | to | -36.9 | -22.8 |
| | S7 – High K | Yes | 90% | +51.3 | to | -0.9 | +14.0 |
| | S7 – High K | No | 50% | -15.3 | to | -30.7 | -21.7 |
| | S7 – High K | Yes | 50% | +34.1 | to | -10.3 | +3.8 |
| | S7 – High K | No | 10% | -11.4 | to | -22.3 | -16.7 |
| | S7 – High K | Yes | 10% | +12.0 | to | -15.2 | -4.7 |
| | S8 – Low K | No | 90% | -11.5 | to | -36.9 | -22.8 |
| | S8 – Low K | Yes | 90% | +34.3 | to | -4.5 | +7.2 |
| | S8 - Low K | No | 50% | -15.3 | to | -30.7 | -21.7 |
| | S8 - Low K | Yes | 50% | +21.9 | to | -12.4 | -0.9 |
| | S8 – Low K | No | 10% | -11.4 | to | -22.3 | -16.7 |
| | S8 – Low K | Yes | 10% | +7.1 | to | -16.3 | -7.0 |
| C | S0 – Base Case | No | 90% | 22.1 | to | -100.0 | -54.0 |
| | S0 – Base Case | Yes | 90% | +385.2 | to | -6.9 | +57.5 |
| | S0 – Base Case | No | 50% | -5.8 | to | -100.0 | -46.5 |
| | S0 – Base Case | Yes | 50% | +110.2 | to | -20.4 | +9.2 |
| | S0 – Base Case | No | 10% | 20.5 | to | -38.3 | -29.2 |
| | S0 – Base Case | Yes | 10% | +12.3 | to | -25.1 | -9.7 |
| | S7 – High K | No | 90% | -22.1 | to | -100.0 | -54.0 |
| | S7 – High K | Yes | 90% | +522.8 | to | -2.8 | +84.6 |
| | S7 – High K | No | 50% | 26.0 | to | -100.0 | -46.5 |
| | S7 – High K | Yes | 50% | +154.4 | to | -17.7 | +20.4 |
| | S7 – High K | No | 10% | 20.5 | to | -38.3 | -29.2 |
| | S7 – High K | Yes | 10% | +22.2 | to | -24.1 | -6.0 |
| | S8 – Low K | No | 90% | 22.1 | to | 100.0 | -54.0 |
| | S8 – Low K | Yes | 90% | +363.4 | to | 7.7 | +53.3 |
| | S8 – Low K | No | 50% | -26.0 | to | -100.0 | -46.5 |
| | S8 – Low K | Yes | 50% | +103.2 | to | -20.9 | +7.5 |
| | S8 – Low K | No | 10% | 20.5 | to | -38.3 | -29.2 |
| | S8 – Low K | Yes | 10% | +10.7 | to | -25.3 | -10.3 |

Note: This table is a summary of some of the data from Table K4.16-20 through Table K4.16-37

**Table K4.16-57: Summary North Fork Koktuli River, Post-Closure, Reaches A and C**

| Reach | Scenario | Treated Water Discharge | Probability of Exceedance | Range in Average Monthly Streamflow Change (%) | | | Annual Average Monthly Streamflow Change (%) |
|---|---|---|---|---|---|---|---|
| A | S0 – Base Case | No | 90% | -1.9 | to | -14.1 | -7.3 |
| | S0 – Base Case | Yes | 90% | +15.0 | to | -5.2 | +1.6 |
| | S0 – Base Case | No | 50% | -2.7 | to | -11.6 | -6.5 |
| | S0 – Base Case | Yes | 50% | +10.0 | to | -5.6 | 0.0 |
| | S0 – Base Case | No | 10% | -2.4 | to | -7.5 | -4.0 |
| | S0 – Base Case | Yes | 10% | +4.6 | to | -4.8 | -1.2 |
| | S7 – High K | No | 90% | -1.6 | to | -15.4 | -7.5 |
| | S7 – High K | Yes | 90% | +18.9 | to | -4.7 | +3.0 |
| | S7 – High K | No | 50% | -2.1 | to | -12.3 | -6.6 |
| | S7 – High K | Yes | 50% | +13.1 | to | -5.6 | +1.0 |
| | S7 – High K | No | 10% | -2.1 | to | -7.5 | -4.0 |
| | S7 – High K | Yes | 10% | +6.5 | to | -4.3 | -0.7 |
| | S8 – Low K | No | 90% | -1.5 | to | -13.7 | -6.9 |
| | S8 – Low K | Yes | 90% | +14.5 | to | -4.7 | +1.8 |
| | S8 – Low K | No | 50% | -2.1 | to | -11.4 | -6.2 |
| | S8 – Low K | Yes | 50% | +9.7 | to | -5.4 | +0.1 |
| | S8 – Low K | No | 10% | -2.1 | to | -7.2 | -3.8 |
| | S8 – Low K | Yes | 10% | +5.0 | to | -4.6 | -1.1 |
| C | S0 – Base Case | No | 90% | -4.5 | to | -96.6 | -28.8 |
| | S0 – Base Case | Yes | 90% | +159.6 | to | -9.2 | +17.5 |
| | S0 – Base Case | No | 50% | -5.0 | to | -45.9 | -16.0 |
| | S0 – Base Case | Yes | 50% | +45.7 | to | -7.7 | +3.4 |
| | S0 - Base Case | No | 10% | -4.4 | to | -13.3 | -8.1 |
| | S0 – Base Case | Yes | 10% | +6.9 | to | -7.9 | -2.2 |
| | S7 – High K | No | 90% | 3.7 | to | -100.0 | -29.8 |
| | S7 – High K | Yes | 90% | +203.3 | to | -7.8 | +24.9 |
| | S7 – High K | No | 50% | 4.0 | to | -47.6 | -16.3 |
| | S7 – High K | Yes | 50% | +60.1 | to | 7.6 | +6.6 |
| | S7 – High K | No | 10% | -3.9 | to | -13.1 | -8.0 |
| | S7 – High K | Yes | 10% | +11.1 | to | -7.2 | -1.1 |
| | S8 – Low K | No | 90% | -22.1 | to | -100.0 | -54.0 |
| | S8 – Low K | Yes | 90% | +156.8 | to | -8.5 | +17.4 |
| | S8 – Low K | No | 50% | -26.0 | to | -100.0 | -46.5 |
| | S8 – Low K | Yes | 50% | +44.3 | to | -7.3 | +3.6 |
| | S8 – Low K | No | 10% | -20.5 | to | -38.3 | -29.2 |
| | S8 – Low K | Yes | 10% | +7.6 | to | -7.7 | -1.9 |

Note: This table is a summary of some of the data from Table K4.16-20 through Table K4.16-37

**Table K4.16-58: Summary South Fork Koktuli River, End of Mine, Reaches A and E**

| Reach | Scenario | Treated Water Discharge | Probability of Exceedance | Range in Average Monthly Streamflow Change (%) | | | Annual Average Monthly Streamflow Change (%) |
|---|---|---|---|---|---|---|---|
| A | S0 – Base Case | No | 90% | -2.6 | to | -15.6 | -6.8 |
| | S0 – Base Case | Yes | 90% | +3.6 | to | -2.9 | -1.6 |
| | S0 – Base Case | No | 50% | -2.4 | to | -11.9 | -5.4 |
| | S0 – Base Case | Yes | 50% | -0.8 | to | -2.8 | -2.2 |
| | S0 – Base Case | No | 10% | -2.2 | to | -5.6 | -3.5 |
| | S0 – Base Case | Yes | 10% | -0.6 | to | -2.4 | -1.9 |
| | S7 – High K | No | 90% | -4.7 | to | -29.3 | -12.2 |
| | S7 – High K | Yes | 90% | -2.1 | to | -11.5 | -6.0 |
| | S7 – High K | No | 50% | -3.6 | to | -18.9 | -8.7 |
| | S7 – High K | Yes | 50% | -2.4 | to | -8.0 | -5.0 |
| | S7 – High K | No | 10% | -2.8 | to | -8.8 | -5.3 |
| | S7 – High K | Yes | 10% | -2.0 | to | -4.6 | -3.3 |
| | S8 – Low K | No | 90% | -3.1 | to | -13.1 | -6.2 |
| | S8 – Low K | Yes | 90% | +5.8 | to | -2.3 | -0.6 |
| | S8 – Low K | No | 50% | -2.6 | to | -10.2 | -5.2 |
| | S8 – Low K | Yes | 50% | +0.7 | to | -2.3 | -1.6 |
| | S8 – Low K | No | 10% | -2.3 | to | -5.0 | -3.5 |
| | S8 – Low K | Yes | 10% | -0.2 | to | -2.0 | -1.6 |
| E | S0 – Base Case | No | 90% | -37.7 | to | -61.2 | -50.7 |
| | S0 – Base Case | Yes | 90% | -37.7 | to | -61.2 | -50.7 |
| | S0 – Base Case | No | 50% | -32.1 | to | -53.0 | -42.8 |
| | S0 – Base Case | Yes | 50% | -32.1 | to | -53.0 | -42.8 |
| | S0 – Base Case | No | 10% | -25.1 | to | -44.7 | -37.0 |
| | S0 – Base Case | Yes | 10% | -25.1 | to | -44.7 | -37.0 |
| | S7 – High K | No | 90% | -41.7 | to | -79.3 | -62.0 |
| | S7 – High K | Yes | 90% | -41.7 | to | -79.3 | -62.0 |
| | S7 – High K | No | 50% | -34.1 | to | -68.6 | -51.3 |
| | S7 – High K | Yes | 50% | -34.1 | to | -68.6 | -51.3 |
| | S7 – High K | No | 10% | -26.5 | to | -53.2 | -42.4 |
| | S7 – High K | Yes | 10% | -26.5 | to | -53.2 | -42.4 |
| | S8 – Low K | No | 90% | -32.8 | to | -40.8 | -37.5 |
| | S8 – Low K | Yes | 90% | -32.8 | to | -40.8 | -37.5 |
| | S8 – Low K | No | 50% | -29.0 | to | -38.9 | -34.4 |
| | S8 – Low K | Yes | 50% | -29.0 | to | -38.9 | -34.4 |
| | S8 – Low K | No | 10% | -23.8 | to | -38.4 | -33.1 |
| | S8 – Low K | Yes | 10% | -23.8 | to | -38.4 | -33.1 |

Note: This table is a summary of some of the data from Table K4.16-20 through Table K4.16-37

**Table K4.16-59: Summary South Fork Koktuli River, Post-Closure, Reaches A and E**

| Reach | Scenario | Treated Water Discharge | Probability of Exceedance | Range in Average Monthly Streamflow Change (%) | | | Annual Average Monthly Streamflow Change (%) |
|---|---|---|---|---|---|---|---|
| A | S0 – Base Case | No | 90% | -3.2 | to | -14.2 | -6.6 |
| | S0 – Base Case | Yes | 90% | +16.3 | to | +1.5 | +5.3 |
| | S0 – Base Case | No | 50% | -2.7 | to | -10.8 | -5.4 |
| | S0 – Base Case | Yes | 50% | +5.8 | to | -0.3 | +1.7 |
| | S0 – Base Case | No | 10% | -2.3 | to | -5.2 | -3.6 |
| | S0 – Base Case | Yes | 10% | +0.9 | to | -1.1 | 0.0 |
| | S7 – High K | No | 90% | -30.9 | to | -53.2 | -43.1 |
| | S7 – High K | Yes | 90% | +16.4 | to | -1.7 | +5.6 |
| | S7 – High K | No | 50% | -25.4 | to | -46.5 | -36.2 |
| | S7 – High K | Yes | 50% | +5.9 | to | -0.3 | +1.9 |
| | S7 – High K | No | 10% | -19.1 | to | -37.9 | -30.7 |
| | S7 – High K | Yes | 10% | +0.9 | to | -1.2 | +0.1 |
| | S8 – Low K | No | 90% | -27.0 | to | -39.5 | -34.5 |
| | S8 – Low K | Yes | 90% | +16.7 | to | +1.6 | +5.3 |
| | S8 – Low K | No | 50% | -23.7 | to | -35.6 | -30.0 |
| | S8 – Low K | Yes | 50% | +5.9 | to | -0.2 | +1.7 |
| | S8 – Low K | No | 10% | -18.1 | to | -33.0 | -27.2 |
| | S8 – Low K | Yes | 10% | +0.9 | to | -1.1 | 0.0 |
| E | S0 – Base Case | No | 90% | -28.8 | to | -46.4 | -39.0 |
| | S0 – Base Case | Yes | 90% | -28.8 | to | -46.4 | -39.0 |
| | S0 – Base Case | No | 50% | -24.4 | to | -40.3 | -32.8 |
| | S0 – Base Case | Yes | 50% | -24.4 | to | -40.3 | -32.8 |
| | S0 – Base Case | No | 10% | -18.5 | to | -35.1 | -28.6 |
| | S0 – Base Case | Yes | 10% | -18.5 | to | -35.1 | -28.6 |
| | S7 – High K | No | 90% | -30.9 | to | -53.2 | -43.1 |
| | S7 – High K | Yes | 90% | -30.9 | to | -53.2 | -43.1 |
| | S7 – High K | No | 50% | -25.4 | to | -46.5 | -36.2 |
| | S7 – High K | Yes | 50% | -25.4 | to | -46.5 | -36.2 |
| | S7 – High K | No | 10% | -19.1 | to | -37.9 | -30.7 |
| | S7 – High K | Yes | 10% | -19.1 | to | -37.9 | -30.7 |
| | S8 – Low K | No | 90% | -27.0 | to | -39.5 | -34.5 |
| | S8 – Low K | Yes | 90% | -27.0 | to | -39.5 | -34.5 |
| | S8 – Low K | No | 50% | -23.7 | to | -35.6 | -30.0 |
| | S8 – Low K | Yes | 50% | -23.7 | to | -35.6 | -30.0 |
| | S8 – Low K | No | 10% | -18.1 | to | -33.0 | -27.2 |
| | S8 – Low K | Yes | 10% | -18.1 | to | -33.0 | -27.2 |

Note: This table is a summary of some of the data from Table K4.16-20 through Table K4.16-37

**Table K4.16-60: Summary Upper Talarik Creek, End of Mine, Reaches A and E**

| Reach | Scenario | Treated Water Discharge | Probability of Exceedance | Range in Average Monthly Streamflow Change (%) | | | Annual Average Monthly Streamflow Change (%) |
|---|---|---|---|---|---|---|---|
| A | S0 – Base Case | No | 90% | -0.4 | to | -1.0 | -0.8 |
| | S0 – Base Case | Yes | 90% | +0.9 | to | -0.3 | +0.2 |
| | S0 – Base Case | No | 50% | -0.2 | to | -0.9 | -0.6 |
| | S0 – Base Case | Yes | 50% | +0.8 | to | -0.2 | +0.2 |
| | S0 – Base Case | No | 10% | -0.1 | to | -0.6 | -0.3 |
| | S0 – Base Case | Yes | 10% | +0.5 | to | -0.1 | +0.1 |
| | S7 – High K | No | 90% | -0.8 | to | -2.0 | -1.5 |
| | S7 – High K | Yes | 90% | +0.4 | to | -0.8 | -0.3 |
| | S7 – High K | No | 50% | -0.3 | to | -1.7 | -1.1 |
| | S7 – High K | Yes | 50% | +0.4 | to | -0.6 | -0.2 |
| | S7 – High K | No | 10% | -0.2 | to | -1.1 | -0.7 |
| | S7 – High K | Yes | 10% | +0.2 | to | -0.3 | -0.1 |
| | S8 – Low K | No | 90% | -0.2 | to | -0.4 | -0.3 |
| | S8 – Low K | Yes | 90% | +1.3 | to | +0.2 | +0.9 |
| | S8 – Low K | No | 50% | -0.1 | to | -0.4 | -0.2 |
| | S8 – Low K | Yes | 50% | +1.3 | to | +0.2 | +0.9 |
| | S8 – Low K | No | 10% | 0.0 | to | -0.2 | -0.1 |
| | S8 – Low K | Yes | 10% | +1.3 | to | +0.2 | +0.9 |
| F | S0 – Base Case | No | 90% | -2.4 | to | -8.9 | -6.2 |
| | S0 – Base Case | Yes | 90% | +11.4 | to | -2.3 | +2.6 |
| | S0 – Base Case | No | 50% | -1.0 | to | -6.6 | -4.1 |
| | S0 – Base Case | Yes | 50% | +8.6 | to | -1.3 | +2.0 |
| | S0 – Base Case | No | 10% | -0.5 | to | -3.9 | -2.3 |
| | S0 – Base Case | Yes | 10% | +4.7 | to | -0.6 | +1.2 |
| | S7 – High K | No | 90% | -4.6 | to | -17.1 | -11.9 |
| | S7 – High K | Yes | 90% | +7.6 | to | -6.8 | -1.3 |
| | S7 – High K | No | 50% | -2.0 | to | -12.6 | -7.8 |
| | S7 – High K | Yes | 50% | +5.7 | to | -3.9 | -0.5 |
| | S7 – High K | No | 10% | -1.0 | to | -7.5 | -4.4 |
| | S7 – High K | Yes | 10% | +3.1 | to | -1.7 | -0.2 |
| | S8 – Low K | No | 90% | -0.7 | to | -2.7 | -1.8 |
| | S8 – Low K | Yes | 90% | +16.8 | to | +0.4 | +6.7 |
| | S8 – Low K | No | 50% | -0.3 | to | -2.0 | -1.2 |
| | S8 – Low K | Yes | 50% | +12.8 | to | +0.3 | +4.7 |
| | S8 – Low K | No | 10% | -0.2 | to | -1.2 | -0.7 |
| | S8 – Low K | Yes | 10% | +6.9 | to | +0.1 | +2.7 |

Note: This table is a summary of some of the data from Table K4.16-19 through Table K4.16-36

**Table K4.16-61: Summary Upper Talarik Creek, Post Closure, Reaches A and E**

| Reach | Scenario | Treated Water Discharge | Probability of Exceedance | Range in Average Monthly Streamflow Change (%) | | | Annual Average Monthly Streamflow Change (%) |
|---|---|---|---|---|---|---|---|
| A | S0 – Base Case | No | 90% | -0.2 | to | -0.4 | -0.3 |
| | S0 – Base Case | Yes | 90% | +0.7 | to | 0.0 | +0.2 |
| | S0 – Base Case | No | 50% | -0.1 | to | -0.3 | -0.2 |
| | S0 – Base Case | Yes | 50% | +0.6 | to | 0.0 | +0.2 |
| | S0 – Base Case | No | 10% | 0.0 | to | -0.2 | -0.1 |
| | S0 – Base Case | Yes | 10% | +0.4 | to | 0.0 | +0.1 |
| | S7 – High K | No | 90% | -0.4 | to | -0.9 | -0.7 |
| | S7 – High K | Yes | 90% | +0.4 | to | -0.8 | -0.3 |
| | S7 – High K | No | 50% | -0.2 | to | -0.8 | -0.5 |
| | S7 – High K | Yes | 50% | +0.4 | to | -0.6 | -0.2 |
| | S7 – High K | No | 10% | -0.1 | to | -0.5 | -0.3 |
| | S7 – High K | Yes | 10% | +0.2 | to | -0.3 | -0.1 |
| | S8 – Low K | No | 90% | -0.2 | to | -0.4 | -0.3 |
| | S8 – Low K | Yes | 90% | +0.7 | to | 0.0 | +0.2 |
| | S8 – Low K | No | 50% | -0.1 | to | -0.3 | -0.2 |
| | S8 – Low K | Yes | 50% | +0.6 | to | 0.0 | +0.2 |
| | S8 – Low K | No | 10% | 0.0 | to | -0.2 | -0.1 |
| | S8 – Low K | Yes | 10% | +0.4 | to | 0.0 | +0.1 |
| F | S0 – Base Case | No | 90% | -0.6 | to | -2.4 | -1.7 |
| | S0 – Base Case | Yes | 90% | +6.0 | to | -1.0 | +1.2 |
| | S0 – Base Case | No | 50% | -0.3 | to | -1.8 | -1.1 |
| | S0 – Base Case | Yes | 50% | +4.5 | to | -0.7 | +0.9 |
| | S0 – Base Case | No | 10% | -0.1 | to | -1.0 | -0.6 |
| | S0 – Base Case | Yes | 10% | +2.5 | to | -0.4 | +0.5 |
| | S7 – High K | No | 90% | -1.9 | to | -7.1 | -5.0 |
| | S7 – High K | Yes | 90% | +2.7 | to | -5.3 | -1.7 |
| | S7 – High K | No | 50% | -0.8 | to | -5.3 | -3.3 |
| | S7 – High K | Yes | 50% | +2.1 | to | -4.1 | -0.9 |
| | S7 – High K | No | 10% | -0.4 | to | -3.1 | -1.8 |
| | S7 – High K | Yes | 10% | +1.2 | to | -2.2 | -0.5 |
| | S8 – Low K | No | 90% | -0.7 | to | -2.6 | -1.8 |
| | S8 – Low K | Yes | 90% | +5.5 | to | -1.2 | +0.9 |
| | S8 – Low K | No | 50% | -0.3 | to | -1.9 | -1.2 |
| | S8 – Low K | Yes | 50% | +4.2 | to | -0.9 | +0.7 |
| | S8 – Low K | No | 10% | -0.2 | to | -1.1 | -0.7 |
| | S8 – Low K | Yes | 10% | +2.4 | to | -0.5 | +0.4 |

Note: This table is a summary of some of the data from Table K4.16-19 through Table K4.16-36