Attachment H

Water Quality Analysis

OPERATIONAL AND RECLAIMED WATER QUALITY

PERMANENTE QUARRY
SANTA CLARA COUNTY, CALIFORNIA



Prepared for:
Lehigh Southwest Cement Company
24001 Stevens Creek Boulevard
Cupertino, CA 95014

Prepared by:
Strategic Engineering & Science, Inc.
17701 Cowan, Suite 210
Irvine, CA 92614

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EXECUTIVE SUMMARY

Strategic Engineering & Science, Inc. (SES) has performed water quality evaluations for the Permanente Quarry (Quarry), as requested by Lehigh Southwest Cement Company (Lehigh). Lehigh seeks to amend its current reclamation plan and obtain a conditional use permit to support mining and reclamation activities over an estimated 20-year period (Project). The Project would simultaneously develop a new limestone quarry, known as the South Quarry, while reclaiming the existing North Quarry. This report describes the Project's anticipated effects on water quality.

This report considers and benefits from a substantial amount of data. This includes environmental monitoring of surface water at gauging stations both in Permanente Creek and Monte Bello Creek over the past two years, in addition to groundwater results from on-site monitoring wells. This data also includes water testing of existing North Quarry pit water quality, and runoff from mining areas and overburden storage areas. The results of bioassay (fish toxicity) testing of background and baseline surface water quality are also considered.

This report concludes that implementation of the Project will result in significant improvements in water quality in Permanente Creek compared to baseline conditions and it also concludes that water quality will not be affected in Monte Bello Creek.

The table below shows the Project's projected effect on water quality for selected constituents in the North and South Quarry before being discharged into Permanente Creek.

Constituent	North Quarry		South Quarry	
	Existing	After Reclamation	Start of Mining	After Reclamation
Antimony (µg/L)	8.2	1.5 - 2.0	0.2 - 1.0	0.3 - 0.4
Arsenic (µg/L)	4.5	2.5 - 3.0	0.8 - 2.2	2 - 3
Cadmium (µg/L)	0.53	0.15 - 0.20	0.05 -0.1	0.15 - 0.20
Copper (µg/L)	1.5	1.5 - 1.6	1 - 1.2	1.6 - 1.7
Manganese (µg/L)	21	15 - 20	0 - 10	0 - 10
Molybdenum (µg/L)	540	85 - 100	19 - 21	10 - 11
Nickel (µg/L)	160	20 - 30	4 - 5	3 - 4
Selenium (µg/L)	82	10 - 15	8 - 12	1 - 2
TDS (mg/L)	790	500 - 600	400 - 600	500 - 600
Sulfate (mg/L)	550	100 - 200	100 - 140	120 - 140

Existing water quality (or "baseline" water quality) in Permanente Creek is generally good with some exceptions. North Quarry mining operations appear to have increased the concentrations of some constituents above natural background levels in water collected in the quarry and potentially in Permanente Creek. Certain constituents, including selenium, nickel, TDS (Total Dissolved Solids), sulfate, antimony, cadmium, arsenic, manganese, molybdenum, and copper, currently show small to moderate increases above background

levels. Manganese concentrations in the North Quarry are believed to be due to a dynamic condition, as typically oxygenated surface waters do not contain much manganese. Therefore, manganese concentrations are expected to decrease significantly before quarry water is discharged to Permanente Creek. Study and bioassay testing of surface waters in Permanente Creek also indicate that fish and benthic organisms are present and are not detrimentally affected by existing water quality.

The Project would improve upon baseline water quality. The primary mechanism for achieving this improvement is the proposed backfilling and reclamation of the North Quarry. Since limestone rock is the major source of the dissolved constituents in water, backfilling would eliminate most current effects of mining by covering areas of limestone rock exposure and by ensuring future surface runoff only occurs from vegetated topsoil or non-limestone rock types. Groundwater quality within the reclaimed North Quarry would also improve as limestone exposures are covered and flooded by surface water inflow and groundwater recharge.

Good water management practices in the South Quarry will complement North Quarry reclamation. As summarized in the report below, all constituents are expected to be at or within regulatory water quality benchmarks after reclamation, including all federal drinking water standards. In particular, selenium concentrations are projected to decrease by 80 percent or more during reclamation.

SES recommends that the Project include a monitoring and verification program during mining and reclamation in order to verify water quality under field conditions. SES also recommends materials handling procedures to assure maximum protection of surface water quality. Such procedures would provide for good drainage around disturbed limestone areas and stockpiles to minimize contact with rainfall and runoff. Additional recommendations and considerations are included in the body of this report.

1.0 INTRODUCTION

This report describes the results of the water quality evaluations performed for the amendment to the reclamation plan and conditional use permit application for the Permanente Quarry (Project) in Santa Clara County, California (see Project Area, Figure 1). This report provides future water quality projections for flows into the North Quarry and the South Quarry and runoff from the reclaimed quarry areas, and provides recommendations for backfilling and reclamation that enhance water quality.

More specifically, this report addresses:

- Background and baseline water quality at the Project
- Projections of mine water quality during mine backfilling and reclamation
- Projections of runoff water quality during and after reclamation
- Recommended verification monitoring program
- Recommended mined materials and overburden handling procedures

2.0 BACKGROUND

2.1 Existing Operations

The Permanente Quarry (Quarry) is a limestone and aggregate mining operation in the unincorporated foothills of western Santa Clara County, approximately two miles west of the City of Cupertino. The Quarry occupies a portion of a 3,510-acre property owned by Hanson Permanente Cement, Inc., and is operated by Lehigh Southwest Cement Company (collectively, Lehigh).

The Quarry currently comprises approximately 537 acres of operational areas, which consist of surface mining excavations, overburden stockpiling, crushing and processing facilities, access roads, administrative offices, and equipment storage. The Quarry also includes other predominantly undisturbed areas, either held in reserve for future mining or which buffer operations from adjacent land uses. The main operational areas of the Quarry are currently as follows:

- North Quarry: The North Quarry is where mineral extraction currently occurs and has historically taken place. The North Quarry features a large mining pit with elevations that currently range from approximately 750 feet to 1,750 feet above mean sea level (amsl). Limestone and greenstone mined from the North Quarry

are crushed and either processed into aggregate products at Lehigh's on-site Rock Plant or used for cement manufacture at Lehigh's adjacent cement plant. Historically, the North Quarry has filled with water to an approximate elevation of 775 feet amsl except when it is actively dewatered for mining. At present, mining occurs in the North Quarry on the south and west walls above an elevation of 800 feet amsl.

- East Materials Storage Area (EMSA): The EMSA is located to the east of the North Quarry and is currently the primary storage site for overburden. Elevations at the EMSA range from 550 to 920 feet amsl.

- West Materials Storage Area (WMSA): The WMSA is a second overburden storage site, located west of the North Quarry. Elevations in the WMSA range from 1,500 to 1,975 feet amsl. The WMSA is approaching the final elevation and contours, described in the Quarry's existing reclamation plan.

- Rock Plant: The Rock Plant is located in the southeast portion of the Quarry, and processes mined material into aggregate products. The Rock Plant occupies gentle slopes ranging from 580 and 770 feet amsl.

Mining operations take place subject to California's Surface Mining and Reclamation Act (SMARA). SMARA mandates that surface mining operations have an approved reclamation plan that describes how mined lands will be prepared for alternative post-mining uses, and how residual hazards will be addressed. Santa Clara County acts as lead agency under SMARA. The County approved the Quarry's current reclamation plan in March 1985, covering 330 acres.

Lehigh excavates limestone from the Quarry for the production of cement and aggregate. Limestone that is of suitable grade is used for cement production; lower grade limestone is used for aggregate. Unsuitable rock materials (overburden) excavated from the Quarry are permanently stockpiled in the WMSA or EMSA. Overburden materials are comprised of non-limestone rock materials (i.e., greenstones, metabasalts, and graywacke) and some minor amounts of low-grade limestone not suitable for use as aggregate.

A cement manufacturing plant lies adjacent to the Quarry in the east. The cement plant also is owned and operated by Lehigh. The cement plant is separately permitted for industrial use and is not considered part of the Quarry and therefore, is not subject to SMARA's requirements.

2.2 Proposed Project

The proposed Project is the approval of an amendment to the Quarry's reclamation plan. The proposed amendment would broaden the reclamation plan and associated reclamation requirements to include all areas that are currently disturbed by mining activities, including lands scheduled to be disturbed by mining over approximately the next 20 years. The

amendment would provide for the reclamation of existing and planned mining disturbance within 1,105 acres of Lehigh's 3,510-acre ownership over a period of approximately the next 20 years. Under the amendment, areas disturbed by mining would be reclaimed for open space uses.

The Project also includes the approval of a Conditional Use Permit (CUP) for certain mining operations at the Quarry. The CUP would authorize the continuation of mineral extraction in a portion of the planned extraction area south of Permanente Creek, known as the South Quarry. Rock mined at the South Quarry would be transported to existing facilities for processing. The South Quarry is included in the proposed reclamation plan amendment and would be reclaimed according to the requirements therein.

The Project would result in the following conditions and changes at the Quarry:

- South Quarry: The Project would approve a CUP and amend the reclamation plan to provide for concurrent mining and reclamation at the South Quarry. The South Quarry will be developed in five phases over a period of about 20 years, depending on market demand. The approximate pit limits are shown in Figure 2. Reclamation would follow mining within each phase. Mined limestone and greenstone would be transported to existing Quarry facilities for crushing and processing. The ultimate floor in the east half of the South Quarry will be at an elevation of 925 feet amsl, approximately 150 feet below Permanente Creek. During reclamation, the lower benches of the pit will be backfilled to an elevation of 1110-1120 feet amsl, above the level of Permanente Creek.

- Topsoil Storage Area: The Project would amend the reclamation plan to provide for the reclamation of the Topsoil Storage Area, located to the south of the Rock Plant. The Topsoil Storage Area would serve to temporarily store topsoil material removed from the South Quarry until such material is needed for reclamation.

- North Quarry: The Project would amend the current reclamation plan for the North Quarry to reflect the use of the North Quarry as a permanent storage site for overburden extracted from the South Quarry. Reclamation will backfill the North Quarry floor to a minimum elevation of 990 feet amsl. The final phases of reclamation will create new walls along the full depth of the south, southwest, and east sides of the North Quarry pit. Reclamation activities would establish final slope contours and vegetation consistent with the surrounding topography.

- Central Materials Storage Area (CMSA): The Project would amend the reclamation plan to include the CMSA, an overburden storage site located directly west of the EMSA and east of the North Quarry in elevations ranging from 775 to 1270 amsl. The proposed reclamation plan amendment would provide final grading contours and re-vegetation for this area.

- EMSA: Reclamation for the EMSA was provided for in the reclamation plan amendment for the East Materials Storage Area, submitted in April 2009. The EMSA is expected to be in active reclamation at the time of Project approval.

- WMSA: The Project would amend the current reclamation plan for the WMSA to reflect the transition of the adjacent North Quarry reclaimed fill slopes and tie in these slopes to the WMSA's east side. The project also would update the current WMSA re-vegetation design.

- Rock Plant: The Project would amend the reclamation plan to provide a reclamation design for the Rock Plant.

3.0 SURFACE WATER QUALITY

This section describes the hydrology and water quality in the drainage basins in the Project Area and compares data against standards for surface water as established by the Regional Water Quality Control Board (RWQCB) in the current Basin Plan Benchmarks (Benchmarks). This section discusses background (i.e. surface water up-gradient from existing mining areas) and baseline water quality (i.e. adjacent to and downstream from existing mining areas). The Benchmarks, background and baseline conditions serve as a basis of comparison that can be used to evaluate whether future mining activities could result in any water quality impacts. These data are not intended to determine how regulated discharges from current operations affect Permanente Creek water quality compared to regulatory standards. Factors necessary for such a determination, including the hardness of Permanente Creek water and background water quality, have not been fully analyzed in this report.

3.1 Hydrology

The area surrounding the Project Area is drained by Permanente Creek, as well as by Monte Bello Creek which is located in the Stevens Creek Basin. Water quality sampling has taken place at two gauges on Permanente Creek; SW-1, located adjacent to the most western edge of the existing mining operations and SW-2, located downstream from the operations. Sampling is conducted at one gauge on Monte Bello Creek at SW-3, which is unaffected by any of the existing operations.

The catchment areas draining to the above three sampling stations are (Golder, 2010b):

SW-1 662 acres

SW-2 1,707 acres

SW-3 419 acres

Streamflow is generally intermittent and increases rapidly during rainfall events. Flows in Permanente Creek between SW-1 and SW-2 may be reduced by infiltration from the Creek to the North Quarry. The North Quarry bottom is currently approximately 250 feet below the creek bottom (Golder, 2010b). Flows at SW-2 are augmented by water pumped out of the North Quarry on a routine basis to maintain conditions suitable for mining. Water that accumulates in the North Quarry comes from rainfall onto the quarry walls, stormwater runoff from surrounding areas, and from groundwater inflow.

3.2 Water Quality Benchmarks

This report provides an analysis of existing and projected water quality against certain regulatory standards. Potentially applicable standards are defined by the San Francisco Bay RWQCB. The RWQCB regulates water quality based on the intended uses of water. These uses, known as beneficial uses, guide what water quality standards apply to a given water body.

The designated beneficial uses of surface water for Permanente Creek include cold freshwater habitat (COLD), fishing spawning (SPAWN), wildlife (WILD), water contact recreation (REC 1) and non-contact water recreation (REC 2) (San Francisco Area Basin Plan, RWQCB, 2007). Specific numeric Benchmarks have been established for certain metals including arsenic, cadmium, chromium, copper, lead, mercury, selenium, silver, and zinc. These are listed on Table 1, although they have not yet been adjusted to reflect the hardness of the water as called for in the Basin Plan. Generally, these Benchmarks have been derived for the protection of aquatic habitat.

For some water bodies, the RWQCB also applies human drinking water quality standards. The US Environmental Protection Agency (EPA) has established Maximum Contaminant Levels (MCLs) for drinking water, defined as the maximum permissible level of a contaminant in water delivered to a user of a public water system. The RWQCB incorporates these standards where water is designated for municipal use and is meant for human consumption.

In Permanente Creek, surface waters are designated for the protection of aquatic habitat and are not designated for human consumption. Nonetheless, federal drinking water MCLs have been presented in this report as Benchmarks for comparison purposes.

3.3 Background Water Quality

SW-1 in Permanente Creek is not completely upstream of all quarry activities as it is adjacent to the WMSA. Nonetheless, water quality is comparable to SW-3, on the adjacent Monte Bello Creek, for most metals. SW-1 is therefore considered to be unimpacted by mining for these constituents. In contrast, total dissolved solids (TDS), sulfate, iron and selenium at SW-1 are elevated compared to SW-3, indicating that mining activities may be having some impact. While surface flow at station SW-3 in Monte Bello Creek is useful in characterizing background quality for the general area around the Project, it may not be completely representative of background in Permanente Creek. Permanente Creek likely has more naturally occurring mineralized rock outcrops that could be causing increased concentrations of constituents in background water.

Samples were collected at SW-1 and SW-3 in February, April and September 2009 and in January 2010. The results of analyses for dissolved constituents in these waters are provided in Table 1. Surface water at the "background stations" SW-1 and SW-3 meets the Benchmarks, with the exception of TDS and selenium[1].

3.4 Baseline Water Quality

Baseline water quality was established at SW-2 using samples collected at the same time period as the background samples. The results are summarized on Table 2.

Baseline surface water quality generally meets the Benchmarks, with the exception of TDS, nickel and selenium. Dissolved selenium concentrations are contained in background Permanente Creek water and the water collected in the North Quarry. At SW-2, selenium concentrations have ranged from 13 to 81 µg/L at SW-2. North Quarry water sampled in January 2010 had a dissolved selenium concentration of 82 µg/L (Golder, 2010b). Nickel concentrations may not exceed the Benchmarks depending on the hardness of the water.

There is one isolated exception for mercury, which at 0.07 µg/L is not significantly above the 0.025 µg/L, 4-day average goal and is below the 2.4 µg/L one-hour goal. Mercury occurs naturally in the various rock types and is detected in groundwater which is not affected by mining (Table 3).

Waste screen bio-analyses were conducted on water collected at SW-2 in February and April 2009 using fathead Minnows (Pimepholes Primelas). These tests demonstrated that the

[1] The one elevated concentration of mercury is likely due to natural conditions.

selenium exceedances had no effect on fish mortality. All tests had a 100% survival rate. Furthermore, biologists familiar with this area of Permanente Creek have concluded that fish and benthic diversity and abundance in the downstream reaches of the creek are similar to the upper reaches above SW-1 (WRA, 2010).

Comparing the baseline to the background concentrations (Tables 1 and 2) indicates that there are increases in the concentrations of TDS and sulfate (when compared to SW-3), as well as antimony, arsenic, cadmium, manganese, molybdenum, nickel and selenium (when compared to SW-3). However, as mentioned above, with the exception of TDS and selenium, these concentrations do not exceed the Benchmark levels. Data on the hardness of the water would be necessary to determine whether nickel exceeds Benchmark levels.

4.0 GROUNDWATER QUALITY

In addition to characterizing the background water quality, this section briefly describes the geohydrology of the Quarry area and the applicable Benchmarks used for evaluating groundwater quality. The Benchmarks and background conditions serve as a basis of comparison that can be used to evaluate whether future mining activities have any water quality impacts.

4.1 Geohydrology

Groundwater in the area typically occurs in fractured bedrock of relatively low permeability. In 2007, the water level in the North Quarry was at an elevation of approximately 754 feet amsl, which correlates well with the likely static groundwater level of approximately 775 feet amsl based on groundwater occurrence in exploratory borings, the location of groundwater seepage within the quarry walls, and the location of the adjacent Permanente Creek (Golder, 2010a). The creek may be hydraulically connected to the North Quarry as suggested by a dry creek bed adjacent to the pit, while surface water flows occur both upstream of and downstream from the North Quarry (Golder, 2010b).

Groundwater seepage was observed during May and June 2007 on a wide bench at approximate elevation of 1,050 feet amsl in the southwest corner of the North Quarry. These observations support the concept of localized groundwater occurrence in the greenstone above the regional static groundwater level due to its low permeability.

4.2 Water Quality Benchmarks

The beneficial uses of groundwater in the Quarry area include Drinking (potable) Water (MUN) and agricultural usage (AGR) (RWQCB, 2007). Specific numeric Benchmarks have also been established by the US EPA and the California EPA. Applicable Benchmarks are listed on Table 3.

4.3 Water Quality

Groundwater sampling was conducted in February, April and October 2009 and January 2010 at five monitoring wells (HG-4, -6, -7, -9, and -10 on Figure 2) (Golder, 2010b). These wells are located in the general area where the future South Quarry is to be located. The results for dissolved metals are provided in Table 3.

Groundwater quality generally meets the Benchmarks with the exception of TDS, sulfate, iron, manganese and molybdenum (Table 3). These five constituents are naturally elevated in groundwater due to the mineralized nature of the bedrock.

5.0 OVERBURDEN CHARACTERIZATION

This section discusses the amount and geologic types of overburden that is expected to be generated during future mining and summarizes the testing conducted on mined material and overburden. These tests were conducted to characterize the potential future water quality impacts associated with the overburden and various mined materials. These results are used in Section 6.0 to project future water quality in the quarries.

5.1 Overburden and Backfill Production Schedule

Over an approximate 20-year Project period, Lehigh is expected to mine the following quantities of product from the South Quarry:

Limestone (for cement):	28.6 million tons
Aggregate production:	36.8 million tons
Aggregate fines:	7.5 million tons

As not all the material that is mined is usable, the following quantities of topsoil and overburden will be generated:

Topsoil (Salvaged for future use)	1.3 million tons
Overburden rock (unmarketable material)	108.3 million tons

Comparing the geologic maps and the mine plans (Appendix A) indicates that overburden will consist of the following rock types:

Greenstone:	35%
Graywacke:	20%
Fault Breccia:	45%

The overburden will be disposed of at the following facilities in the following percentages:

Western Materials Storage Area:	4%
Eastern Materials Storage Area:	5%
Within North Quarry:	88%
Within South Quarry:	3%

Table 4 provides more details on the Quarry backfill volumes and rock types.

5.2 Mined Material and Overburden Geochemistry

Several different types of tests were conducted on the mined material present in the quarries and on the overburden that will be removed in the future. These tests included determining the total metals content and the leachability of general minerals and metals from these materials. Leachability was determined using the Modified California Assessment Manual Waste Extraction Test (CAM WET) and wall washing tests. In addition, North Quarry water runoff from the WMSA was analyzed for general minerals and metals. Finally, acid-base accounting testing was done to confirm that the materials do not have any acid generating potential. Details are contained in the Hydrologic Investigation Report (Golder, 2010b).

This information, together with the data provided in Section 4.3 (Baseline Groundwater Quality), is used in Section 6.0 to determine water quality during future mining activities.

5.2.1 Total Metals

Table 5 provides the total concentrations determined from rock boring samples collected in both the North Quarry and the South Quarry, either as composited or individual samples. Rock types are also indicated in the Table and include the various overburden rock types and limestone which is a mined material (product).

5.2.2 Modified CAM WET Results

CAM WET tests were conducted using de-ionized water. These tests indicate that the mined material (limestone) contains low levels of leachable molybdenum and selenium. The overburden materials such as graywacke, fault breccia, greenstone, metabasalt and chert have lower leachability for molybdenum and a very limited selenium leachability.

5.2.3 Wall Washing

Wall washing tests were performed on exposed faces within the North Quarry in 2009 (Golder, 2010b). These tests involved washing an approximately one-meter square area of rock face with a known volume of water. The resultant wash water was analyzed for dissolved and total metal concentrations and general minerals. The results are provided in Table 7.

These wall washing samples provide an indication as to the amount of dissolved constituents that could be leached out during a rainstorm for the various rock types. The amount of wash water added was approximately equivalent to a 0.25 inch rainstorm event.

5.2.4 Project Water Quality Sampling

Water samples were collected on January 13, 2010 from the water stored in the North Quarry and from runoff from the WMSA. The resultant constituent concentrations are provided in Table 7. The North Quarry sample provides evidence of the typical water quality that is currently entering the quarry by runoff from surrounding areas, the quarry walls, and groundwater.

5.2.5 Acid Generating Potential

The major rock types found in the quarries were tested for acid-generating potential. These included graywacke, limestone, chert, fault breccia, greenstone and metabasalt. All were found to have no potential for acid generation (Golder, 2010b). The ratio of neutralization potential to acid generation potential ranged from four for fault breccia, to the hundreds and thousands for greenstone and metabasalt. Typically, a ratio of greater than three (Hutchison et. al., 1992) indicates there is no acid generating potential.

Net neutralization capacity, i.e. the difference between the rock's neutralization capacity and its acid generating capacity range from 58 Kg (calcium carbonate equivalent – $CaCO_3$) per ton for graywacke to 867 Kg (calcium carbonate equivalent - $CaCO_3$)/t for metabasalt. Typically, values above 20 Kg ($CaCO_3$)/t are considered non-acid generating (Hutchison et. al., 1992).

6.0 WATER QUALITY DURING FUTURE MINING

This section describes the mining and reclamation plans under the Project for the North Quarry and the South Quarry and the rate at which backfilling of the quarries will occur (Section 6.1). Further, it discusses the water balance associated with each during the reclamation period (Section 6.2), describes the expected rates the quarries will fill with water, provides projected future quarry water quality during operations as well as during the reclamation and post-reclamation periods (Section 6.3). These projections are not intended to determine how the resulting Permanente Creek water quality would compare to regulatory standards when water from quarry operations is discharged to Permanente Creek. Factors necessary for such a determination, including the hardness of Permanente Creek water and background water quality, have not been fully analyzed

The water quality projections described in this section are for the North Quarry and the South Quarry that are located within the Permanente Creek's drainage basin. A small portion of the South Quarry will be located in the Monte Bello Creek drainage basin. This is not expected to result in any water quality changes in Monte Bello Creek. All other drainage within the South Quarry will be controlled to flow towards Permanente Creek.

6.1 Quarry Reclamation Plan

After mining ceases, the North Quarry and South Quarry will be reclaimed by backfilling the mining excavations to a specified level. Backfilled areas will be allowed to fill with surface water runoff and infiltrating groundwater. The backfill in each quarry has been designed to ensure that the surface of the backfill will remain above the maximum elevation of the water that accumulates in each quarry, thereby avoiding surface impoundments. Each drainage system will be established with a positive sloping gradient in order to convey excess surface water to Permanente Creek.

Mining and reclamation are planned under five phases. Details of these plans and the various drainage areas discussed below are contained in Appendices B and C. Section 7.0 describes a proposed verification monitoring program that will provide the necessary data to establish whether drainage plan refinements will be necessary.

6.1.1 Inflow to North Quarry

(a) Existing Conditions

The following surfaces drain into North Quarry (including all WMSA haul roads):

Un-reclaimed WMSA:	83 acres
Quarry Walls: greenstone and graywacke	112 acres
Quarry Walls: limestone	161 acres
Total:	**356 acres**

(b) Phase 1

North Quarry will be mined to an elevation of approximately 440 feet amsl. During this period, limestone product will be recovered and overburden rock comprised of greenstone, graywacke and chert will be placed on the west wall of the North Quarry.

At the end of Phase I the following areas will drain into the North Quarry:

Un-reclaimed WMSA:	42 acres
Reclaimed WMSA:	41 acres
Quarry Walls: greenstone and graywacke	112 acres
Quarry Walls: limestone	161 acres
Total:	**356 acres**

At this stage it is assumed that 50% of the WMSA will be reclaimed and runoff from its surface discharged as stormwater to Permanente Creek.

(c) Phase 2

During Phase 2, the North Quarry backfilling will commence. Breccia (including greenstone) and graywacke overburden from the South Quarry will be placed in the North Quarry, which will be backfilled to an elevation of approximately 840 feet amsl.

At the end of Phase 2, the following areas will drain into the partially backfilled North Quarry:

Reclaimed WMSA:	83 acres
Quarry Walls: greenstone and graywacke	124 acres
Quarry Walls: limestone	110 acres
Backfilled North Quarry Area (greenstone and graywacke)	41 acres
Total:	**358 acres**

(d) Phase 3

During Phase 3, backfilling of the North Quarry bottom will be completed to an approximate elevation of 990 feet amsl. Water will progressively accumulate in the backfill via groundwater inflow and surface infiltration through the 18-acre backfill surface (Section 6.2).

(e) Phases 4 and 5

The same conditions apply as in Phase 3.

6.1.2 Runoff from North Quarry

During the initial reclamation phase and through the end of Phase 3, rainfall runoff generated inside the North Quarry will flow into the quarry bottom where it will accumulate or be pumped out. The water will be pumped out during the active mining period. For purposes of this analysis, it is assumed that water will also be pumped out for the first year of Phase 2 when backfilling starts and effective water management procedures for the backfilling period will be established. Thereafter, water will be pumped as necessary to maintain a dry work surface, and otherwise allowed to accumulate as groundwater within the backfill subsurface.

For purposes of determining the amount and quality of the surface water runoff from the North Quarry to Permanente Creek after the backfill reaches its maximum level, the following drainage areas were determined for the end of each of the following phases:

Phase	Quarry Walls (acres)		Total (acres)
	Covered	Exposed	
	Breccia & Greenstone[1]	Limestone	
3	269	89[1]	358
4	294	64[2]	358
5	333	4[3]	337[4]

(1) Includes the 83-acre reclaimed WMSA.
(2) Includes 42 acres of unspecified rock that is conservatively assumed to be limestone (Appendix B).
(3) Includes 6 acres of unspecified rock that is conservatively assumed to be limestone (Appendix B).
(4) The area to the north-east of the WMSA will be reclaimed and drained separately to the north.

6.1.3 Inflow to South Quarry

Mining in the South Quarry is expected to commence during Phase 1 with overburden being hauled for disposal to the CMSA and the North Quarry. The final anticipated elevation of mining is approximately 925 ft amsl. Backfilling is expected to occur during Phase 5 to a minimum elevation of 1,110 feet amsl. The drainage areas below apply to the western portion of the South Quarry development that includes the deepest portion of the South Quarry excavation. The eastern portion includes haul roads and does not contain any mining other than the grading needed for road construction, therefore it is not considered in these analyses.

Mining in the South Quarry from Phases 1 through 3 occurs on the north facing hillside and would not result, in this stage, in a developed “pit” that would accumulate water. Surface water runoff from the mined areas will occur and is discussed in Section 6.1.4 below.

During Phases 3 through 5 of mining, a pit will develop in South Quarry. The areas that drain into this pit are described below.

(a) Phase 4A

Quarry Walls: breccia and graywacke	14 acres
Quarry Walls: limestone	6 acres
Total:	**20 acres**

(b) Phase 4B

Quarry Walls: breccia and graywacke	16 acres
Quarry Walls: limestone	11 acres
Total:	**27 acres**

At the end of Phase 5, the quarry will be backfilled to a minimum elevation of 1,110 feet amsl. At this stage, the inflow to the quarry will be the infiltration through the surface of the backfill and groundwater.

(c) Phase 5

Backfilled South Quarry Area: breccia and graywacke 13 acres

6.1.4 Runoff from South Quarry

Through all phases of mining and reclamation, runoff will occur from the South Quarry area. This runoff is captured in sediment basins (Chang, 2010) before being discharged.

The following drainage areas occur at the end of each phase:

Phase	Quarry Walls (acres)			Total (acres)
	Natural Terrain	Breccia & Graywacke	Limestone	
1	55	-	35	90
2	13	53	41	107
3	-	85	48	133
4A	-	106	32	138
4B	-	119	30	149
5	-	140	37	177

6.2 Quarry Water Balances

Water balance computations have been completed for the North Quarry and the South Quarry for all phases of mining, reclamation, and post-reclamation, typically for a period of 30 years, i.e. 10 years beyond the end of the Project period.

The drainage areas described in Section 6.1, coupled with average monthly precipitation values, were used to determine the volumes of water over time. The following runoff and infiltration coefficients were used to calculate volumes of water flowing into the North Quarry and South Quarry, plus the direct runoff to Permanente Creek from the surface of the operating and reclaimed South Quarry and the reclaimed North Quarry:

North Quarry Parameters and Coefficients

Mean annual rainfall (Golder, 2010b):	22.2 inches
Runoff from WMSA as a percentage of rainfall (typical surface runoff in area):	30%
Runoff from quarry walls (typical):	50%
Infiltration through surface of backfilled quarry before it can be drained:	50%
Infiltration through surface of backfilled quarry after it is drained (reclamation period):	15%

South Quarry Parameters and Coefficients

Mean annual rainfall (Golder, 2010b):	24.6 inches
Runoff from quarry walls as a percentage of rainfall(typical):	50%
Infiltration through backfilled quarry:	15%

Groundwater inflow is also included in the water balance. Based on groundwater modeling (Golder, 2010b), the following average annual rates of groundwater inflow to the quarries were established and used in the water balance calculations:

North Quarry:	Full Mining Depth (440 feet amsl)	371 gpm inflow
	Approximate final groundwater level in quarry (990 feet amsl)	80 gpm inflow
South Quarry:	Full Mining Depth (925 feet amsl)	90 gpm inflow
	Approximate final groundwater level in quarry (1110 feet amsl)	10 gpm inflow

The above information was utilized in spreadsheet calculations to assess the rate of backfilling with overburden and the average rate of water accumulation in the quarries, as well as to determine the average annual outflow from the quarries after the equilibrium water elevation is reached. The Project provides for sufficient backfill being placed to cover the

water accumulation, particularly during the post-reclamation period. The outflow will be engineered to occur as subsurface flow.

The result of the water balance calculations indicates that the average annual outflows from the quarries will be as follows:

North Quarry: 90 gpm

South Quarry: 30 gpm

Spreadsheet models were used to determine monthly inflows to the quarry and runoff from the quarry areas for a 20-year period, starting with Phase 1. Once backfill starts in a quarry, the models calculated the rate of filling and determined the long-term net outflow. These monthly water balance computations were customized for this project.

The above approach is based on measured climatic conditions, factors based on measurements, professional judgment, and modeling. As such there are uncertainties in the groundwater filling rate, the projected equilibrium levels, and outflows. To account for these uncertainties, verification monitoring, water management measures, and contingencies are recommended for the mine operating period. These are discussed in Section 7.0 below.

The projected quarry backfill and water filling rates are provided in Figures 5 and 6. It is estimated to take approximately 14 and five years to fill the North Quarry and the South Quarry respectively.

6.3 Water Quality Projections

This section describes the water quality projections undertaken for the North Quarry and South Quarry. These projections are based on the water balance spreadsheet models described in Section 6.2, coupled with the water quality testing and sampling data for the mined and overburden materials presented in Section 5.2. The water quality parameters have been specifically selected from the testing results and water quality monitoring to reflect the changing conditions during mining, backfilling, and reclamation. The model assumes that the constituents behave conservatively and there are no geochemical interactions with the adjacent rock materials. For all constituents except manganese, these are considered reasonable assumptions for projecting future conditions.

The projected manganese concentrations are likely over-estimates as manganese is expected to precipitate in the quarries. Dissolved manganese derived from groundwater and weathering becomes oxidized, and as oxidized manganese is not soluble, it precipitates in the quarry water. The water quality input parameters and results for each quarry are discussed in Sections 6.3.1 and 6.3.2 below.

The quarry water quality projections were performed for the following list of dissolved metal constituents:

- Antimony
- Arsenic
- Cadmium
- Copper
- Manganese
- Molybdenum
- Nickel
- Selenium
- TDS
- Sulfate (SO_4)

The North Quarry, which has been eroding and weathering for a long period of time, has predominantly limestone walls. Therefore, the projections for North Quarry represent worst case conditions as due to excavation, the metals in the rock have been made more available by weathering of the rock surfaces. Limestone typically yields the highest metal concentrations, as demonstrated by the information contained in Table 7.

6.3.1 North Quarry

The key water mass balance components and the water quality described for each component is provided in Table 8.

Currently, stormwater enters the North Quarry by running over fractured and weathered rock. In addition, groundwater enters the North Quarry as seeps through fractured and weathered rock. Seeps flow across the weathered rock and have time to dissolve general minerals and metals. While there is no data characterizing the inflowing seepage water, it is conservatively assumed that the chemistry is similar to the current North Quarry water quality. However, once the backfilling commences and the quarry is allowed to gradually flood, it is expected that the quality of the water in the quarry will improve. The existing weathered material will be compacted and covered making it less reactive. In addition, weathering of the quarry walls will slow as the backfill material and water accumulates over it, reducing reactivity and the solubilizing of metals. By the time the backfill reaches 990 ft amsl, it is expected that the groundwater quality inflow to the quarry will return to that typically measured in the groundwater wells (Table 3).

For all constituents considered, the water quality in the North Quarry and in the outflows from the quarry improve once the backfilling activities start. Water quality projections for the North Quarry are as follows:

Constituent		North Quarry Pit Water (Measured and Projected)		Basin Plan Benchmarks (Table 1)	Drinking Water Benchmarks (for comparison)
		Current	After Reclamation		
Antimony	(µg/L)	8.2	1.5 - 2.0	--	6
Arsenic	(µg/L)	4.5	2.5 - 3.0	150 (4d), 340 (1h)	10
Cadmium	(µg/L)	0.53	0.15 - 0.20	1.1 (4d), 3.9 (1h)	5
Copper	(µg/L)	1.5	1.5 - 1.6	9 (4d), 13 (1h)	1,300
Manganese[1]	(µg/L)	21	15 - 20	--	50
Molybdenum	(µg/L)	540	85 - 100	--	--
Nickel	(µg/L)	160	20 - 30	52 (4d), 470 (1h)	100
Selenium	(µg/L)	82	10 - 15	5 (4d), 20 (1h)	50
TDS	(mg/L)	790	500 - 600	450	500
Sulfate	(mg/L)	550	100 - 200	--	250

(1) Concentration projections for manganese are higher than what will be observed because manganese will not behave conservatively as assumed in the projection models. See text in section 6.3.

Detailed plots of projected water quality versus time are provided in Figures 7A through 7B.

Projections of future surface water quality in the runoff from the reclaimed North Quarry area are as follows:

Constituent		North Quarry Runoff (Measured and Projected)		Basin Plan Benchmarks (Table 1)	Drinking Water Benchmarks (for comparison)
		Ongoing Mining	After Reclamation		
Antimony	(µg/L)	5.5 – 6.0	4.5 – 5.0	--	6
Arsenic	(µg/L)	3.5 – 4.0	3.5 – 4.0	150 (4d), 340 (1h)	10
Cadmium	(µg/L)	0.20 – 0.25	0.05 – 0.10	1.1 (4d), 3.9 (1h)	5
Copper	(µg/L)	0.80 – 1.00	0.60 – 0.80	9 (4d), 13 (1h)	1,300
Manganese[1]	(µg/L)	8 - 10	4 - 5	--	50
Molybdenum	(µg/L)	180 - 200	20 - 30	--	--
Nickel	(µg/L)	50 - 60	5 - 10	52 (4d), 470 (1h)	100

Selenium	(µg/L)	25 - 30	2 - 5	5 (4d), 20 (1h)	50
TDS	(mg/L)	300 - 350	100 - 150	450	500
Sulfate	(mg/L)	150 - 200	20 - 30	--	250

(1) Concentration projections for manganese are higher than what will be observed because manganese will not behave conservatively as assumed in the projection models. See text in section 6.3.

Detailed plots of projected water quality versus time are provided in Figures 8A through 8B.

As indicated by these projections, reclamation results in significant improvements to water quality. The quality in both the North Quarry and surface runoff is expected to meet (nickel) or come close to meeting (TDS and selenium) the applicable Benchmarks. The Drinking Water Benchmarks, although not applicable to Permanente Creek surface water, are included to demonstrate that the water quality will not pose a risk to human health if it were to be used for consumption.

6.3.2 South Quarry

The key water mass balance components and the water quality described for each component is provided in Table 9.

Water quality projections for the South Quarry mining, when water accumulates in the pit during backfilling and thereafter, is as follows:

Constituent		South Quarry Pit Water (Projected)		Basin Plan Benchmarks (Table 1)	Drinking Water Benchmarks (for comparison)
		Start of Mining	After Reclamation		
Antimony	(µg/L)	0.2 - 1.0	0.3 - 0.4	--	6
Arsenic	(µg/L)	0.8 - 2.2	2 - 3	150 (4d), 340 (1h)	10
Cadmium	(µg/L)	0.05 -0.1	0.15 - 0.20	1.1 (4d), 3.9 (1h)	5
Copper	(µg/L)	1 - 1.2	1.6 - 1.7	9 (4d), 13 (1h)	1,300
Manganese[1]	(µg/L)	0 - 10	0 - 10	--	50
Molybdenum	(µg/L)	19 - 21	10 - 11	--	--
Nickel	(µg/L)	4 - 5	3 - 4	52 (4d), 470 (1h)	100
Selenium	(µg/L)	8 - 12	1 - 2	5 (4d), 20 (1h)	50
TDS	(mg/L)	400 - 600	500 - 600	450	500
Sulfate	(mg/L)	100 - 140	120 - 140	--	250

(1) Concentration projections for manganese are higher than what will be observed because manganese will not behave conservatively as assumed in the projection models. See text in section 6.3.

Detailed plots of projected water quality in the South Quarry are provided in Figures 9A through 9B.

Projections of future surface water quality in the runoff from the mined and reclaimed South Quarry area are as follows:

Constituent		South Quarry Runoff (Projected)		Basin Plan Benchmarks (Table 1)	Drinking Water Benchmarks (for comparison)
		Start of Mining	After Reclamation		
Antimony	(µg/L)	2 - 4	3 - 4	--	6
Arsenic	(µg/L)	6 - 12	6 - 8	150 (4d), 340 (1h)	10
Cadmium	(µg/L)	0.06 - 0.08	0.06 – 0.08	1.1 (4d), 3.9 (1h)	5
Copper	(µg/L)	0.7 – 0.9	0.7 – 0.8	9 (4d), 13 (1h)	1300
Manganese[1]	(µg/L)	5 - 6	4 - 5	--	50
Molybdenum	(µg/L)	15 - 18	15 - 16	--	--
Nickel	(µg/L)	3 - 4	3 - 4	52 (4d), 470 (1h)	100
Selenium	(µg/L)	3 - 6	3 - 4	5 (4d), 20 (1h)	50
TDS	(mg/L)	80 - 120	80 - 120	450	500
Sulfate	(mg/L)	20 - 30	20 - 25	--	250

(1) Concentration projections for manganese are higher than what will be observed because manganese will not behave conservatively as assumed in the projection models. See text in section 6.3.

Detailed plots of projected water quality versus time are provided in Figures 10A through 10B.

As with the North Quarry, reclamation in the South Quarry results in significant improvements to water quality. The initial quarry water and runoff quality is expected to be better than for North Quarry. After reclamation, South Quarry water quality is expected to meet all applicable Benchmarks.

7.0 MINE RECLAMATION RECOMMENDATIONS

Mining and reclamation under the Project are expected to progressively improve surface water quality in Permanente Creek, especially following Phase 2 when significant areas of exposed limestone are covered and reclaimed in the North Quarry. However, in recognition of the uncertainties associated with the predictions of future water quality, as described in Section 6.0 above, it is recommended that a monitoring and verification program be implemented to verify the predictions with actual field data as mining proceeds. In order to

maximize water quality improvements, prudent water management measures are recommended for the active mining period.

The sections below describe the proposed monitoring and verification program and the recommended water management measures. The final Section 7.3 discusses how these programs and plans can be implemented.

7.1 Monitoring and Verification Programs

It is recommended that the following program be implemented during mining operations. This monitoring program focuses on mining in the North Quarry and the South Quarry and does not address any general environmental monitoring that may be required in the quarries.

- Collect annual quarry water samples and analyze for general water chemistry and dissolved metals.
- Perform quarterly electrical conductivity and pH measurements of the quarry water.
- Measure and record daily volumes of any quarry water that is removed.
- Conduct annual seep surveys in March or April of each year within each quarry. Any seeps identified should be sampled for general water chemistry and minerals and dissolved metals and the magnitude of the seep should be estimated.

It is recommended that the above information, plus available rainfall data, be used to review and refine the water quality projections contained in this report on an interval of approximately every three years, or as necessary. The above data should be used to re-evaluate the water balance components such as runoff and groundwater inflow and the water quality associated with these.

Based on the results of any refined water balance and water quality projections, the water management procedures described below should also be reviewed and refined as necessary.

7.2 Water Management Measures

The following water management measures are recommended for the North Quarry and the South Quarry and the ore and overburden handling. These measures are in addition to the usual measures undertaken to eliminate suspended sediments from any water that is to be removed from a quarry, i.e. internal sediment basins, sump intake filters, etc.

- In order to minimize the uptake of dissolved metals from the limestone, quarry drainage controls should be implemented to separate runoff from the breccia, graywacke, and greenstone materials. To the extent possible, drainage of the former should be diverted directly to sediment control facilities and natural surface drainages. The mining plan for South Quarry already incorporates these measures (Chang, 2010).

- Wherever possible, surface drainage should be placed around newly disturbed limestone areas and limestone stockpiles in the quarry areas. This will avoid excessive water contact with exposed limestone by run-on from upgradient areas.

- Where limestone materials are disturbed or stockpiled, minimize water ponding which would increase contact and contact time between rainfall and limestone materials. Grade out hollows and compact surfaces with equipment (such as dozers), as necessary.

Reclamation design also should incorporate a subsurface outflow drain system, in order to control the maximum level of groundwater in the quarries and to promote diffusion and infiltration of excess groundwater into the Permanente Creek catchment area.

7.3 Implementation of Monitoring and Water Management Plans

The facility is subject to the General Industrial Stormwater Permit and Lehigh manages the water associated with its quarry operations pursuant to a Stormwater Pollution Prevention Plan (SWPPP). In addition to the recommendations included in Sections 7.1 and 7.2 above, Lehigh is currently working with the RWQCB to evaluate its existing stormwater best management practices (BMPs), enhance the existing BMPs where needed, and develop new BMPs to control the transport of sediment and metals into the North Quarry. As part of that effort, Lehigh will add the recommendations included in Sections 7.1 and 7.2 above to the SWPPP with the RWQCB's concurrence. In addition, Lehigh will conduct additional sampling, further evaluate the sources of constituents in waters associated with the operations and confirm the conclusions of this report. With input from the RWQCB, Lehigh will revise its SWPPP and monitoring program as required by General Permit Section C.3.a. Based on the findings of the BMP assessment at North Quarry, additional BMPs may be adopted which will apply, as appropriate, to the South Quarry.

8.0 REFERENCES

California Regional Water Quality Control Board, 2007. *San Francisco Bay Basin (Region 2) - Water Quality Control Plan (Basin Plan)*. January 18.

Chang Consultants, 2010. *Drainage Report For The Permanente Quarry*. May 23.

Golder Associates, 2010a. *Geotechnical Evaluation and Design Recommendations – Permanente Quarry Reclamation Plan Update, Santa Clara County, California*. April.

Golder Associates, 2010b. *Hydrogeologic Investigation – Permanente Quarry Reclamation Plan Update, Santa Clara County, California*. May.

Hutchison, Ian P.G. and Ellison, Richard D., 1992. *Mine Waste Management*, Lewis Publishers.

WRA, 2010. *Biological Resource Assessment*. May.

Tables

TABLE 1
BACKGROUND SURFACE WATER QUALITY

Dissolved Constituent	SW-1 (µg/L)				SW-1 average (µg/L)	SW-3 (µg/L)				SW-3 average (µg/L)	Basin Plan Benchmarks (µg/L)
	2/4/09	4/2/09	4/22/09	1/10/10		2/4/09	4/1/09	9/22/09	1/14/09		
Aluminum	ND (<38)	ND (<38)	ND (<76)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	--
Antimony	ND (<0.23)	ND (<0.23)	ND (<0.17)	0.26	0.1438	ND (<0.23)	ND (<0.23)	ND (<0.17)	ND (<0.17)	ND (<0.17)	--
Arsenic	0.79	ND (<0.67)	ND (<0.52)	0.74	0.5313	ND (<0.67)	ND (<0.67)	ND (<0.52)	ND (<0.52)	ND (<0.52)	150 (4d), 340 (1h)
Hexavalent Chromium	0.98	ND (<0.7)	ND (<0.7)	1.2	0.72	1.4	ND (<0.7)	ND (<0.7)	1.3	0.85	11 (4d), 16 (1h)
Barium	34	91	63	58	61.5	96	100	170	110	119	--
Beryllium	ND (<0.046)	ND (<0.046)	ND (<0.18)	ND (<0.18)	ND (<0.046)	ND (<0.046)	ND (<0.046)	ND (<0.18)	ND (<0.18)	ND (<0.046)	--
Boron	55	200	51	--	102	39	67	40	--	48.67	--
Cadmium	ND (<0.013)	0.022	ND (<0.13)	ND (<0.13)	0.0396	0.017	ND (<0.013)	ND (<0.13)	ND (<0.13)	0.0384	1.1 (4d), 3.9 (1h)
Chromium (total)	ND (<0.64)	1.5	ND (<0.55)	ND (<0.55)	0.5925	ND (<0.64)	0.81	ND (<0.55)	0.63	0.5088	11 (4d), 16 (1h)
Copper	1.2	1.6	4.2	3.1	2.525	0.7	0.55	2.2	1.4	1.2125	9 (4d), 13 (1h)
Iron	8.1	ND (<7.2)	ND (<19)	9.7	6.5625	ND (<7.2)	ND (<7.2)	ND (<9.3)	ND (<9.3)	ND (<7.2)	--
Lead	ND (<0.019)	0.029	ND (<0.054)	ND (<0.054)	0.0231	ND (<0.019)	0.026	ND (<0.054)	ND (<0.054)	0.0224	2.5 (4d), 65 (1h)
Manganese	0.33	0.58	0.79	1.9	0.9	0.11	0.31	0.73	1.4	0.6375	--
Mercury	0.00078	0.00101	0.00178	0.0547	0.0146	0.00072	ND (<0.00020)	0.00069	0.00089	0.0006	0.025 (4d), 2.4 (1h)
Molybdenum	5.7	3.9	3.8	1.8	3.8	24	0.91	10	3.6	9.6275	--
Nickel	3.3	2.2	4.7	2.3	3.1	1.4	1.0	1.3	0.87	1.1425	52 (4d), 470 (1h)
Selenium	8.9	7.1	11	1.7	7.18	ND (<0.23)	0.71	ND (<0.38)	0.45	0.36625	5 (4d), 20 (1h)
Silver	ND (<0.028)	0.063	ND (<0.065)	ND (<0.065)	0.0355	ND (<0.028)	ND (<0.028)	ND (<0.065)	ND (<0.065)	ND (<0.028)	3.4 (1h)
Thallium	ND (<0.054)	ND (<0.054)	ND (<0.11)	0.17	0.0698	ND (<0.054)	0.13	ND (<0.11)	ND (<0.11)	0.06675	--
Vanadium	ND (<1.2)	1.8	--	--	1.2	ND (<1.2)	1.9	--	--	1.25	--
Zinc	7.2	58	3.4	2.2	17.7	4.7	67	ND (<1.9)	ND (<1.9)	18.4	120 (4d), 120 (1h)
TDS	1,400,000	890,000	1,800,000	350,000	1,110,000	340,000	360,000	350,000	360,000	352,500	450,000
Sulfate	650,000	450,000	1,100,000	110,000	577,500	28,000	18,000	22,000	23,000	22,750	--
Chloride	23,000	15,000	28,000	9,400	18,850	28,000	16,000	23,000	20,000	21,750	106,000
Hardness (as CaCO3)	900,000	650,000	1,300,000	270,000	780,000	290,000	290,000	310,000	300,000	297,500	--

Notes:

Shading indicates an exceedance of Basin Plan Benchmarks.

ND = Not detected at the specified detection limit.

When an ND was included in the calculation of an average value, it was assumed to be one half the detection limit.

If all samples were ND, then the lowest detection limit was retained.

4d = 4-day average.

1h = 1-hour average.

TABLE 2
BASELINE SURFACE WATER QUALITY

Dissolved Constituent	SW-2 (µg/L)				SW-2 average (µg/L)	Basin Plan Benchmarks (µg/L)
	2/4/09	4/2/09	9/22/09	1/20/09		
Aluminum	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	--
Antimony	6.3	3.8	2.4	0.98	3.37	--
Arsenic	4.5	2.8	1.5	1.5	2.575	150 (4d), 340 (1h)
Hexavalent Chromium	0.95	0.83	ND (<0.7)	1.2	0.8325	11 (4d), 16 (1h)
Barium	37	63	60	43	50.75	--
Beryllium	ND (<0.18)	0.059	ND (<0.18)	ND (<0.18)	0.08225	--
Boron	89	100	36	--	75	
Cadmium	0.98	0.055	ND (<0.13)	ND (<0.13)	0.29125	1.1 (4d), 3.9 (1h)
Chromium (total)	0.58	ND (<0.55)	ND (<0.55)	ND (<0.55)	0.35125	11 (4d), 16 (1h)
Copper	1.3	1.3	3.3	1.8	1.925	9 (4d), 13 (1h)
Iron	ND (<9.3)	18	ND (<9.3)	ND (<9.3)	7.9875	--
Lead	0.22	ND (<0.054)	ND (<0.054)	ND (<0.054)	0.07525	2.5 (4d), 65 (1h)
Manganese	2.2	3	2.1	3.9	2.8	--
Mercury	0.00173	0.00133	0.00182	0.07	0.01872	0.025 (4d), 2.4 (1h)
Molybdenum	750	460	470	83	440.75	--
Nickel	70	110	44	27	62.75	52 (4d), 470 (1h)
Selenium	80	74	81	13	62	5 (4d), 20 (1h)
Silver	ND (<0.065)	ND (<0.065)	ND (<0.065)	ND (<0.065)	ND (<0.065)	3.4 (1h)
Thallium	0.16	ND (<0.11)	ND (<0.11)	ND (<0.11)	0.08125	--
Vanadium	110	66	--	--	88	--
Zinc	12	61	3.1	4.1	20.05	120 (4d), 120 (1h)
TDS	1,100,000	1,100,000	1,000,000	--	1,066,667	450,000
Sulfate	560,000	600,000	550,000	--	570,000	--
Chloride	14,000	12,000	18,000	--	14,667	106,000
Hardness (as CaCO3)	650,000	740,000	710,000	320,000	605,000	--

Notes:

Shading indicates an exceedances of Basin Plan Benchmarks;

ND = Not detected at the specified detection limit.

When an ND was included in the calculation of an average value, it was assumed to be one half the detection limit.

If all samples were ND, then the lowest detection limit was retained.

4d = 4-day average.

1h = 1-hour average.

TABLE 3
GROUNDWATER QUALITY

Constituent	HG-4 (µg/L)				HG-4 average (µg/L)	HG-6 (µg/L)				HG-6 average (µg/L)	HG-7 (µg/L)				HG-7 average (µg/L)	HG-9 (µg/L)				HG-9 average (µg/L)	HG-10 (µg/L)		HG-10 average (µg/L)	Average Groundwater Quality (µg/L)	Drinking Water Benchmarks[1] (µg/L)	Agricultural Benchmarks (µg/L)
Aluminum	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	1000 MCL; 50-200 SMCL	5,000
Antimony	0.43	ND (<0.23)	0.17	ND (<0.17)	0.2	ND (<0.23)	ND (<0.23)	ND (<0.17)	ND (<0.17)	ND (<0.17)	0.62	ND (<0.17)	ND (<0.17)	0.27	0.265	0.47	0.67	ND (<0.17)	ND (<0.17)	0.3275	ND (<0.17)	0.48	0.2825	0.232	6 MCL	--
Arsenic	2.8	3.5	9.4	8.7	6.1	2.6	2	0.62	0.62	1.46	4.2	2.2	2.4	2	2.7	1.1	1.5	1.2	1	1.2	ND (<0.52)	ND (<0.52)	ND (<0.52)	2.344	10 MCL	100
Barium	39	21	14	7.4	20.35	120	130	240	250	185	120	120	120	110	117.5	30	22	19	20	22.75	150	24	87	86.52	1000 MCL	--
Beryllium	0.064	0.061	ND (<0.18)	ND (<0.18)	0.076	0.052	ND (<0.046)	ND (<0.18)	ND (<0.18)	0.064	ND (<0.046)	ND (<0.18)	ND (<0.18)	ND (<0.18)	ND (<0.046)	0.064	ND (<0.18)	ND (<0.18)	ND (<0.18)	0.084	ND (<0.18)	ND (<0.18)	ND (<0.18)	0.067	4 MCL	100
Boron	--	250	270	260	260	--	60	46	64	56.667	27	ND (<9.7)	ND (<9.7)	21	14.425	--	21	10	33	21.333333	33	15	24	75.285	--	700
Cadmium	0.2	0.052	ND (<0.13)	ND (<0.13)	0.085	0.014	0.017	ND (<0.13)	ND (<0.13)	0.040	0.013	ND (<0.13)	ND (<0.13)	ND (<0.13)	0.052	0.053	0.04	ND (<0.13)	ND (<0.13)	0.05575	ND (<0.13)	ND (<0.13)	ND (<0.13)	0.060	5 MCL	10
Chloride	51,000	41,000	28,000	25,000	36,250	24,000	25,000	25,000	25,000	24,750	47,000	46,000	46,000	45,000	46,000	46,000	32,000	26,000	27,000	32,750	14,000	14,000	14,000	30,750	250,000 SMCL	106,000
Chromium (total)	ND (<0.64)	4	20	ND (<0.55)	6.149	ND (<0.64)	3.2	ND (<0.55)	ND (<0.55)	1.018	0.94	2.1	1.4	ND (<0.55)	1.179	0.68	1.9	1.5	ND (<0.55)	1.08875	ND (<0.55)	15	7.638	3.414	50 MCL	--
Copper	3.6	3.1	7.7	0.8	3.8	0.58	0.93	ND (<0.68)	ND (<0.68)	0.548	0.43	ND (<0.68)	ND (<0.68)	ND (<0.68)	0.363	4	0.67	0.86	ND (<0.68)	1.468	1.9	2.3	2.1	1.656	1300 MCL	200
Hexavalent Chromium	ND (<0.7)	ND (<0.7)	ND (<0.7)	ND (<0.7)	ND (<0.7)	ND (<0.7)	ND (<0.7)	ND (<0.7)	ND (<0.7)	ND (<0.7)	ND (<0.7)	ND (<0.7)	ND (<0.7)	ND (<0.7)	ND (<0.7)	1.4	ND (<0.7)	ND (<0.7)	ND (<0.7)	0.613	ND (<0.01)	1.9	0.953	0.523	--	100
Iron	ND (<7.2)	33	13	16	16.4	ND (<7.2)	21	46	34	26.15	330	310	310	290	310	ND (<9.3)	ND (<9.3)	ND (<9.3)	ND (<9.3)	ND (<9.3)	ND (<9.3)	ND (<9.3)	ND (<9.3)	72.37	300 SMCL	5,000
Lead	0.28	0.26	0.76	ND (<0.054)	0.332	ND (<0.019)	0.12	ND (<0.054)	ND (<0.054)	0.046	0.038	ND (<0.054)	ND (<0.054)	ND (<0.054)	0.030	ND (<0.054)	0.038	ND (<0.054)	ND (<0.054)	0.030	0.13	ND (<0.054)	0.092	0.106	15 MCL	5,000
Manganese	120	90	110	19	84.75	46	58	33	41	44.5	320	330	320	330	325	17	6.7	2.5	0.19	6.598	85	0.16	42.58	100.686	50 SMCL	200
Mercury	0.013	0.023	0.014	0.011	0.015	0.006	0.002	0.001	0.001	0.002	0.068	0.024	0.022	0.014	0.032	0.024	0.004	0.001	0.001	0.008	--	0.063	0.063	0.024	2 MCL	--
Molybdenum	31	43	45	33	38	3.6	2.5	1.3	2.5	2.475	0.74	0.62	0.54	0.81	0.678	3.7	3.2	0.93	2.2	2.508	5	16	10.5	10.832	--	10
Nickel	3.8	7.7	24	1.3	9.2	0.86	2.1	0.54	0.47	0.993	3.1	1.7	1.7	2.6	2.275	2.9	2.6	1.6	2.2	2.325	10	1.7	5.85	4.129	100 MCL	200
Selenium	0.27	0.32	1.1	3.9	1.398	ND (<0.23)	ND (<0.23)	ND (<0.38)	ND (<0.38)	ND (<0.23)	ND (<0.23)	ND (<0.38)	ND (<0.38)	ND (<0.38)	ND (<0.23)	0.9	0.73	ND (<0.38)	ND (<0.38)	0.503	ND (<0.38)	2.8	1.495	0.725	50 MCL	20
Silver	ND (<0.028)	ND (<0.028)	ND (<0.065)	ND (<0.065)	ND (<0.028)	ND (<0.028)	ND (<0.028)	ND (<0.065)	ND (<0.065)	ND (<0.028)	ND (<0.028)	0.81	0.42	ND (<0.065)	0.319	ND (<0.028)	ND (<0.028)	0.34	ND (<0.065)	0.100	ND (<0.065)	ND (<0.065)	ND (<0.065)	0.096	100 MCL	--
Sulfate	770,000	770,000	500,000	380,000	605,000	11,000	15,000	8,600	16,000	12,650	31,000	31,000	30,000	29,000	30,250	48,000	38,000	31,000	26,000	35,750	30,000	29,000	29,500	142,630	250,000 SMCL	--
TDS	1,500,000	1,500,000	1,000,000	880,000	1,220,000	490,000	470,000	460,000	460,000	470,000	550,000	530,000	580,000	530,000	547,500	480,000	490,000	450,000	460,000	470,000	400,000	340,000	370,000	615,500	500,000 SMCL	450,000
Thallium	0.088	0.2	0.23	ND (<0.11)	0.143	0.1	ND (<0.054)	ND (<0.11)	ND (<0.11)	0.059	0.17	ND (<0.11)	ND (<0.11)	ND (<0.11)	0.084	ND (<0.11)	0.19	ND (<0.11)	ND (<0.11)	0.089	ND (<0.11)	ND (<0.11)	ND (<0.11)	0.086	2 MCL	--
Vanadium	--	--	11	ND (<1.2)	5.8	--	--	ND (<1.2)	ND (<1.2)	ND (<1.2)	--	ND (<1.2)	ND (<1.2)	ND (<1.2)	ND (<1.2)	--	--	ND (<1.2)	ND (<1.2)	ND (<1.2)	ND (<1.2)	1.7	1.15	1.75	--	100
Zinc	19	4.8	32	ND (<1.9)	14.188	3.2	5.2	2.4	ND (<1.9)	2.938	1.3	ND (<1.9)	3	1.9	1.788	19	8.7	3.2	2.1	8.25	35	ND (<1.9)	17.975	9.028	5000 SMCL	2,000

Notes:
Shading indicates an exceedance of the most stringent Benchmark.
[1] MCL ("maximum contaminant level") is the primary drinking water standard;
SMCL ("secondary maximum contaminant level") is the secondary drinking water standard based on aesthetics and odors.
ND = Not detected at the specified detection limit.
When an ND was included in the calculation of an average value, it was assumed to be one half the detection limit.
If all samples were ND, then the lowest detection limit was retained.

TABLE 4
OVERBURDEN AND BACKFILL PRODUCTION SCHEDULE

4.A Backfill Volume

Project Phase	Backfill Volume (cy)		
	North Quarry	South Quarry	**Total**
1	--	--	**--**
2	12,000,000	--	**12,000,000**
3	14,400,000	--	**14,400,000**
4	14,400,000	--	**14,400,000**
Ultimate	11,900,000	2,100,000	**14,000,000**
TOTAL	**52,700,000**	**2,100,000**	**54,800,000**

4.B Backfill Rock Type

Project Phase	North Quarry	South Quarry
Greenstone	31%	0%
Graywacke	17%	67%
Fault Breccia	37%	33%
Soils	15%	0%
TOTAL	**100%**	**100%**

TABLE 5
MINED MATERIAL AND OVERBURDEN CONSTITUENT CONCENTRATIONS

Constituent	units	C-1	C-2	C-3	C-4	C-5	GT1-2-08-213	Average of Detections for SQ	B1-1	B1-2	B1-3	B1-4	B2-1	Average of Detections for NQ	B2-2
		SQ Boring Composite	SQ Boring Composite	SQ Boring Composite	SQ Boring Composite	SQ Boring Composite	SQ Boring Composite		NQ Single Sample	NQ Single Sample	NQ Single Sample	NQ Single Sample	NQ Composite		EMSA OB Composite
		Graywacke	Limestone	Flt. Breccia	Greenstone	Metabasalt	Chert		Limestone	Limestone	Metavolcan.	Graywacke			
		(7/1/09)	(7/1/09)	(7/1/09)	(7/1/09)	(7/1/09)	(7/1/09)	mg/kg	(1/22/10)	(1/22/10)	(1/22/10)	(1/22/10)	(2/10/10)	mg/kg	(2/10/10)
Antimony	mg/kg	ND (<1.7)	6.5	4.2	ND (<1.7)	ND (<1.7)	5.3	3.09	ND (<1.7)	ND (<1.7)	ND (<1.7)	ND (<1.7)	ND (<1.7)	ND (<1.7)	ND (<1.7)
Arsenic	mg/kg	5.1	8.4	2.4	ND (<0.71)	4.8	5.7	4.46	ND (<0.71)	2.7	ND (<0.71)	7.5	2.7	2.7	2.6
Asbestos	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium	mg/kg	60	800	180	46	110	560	292.7	940	290	590	49	ND (<0.13)	373.8	750
Beryllium	mg/kg	0.17	0.3	ND (<0.026)	ND (<0.026)	0.032	0.11	0.106	ND (<0.026)	ND (<0.026)	ND (<0.026)	ND (<0.026)	ND (<0.026)	ND (<0.026)	ND (<0.026)
Cadmium	mg/kg	0.071	0.068	ND (<0.033)	ND (<0.033)	ND (<0.033)	0.15	0.056	ND (<0.033)	6.5	ND (<0.033)	ND (<0.033)	ND (<0.033)	1.3	ND (<0.033)
Chromium IV	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium Compounds	mg/kg	95	29	260	400	110	6.6	150.1	ND (<0.045)	30	200	35	130	79.0	110
Cobalt	mg/kg	20	21	34	93	26	8.4	33.7	ND (<0.18)	ND (<0.18)	37	10	27	14.8	23
Copper	mg/kg	50	56	56	45	62	27	49.3	ND (<0.13)	48	47	37	44	35	44
Fluoride Salts	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	mg/kg	9.7	6.8	8.3	ND (<0.59)	11	2	6.3	ND (<0.59)	ND (<0.59)	ND (<0.59)	ND (<0.59)	ND (<0.59)	ND (<0.59)	ND (<0.59)
Mercury	mg/kg	0.033	0.15	0.053	ND (<0.014)	ND (<0.014)	ND (<0.014)	0.043	ND (<0.014)	0.77	0.16	ND (<0.014)	0.12	0.21	0.11
Molybdenum	mg/kg	0.22	2.3	ND (<0.18)	ND (<0.18)	1	0.74	0.74	ND (<0.18)	20	ND (<0.18)	ND (<0.18)	ND (<0.18)	4	ND (<0.18)
Nickel	mg/kg	120	120	250	1,200	100	220	335	ND (<0.12)	59	230	71	180	108	150
Selenium	mg/kg	10	8.5	15	15	13	2.4	10.7	ND (<0.76)	6.6	ND (<0.76)	ND (<0.76)	ND (<0.76)	1.6	ND (<0.76)
Silver	mg/kg	ND (<0.086)	0.63	0.13	ND (<0.086)	0.16	ND (<0.086)	0.17	ND (<0.086)	ND (<0.086)	ND (<0.086)	0.86	ND (<0.086)	0.21	ND (<0.086)
Thallium	mg/kg	ND (<0.94)	ND (<0.94)	0.97	ND (<0.94)	ND (<0.94)	ND (<0.94)	0.55	ND (<0.94)	1.2	ND (<0.94)	ND (<0.94)	ND (<0.94)	0.6	ND (<0.94)
Vanadium	mg/kg	64	15	75	53	70	5.9	47.2	ND (<0.062)	560	80	27	67	146.8	56
Zinc	mg/kg	250	67	75	64	71	150	112.8	14	180	73	51	72	78	75

Notes:
ND = Not detected at the specified detection limit.
When an ND was included in the calculation of an average value, it was assumed to be one half the detection limit.
If all samples were ND, then the lowest detection limit was retained.

TABLE 6
OVERBURDEN LEACHABILITY BY MODIFIED CAM WET

Constituent	units	C-1	C-2	C-3	C-4	C-5	GT1-2-08-213	Average of Detections for SQ
		SQ Boring Composite	SQ Boring Composite	SQ Boring Composite	SQ Boring Composite	SQ Boring Composite	SQ Boring Composite	
		Graywacke	Limestone	Flt. Breccia	Greenstone	Metabasalt	Chert	
		(7/1/09)	(7/1/09)	(7/1/09)	(7/1/09)	(7/1/09)	(7/1/09)	(µg/L)
Antimony	µg/L	7.2	1.5	5.8	0.98	8.5	3.2	4.53
Arsenic	µg/L	3	1.3	6.2	2.7	7.3	1.2	3.6
Asbestos	µg/L	--	--	--	--	--	--	--
Barium	µg/L	59	220	120	37	120	170	121
Beryllium	µg/L	ND (<0.18)	ND (<0.18)	ND (<0.18)	ND (<0.18)	ND (<0.18)	ND (<0.18)	ND (<0.18)
Cadmium	µg/L	ND (<0.13)	ND (<0.13)	ND (<0.13)	ND (<0.13)	ND (<0.13)	ND (<0.13)	ND (<0.13)
Chromium (total)	µg/L	ND (<0.55)	ND (<0.55)	ND (<0.55)	1.9	ND (<0.55)	ND (<0.55)	0.55
Cobalt	µg/L	0.29	0.15	0.13	0.34	0.1	0.25	0.21
Copper	µg/L	1.3	ND (<0.68)	ND (<0.68)	ND (<0.68)	ND (<0.68)	1.2	0.64
Fluoride Salts	µg/L	--	--	--	---	---	--	--
Lead	µg/L	1.2	0.11	ND (<0.054)	ND (<0.054)	0.09	0.12	0.262
Mercury	µg/L	ND (<0.016)	0.21	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	0.042
Molybdenum	µg/L	11	27	7.3	2.3	28	12	14.6
Nickel	µg/L	1.7	1.7	2	8.1	0.89	3.2	2.93
Selenium	µg/L	ND (<0.38)	6	ND (<0.38)	ND (<0.38)	0.58	ND (<0.38)	1.22
Silver	µg/L	ND (<0.065)	ND (<0.065)	ND (<0.065)	ND (<0.065)	ND (<0.065)	ND (<0.065)	ND (<0.065)
Thallium	µg/L	ND (<0.11)	ND (<0.11)	ND (<0.11)	ND (<0.11)	ND (<0.11)	ND (<0.11)	ND (<0.11)
Vanadium	µg/L	1.5	ND (<1.2)	12	18	4.9	ND (<1.2)	6.27
Zinc	µg/L	22	8.1	11	11	10	37	16.5
Manganese	µg/L	5.2	2.5	7.5	3	3.1	1.2	3.8
Calcium	mg/L	18	16	13	17	11	14	14.8
Magnesium	mg/L	4.3	4.2	6.8	8.3	5.4	14	7.2
Sodium	mg/L	8.8	4.0	7.9	5.9	6.6	2.7	6.0
Potassium	mg/L	3.7	2.8	3.9	0.96	4.1	2.0	2.9
Total Alkalinity	mg/L	37	42	56	76	46	49	51
Chloride	mg/L	1.6	1.1	1.3	2.0	1.3	1.4	1.45
Sulfate	mg/L	22	12	16	3	8.8	29	15.1
pH	number	8.11	8.16	8.24	8.29	8.36	8.27	8.2
EC	µmhos/cm	160	130	160	160	130	190	155

Notes:
ND = Not detected at the specified detection limit.
When an ND was included in the calculation of an average value, it was assumed to be one half the detection limit.
If all samples were ND, then the lowest detection limit was retained.

TABLE 7

MINED MATERIALS AND OVERBURDEN LEACHABILITY

		Wall Washing Results						North Quarry	WMSA Runoff
		Graywacke	Limestone - High Grade	Limestone - Medium to High	Limestone - high and med/low	Chert	Greenstone		
	Sample	GW-01	HG-01	MG-01	HMG-01	CT-01	GS-01		
	Date	11/24/09	11/24/09	11/24/09	11/24/09	11/24/09	11/24/09	01/13/10	01/13/10
	Age	> 5 years	> 5 years	2 months	1 year	< 1 month	< 1 month	NA	NA
Field Parameters									
pH	s.u.	6.94	7.87	7.53	7.32	7.53	8.95	7.94	7.9
Specific Conductance	µS/cm	283	137	42	46	78	94	NA	NA
Temperature	°C	18.6	16.43	13.78	11.91	17.35	18.36	NA	NA
Dissolved Oxygen	mg/L	6.57	7.42	7.95	16.5	8.03	7.4	NA	NA
ORP		70	-32.7	11.4	25.1	92.8	73.7	NA	NA
Lab Parameters - Dissolved									
Aluminum	µg/L	1,800	220	59	220	1400	650	<38	<38
Antimony	µg/L	0.43	0.56	<0.17	0.18	<0.17	<0.17	8.2	0.86
Arsenic	µg/L	33	20	21	22	16	12	4.5	1.3
Barium	µg/L	150	79	83	180	520	660	41	24
Beryllium	µg/L	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
Boron	µg/L	28	19	14	24	52	52	69	31
Cadmium	µg/L	<0.13	0.2	<0.13	<0.13	<0.13	<0.13	0.53	<0.13
Chromium	µg/L	<0.55	0.81	<0.55	<0.55	3.6	2.6	<0.55	<0.55
Copper	µg/L	2.1	2.1	<0.68	0.86	<0.68	1.1	1.5	1.2
Iron	µg/L	720	130	11	160	1400	970	<9.3	<9.3
Lead	µg/L	0.29	0.063	<0.054	0.065	<0.054	<0.054	<0.054	<0.054
Manganese	µg/L	8.6	19	2.6	1.2	7.9	11	21	14
Mercury	µg/L	NA	NA	NA	NA	NA	NA	0.0107	NA
Molybdenum	µg/L	2.6	98	6.7	14	1.4	0.37	540	120
Nickel	µg/L	1.7	9.9	0.91	4.9	5.9	3.5	160	3.4
Selenium	µg/L	<0.38	49	14	0.7	<0.38	<0.38	82	29
Silver	µg/L	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065
Thallium	µg/L	0.22	<0.11	<0.11	<0.11	<0.11	<0.11	0.39	<0.11
Vanadium	µg/L	2.9	44	<1.2	6.3	7.3	39	400	2.6
Zinc	µg/L	7.5	23	3.6	16	6.6	5.8	120	28
Calcium	mg/L	7.8	46	31	34	17	21	210	160
Magnesium	mg/L	6.1	1.7	2.2	2.6	6.6	3.1	36	42
Sodium	mg/L	4.2	1.6	1.2	2.3	6.1	7.3	22	24
Potassium	mg/L	1.2	0.43	0.21	0.85	1.8	0.86	0.85	2
Lab Parameters - Total Recoverable									
Aluminum	µg/L	77,000	40,000	28,000	1,800,000	960,000	990,000	720	87,000
Antimony	µg/L	<4.0	7.7	6.8	<20	<4.0	<4.0	7.9	1.6
Arsenic	µg/L	80	88	81	290	<22	<22	3.7	21
Barium	µg/L	2,800	7,900	13,000	140,000	12,000	23,000	59	4,200
Beryllium	µg/L	6.7	<4.0	<4.0	92	36	30	<0.20	1.1
Boron	µg/L	33	36	86	650	160	230	70	52
Cadmium	µg/L	14	45	6.6	680	5.7	5.1	1.3	5.8
Chromium	µg/L	120	490	63	4,500	7,000	7,100	6	370
Copper	µg/L	160	420	370	17,000	2,000	3,100	3.3	170
Iron	µg/L	100,000	83,000	69,000	2,400,000	1,100,000	940,000	1,200	160,000
Lead	µg/L	130	25	43	1,300	27	15	0.5	17
Manganese	µg/L	3,000	2,000	7,200	56,000	22,000	44,000	38	3,000
Mercury	µg/L	0.032	<0.016	<0.016	0.032	<0.016	<0.016	<0.016	1.5
Molybdenum	µg/L	16	320	23	<23	<4.6	<4.6	630	140
Nickel	µg/L	210	1,300	1,100	150,000	9,300	5,800	180	460
Selenium	µg/L	<11	230	60	160	<11	<11	73	33

TABLE 7

MINED MATERIALS AND OVERBURDEN LEACHABILITY

		Wall Washing Results							
		Graywacke	Limestone - High Grade	Limestone - Medium to High	Limestone - high and med/low	Chert	Greenstone	North Quarry	WMSA Runoff
Silver	µg/L	2	5.4	3.4	<8.8	<1.8	<1.8	<0.088	0.89
Thallium	µg/L	<2.2	4.3	<2.2	57	<2.2	<2.2	0.24	0.79
Vanadium	µg/L	230	960	220	2100	<100	<52	430	350
Zinc	µg/L	460	3,300	700	390,000	2,800	2,100	140	600
Calcium	mg/L	180	1,000	3,100	33,000	2,300	1,500	230	1,000
Magnesium	mg/L	44	67	68	1,700	1,600	1,700	40	160
Sodium	mg/L	4.2	3.6	3.9	8.5	5.4	5.6	23	25
Potassium	mg/L	13	4.1	4	64	14	4.2	1.0	8.2
General Chemistry									
Ammonia as N	mg/L	0.22	0.038	0.025	0.16	0.84	4.9	<0.025	0.095
Bicarbonate	mg/L	50	25	24	41	68	57	200	71
Carbonate	mg/L	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<5.0	<5.0
Chloride	mg/L	1.3	0.95	0.97	1.4	1.3	0.44	13	25
Electrical Conductivity	µmhos/cm	101	259	199	222	135	160	1,130	1,090
Fluoride	mg/L	1.3	0.34	0.46	0.86	2.4	1.2	0.14	0.22
Hardness (as $CaCO_3$)	mg/L	45	120	86	96	69	64	673	580
Nitrate as N	mg/L-N	0.31	0.28	1.4	12	0.49	6.7	0.73	7.6
Nitrite as N	mg/L-N	0.015	0.012	<0.0081	<0.0081	0.049	0.12	<0.0081	<0.0081
pH	s.u.	7.89	8.06	7.95	8.09	8.16	8.24	7.94	7.90
Sulfate	mg/L	4.9	100	61	15	2.6	3.3	550	550
Total Alkalinity (as $CaCO_3$)	mg/L	41	20	20	33	56	47	170	58
Total Dissolved Solids	mg/L	61	110	65	91	67	100	790	900
Total Phosphorus	mg/L	2.2	4.1	3.7	140	91	100	<0.016	1.8
Total Suspended Solids	mg/L	3,400	540	4,800	68,000	35,000	50,000	18	3,600
Turbidity	NT Units	1,600	850	2,500	44,000	28,000	23,000	NA	NA

TABLE 8
NORTH QUARRY WATER QUALITY PARAMETERS

Water Balance Component	Rock type	Water Quality										Rationale
		Antimony (µg/L)	Arsenic (µg/L)	Cadmium (µg/L)	Copper (µg/L)	Manganese (µg/L)	Molybdenum (µg/L)	Nickel (µg/L)	Selenium (µg/L)	TDS (mg/L)	SO_4 (mg/L)	
WMSA Runoff	Various	0.86	1.3	0.06	1.2	14	120	3.4	29	900	550	WMSA runoff quality –Table 7
Quarry Walls	Greenstone & graywacke	4.53	3.6	0.06	0.64	3.8	14.6	2.9	1.2	108	15	CAM WET tests (average for all tests) – Table 6
Quarry Walls	Limestone	8.2	4.5	0.53	1.5	21	540	160	82	790	550	North Quarry Water – Table 7
Infiltration through quarry backfill	Greenstone and graywacke	4.53	3.6	0.06	.64	3.8	14.6	2.9	1.2	108	15	CAM WET tests (average for all tests)
Groundwater Inflow	Various, mainly limestone During Phase 1 prior to backfilling	8.2	4.5	0.53	1.5	21	540	160	82	790	550	North Quarry Water – Table 7
	Gradual improvement during backfilling	Linear interpolation										N/A
	At the end of the backfill to the 990 level during Phase 3	0.23	2.34	0.06	1.66	21[1]	10.8	4.1	0.7	616	143	Average groundwater quality from Table 3

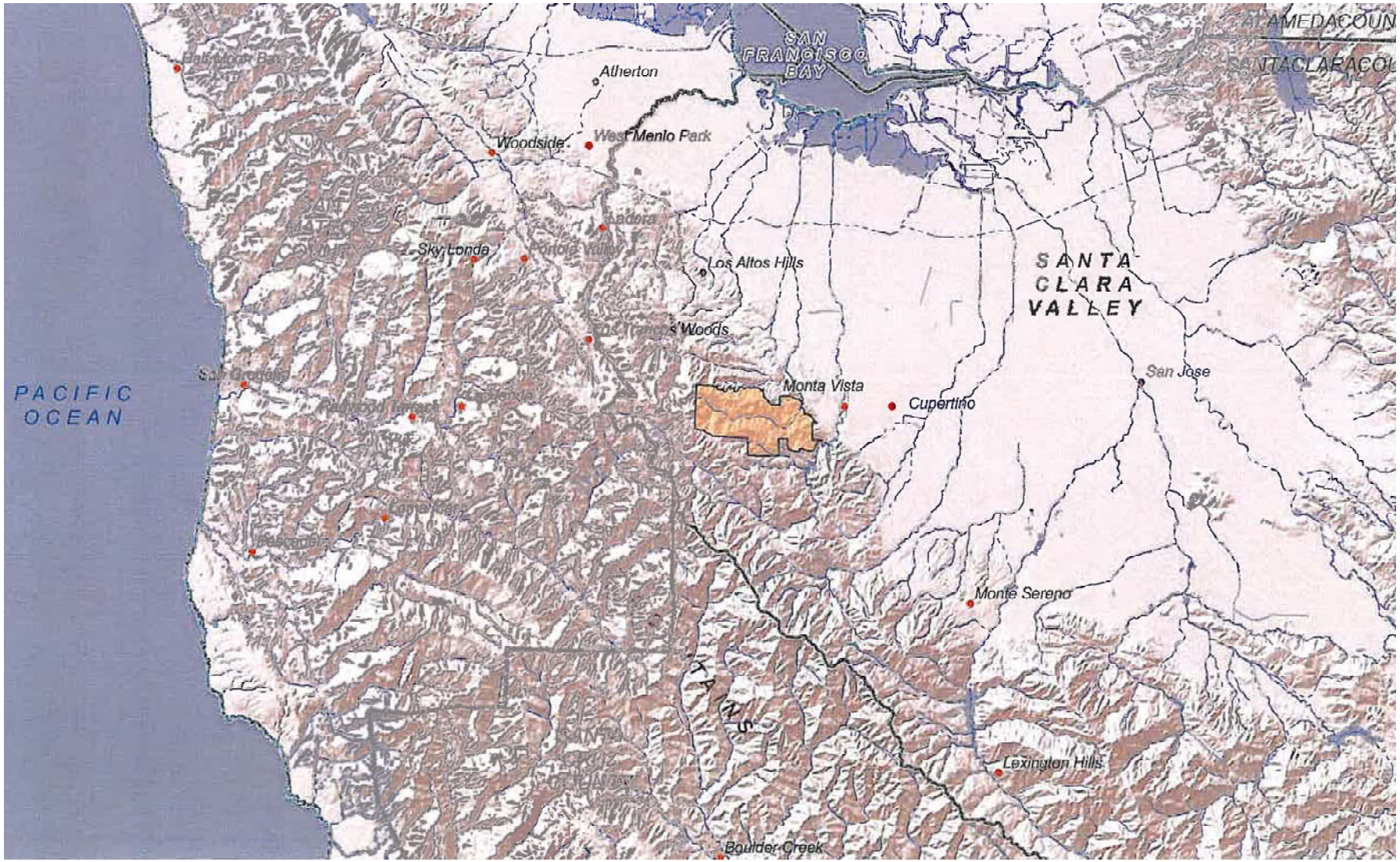
[1] Manganese value based on North Quarry Pit water.

TABLE 9
SOUTH QUARRY WATER QUALITY PARAMETERS

Water Balance Component	Rock type	Water Quality										Rationale
		Antimony (µg/L)	Arsenic (µg/L)	Cadmium (µg/L)	Copper (µg/L)	Manganese (µg/L)	Molybdenum (µg/L)	Nickel (µg/L)	Selenium (µg/L)	TDS (mg/L)	SO_4 (mg/L)	
Quarry Walls	Greenstone & graywacke	4.53	3.6	0.06	0.64	3.8	14.6	2.9	1.2	108	15	CAM WET tests (average for all tests) – Table 6
Quarry Walls	Limestone	0.24	20.7	0.08	1.17	8.38	20.5	4.5	10.7	81.8	45.2	Wall washing average – Table 7
Infiltration through quarry backfill	Greenstone and graywacke	4.53	3.6	0.06	0.64	3.8	14.6	2.9	1.2	108	15	CAM WET tests (average for all tests) - Table 6
Groundwater Inflow	Various, mainly limestone During Phase 1 prior to backfilling	0.24	20.7	0.08	1.14	8.38	20.5	4.5	10.7	616	143	Wall washing (average) for metals – Table 7 Average groundwater quality from Table 3 for TDS and sulfate
	Gradual improvement during backfilling	Linear interpolation										N/A
	At the end of the backfill to the 990 level during Phase 3	0.23	2.34	0.06	1.66	8.38[1]	10.8	4.1	0.7	616	143	Average groundwater quality from Table 3 Wall washing (average) for manganese – Table 7

[1] Manganese value based on wall washing average. Concentration projections for manganese are likely higher than what will be observed because it precipitates under oxidizing conditions.

Figures



Imagery obtained from Golder Associates, Geotechnical Evaluations And Design Recommendations – Permanente Quarry Reclamation Plan Update, April, 2010

Site Location

LEHIGH SOUTHWEST CEMENT COMPANY

Figure 1	May 2010	SES STRATEGIC ENGINEERING & SCIENCE

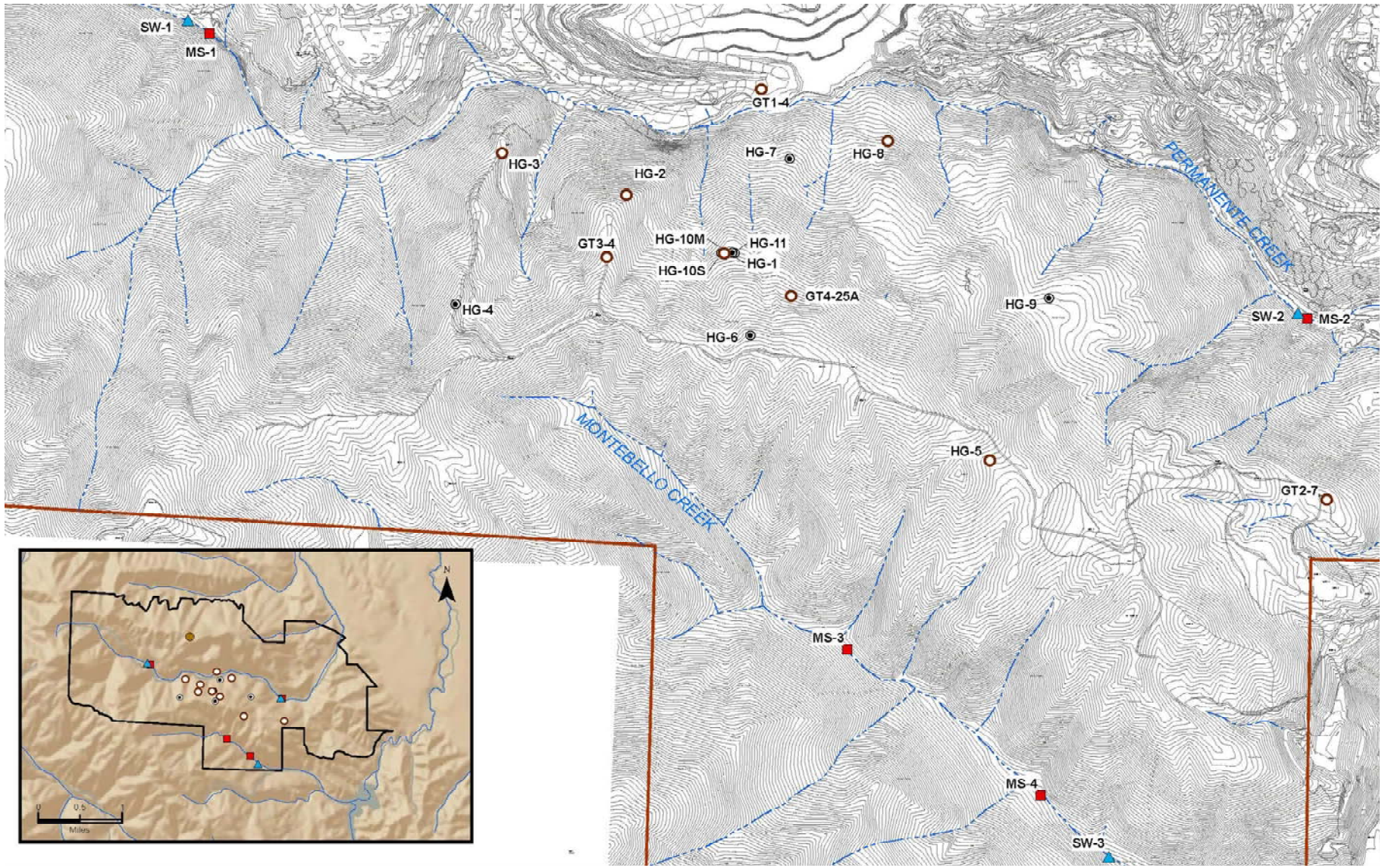


Imagery obtained from Golder Associates, Geotechnical Evaluations And Design Recommendations – Permanente Quarry Reclamation Plan Update, May, 2010

Mine Plan

LEHIGH SOUTHWEST CEMENT COMPANY

Figure 2	May 2010	SES STRATEGIC ENGINEERING & SCIENCE



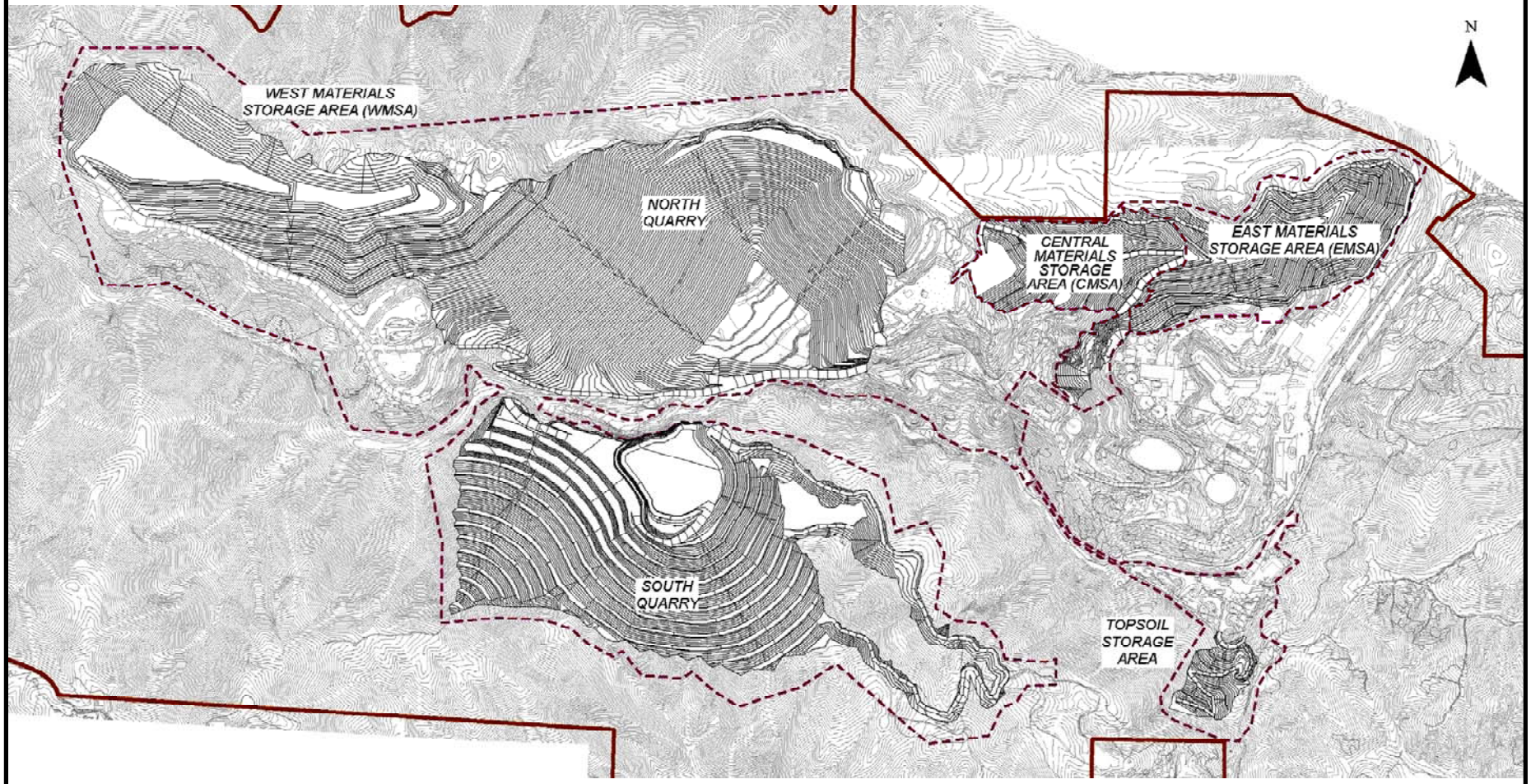
Imagery obtained from Golder Associates, Hydrologic Investigation – Permanente Quarry Reclamation Plan Update, April, 2010

LEGEND

- Groundwater monitor well
- Hydrogeology borehole
- Borehole with transducer
- Surface water sample location
- Surface water station
- Facility boundary

Surface Water & Groundwater Monitoring Locations
LEHIGH SOUTHWEST CEMENT COMPANY

Figure 3	May 2010	SES STRATEGIC ENGINEERING & SCIENCE



Imagery obtained from Golder Associates, Hydrologic Investigation – Permanente Quarry Reclamation Plan Update, May, 2010

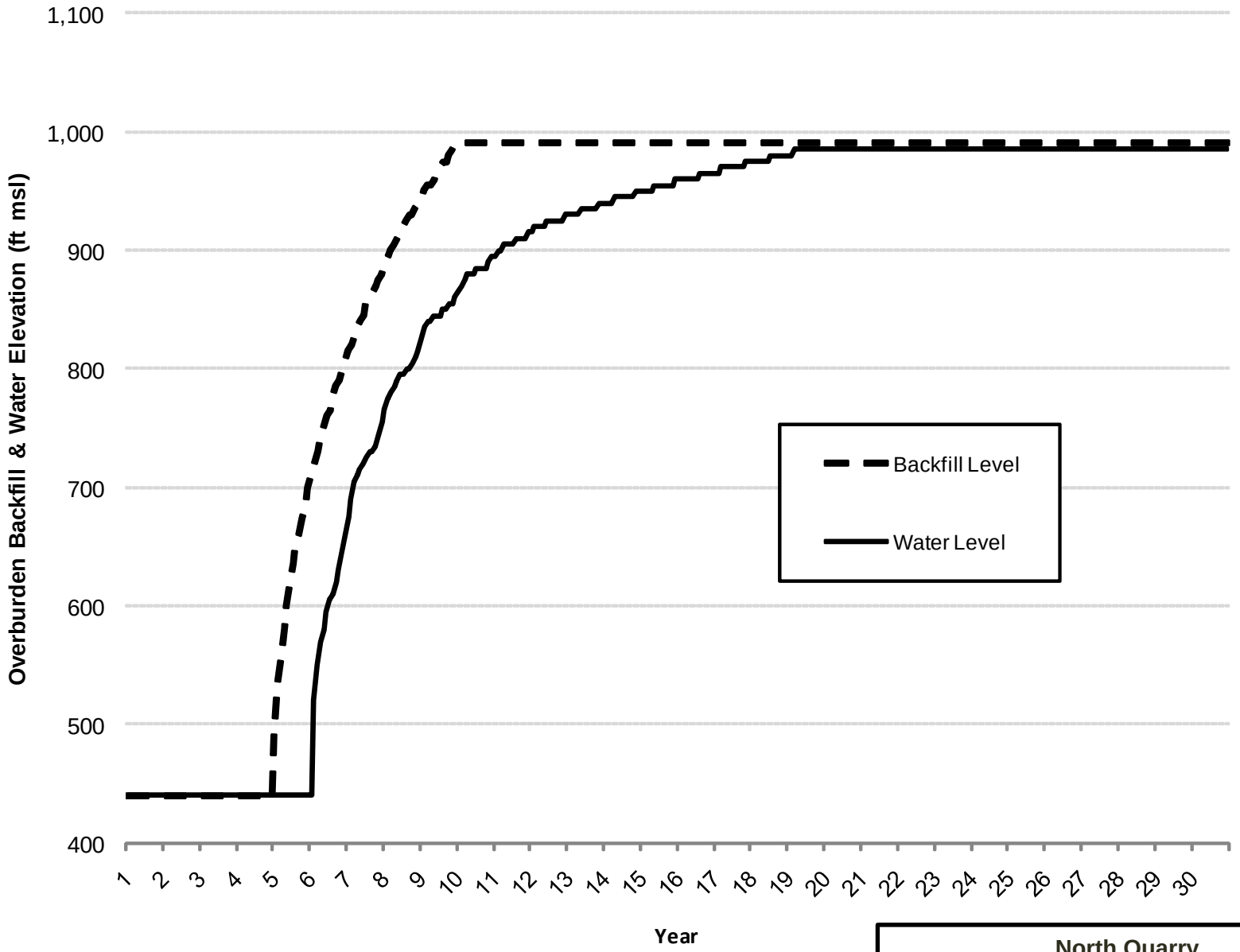
LEGEND

- Reclamation Plan Boundary
- Lehigh Property Boundary

Final Reclamation Plan

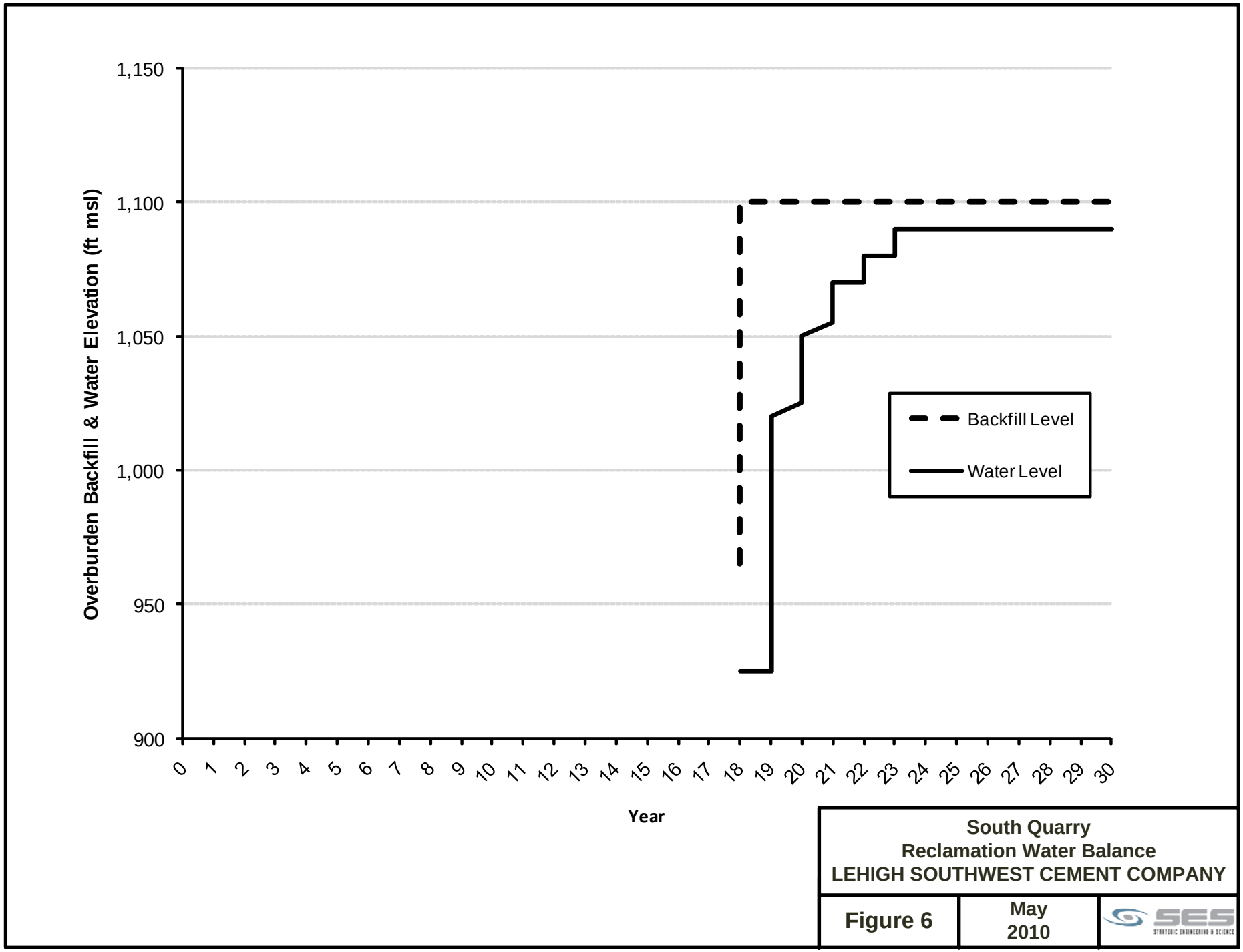
LEHIGH SOUTHWEST CEMENT COMPANY

Figure 4	May 2010	SES STRATEGIC ENGINEERING & SCIENCE



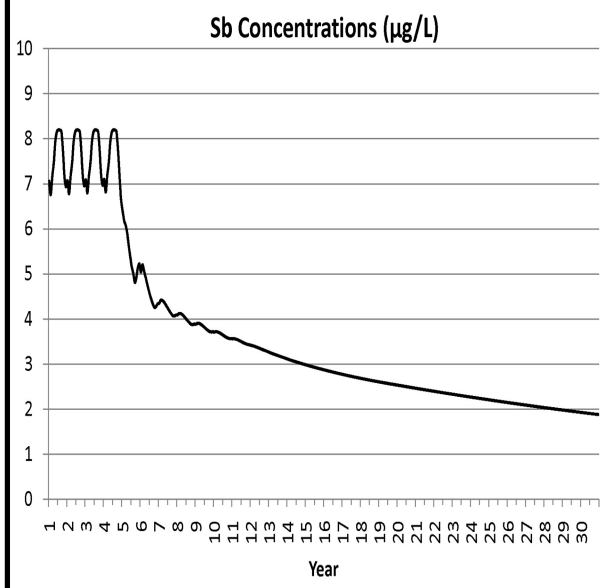
North Quarry
Reclamation Water Balance
LEHIGH SOUTHWEST CEMENT COMPANY

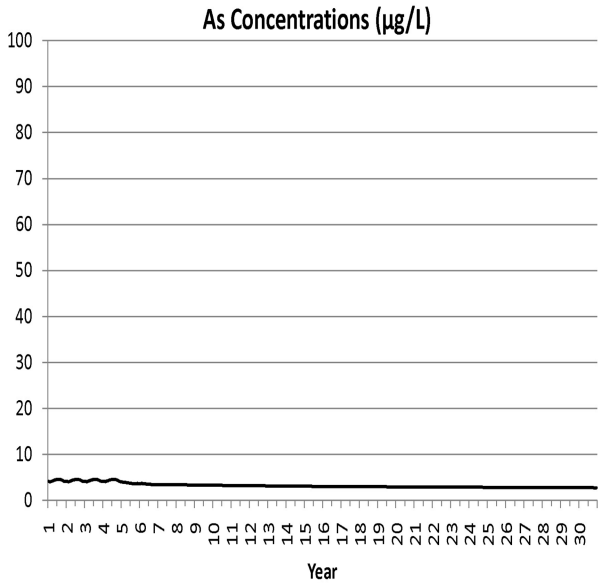
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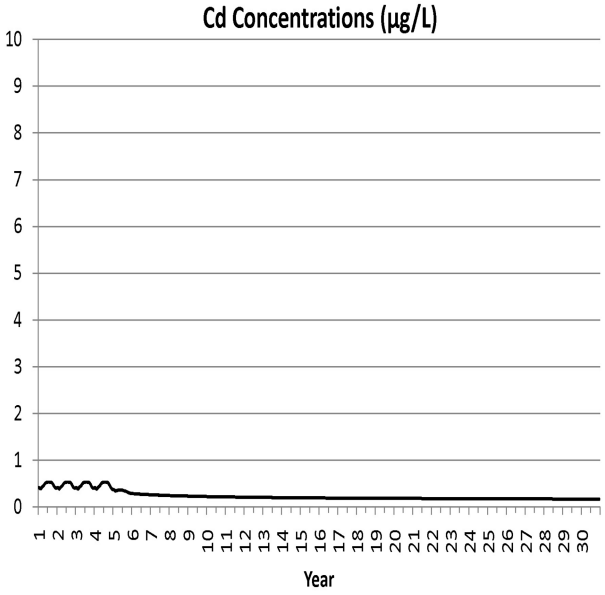


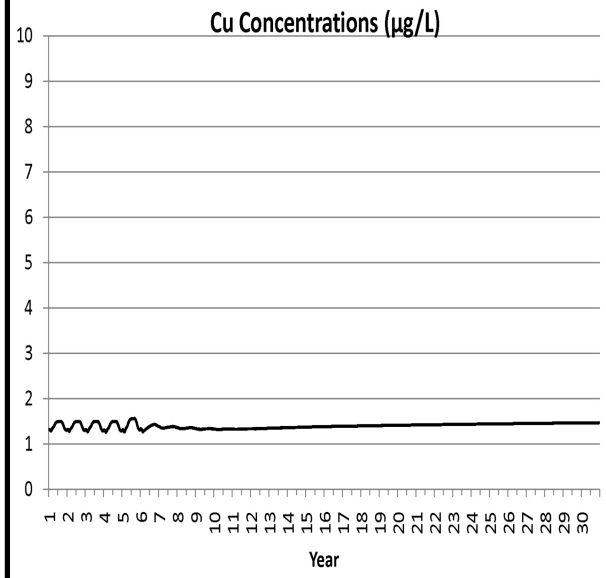
South Quarry
Reclamation Water Balance
LEHIGH SOUTHWEST CEMENT COMPANY

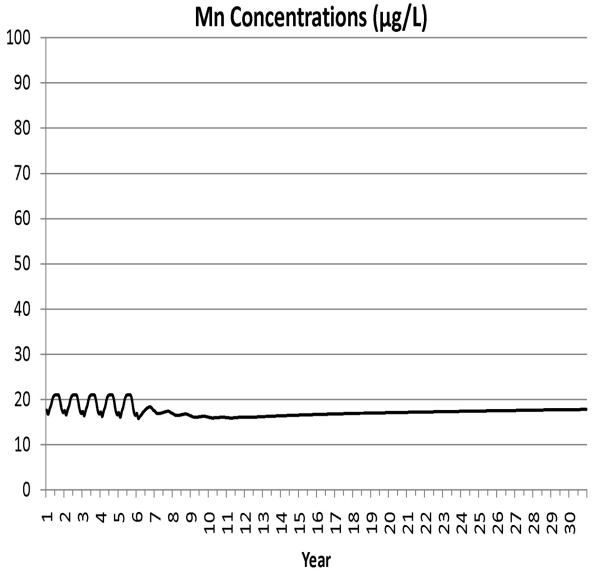
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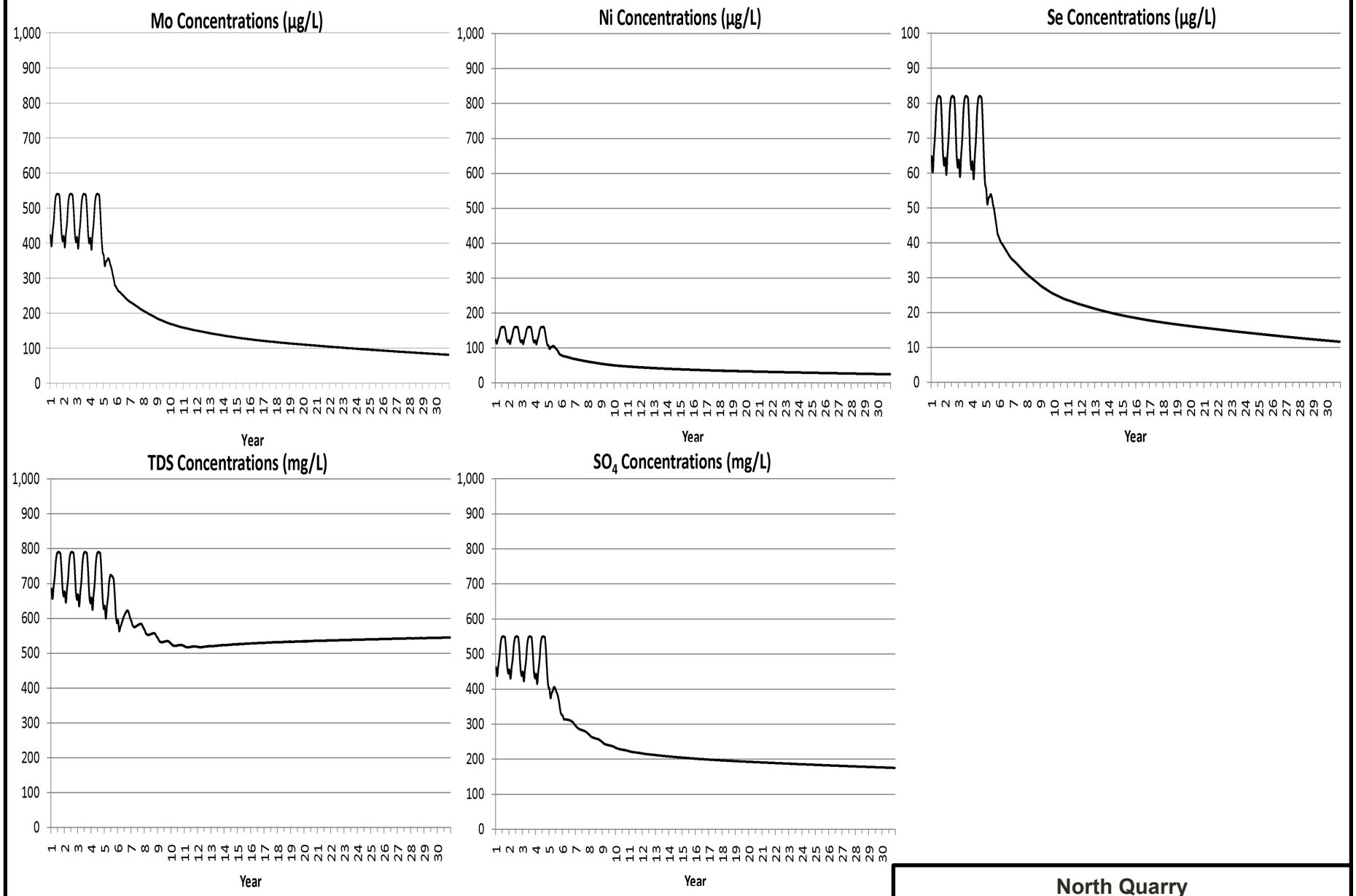






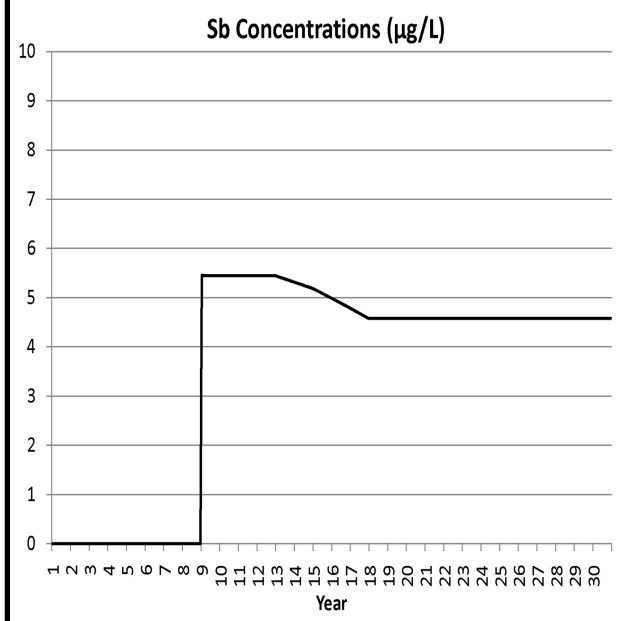
North Quarry
Water Quality Projections
LEHIGH SOUTHWEST CEMENT COMPANY

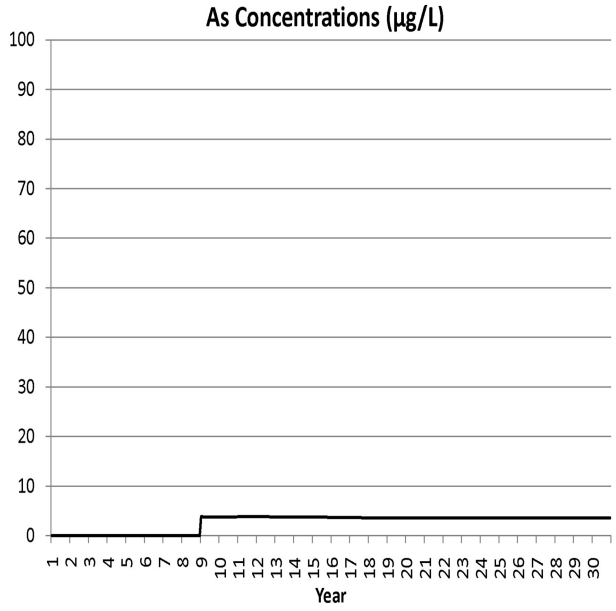
Figure 7A	May 2010	SES STRATEGIC ENGINEERING & SCIENCE

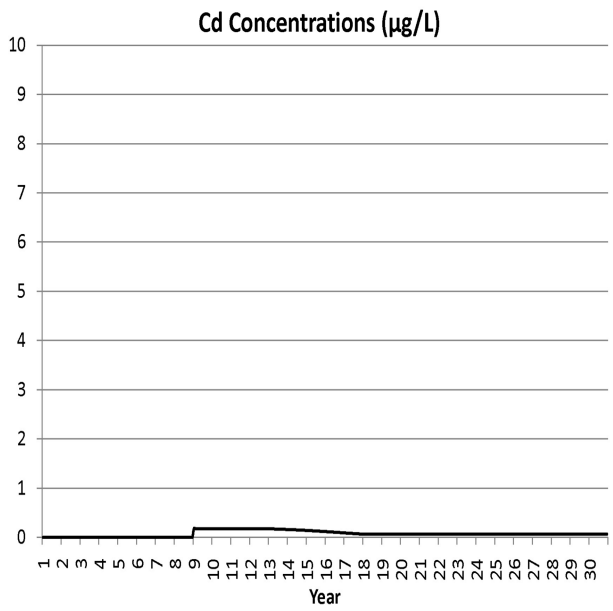


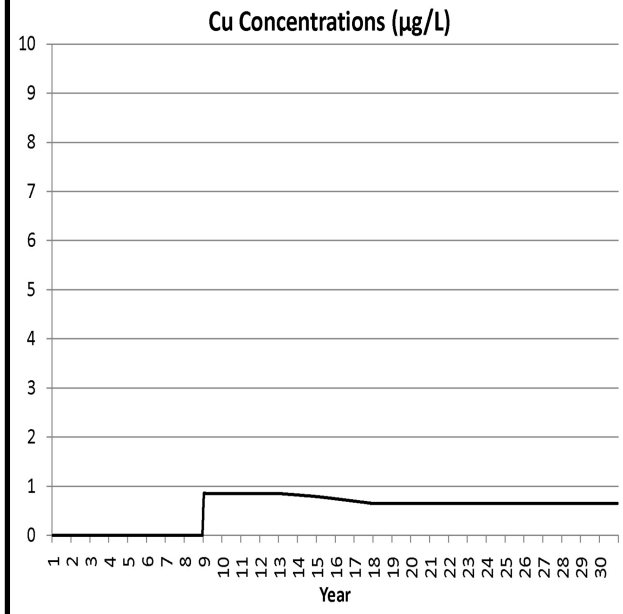
North Quarry
Water Quality Projections
LEHIGH SOUTHWEST CEMENT COMPANY

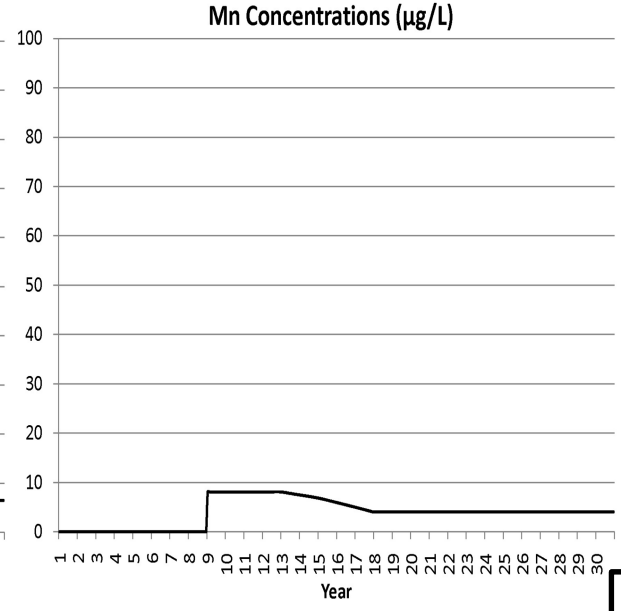
Figure 7B	May 2010	SES STRATEGIC ENGINEERING & SCIENCE





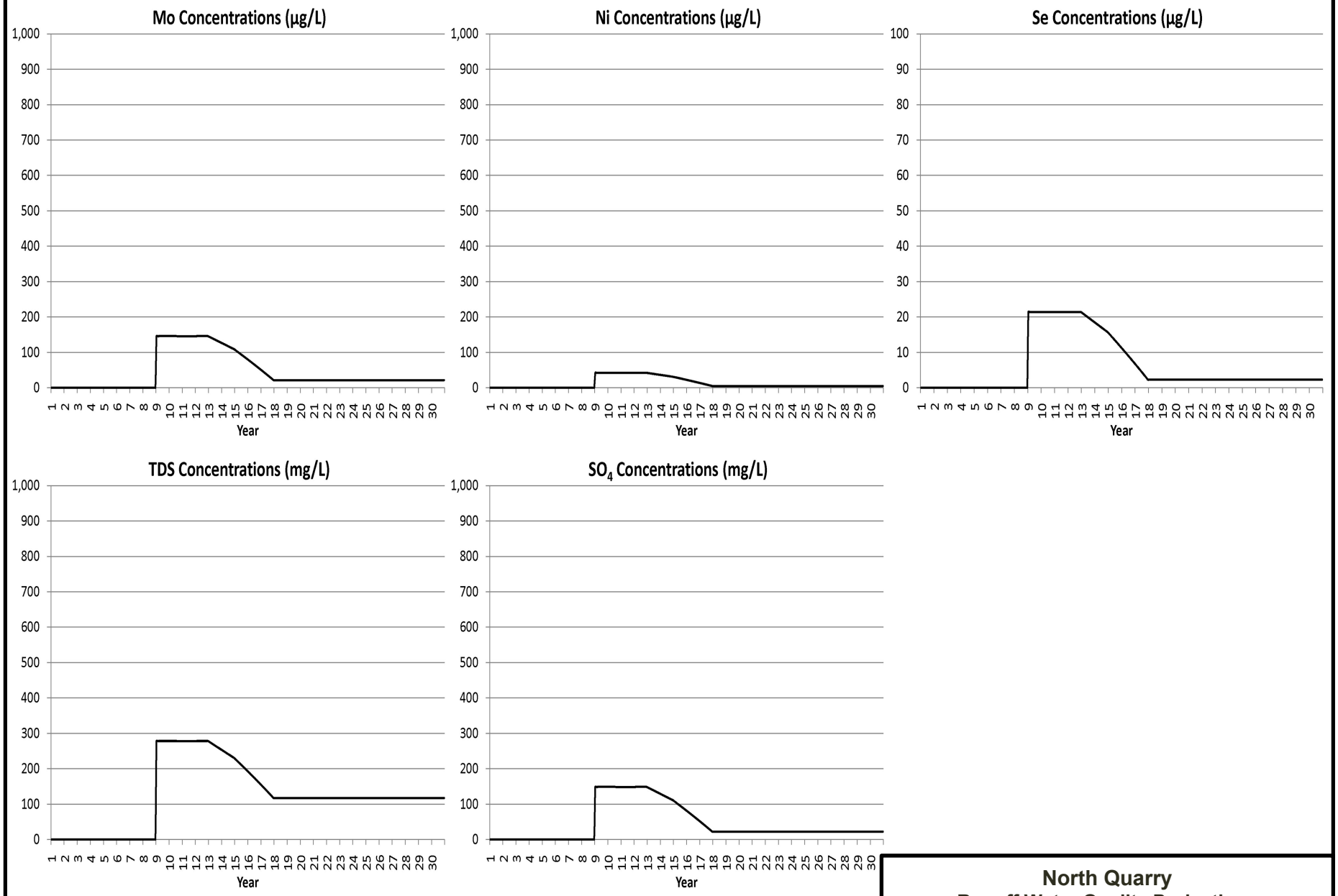






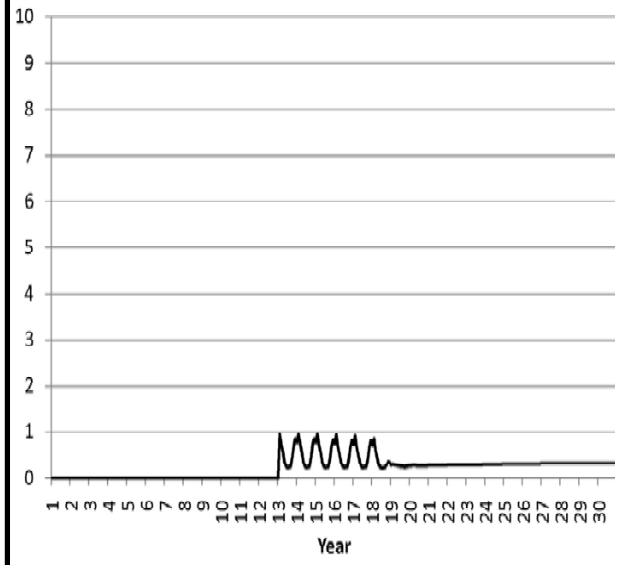
North Quarry
Runoff Water Quality Projections
LEHIGH SOUTHWEST CEMENT COMPANY

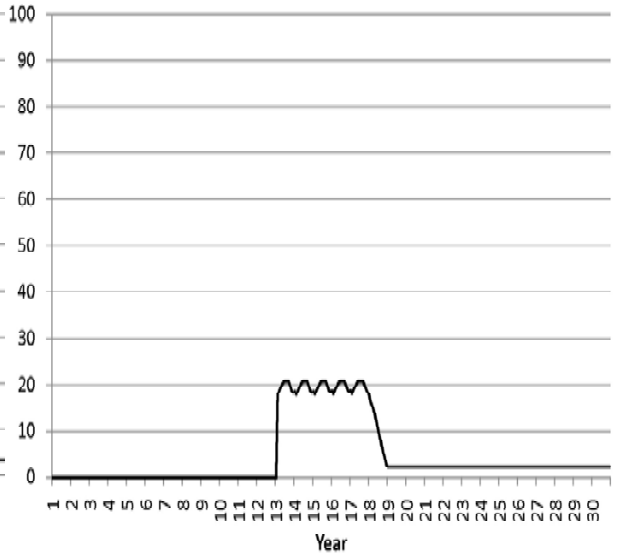
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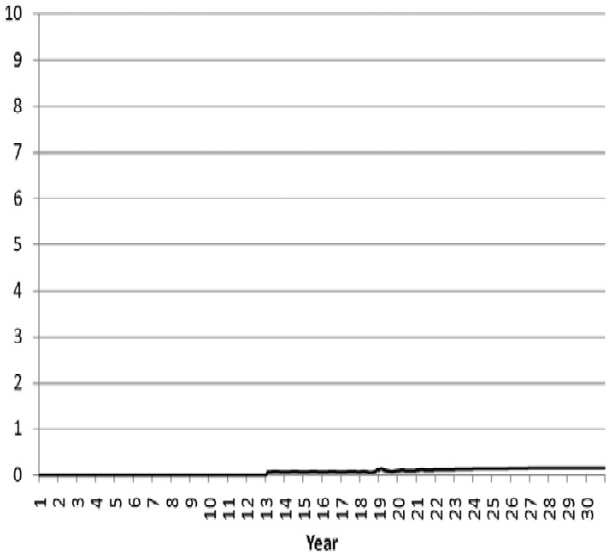


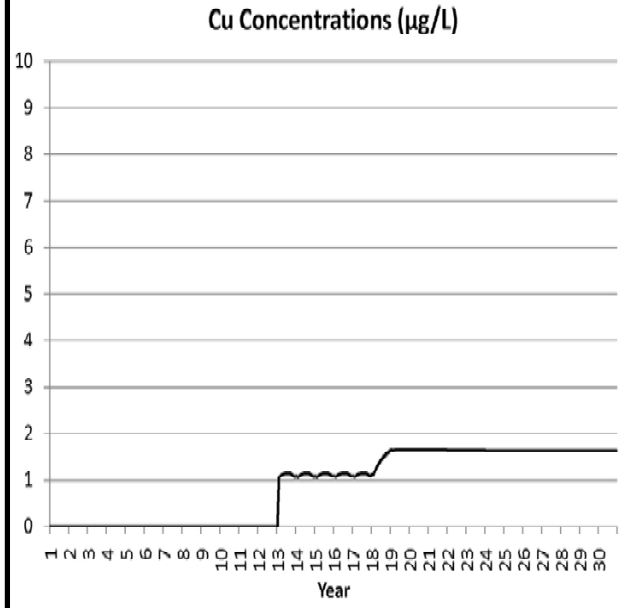
North Quarry
Runoff Water Quality Projections
LEHIGH SOUTHWEST CEMENT COMPANY

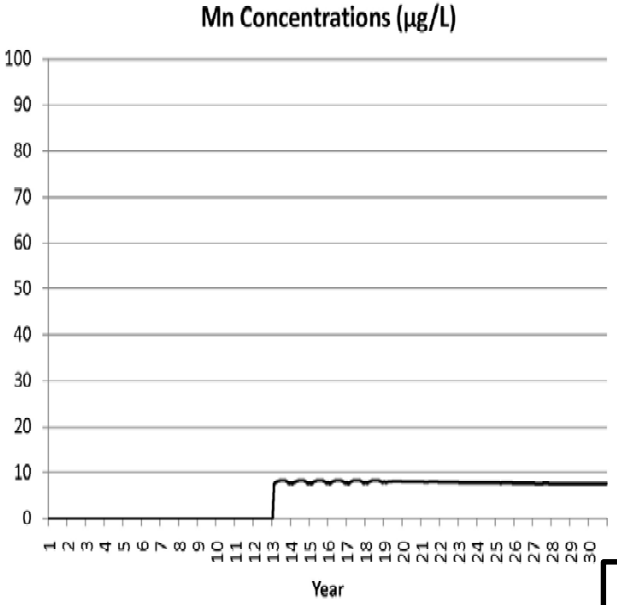
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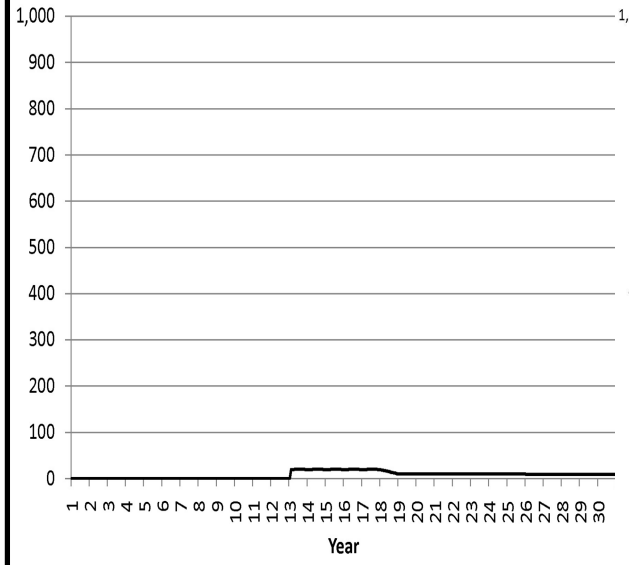


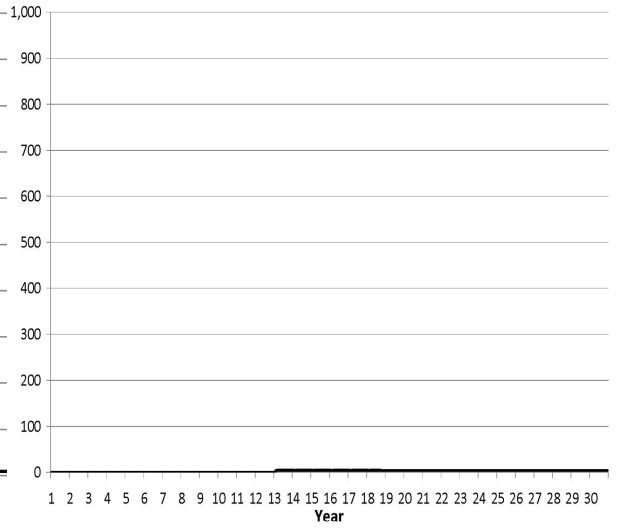


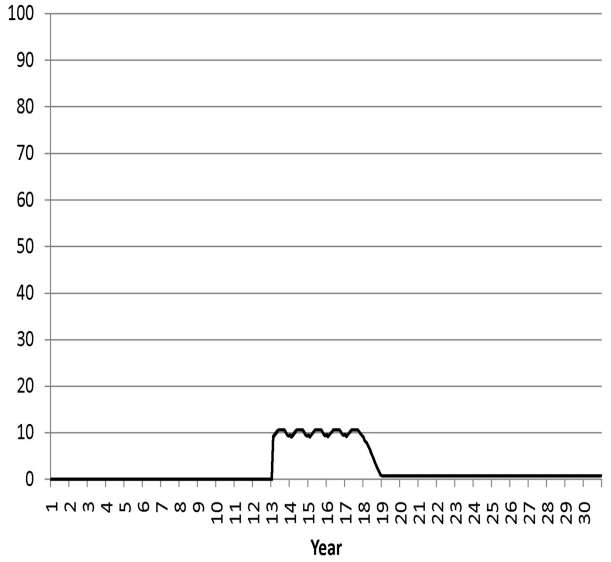


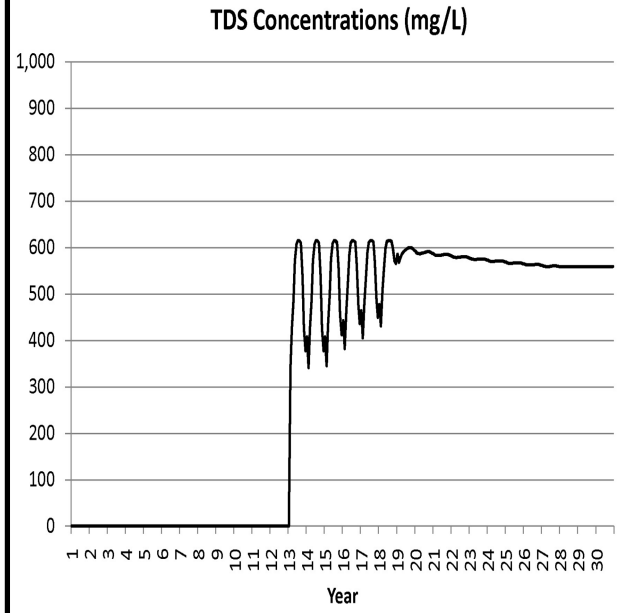
South Quarry
Water Quality Projections
LEHIGH SOUTHWEST CEMENT COMPANY

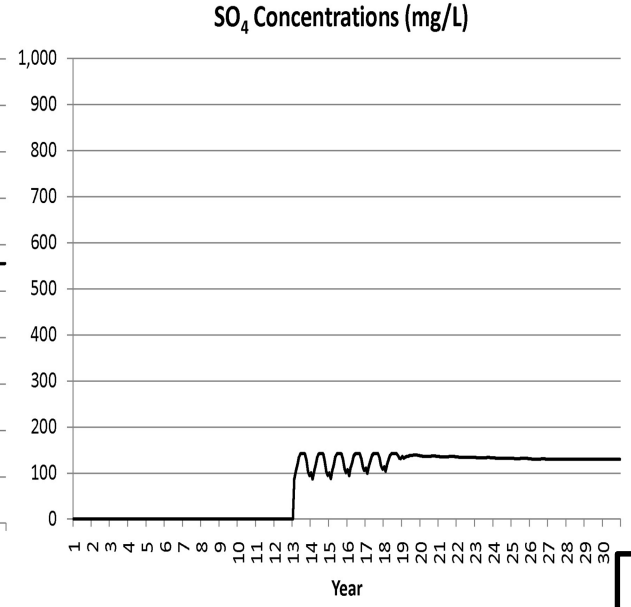
Figure 9A	May 2010	SES STRATEGIC ENGINEERING & SCIENCE





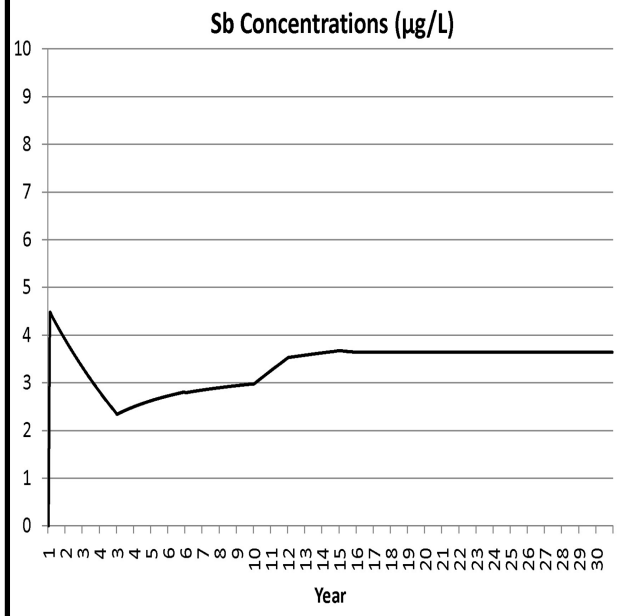


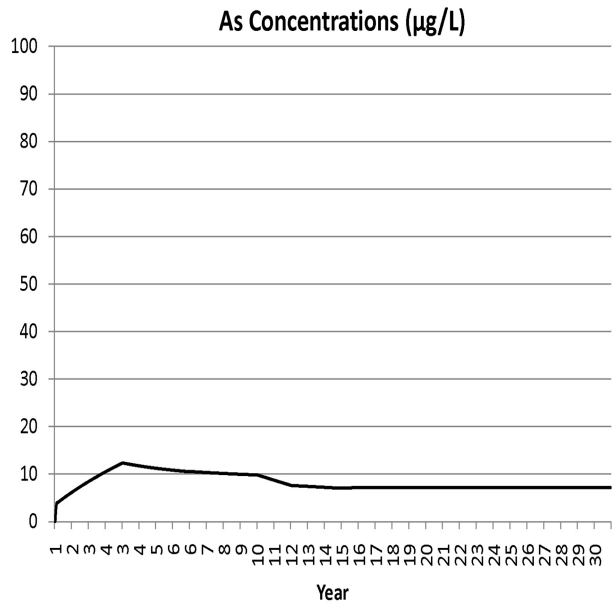


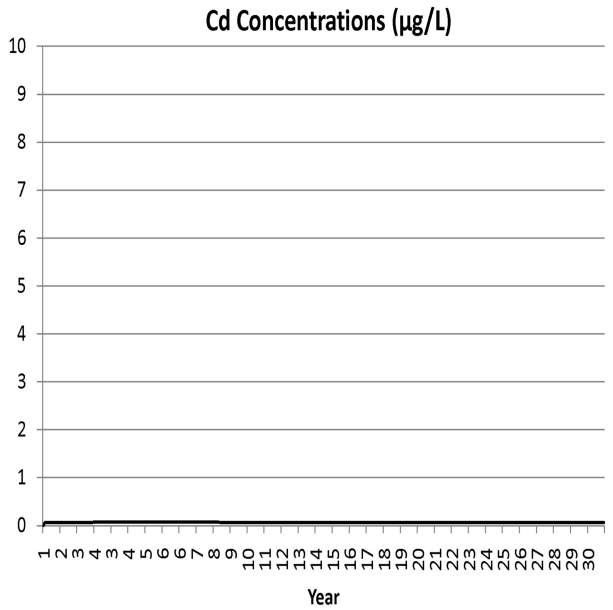


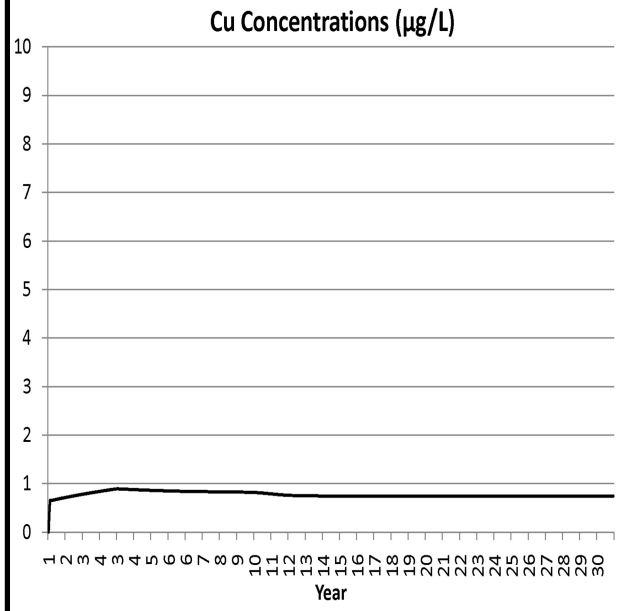
South Quarry
Water Quality Projections
LEHIGH SOUTHWEST CEMENT COMPANY

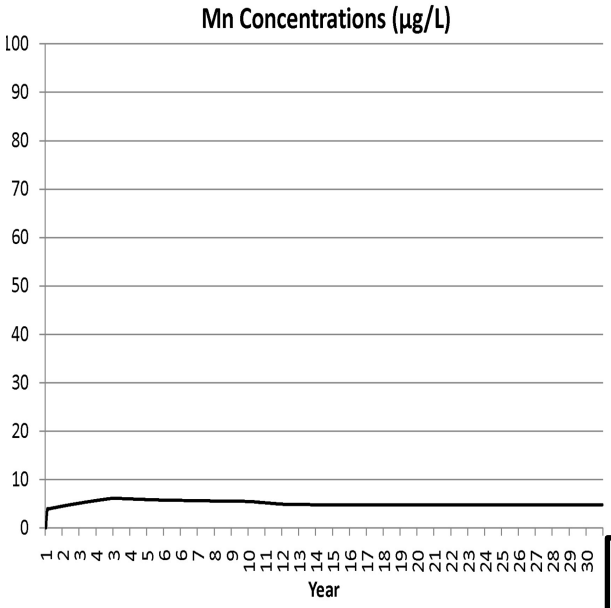
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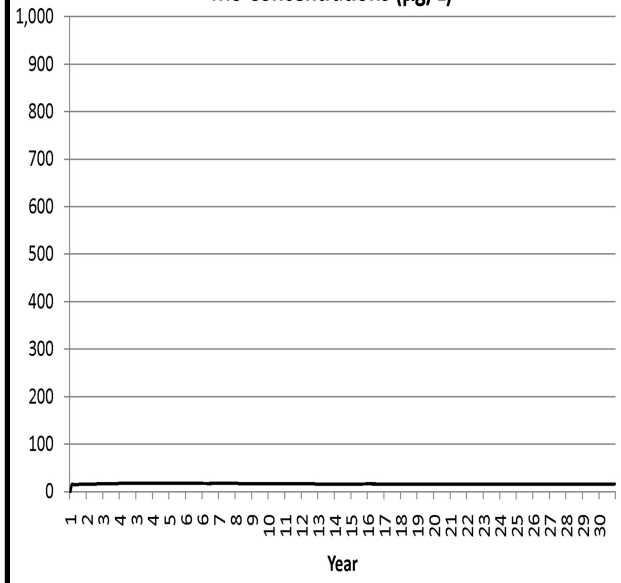


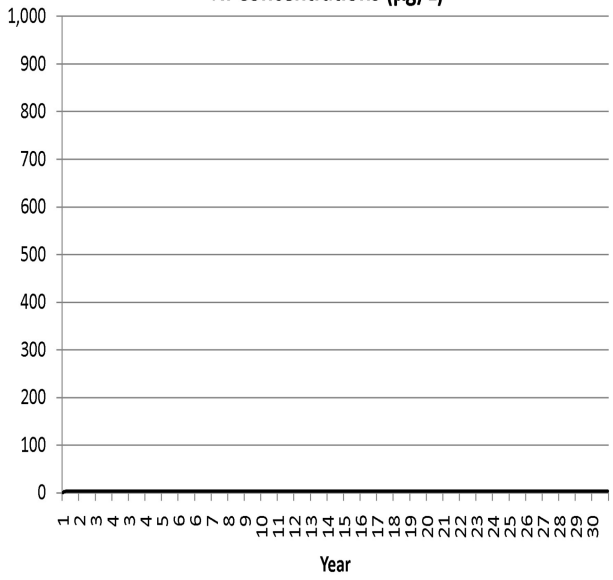


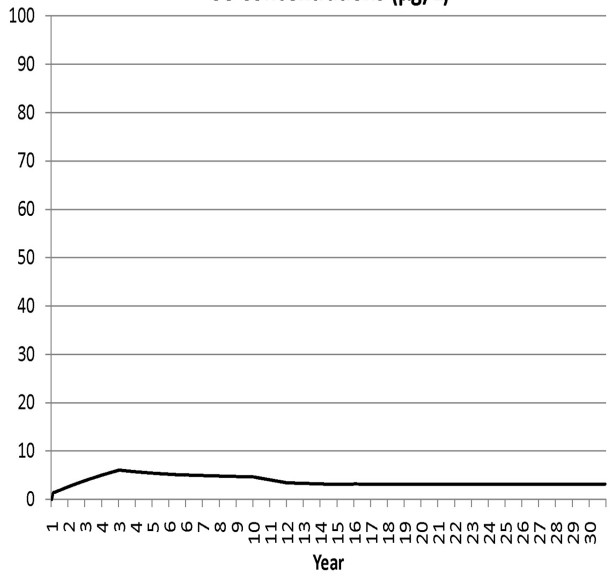


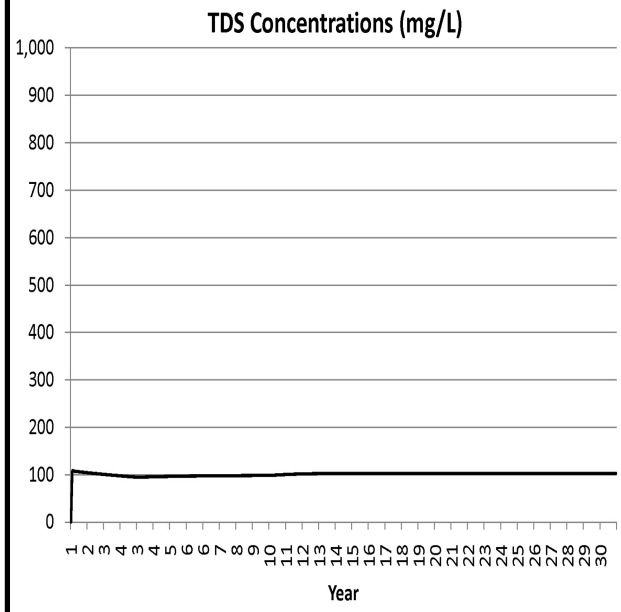
South Quarry
Runoff Water Quality Projections
LEHIGH SOUTHWEST CEMENT COMPANY

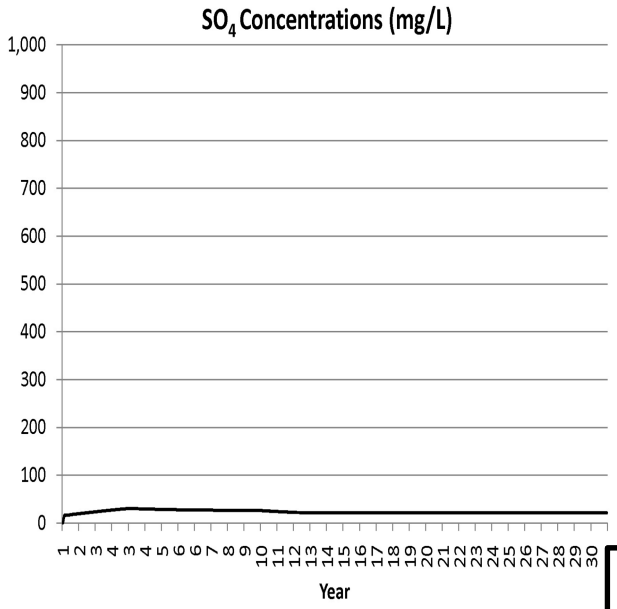
Figure 10A	May 2010	SES STRATEGIC ENGINEERING & SCIENCE











South Quarry
Runoff Water Quality Projections
LEHIGH SOUTHWEST CEMENT COMPANY

Figure 10B	May 2010	SES STRATEGIC ENGINEERING & SCIENCE

Appendix A

Mining and Overburden Schedule

Appendix A
Mining and Overburden Schedule

Quarry Production by Project Phase (units: short tons, or tons).

					Topsoil Movements – To/From Topsoil Stockpile Area				Topsoil-Concurrent Reclamation			
Phase	LS–Cement	LS–Aggregate	Waste Rock	Aggregate Fines	South Quarry	North Quarry Backfill	EMSA	Total Topsoil	South Quarry	EMSA	Topsoil Stockpile	Total Production
1	1,212,549	2,480,213	7,440,640	551,159	165,348	0	0	165,348	0	39,683	6,614	11,684,561
2	2,425,098	2,755,793	8,818,537	551,159	176,371	0	0	176,371	143,301	17,637	2,205	14,550,585
3	2,425,098	2,755,793	11,023,171	551,159	77,162	22,046	0	77,162	33,070	0	3,307	16,755,219
4	2,425,098	2,755,793	8,680,747	551,159	0	22,046	0	22,046	60,627	0	0	14,412,796
5	2,425,098	2,755,793	8,083,659	551,159	171,961	22,046	47,400	219,361	0	0	8,819	13,815,707

Quarry Production by Project Phase and by Year (units: metric tons, or tonnes).

						Topsoil Movements – To/From Topsoil Stockpile Area				Topsoil-Concurrent Reclamation			
Year	Phase	LS-Cement	LS-Aggregate	Waste Rock	Aggregate Fines	South Quarry	North Quarry Backfill	EMSA	Total Topsoil	South Quarry	EMSA	Topsoil Stockpile	Total Production
1	1					50,000	0	0	50,000	0	0	2,000	0
2	1					150,000	0	0	150,000	0	0	6,000	0
3	1	550,000	2,250,000	1,375,000	500,000	25,000	0	0	25,000	0	0	2,000	4,675,000
4	1	550,000	2,250,000	4,375,000	500,000	25,000	0	0	25,000	0	36,000	2,000	7,675.000
5	1	1,100,000	2,250,000	6,750,000	500,000	25,000	0	0	25,000	0	17,000	2,000	10,600,000
6	2	2,200,000	2,500,000	6,938,000	500,000	75,000	0	0	75,000	100,000	16,000	2,000	12,138,000
7	2	2,200,000	2,500,000	8,000,000	500,000	160,000	0	0	160,000	0	0	2,000	13,200,000
8	2	2,200,000	2,500,000	8,000,000	500,000	0	0	0	0	130,000	0	0	13,200,000
9	3	2,200,000	2,500,000	9,000,000	500,000	70,000	0	0	70,000	0	0	3,000	14,200,000
10	3	2,200,000	2,500,000	10,000,000	500,000	0	0	0	0	0	0	0	15,200,000
11	3	2,200,000	2,500,000	9,000,000	500,000	0	11,000	0	11,000	30,000	0	0	14,200,000
12	3	2,200,000	2,500,000	10,000,000	500,000	0	20,000	0	20,000	30,000	0	0	15,200,000
13	4	2,200,000	2,500,000	7,875,000	500,000	0	20,000	0	20,000	55,000	0	0	13,075,000
14	4	2,200,000	2,500,000	7,276,500	500,000	0	20,000	0	20,000	0	0	0	12,476,500
15	5	2,200,000	2,500,000	7,333,333	500,000	156,000	20,000	0	176,000	0	0	3,000	12,533,333
16	5	2,200,000	2,500,000	7,333,333	500,000	156,000	20,000	0	176,000	0	0	8,000	12,533,333
17	5-Ultimate	2,200,000	2,500,000	5,000,000	500,000	156,000	0	43,000	199,000	0	0	8,000	10,200,000
TOTALS:		28,600,000	36,750,000	108,256,167	7,500,000	1,048,000	111,000	43,000	1,202,000	345,000	69,000	40,000	181,106,167

Appendix B

North Quarry and WMSA Mining and Reclamation Phase

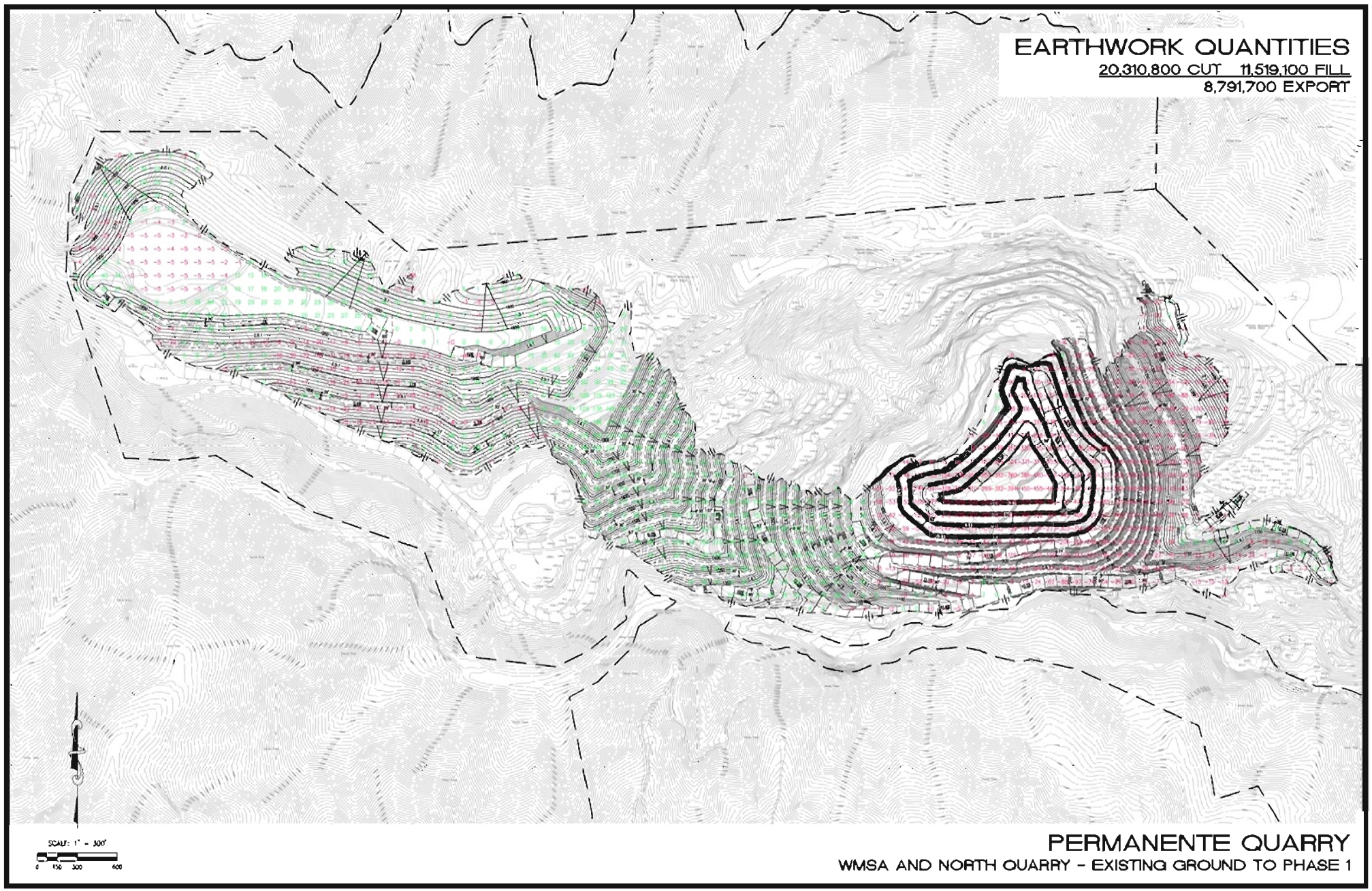
B.1 North Quarry and WMSA Volumes

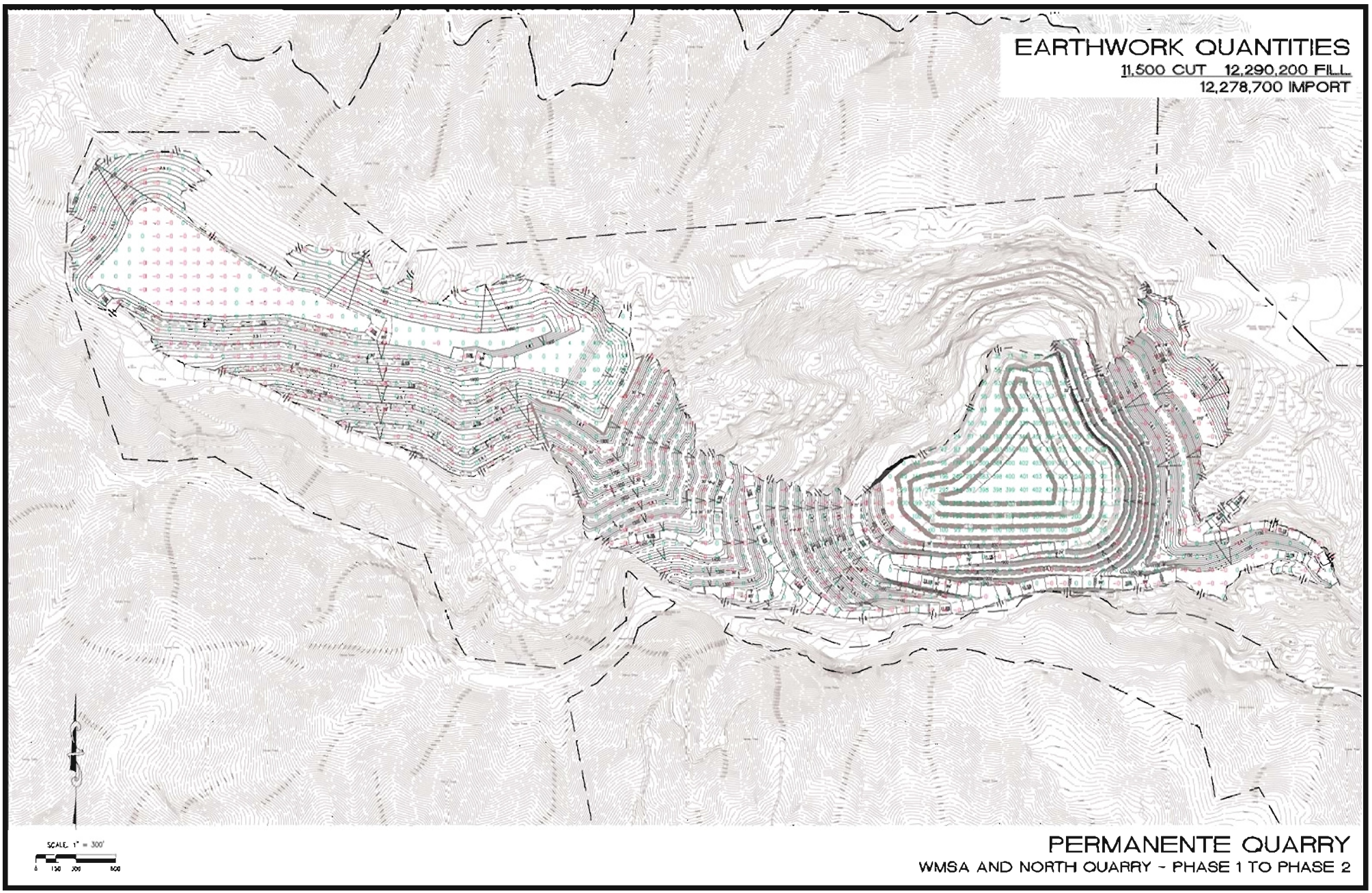
B.2 North Quarry Drainage Areas (Horizontal Projections)

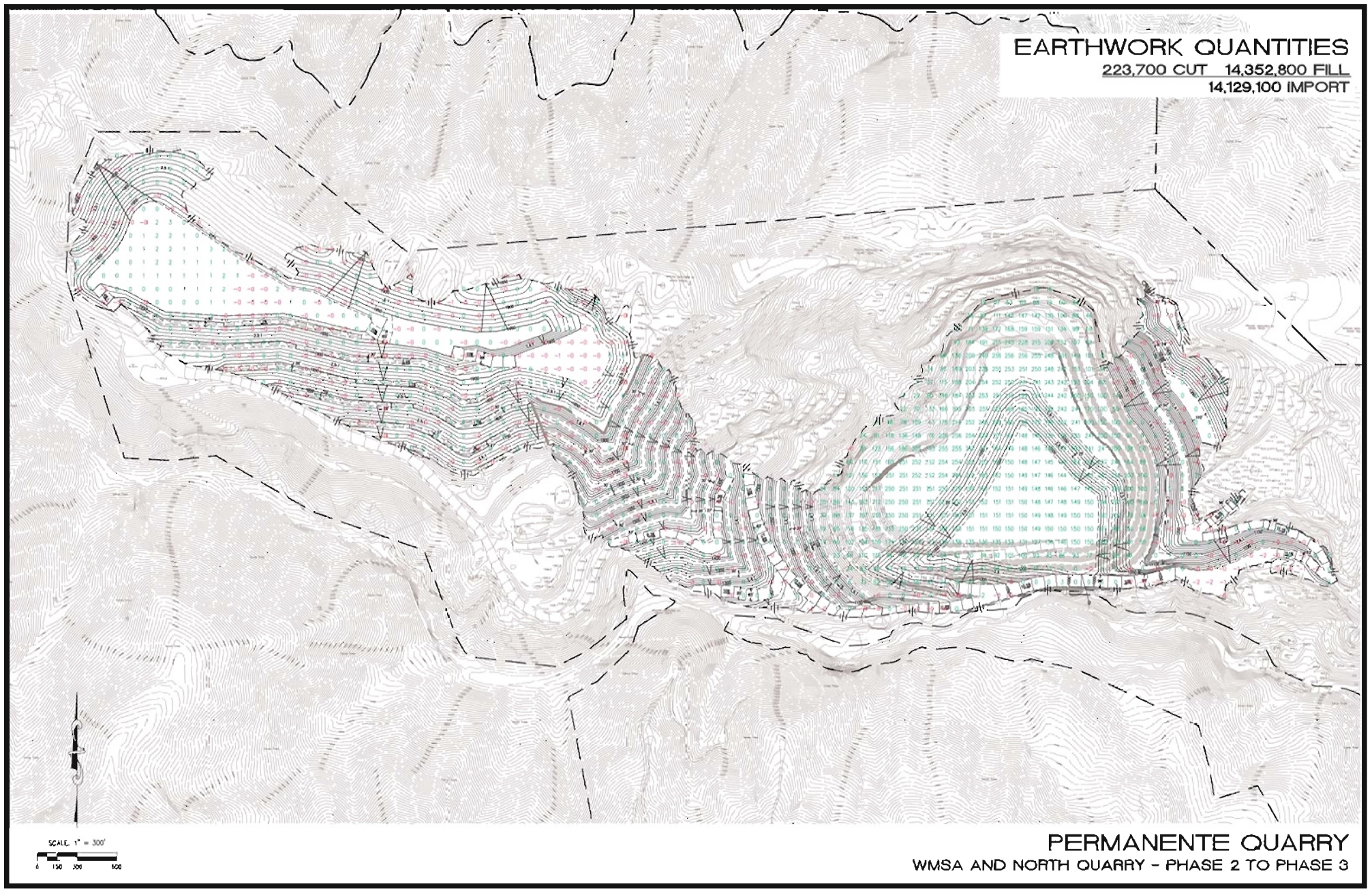
B.3 WMSA Drainage Areas (Horizontal Projections)

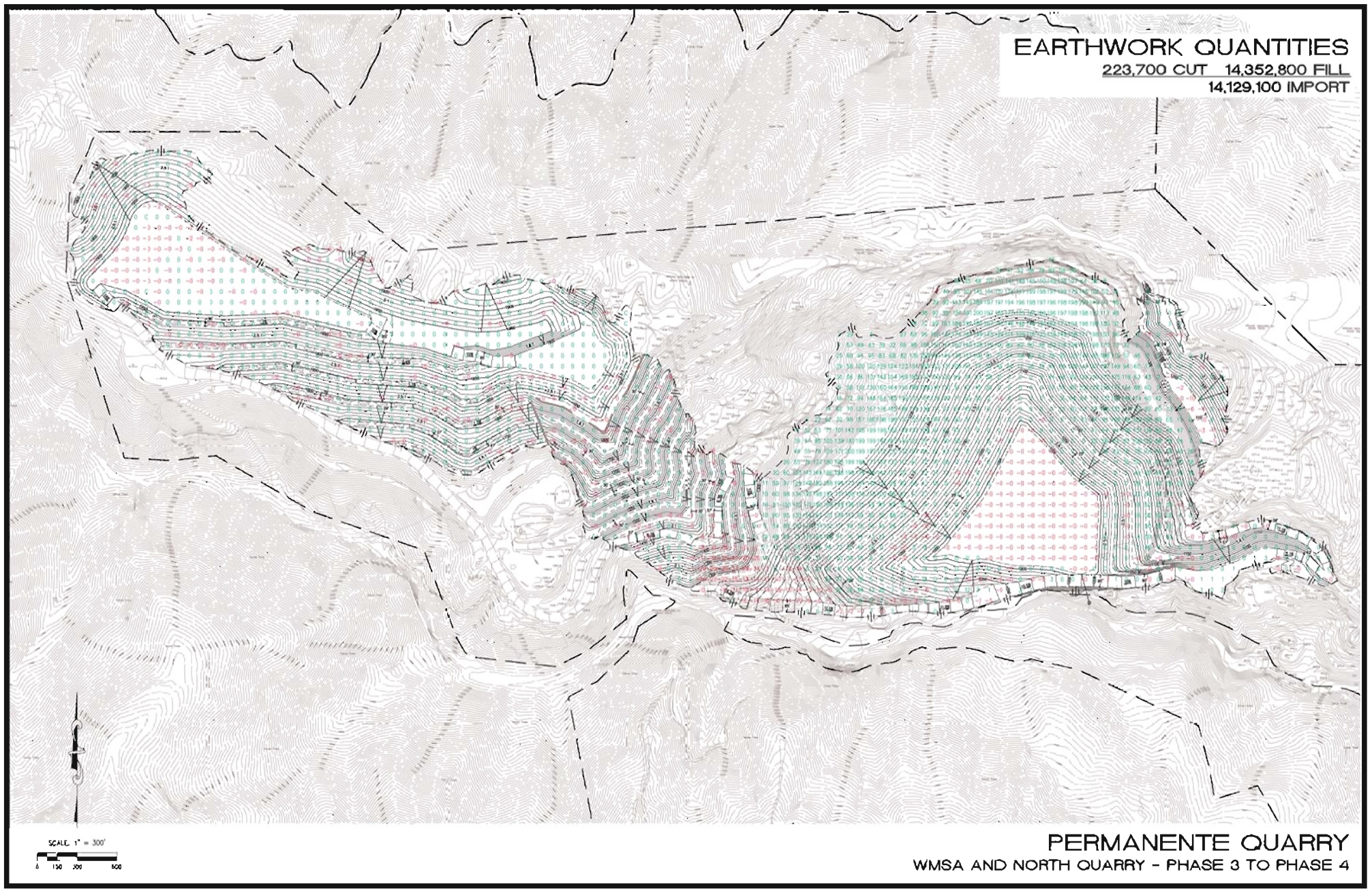
Appendix B.1

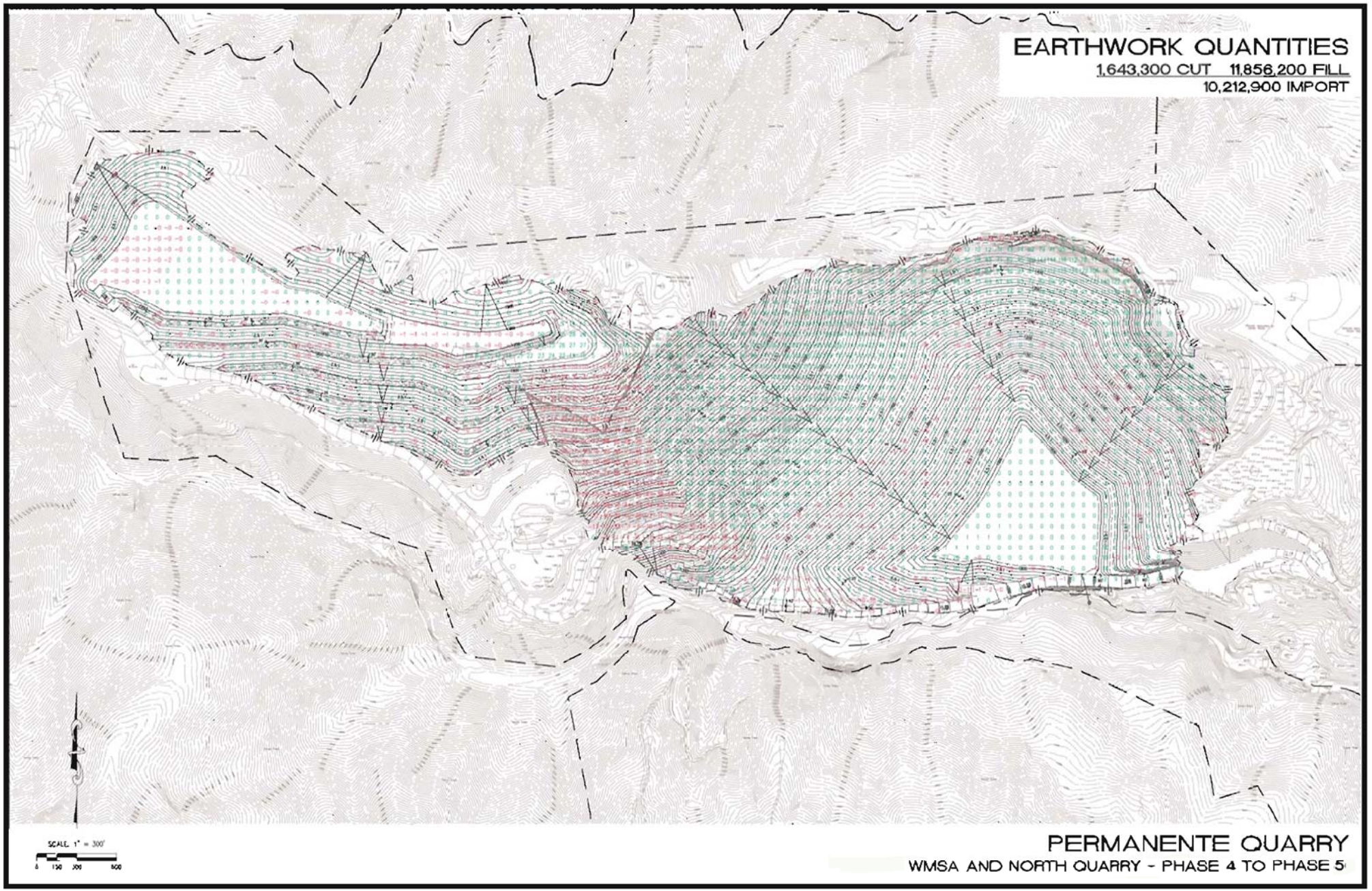
B.1 North Quarry and WMSA Volumes


EARTHWORK QUANTITIES
20,310,800 CUT 11,519,100 FILL
8,791,700 EXPORT
SCALE: 1" = 300'
0 150 300 600
PERMANENTE QUARRY
WMSA AND NORTH QUARRY - EXISTING GROUND TO PHASE 1
APRIL 22, 2020


EARTHWORK QUANTITIES
11,500 CUT 12,290,200 FILL
12,278,700 IMPORT
SCALE: 1" = 300'
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PERMANENTE QUARRY
WMSA AND NORTH QUARRY - PHASE 1 TO PHASE 2

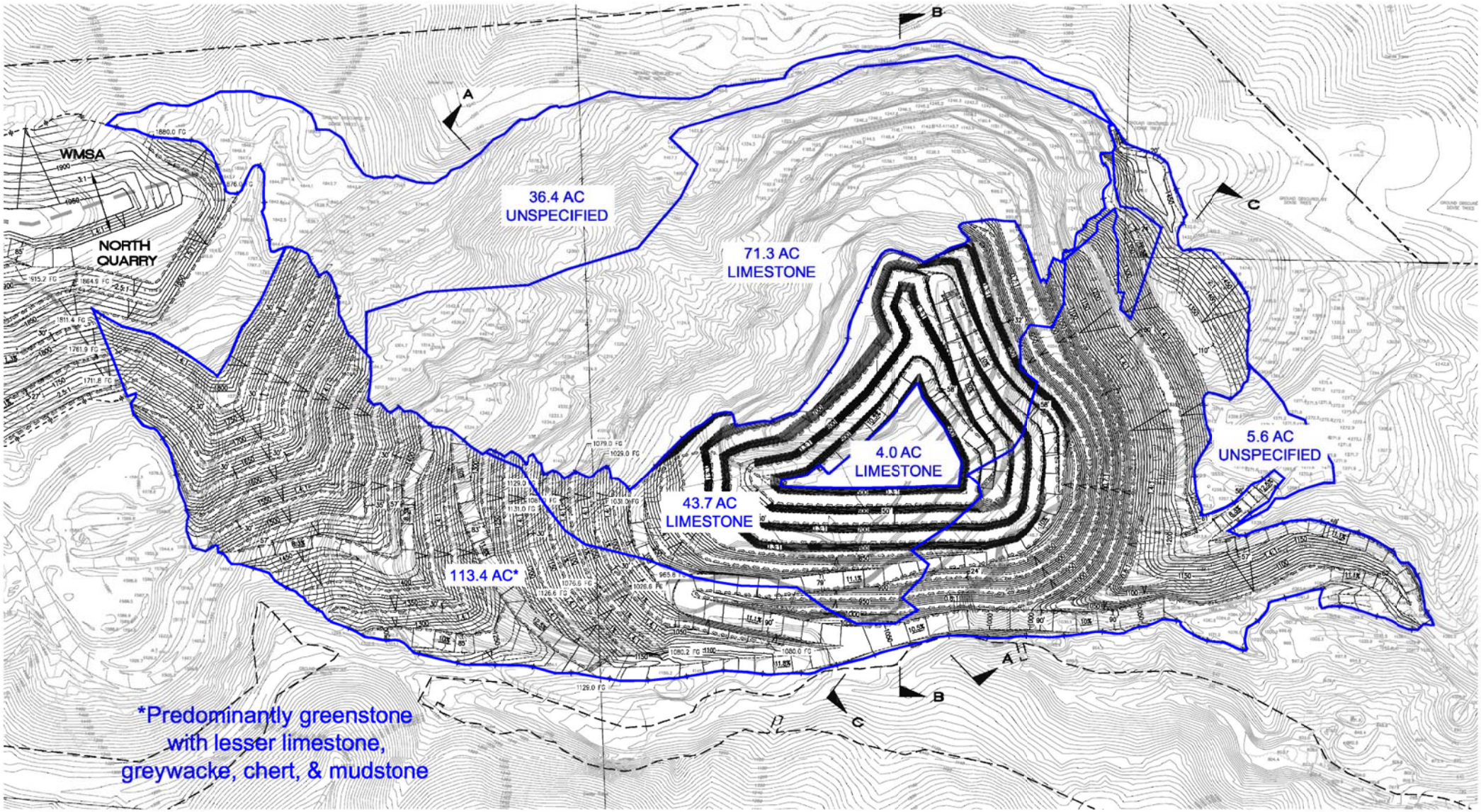

EARTHWORK QUANTITIES
223,700 CUT 14,352,800 FILL
14,129,100 IMPORT
SCALE: 1" = 300'
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PERMANENTE QUARRY
WMSA AND NORTH QUARRY - PHASE 2 TO PHASE 3
APRIL 20, 2009


EARTHWORK QUANTITIES
223,700 CUT 14,352,800 FILL
14,129,100 IMPORT
SCALE: 1" = 300'
0 150 300 600
PERMANENTE QUARRY
WMSA AND NORTH QUARRY - PHASE 3 TO PHASE 4


EARTHWORK QUANTITIES
1,643,300 CUT 11,856,200 FILL
10,212,900 IMPORT
SCALE 1" = 300'
0 150 300 600
PERMANENTE QUARRY
WMSA AND NORTH QUARRY - PHASE 4 TO PHASE 5
APRIL 20, 2010

Appendix B.2

B.2 North Quarry Drainage Areas (Horizontal Projections)



December 2022
Areas horizontally projected

OPERATOR	
NAME:	LEHIGH SOUTHWEST CEMENT COMPANY
ADDRESS:	24001 STEVENS CREEK BLVD CUPERTINO, CA 95014
TELEPHONE:	408-996-4000
SHORT LEGAL:	SEC 18 T7S R2W MDBM; W 1/4 & SE 1/4 SEC 17 T7S R2W MDBM
A.P.N.	351-09-022; 351-10-005, 037, 038
SITE ADDRESS:	24001 STEVENS CREEK BLVD. CUPERTINO, CA 95014

SHEET INDEX

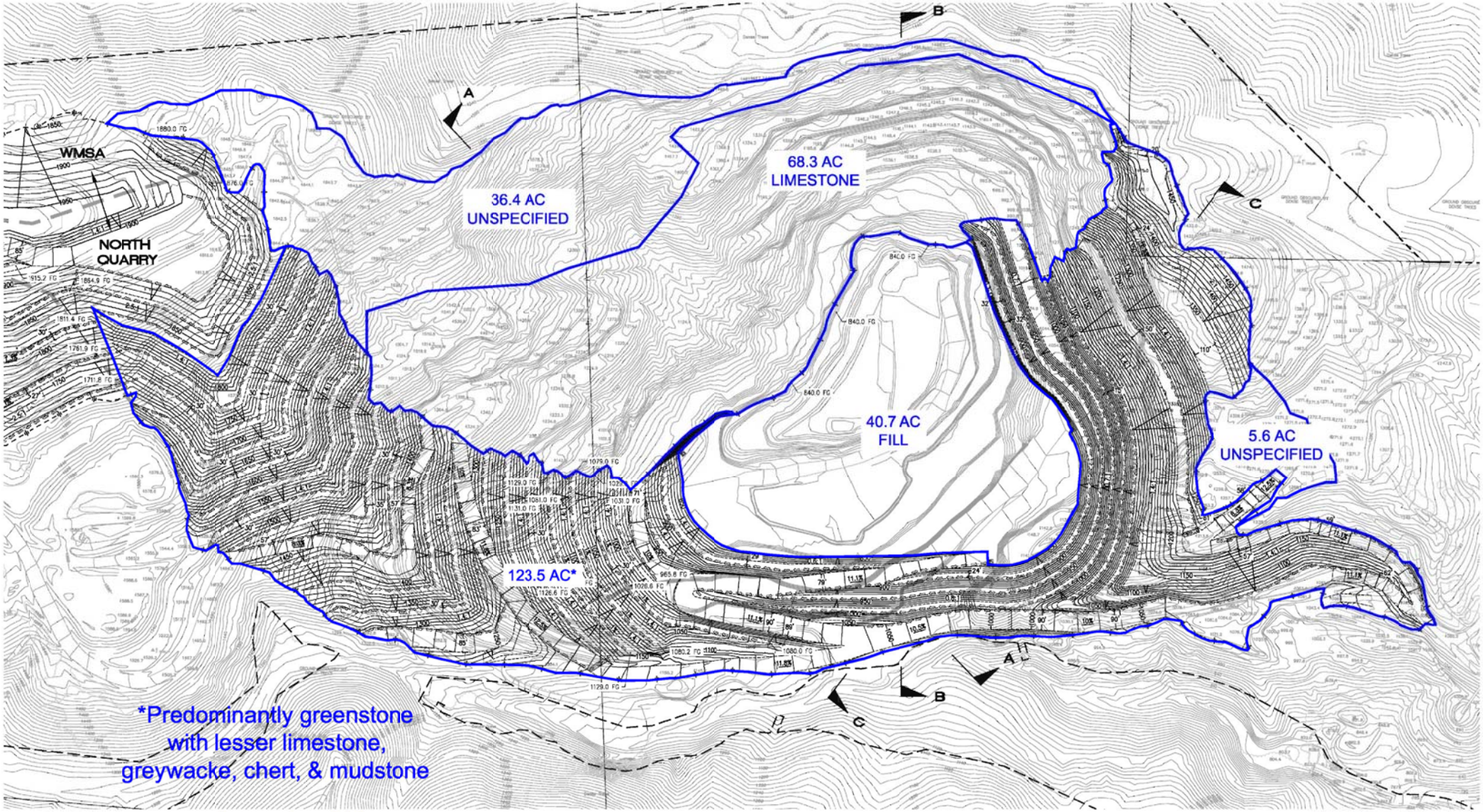
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SHEET 5 NCSF MATERIALS STORAGE AREA PHASE 5
SHEET 6 NCSF MATERIALS STORAGE AREA CROSS-SECTIONS
SHEET 7 NORTH QUARRY PHASE 1
SHEET 8 NORTH QUARRY PHASE 2
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SHEET 11 NORTH QUARRY PHASE 5 – PRE-BACKFILL TO SOUTH QUARRY
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SHEET 25 TOPSOIL STORAGE AREA PHASES 1, 2, 3 AND CROSS-SECTIONS

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Civil Engineering·Hydrology·Hydraulics·Sedimentation
P.O. Box 9496 Rancho Santa Fe, CA 92067
T: 858.692.0760 F: 858.832.1402

RECLAMATION PLAN FOR PERMANENTE QUARRY

NORTH QUARRY PHASE 1

REVISION 1		SHEET 7 OF
REVISION 2		



December 2025
Areas horizontally projected

NOTE:
DIRECTION OF DRAINAGE ALONG PIT FLOOR AND BENCHES SURROUNDING PIT FLOOR CAN BE ALTERED DURING MINING AND RECLAMATION AS LONG AS THE DRAINAGE IS CONVEYED TO THE PIT FLOOR.

OPERATOR	
NAME:	LEHIGH SOUTHWEST CEMENT COMPANY
ADDRESS:	24001 STEVENS CREEK BLVD CUPERTINO, CA 95014
TELEPHONE:	408-996-4000
SHORT LEGAL:	SEC 18 T7S R2W MDBM; W 1/4 & SE 1/4 SEC 17 T7S R2W MDBM
A.P.N.	351-09-022; 351-10-005, 037, 038
SITE ADDRESS:	24001 STEVENS CREEK BLVD. CUPERTINO, CA 95014

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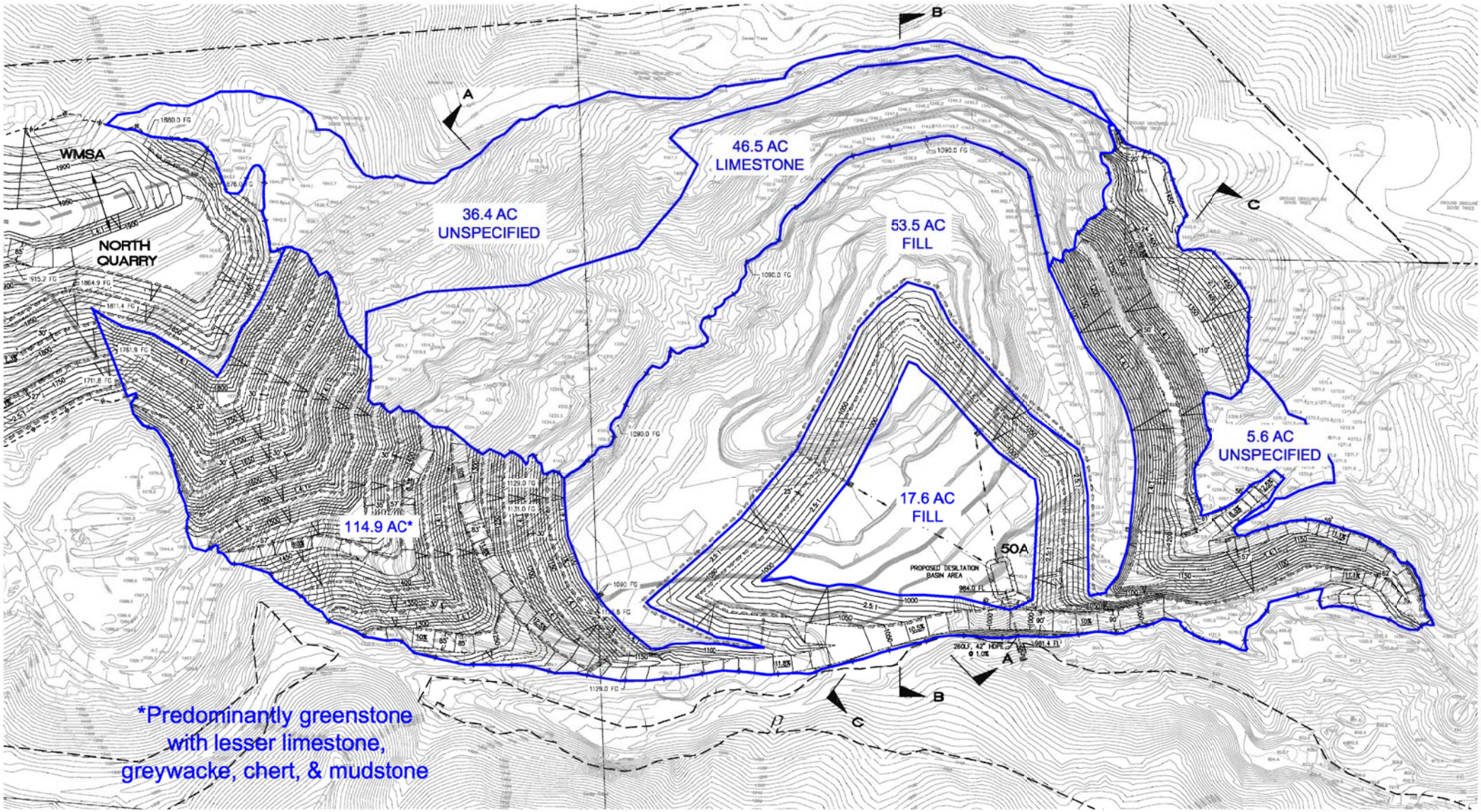
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SHEET 5 NCS' MATERIALS STORAGE AREA PHASE 5
SHEET 6 NCS' MATERIALS STORAGE AREA CROSS-SECTIONS
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P.O. Box 9496 T: 858.692.0760
Rancho Santa Fe, CA 92067 F: 858.832.1402

RECLAMATION PLAN FOR: PERMANENTE QUARRY

NORTH QUARRY PHASE 2

REVISION 1		SHEET 8 OF
REVISION 2		



December 2029
Areas horizontally projected

NOTE:
DIRECTION OF DRAINAGE ALONG PIT FLOOR AND BENCHES SURROUNDING PIT FLOOR CAN BE ALTERED DURING MINING AND RECLAMATION AS LONG AS THE DRAINAGE IS CONVEYED TO THE PIT FLOOR.

0 100 200 400

OPERATOR	
NAME:	LEHIGH SOUTHWEST CEMENT COMPANY
ADDRESS:	24001 STEVENS CREEK BLVD CUPERTINO, CA 95014
TELEPHONE:	408-996-4000
SHORT LEGAL:	SEC 18 T7S R2W MDBM; W 1/4 & SE 1/4 SEC 17 T7S R2W MDBM
A.P.N.	351-09-022; 351-10-005, 037, 038
SITE ADDRESS:	24001 STEVENS CREEK BLVD. CUPERTINO, CA 95014

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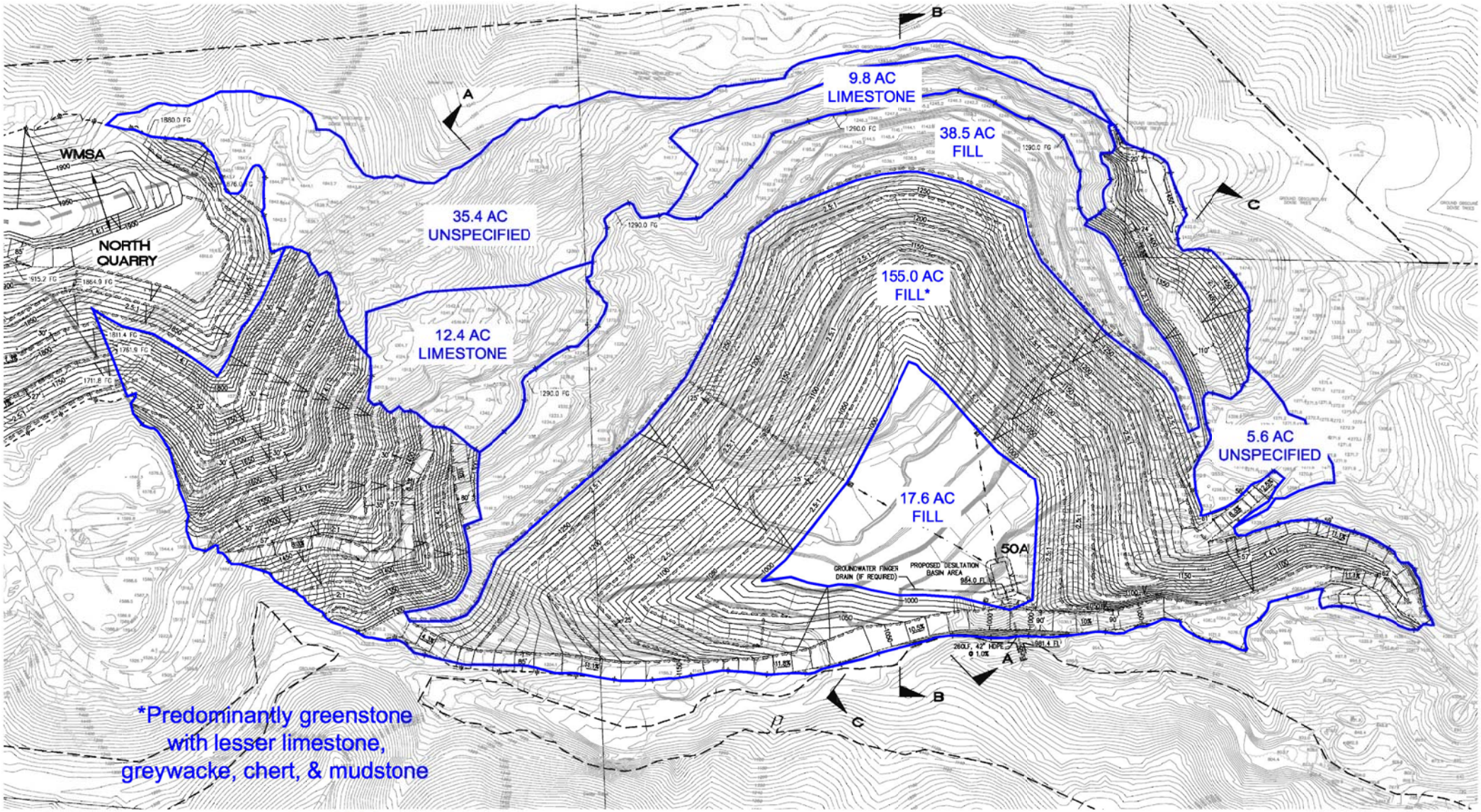
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RECLAMATION PLAN FOR PERMANENTE QUARRY

NORTH QUARRY PHASE 3

REVISION 1		SHEET 9 OF
REVISION 2		



December 2031
Areas horizontally projected

NOTE:
DIRECTION OF DRAINAGE ALONG PIT FLOOR AND BENCHES SURROUNDING PIT FLOOR CAN BE ALTERED DURING MINING AND RECLAMATION AS LONG AS THE DRAINAGE IS CONVEYED TO THE PIT FLOOR.

0 100 200 400

OPERATOR	
NAME:	LEHIGH SOUTHWEST CEMENT COMPANY
ADDRESS:	24001 STEVENS CREEK BLVD CUPERTINO, CA 95014
TELEPHONE:	408-996-4000
SHORT LEGAL:	SEC 18 T7S R2W MDBM; W 1/4 & SE 1/4 SEC 17 T7S R2W MDBM
A.P.N.	351-09-022; 351-10-005, 037, 038
SITE ADDRESS:	24001 STEVENS CREEK BLVD. CUPERTINO, CA 95014

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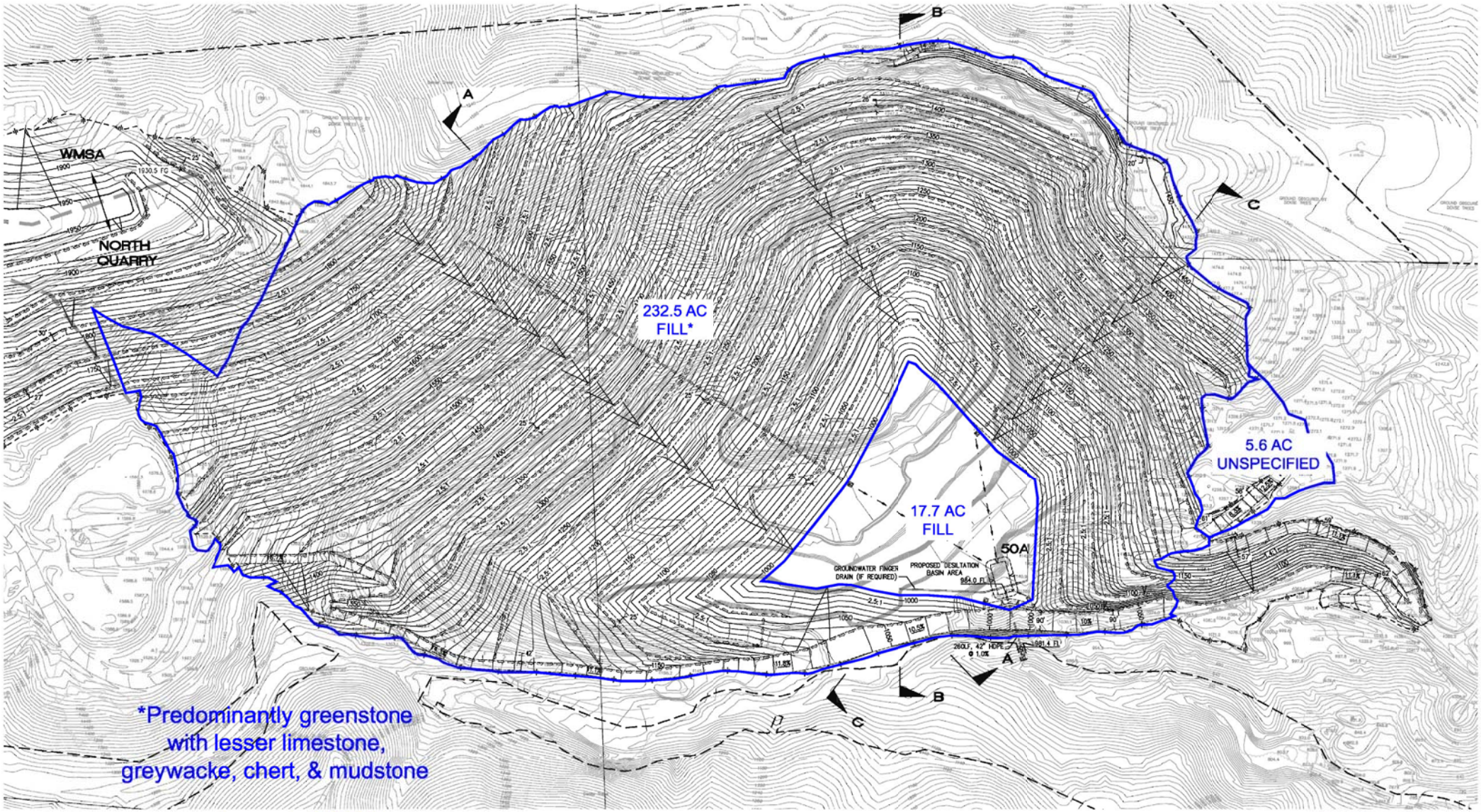
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P.O. Box 9496 T: 858.692.0760
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RECLAMATION PLAN FOR: PERMANENTE QUARRY

NORTH QUARRY PHASE 4

REVISION 1		SHEET
REVISION 2		10



December 2034
Areas horizontally projected

NOTE:
DIRECTION OF DRAINAGE ALONG PIT FLOOR AND BENCHES SURROUNDING PIT FLOOR CAN BE ALTERED DURING MINING AND RECLAMATION AS LONG AS THE DRAINAGE IS CONVEYED TO THE PIT FLOOR.

0 100 200 400

OPERATOR	
NAME:	LEHIGH SOUTHWEST CEMENT COMPANY
ADDRESS:	24001 STEVENS CREEK BLVD CUPERTINO, CA 95014
TELEPHONE:	408-996-4000
SHORT LEGAL:	SEC 18 T7S R2W MDBM; W 1/4 & SE 1/4 SEC 17 T7S R2W MDBM
A.P.N.	351-09-022; 351-10-005, 037, 038
SITE ADDRESS:	24001 STEVENS CREEK BLVD. CUPERTINO, CA 95014

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T: 858.692.0760 F: 858.832.1402

RECLAMATION PLAN FOR: PERMANENTE QUARRY

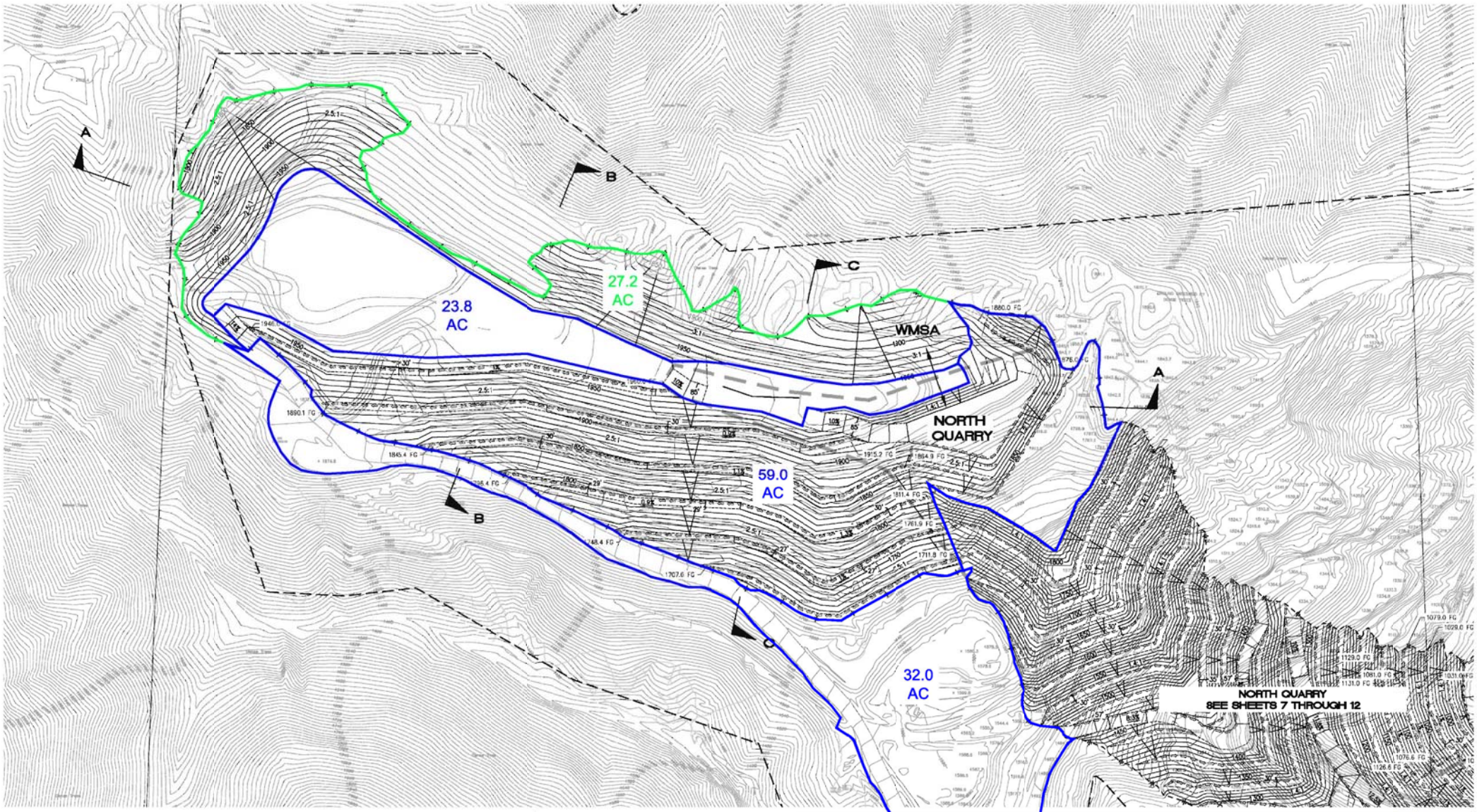
NORTH QUARRY PHASE 5

POST-BACKFILL TO SOUTH QUARRY

REVISION 1		SHEET 12 OF
REVISION 2		

Appendix B.3

B.3 WMSA Drainage Areas (Horizontal Projections)



December 2022
Areas horizontally projected

OPERATOR	
NAME:	LEHIGH SOUTHWEST CEMENT COMPANY
ADDRESS:	24001 STEVENS CREEK BLVD. CUPERTINO, CA 95014
TELEPHONE:	408-996-4000
SHORT LEGAL:	SEC 18 T7S R2W MDBM; W 1/4 & SE 1/4 SEC 17 T7S R2W MDBM
A.P.N.	351-09-022; 351-10-005, 037, 038
SITE ADDRESS:	24001 STEVENS CREEK BLVD. CUPERTINO, CA 95014

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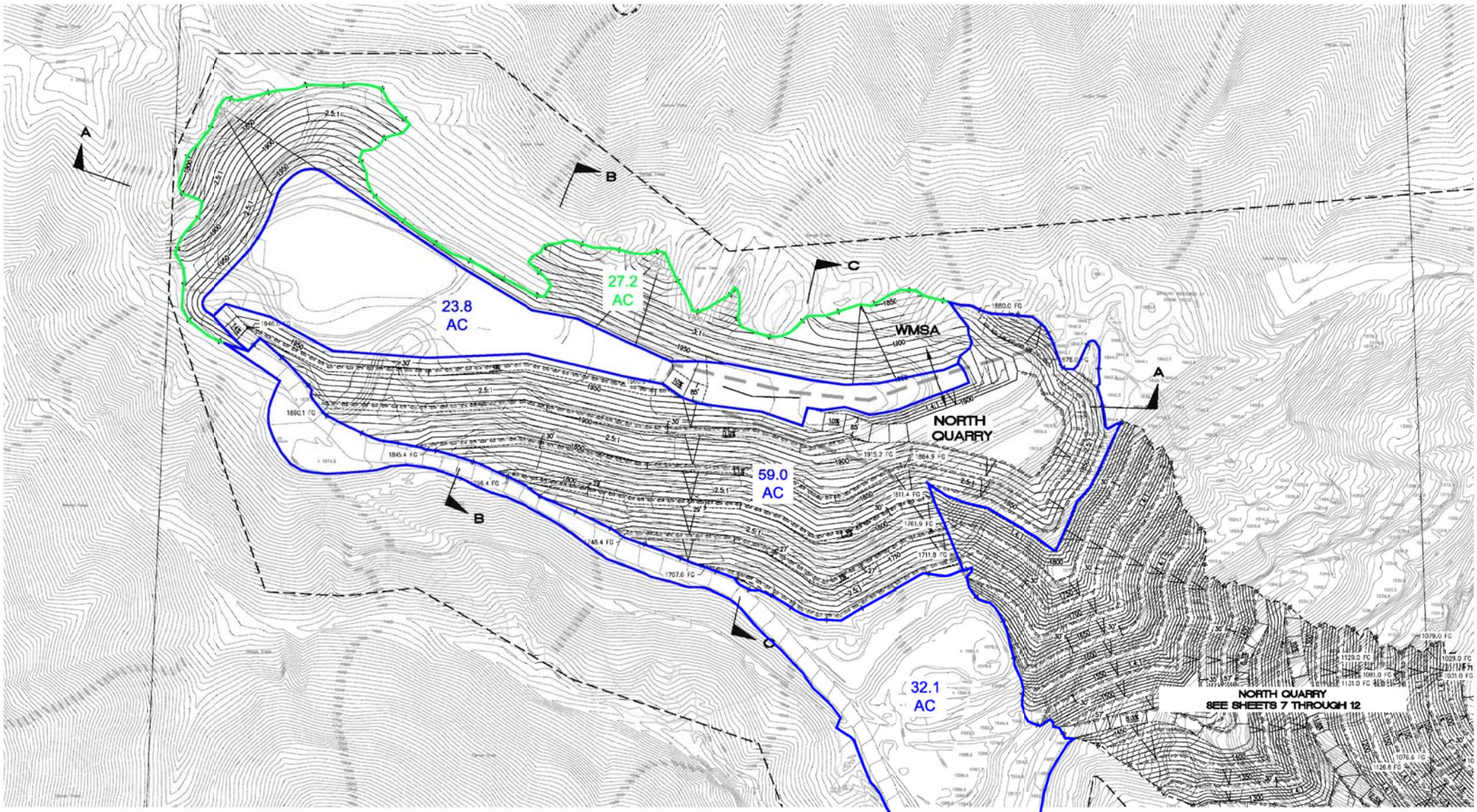
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SHEET 4 WEST MATERIALS STORAGE AREA PHASES 2, 3, AND 4
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SHEET 25 TOPSOIL STORAGE AREA PHASES 1, 2, 3 AND CROSS-SECTIONS

Chang Consultants
Civil Engineering·Hydrology·Hydraulics·Sedimentation
P.O. Box 9496 Rancho Santa Fe, CA 92067
T: 858.692.0760 F: 858.832.1402

RECLAMATION PLAN FOR PERMANENTE QUARRY

WEST MATERIALS STORAGE AREA PHASE 1

REVISION 1		SHEET 3 OF
REVISION 2		



December 2031
Areas horizontally projected

OPERATOR	
NAME:	LEHIGH SOUTHWEST CEMENT COMPANY
ADDRESS:	24001 STEVENS CREEK BLVD. CUPERTINO, CA 95014
TELEPHONE:	408-996-4000
SHORT LEGAL:	SEC 18 T7S R2W MDBM; W 1/4 & SE 1/4 SEC 17 T7S R2W MDBM
A.P.N.	351-09-022; 351-10-005, 037, 038
SITE ADDRESS:	24001 STEVENS CREEK BLVD. CUPERTINO, CA 95014

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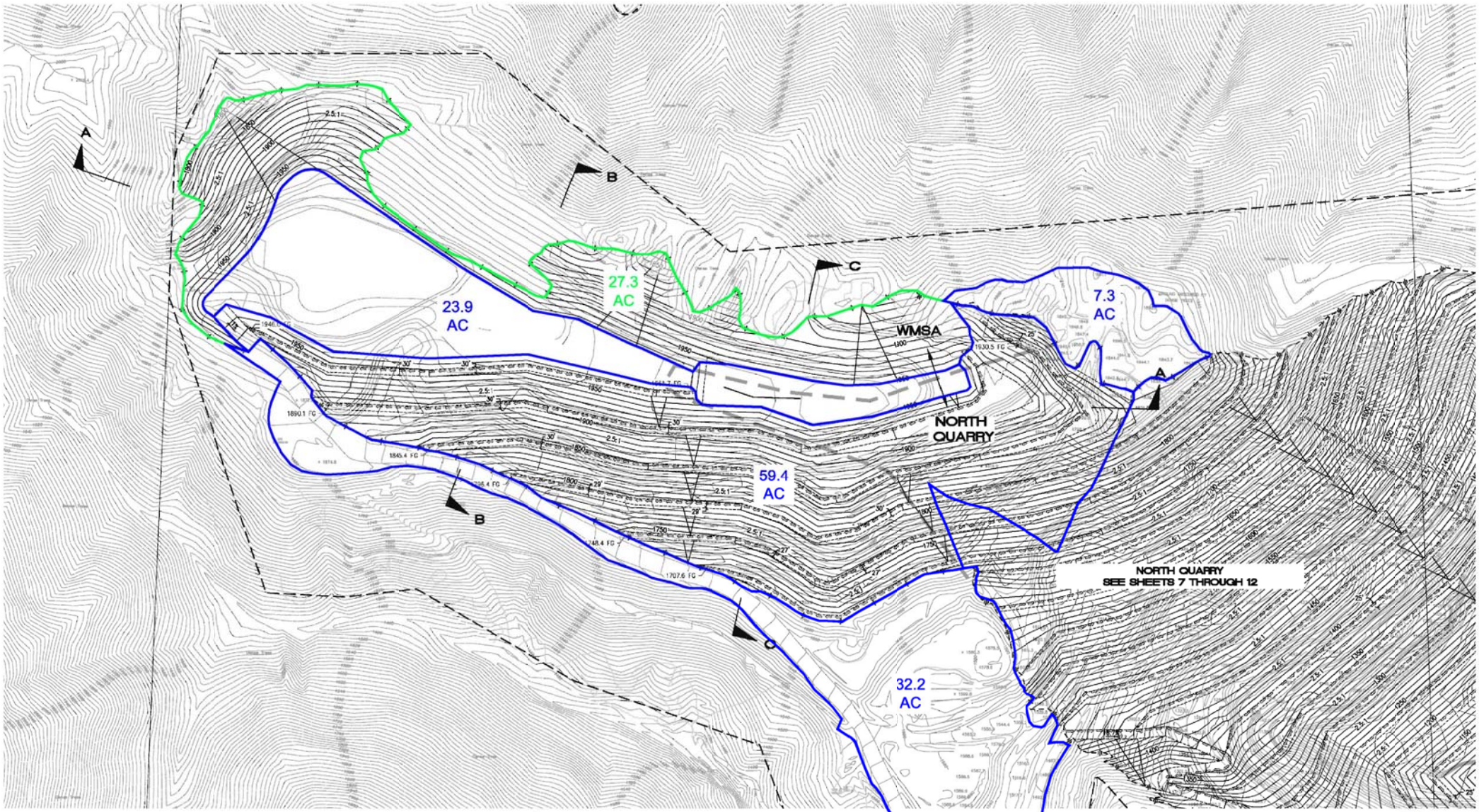
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RECLAMATION PLAN FOR PERMANENTE QUARRY

WEST MATERIALS STORAGE AREA PHASES 2, 3, AND 4

REVISION 1		SHEET 4 OF
REVISION 2		



December 2034
Areas horizontally projected

OPERATOR	
NAME:	LEHIGH SOUTHWEST CEMENT COMPANY
ADDRESS:	24001 STEVENS CREEK BLVD. CUPERTINO, CA 95014
TELEPHONE:	408-996-4000
SHORT LEGAL:	SEC 18 T7S R2W MDBM; W 1/4 & SE 1/4 SEC 17 T7S R2W MDBM
A.P.N.	351-09-022; 351-10-005, 037, 038
SITE ADDRESS:	24001 STEVENS CREEK BLVD. CUPERTINO, CA 95014

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RECLAMATION PLAN FOR PERMANENTE QUARRY

WEST MATERIALS STORAGE AREA PHASE 5

REVISION 1		SHEET 5 OF
REVISION 2		

Appendix C

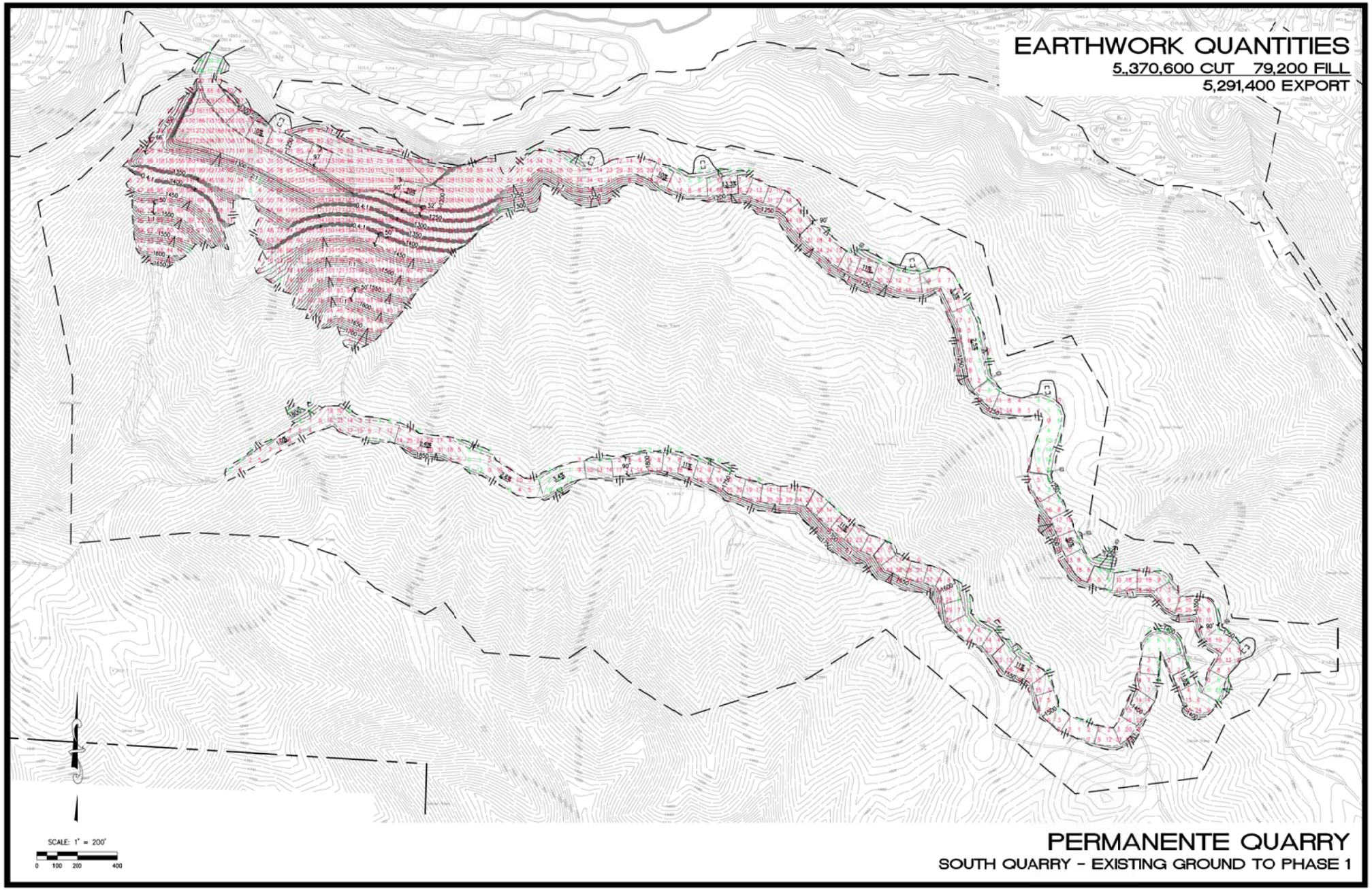
South Quarry and CMSA Mining and Reclamation Phase

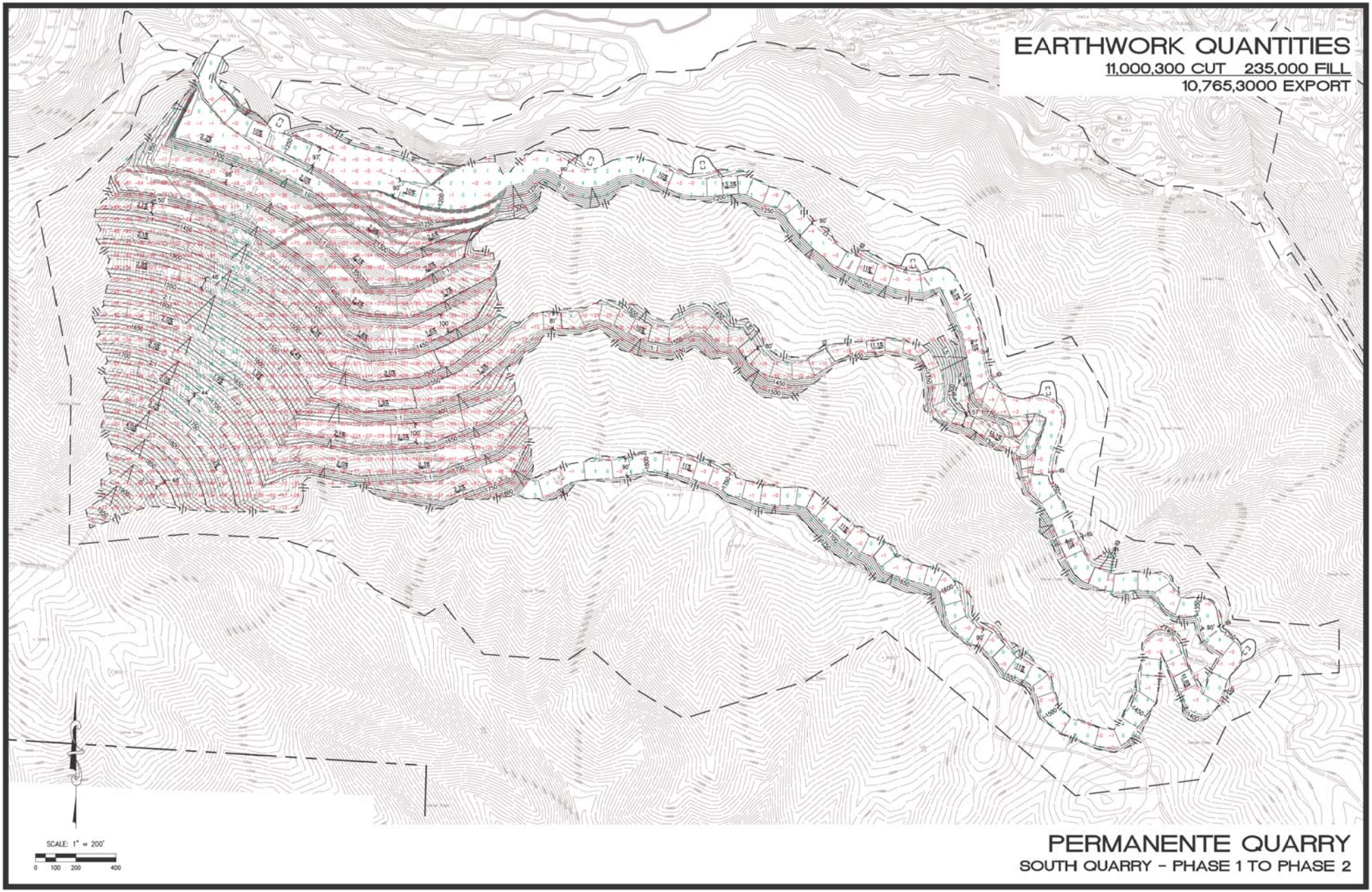
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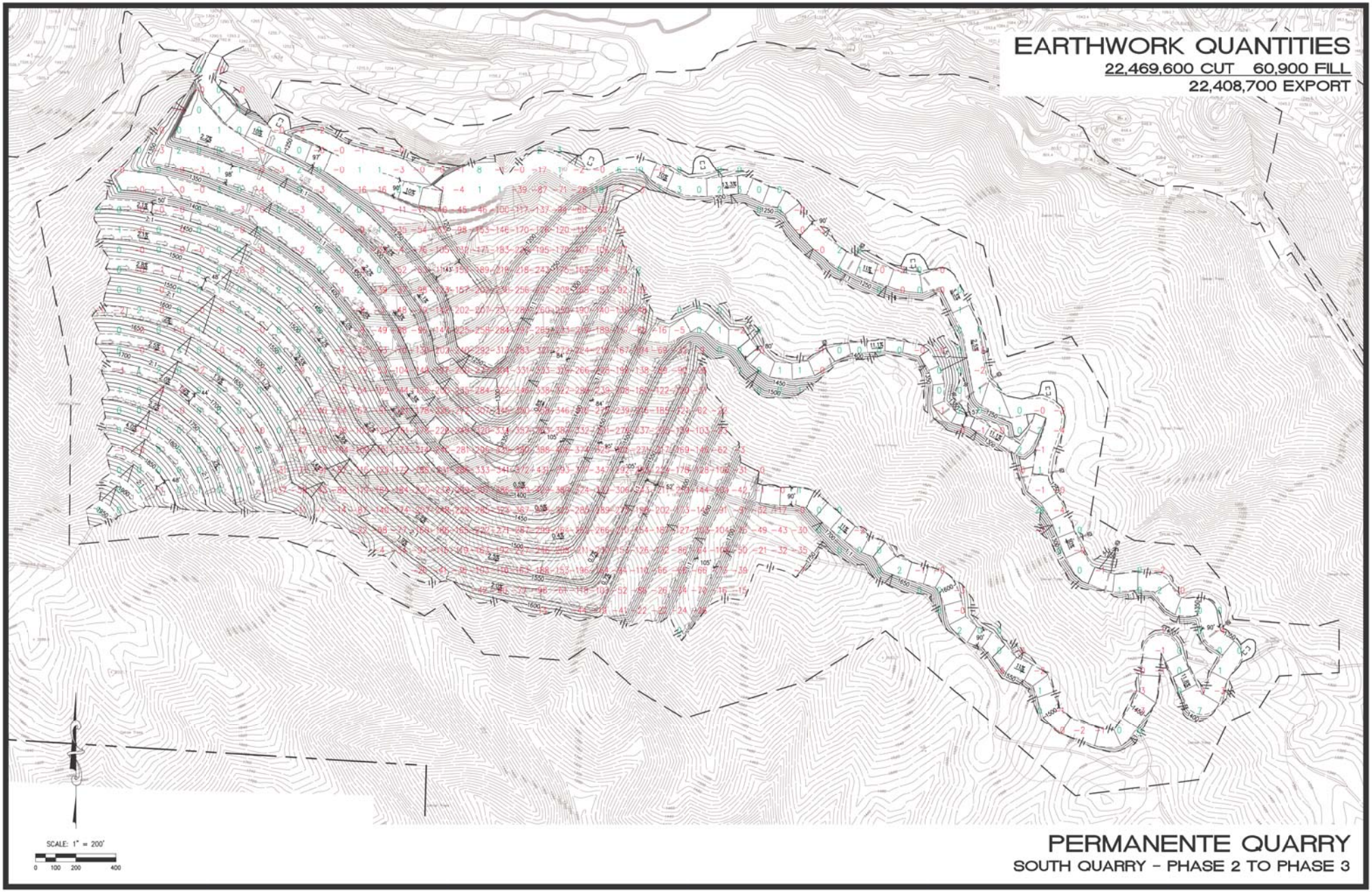
C.2 South Quarry Drainage Areas

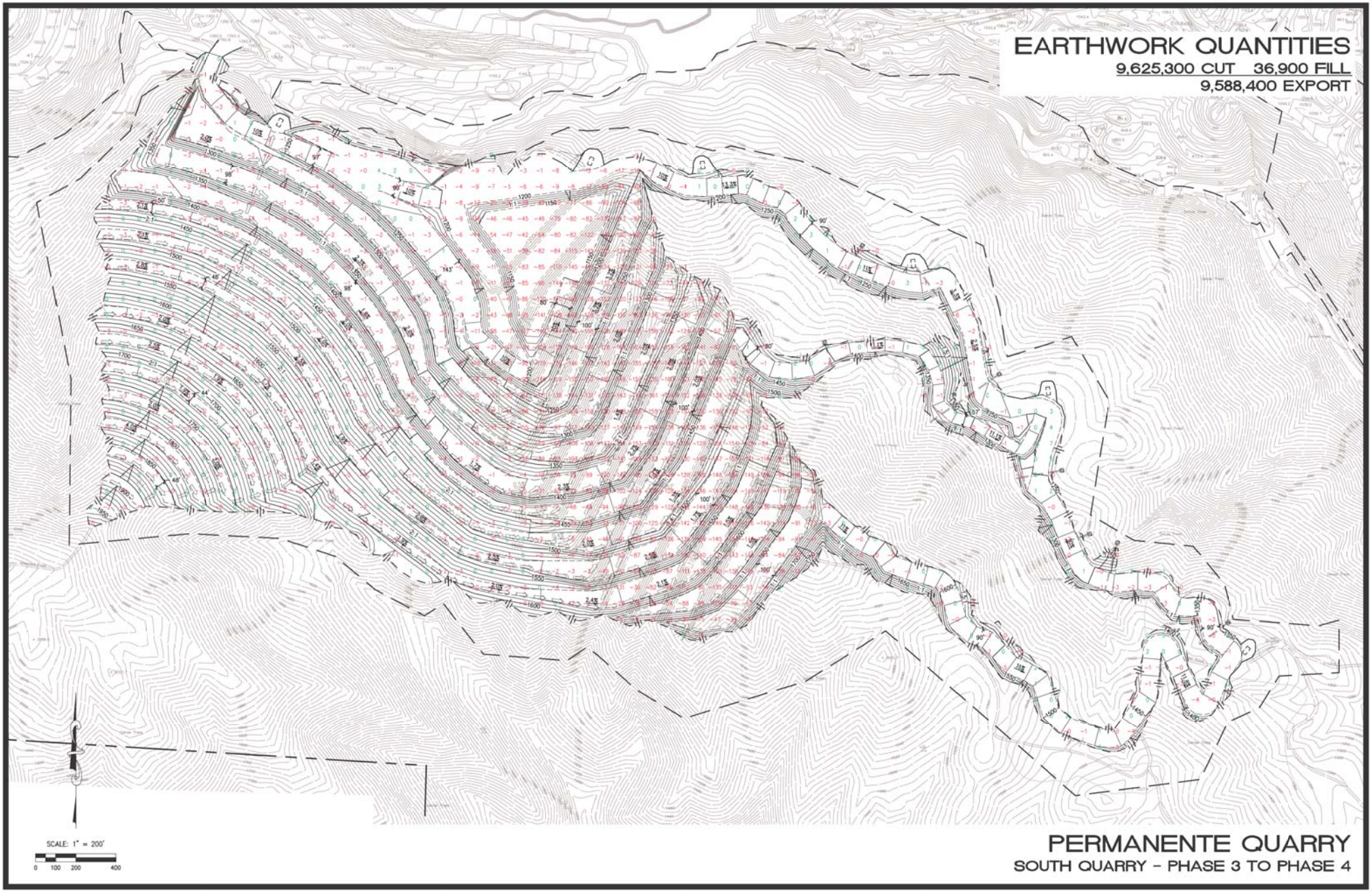
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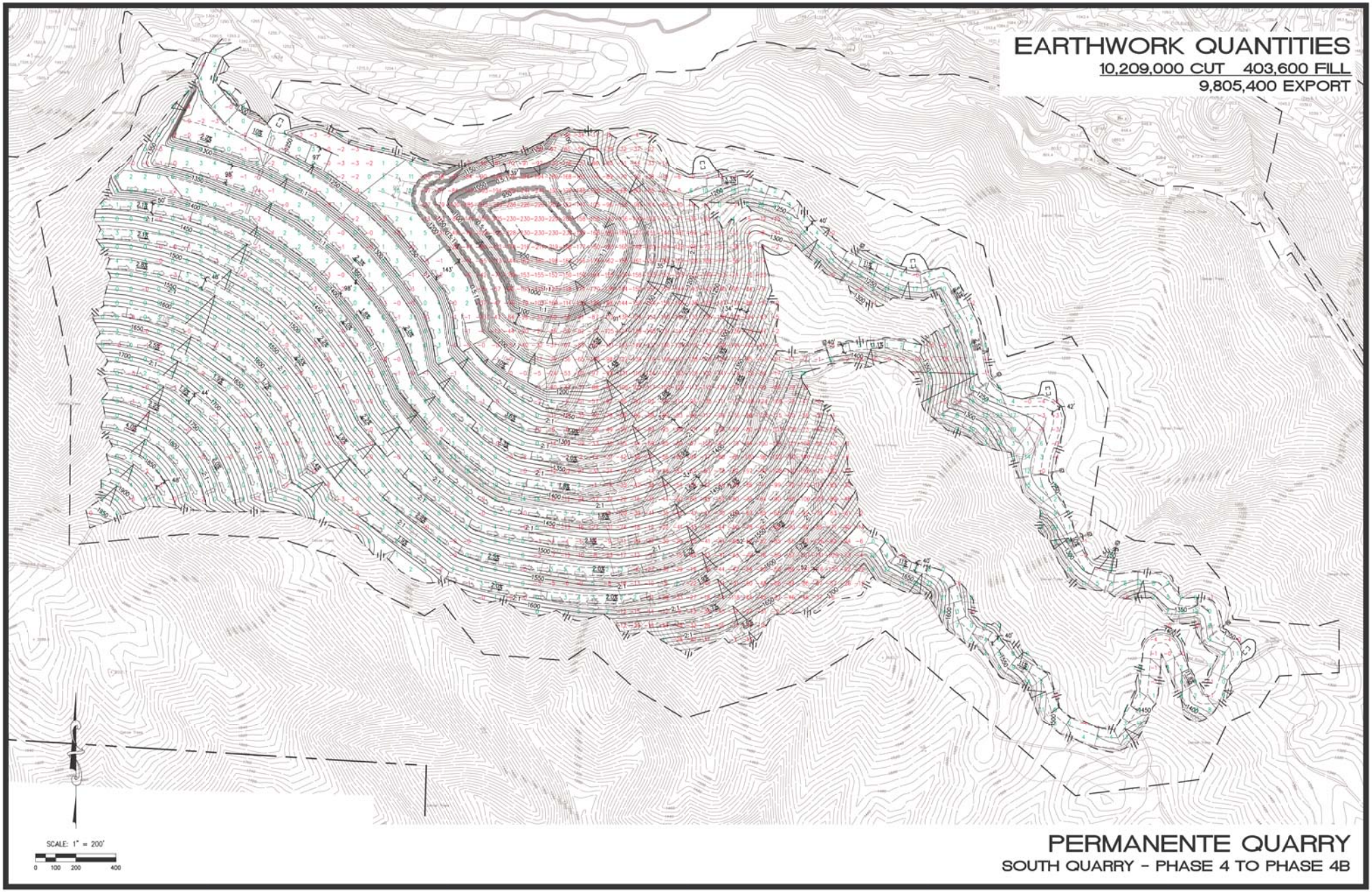
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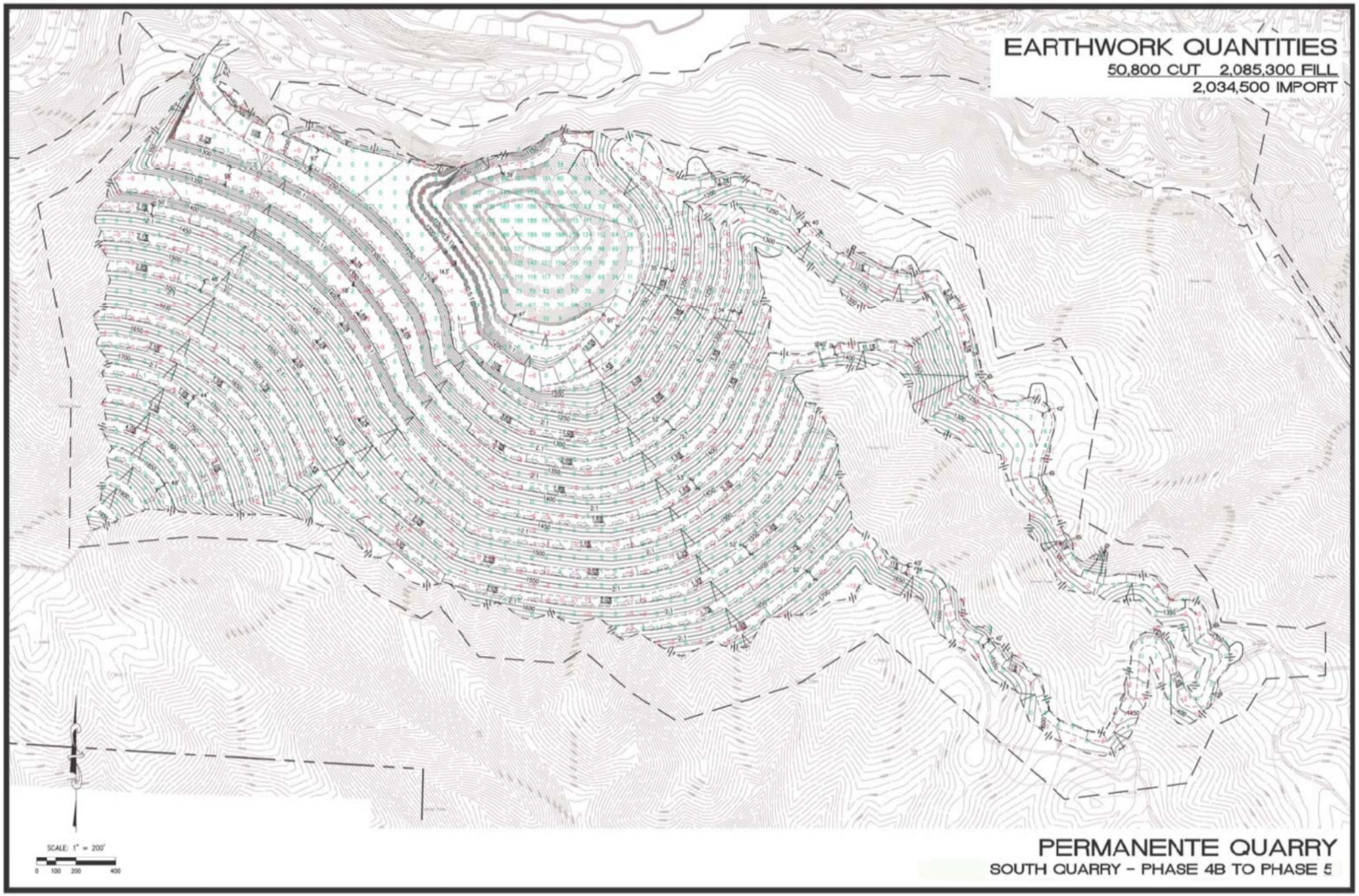

EARTHWORK QUANTITIES
5.,370,600 CUT 79,200 FILL
5,291,400 EXPORT
SCALE: 1" = 200'
0 100 200 400
PERMANENTE QUARRY
SOUTH QUARRY - EXISTING GROUND TO PHASE 1
APRIL 20, 2010


EARTHWORK QUANTITIES
11,000,300 CUT 235,000 FILL
10,765,3000 EXPORT
SCALE: 1" = 200'
0 100 200 400
PERMANENTE QUARRY
SOUTH QUARRY - PHASE 1 TO PHASE 2
APRIL 20, 2010


EARTHWORK QUANTITIES
22,469,600 CUT 60,900 FILL
22,408,700 EXPORT
SCALE: 1" = 200'
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PERMANENTE QUARRY
SOUTH QUARRY - PHASE 2 TO PHASE 3
APRIL 20, 2010

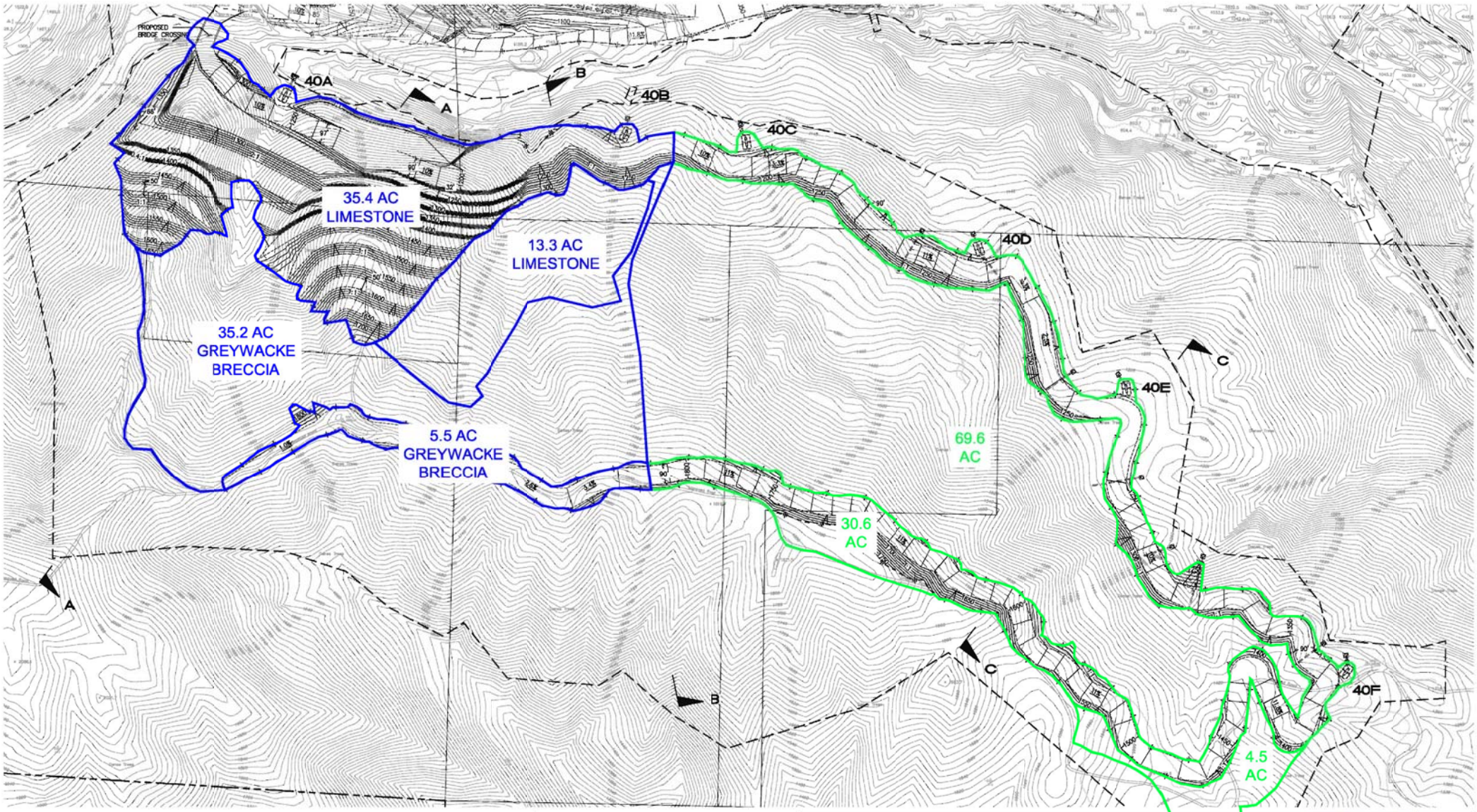

EARTHWORK QUANTITIES
9,625,300 CUT 36,900 FILL
9,588,400 EXPORT
SCALE: 1" = 200'
0 100 200 400
PERMANENTE QUARRY
SOUTH QUARRY - PHASE 3 TO PHASE 4
APRIL 21, 2010


EARTHWORK QUANTITIES
10,209,000 CUT 403,600 FILL
9,805,400 EXPORT
SCALE: 1" = 200'
0 100 200 400
PERMANENTE QUARRY
SOUTH QUARRY - PHASE 4 TO PHASE 4B
APRIL 21, 2010


EARTHWORK QUANTITIES
50,800 CUT 2,085,300 FILL
2,034,500 IMPORT
SCALE: 1" = 200'
0 100 200 400
PERMANENTE QUARRY
SOUTH QUARRY – PHASE 4B TO PHASE 5
APRIL 21, 2010

Appendix C.2

C.2 South Quarry Drainage Areas



December 2022
Areas horizontally projected

0 100 200 400

OPERATOR	
NAME:	LEHIGH SOUTHWEST CEMENT COMPANY
ADDRESS:	24001 STEVENS CREEK BLVD CUPERTINO, CA 95014
TELEPHONE:	408-996-4000
SHORT LEGAL:	SEC 18 T7S R2W MDBM; W 1/4 & SE 1/4 SEC 17 T7S R2W MDBM
A.P.N.	351-09-022; 351-10-005, 037, 038
SITE ADDRESS:	24001 STEVENS CREEK BLVD. CUPERTINO, CA 95014

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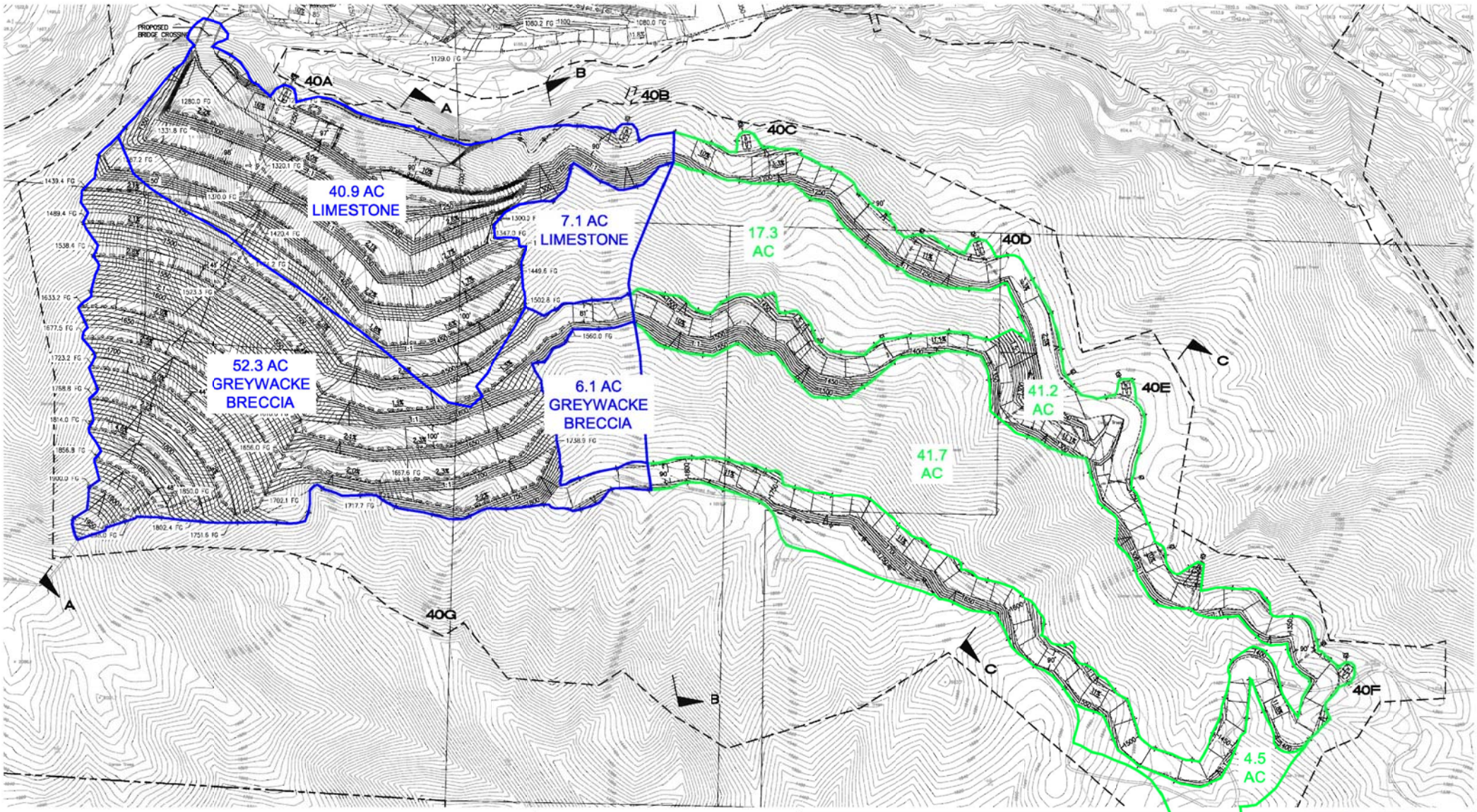
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Rancho Santa Fe, CA 92067 F: 858.832.1402

RECLAMATION PLAN FOR: PERMANENTE QUARRY

SOUTH QUARRY
PHASE 1

REVISION 1		SHEET 18 OF
REVISION 2		



December 2025
Areas horizontally projected

0 100 200 400

OPERATOR	
NAME:	LEHIGH SOUTHWEST CEMENT COMPANY
ADDRESS:	24001 STEVENS CREEK BLVD CUPERTINO, CA 95014
TELEPHONE:	408-996-4000
SHORT LEGAL:	SEC 18 T7S R2W MDBM; W 1/4 & SE 1/4 SEC 17 T7S R2W MDBM
A.P.N.	351-09-022; 351-10-005, 037, 038
SITE ADDRESS:	24001 STEVENS CREEK BLVD. CUPERTINO, CA 95014

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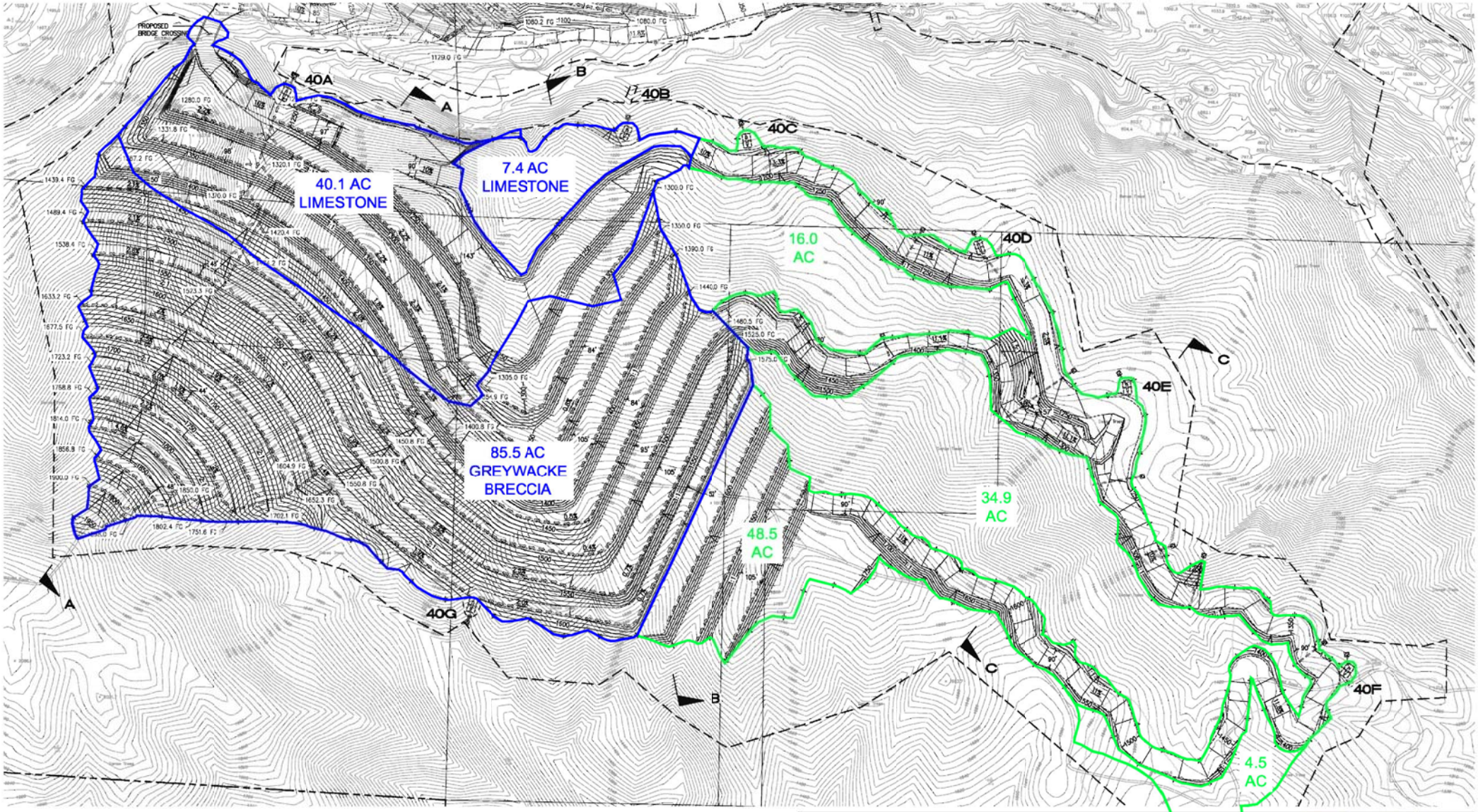
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RECLAMATION PLAN FOR: PERMANENTE QUARRY

SOUTH QUARRY PHASE 2

REVISION 1		SHEET 19 OF
REVISION 2		



December 2029
Areas horizontally projected

0 100 200 400

OPERATOR	
NAME:	LEHIGH SOUTHWEST CEMENT COMPANY
ADDRESS:	24001 STEVENS CREEK BLVD CUPERTINO, CA 95014
TELEPHONE:	408-996-4000
SHORT LEGAL:	SEC 18 T7S R2W MDBM; W 1/4 & SE 1/4 SEC 17 T7S R2W MDBM
A.P.N.	351-09-022; 351-10-005, 037, 038
SITE ADDRESS:	24001 STEVENS CREEK BLVD. CUPERTINO, CA 95014

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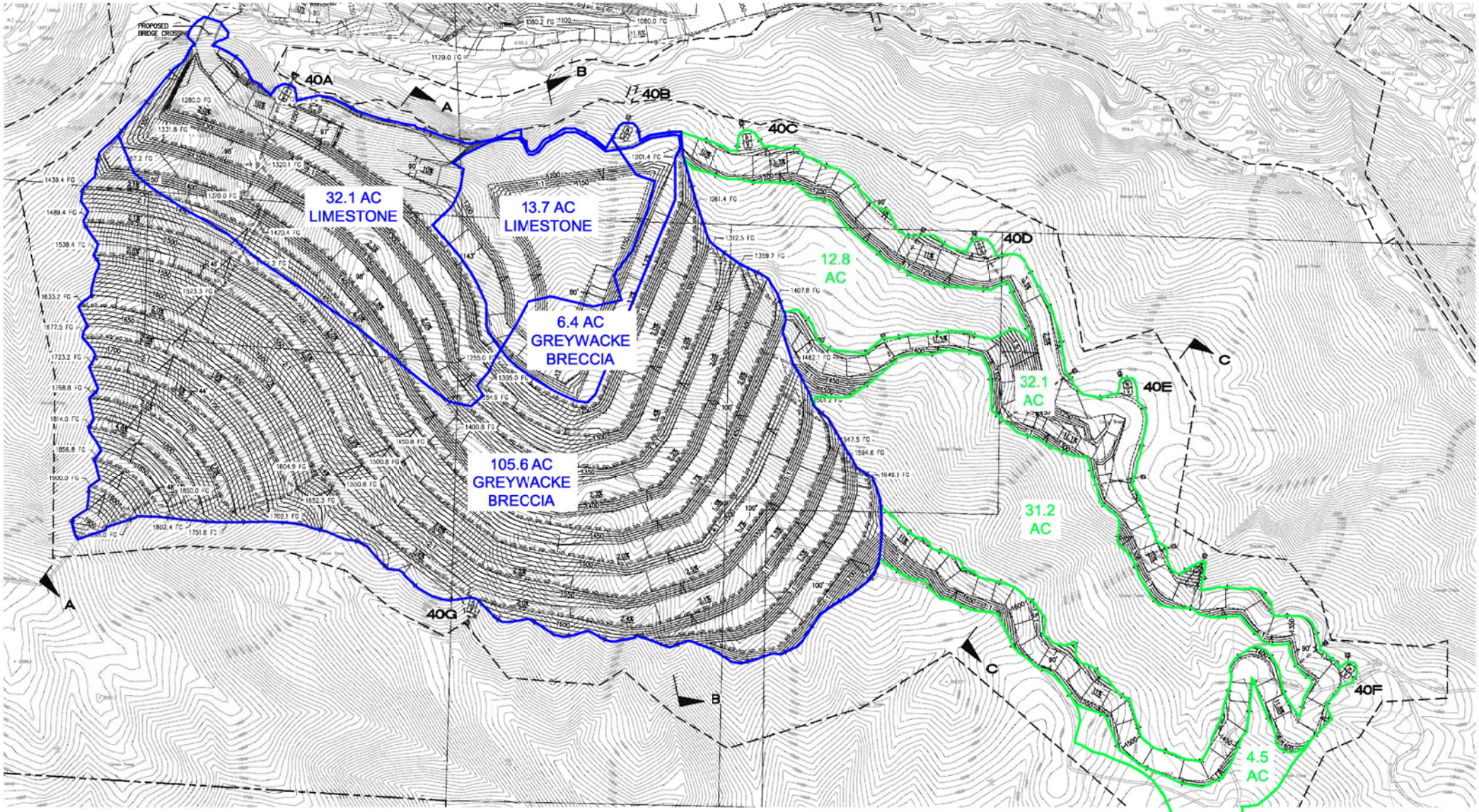
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RECLAMATION PLAN FOR PERMANENTE QUARRY

SOUTH QUARRY PHASE 3

REVISION 1		SHEET 20 OF
REVISION 2		



December 2031
Areas horizontally projected

0 100 200 400

OPERATOR	
NAME:	LEHIGH SOUTHWEST CEMENT COMPANY
ADDRESS:	24001 STEVENS CREEK BLVD CUPERTINO, CA 95014
TELEPHONE:	408-996-4000
SHORT LEGAL:	SEC 18 T7S R2W MDBM; W 1/4 & SE 1/4 SEC 17 T7S R2W MDBM
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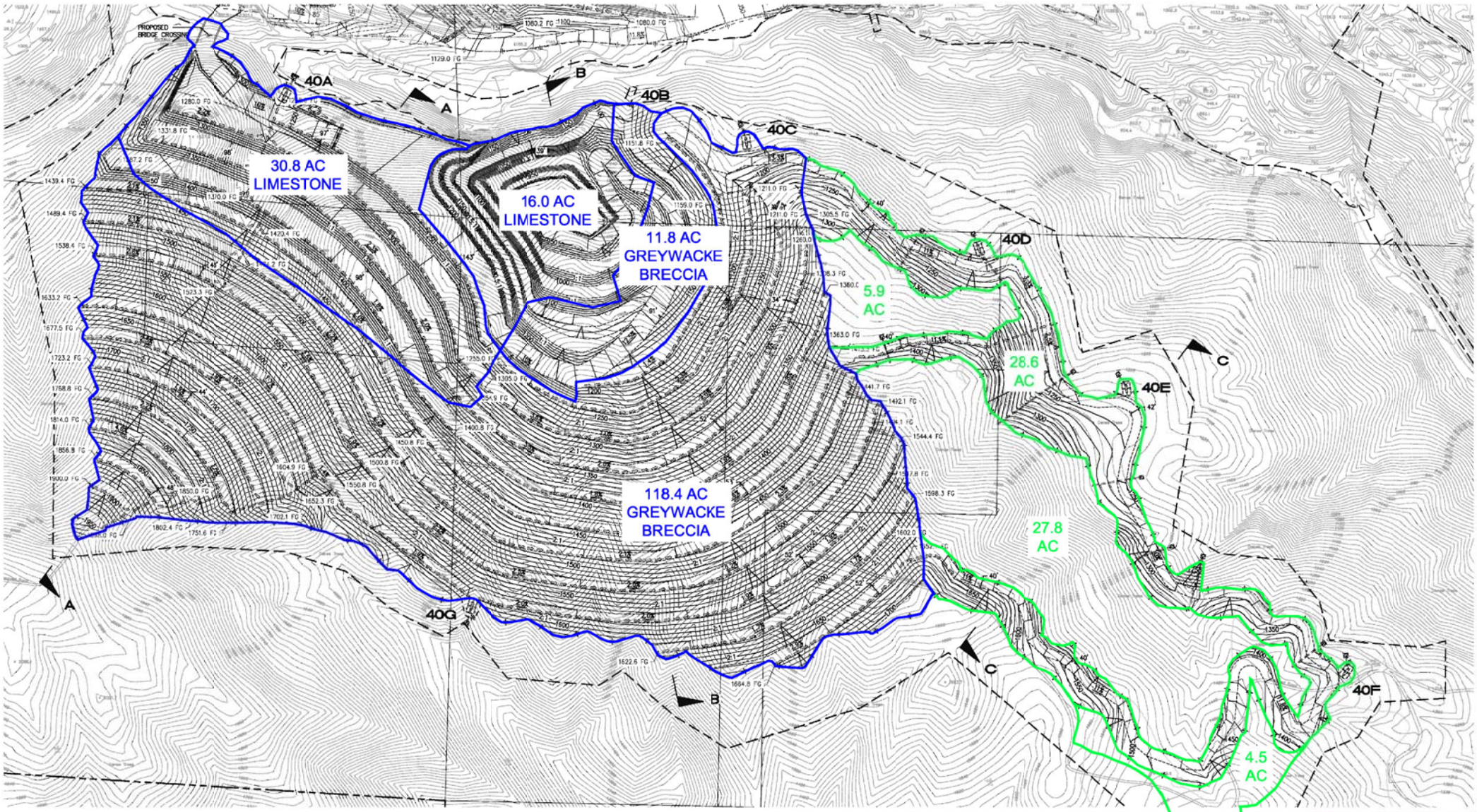
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RECLAMATION PLAN FOR: PERMANENTE QUARRY

SOUTH QUARRY PHASE 4

REVISION 1		SHEET 21
REVISION 2		OF



December 2033
Areas horizontally projected

0 100 200 400

OPERATOR	
NAME:	LEHIGH SOUTHWEST CEMENT COMPANY
ADDRESS:	24001 STEVENS CREEK BLVD CUPERTINO, CA 95014
TELEPHONE:	408-996-4000
SHORT LEGAL:	SEC 18 T7S R2W MDBM; W 1/4 & SE 1/4 SEC 17 T7S R2W MDBM
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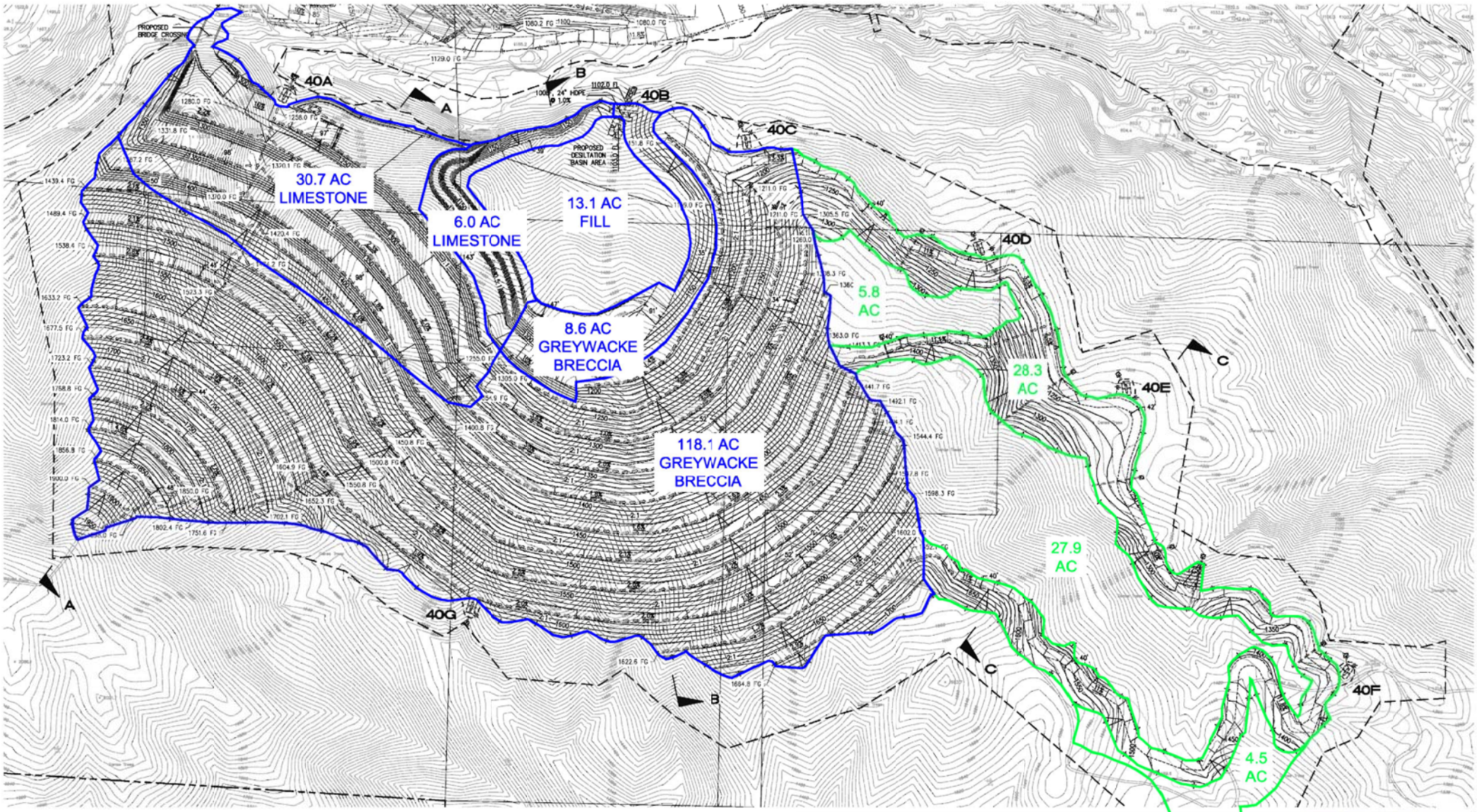
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Chang Consultants
Civil Engineering-Hydrology-Hydraulics-Sedimentation
P.O. Box 9496 T: 831.692.0760
Rancho Santa Fe, CA 92067 F: 831.832.1402

RECLAMATION PLAN FOR PERMANENTE QUARRY

SOUTH QUARRY PHASE 5

REVISION 1		SHEET 22 OF
REVISION 2		



December 2034
Areas horizontally projected

OPERATOR	
NAME:	LEHIGH SOUTHWEST CEMENT COMPANY
ADDRESS:	24001 STEVENS CREEK BLVD CUPERTINO, CA 95014
TELEPHONE:	408-996-4000
SHORT LEGAL:	SEC 18 T7S R2W MDBM; W 1/4 & SE 1/4 SEC 17 T7S R2W MDBM
A.P.N.	351-09-022; 351-10-005, 037, 038
SITE ADDRESS:	24001 STEVENS CREEK BLVD. CUPERTINO, CA 95014

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SHEET 2 LEGEND AND DETAILS
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Rancho Santa Fe, CA 92067 F: 858.832.1402

RECLAMATION PLAN FOR PERMANENTE QUARRY

SOUTH QUARRY
PHASE 5 – BACKFILL

REVISION 1		SHEET 23 OF 25
REVISION 2		

Appendix D

Water Balance and Water Quality Calculations

D.1.1 North Quarry Reclamation Water Quality Projections

D.1.2 North Quarry Runoff Water Quality Projections

D.2.1 South Quarry Reclamation Water Quality Projections

D.2.2 South Quarry Runoff Water Quality Projections

Appendix D.1.1

D.1.1 North Quarry Reclamation Water Quality Projections

North Quarry Pit Lake Water Budget

Inflows and Outflows	Parameters		Value	Units	Description and Rationale				
Precipitation	Precipitation		1.85	ft/yr	Los Altos climate station, direct precip on wasterock backfill area is based on monthly precip data				
			Phases						
			Initial	1	2	3	4	5	Long Term
Quarry Backfilling Areas	**Surface Water Drainage to Pit**								
	Quarry Area (Greenstone/Greywacke)		4,900,000	6,700,000	9,000,000	-	-	-	-
	Quarry Area (Limestone)		7,000,000	7,000,000	4,800,000	-	-	-	-
	WMSA		3,600,000	1,800,000	-	-	-	-	-
	Surface Infiltration to Pit (Through backfill)								
	Undrained Backfill (No Surface Outlet)		-	-	1,800,000	-	-		
	Drained Backfill (With Surface Outlet)					800,000	800,000	800,000	800,000
	Spill Elevation		990.00	ft amsl	Based on mine plan				
	Bottom of Pit		440.00	ft amsl	Based on end of Phase 1 for South Quarry mine plan				
Groundwater Capture	Initial		371	gpm	MODFLOW model results for Phase 1, maximum excavation condition				
			2,181,181	cu ft/mo					
	At Spill Elevation		80	gpm	MODFLOW model results for ultimate condition				
			470,336	cu ft/mo					
Date Quarry Filling Starts	**1/1/2023**								
Assumptions	The pit is backfilled incrementally over a 4-year period, from 440 ft amsl to the spill-over elevation of 990 ft amsl								
	Backfill material has a porosity of 30-percent.								
	Surface runoff is only within the capture area of the pit and is based on water year 2009 data								
	Groundwater inflow into the pit varies by month and diminshes as the backfill increases								
	Precipitation directly infiltrates to the water table within the area of the backfill.								
	Evaporation of the pit lake is only applied when the cumulative volume of water in the pit is greater than the cumulative volume of void spaces within the backfill (based on 30-percent porosity)								
	The water level in the pit is dependent on the total cumulative volume of the backfill up to the spill-over elevation.								

Phase	Year	Month	Total Months	Date	Quarry Area (Greenstone/Greywacke)	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	WMSA	WMSA	Groundwater Inflow	Undrained Backfill (No Surface Outlet)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	cu ft	sq ft	cu ft
1	**1**	**1**	**1**	**1/1/2018**	**4,900,000**	687,361	**7,000,000**	981,944	**3,600,000**	303,000	**2,181,181**	**0**	0
1	1	2	2	2/1/2018	4,900,000	1,140,384	7,000,000	1,629,120	3,569,492	498,440	2,181,181	0	0
1	1	3	3	3/1/2018	4,900,000	591,856	7,000,000	845,509	3,538,983	256,478	2,181,181	0	0
1	1	4	4	4/1/2018	4,900,000	342,546	7,000,000	489,352	3,508,475	147,161	2,181,181	0	0
1	1	5	5	5/1/2018	4,900,000	94,597	7,000,000	135,139	3,477,966	40,286	2,181,181	0	0
1	1	6	6	6/1/2018	4,900,000	15,880	7,000,000	22,685	3,447,458	6,703	2,181,181	0	0
1	1	7	7	7/1/2018	4,900,000	681	7,000,000	972	3,416,949	285	2,181,181	0	0
1	1	8	8	8/1/2018	4,900,000	2,495	7,000,000	3,565	3,386,441	1,035	2,181,181	0	0
1	1	9	9	9/1/2018	4,900,000	12,250	7,000,000	17,500	3,355,932	5,034	2,181,181	0	0
1	1	10	10	10/1/2018	4,900,000	181,481	7,000,000	259,259	3,325,424	73,898	2,181,181	0	0
1	1	11	11	11/1/2018	4,900,000	595,259	7,000,000	850,370	3,294,915	240,163	2,181,181	0	0
1	1	12	12	12/1/2018	4,900,000	867,028	7,000,000	1,238,611	3,264,407	346,571	2,181,181	0	0
1	2	1	13	1/1/2019	4,900,000	687,361	7,000,000	981,944	3,233,898	272,186	2,181,181	0	0
1	2	2	14	2/1/2019	4,900,000	1,140,384	7,000,000	1,629,120	3,203,390	447,318	2,181,181	0	0
1	2	3	15	3/1/2019	4,900,000	591,856	7,000,000	845,509	3,172,881	229,946	2,181,181	0	0
1	2	4	16	4/1/2019	4,900,000	342,546	7,000,000	489,352	3,142,373	131,805	2,181,181	0	0
1	2	5	17	5/1/2019	4,900,000	94,597	7,000,000	135,139	3,111,864	36,046	2,181,181	0	0
1	2	6	18	6/1/2019	4,900,000	15,880	7,000,000	22,685	3,081,356	5,992	2,181,181	0	0
1	2	7	19	7/1/2019	4,900,000	681	7,000,000	972	3,050,847	254	2,181,181	0	0
1	2	8	20	8/1/2019	4,900,000	2,495	7,000,000	3,565	3,020,339	923	2,181,181	0	0
1	2	9	21	9/1/2019	4,900,000	12,250	7,000,000	17,500	2,989,831	4,485	2,181,181	0	0
1	2	10	22	10/1/2019	4,900,000	181,481	7,000,000	259,259	2,959,322	65,763	2,181,181	0	0
1	2	11	23	11/1/2019	4,900,000	595,259	7,000,000	850,370	2,928,814	213,478	2,181,181	0	0
1	2	12	24	12/1/2019	4,900,000	867,028	7,000,000	1,238,611	2,898,305	307,703	2,181,181	0	0
1	3	1	25	1/1/2020	4,900,000	687,361	7,000,000	981,944	2,867,797	241,373	2,181,181	0	0
1	3	2	26	2/1/2020	4,900,000	1,140,384	7,000,000	1,629,120	2,837,288	396,196	2,181,181	0	0
1	3	3	27	3/1/2020	4,900,000	591,856	7,000,000	845,509	2,806,780	203,414	2,181,181	0	0
1	3	4	28	4/1/2020	4,900,000	342,546	7,000,000	489,352	2,776,271	116,449	2,181,181	0	0
1	3	5	29	5/1/2020	4,900,000	94,597	7,000,000	135,139	2,745,763	31,805	2,181,181	0	0
1	3	6	30	6/1/2020	4,900,000	15,880	7,000,000	22,685	2,715,254	5,280	2,181,181	0	0
1	3	7	31	7/1/2020	4,900,000	681	7,000,000	972	2,684,746	224	2,181,181	0	0
1	3	8	32	8/1/2020	4,900,000	2,495	7,000,000	3,565	2,654,237	811	2,181,181	0	0
1	3	9	33	9/1/2020	4,900,000	12,250	7,000,000	17,500	2,623,729	3,936	2,181,181	0	0
1	3	10	34	10/1/2020	4,900,000	181,481	7,000,000	259,259	2,593,220	57,627	2,181,181	0	0
1	3	11	35	11/1/2020	4,900,000	595,259	7,000,000	850,370	2,562,712	186,793	2,181,181	0	0
1	3	12	36	12/1/2020	4,900,000	867,028	7,000,000	1,238,611	2,532,203	268,836	2,181,181	0	0
1	4	1	37	1/1/2021	4,900,000	687,361	7,000,000	981,944	2,501,695	210,559	2,181,181	0	0
1	4	2	38	2/1/2021	4,900,000	1,140,384	7,000,000	1,629,120	2,471,186	345,074	2,181,181	0	0
1	4	3	39	3/1/2021	4,900,000	591,856	7,000,000	845,509	2,440,678	176,881	2,181,181	0	0
1	4	4	40	4/1/2021	4,900,000	342,546	7,000,000	489,352	2,410,169	101,093	2,181,181	0	0
1	4	5	41	5/1/2021	4,900,000	94,597	7,000,000	135,139	2,379,661	27,564	2,181,181	0	0
1	4	6	42	6/1/2021	4,900,000	15,880	7,000,000	22,685	2,349,153	4,568	2,181,181	0	0
1	4	7	43	7/1/2021	4,900,000	681	7,000,000	972	2,318,644	193	2,181,181	0	0
1	4	8	44	8/1/2021	4,900,000	2,495	7,000,000	3,565	2,288,136	699	2,181,181	0	0
1	4	9	45	9/1/2021	4,900,000	12,250	7,000,000	17,500	2,257,627	3,386	2,181,181	0	0
1	4	10	46	10/1/2021	4,900,000	181,481	7,000,000	259,259	2,227,119	49,492	2,181,181	0	0
1	4	11	47	11/1/2021	4,900,000	595,259	7,000,000	850,370	2,196,610	160,108	2,181,181	0	0
1	4	12	48	12/1/2021	4,900,000	867,028	7,000,000	1,238,611	2,166,102	229,968	2,181,181	0	0
1	5	**1**	49	1/1/2022	4,900,000	687,361	7,000,000	981,944	2,135,593	179,746	2,181,181	0	0
1	5	2	50	2/1/2022	4,900,000	1,140,384	7,000,000	1,629,120	2,105,085	293,952	2,181,181	0	0
1	5	3	51	3/1/2022	4,900,000	591,856	7,000,000	845,509	2,074,576	150,349	2,181,181	0	0
1	5	4	52	4/1/2022	4,900,000	342,546	7,000,000	489,352	2,044,068	85,737	2,181,181	0	0
1	5	5	53	5/1/2022	4,900,000	94,597	7,000,000	135,139	2,013,559	23,324	2,181,181	0	0
1	5	6	54	6/1/2022	4,900,000	15,880	7,000,000	22,685	1,983,051	3,856	2,181,181	0	0
1	5	7	55	7/1/2022	4,900,000	681	7,000,000	972	1,952,542	163	2,181,181	0	0
1	5	8	56	8/1/2022	4,900,000	2,495	7,000,000	3,565	1,922,034	587	2,181,181	0	0
1	5	9	57	9/1/2022	4,900,000	12,250	7,000,000	17,500	1,891,525	2,837	2,181,181	0	0
1	5	10	58	10/1/2022	4,900,000	181,481	7,000,000	259,259	1,861,017	41,356	2,181,181	0	0
1	5	11	59	11/1/2022	4,900,000	595,259	7,000,000	850,370	1,830,508	133,424	2,181,181	0	0
1	**5**	**12**	60	**12/1/2022**	**4,900,000**	867,028	**7,000,000**	1,238,611	**1,800,000**	191,100	**2,181,181**	**0**	0
2	**6**	**1**	61	**1/1/2023**	4,913,889	**689,309**	6,938,889	**973,372**	1,750,000	**147,292**	**2,181,181**	50,000	**4,208**
2	6	2	62	2/1/2023	4,927,778	1,146,849	6,877,778	1,600,675	1,700,000	237,386	2,181,181	100,000	13,964
2	6	3	63	3/1/2023	4,941,667	596,889	6,816,667	823,365	1,650,000	119,579	1,947,884	150,000	10,871
2	6	4	64	4/1/2023	4,955,556	346,430	6,755,556	472,263	1,600,000	67,111	1,854,565	200,000	8,389
2	6	5	65	5/1/2023	4,969,444	95,938	6,694,444	129,240	1,550,000	17,954	1,792,353	250,000	2,896
2	6	6	66	6/1/2023	4,983,333	16,150	6,633,333	21,497	1,500,000	2,917	1,761,246	300,000	583
2	6	7	67	7/1/2023	4,997,222	694	6,572,222	913	1,450,000	121	1,714,587	350,000	29

Phase	Year	Month	Total Months	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit
				sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
1	**1**	**1**	**1**	**0**	0		4,153,487	4,153,487	**0**		**0**	**440**	**NA**	**NA**	**4,153,487**	0
1	1	2	2	0	0		5,449,126	5,449,126	0	NA	0	**440**			5,449,126	0
1	1	3	3	0	0		3,875,025	3,875,025	0		0	**440**			3,875,025	0
1	1	4	4	0	0		3,160,240	3,160,240	0		0	**440**			3,160,240	0
1	1	5	5	0	0		2,451,204	2,451,204	0		0	**440**			2,451,204	0
1	1	6	6	0	0		2,226,449	2,226,449	0		0	**440**			2,226,449	0
1	1	7	7	0	0		2,183,119	2,183,119	0		0	**440**			2,183,119	0
1	1	8	8	0	0		2,188,276	2,188,276	0		0	**440**			2,188,276	0
1	1	9	9	0	0		2,215,965	2,215,965	0		0	**440**			2,215,965	0
1	1	10	10	0	0		2,695,820	2,695,820	0		0	**440**			2,695,820	0
1	1	11	11	0	0		3,866,974	3,866,974	0		0	**440**			3,866,974	0
1	1	12	12	0	0		4,633,391	4,633,391	0		0	**440**			4,633,391	0
1	2	1	13	0	0		4,122,673	4,122,673	0		0	**440**			4,122,673	0
1	2	2	14	0	0		5,398,004	5,398,004	0		0	**440**			5,398,004	0
1	2	3	15	0	0		3,848,493	3,848,493	0		0	**440**			3,848,493	0
1	2	4	16	0	0		3,144,884	3,144,884	0		0	**440**			3,144,884	0
1	2	5	17	0	0		2,446,963	2,446,963	0		0	**440**			2,446,963	0
1	2	6	18	0	0		2,225,738	2,225,738	0		0	**440**			2,225,738	0
1	2	7	19	0	0		2,183,088	2,183,088	0		0	**440**			2,183,088	0
1	2	8	20	0	0		2,188,164	2,188,164	0		0	**440**			2,188,164	0
1	2	9	21	0	0		2,215,416	2,215,416	0		0	**440**			2,215,416	0
1	2	10	22	0	0		2,687,685	2,687,685	0		0	**440**			2,687,685	0
1	2	11	23	0	0		3,840,289	3,840,289	0		0	**440**			3,840,289	0
1	2	12	24	0	0		4,594,523	4,594,523	0		0	**440**			4,594,523	0
1	3	1	25	0	0		4,091,860	4,091,860	0		0	**440**			4,091,860	0
1	3	2	26	0	0		5,346,882	5,346,882	0		0	**440**			5,346,882	0
1	3	3	27	0	0		3,821,961	3,821,961	0		0	**440**			3,821,961	0
1	3	4	28	0	0		3,129,529	3,129,529	0		0	**440**			3,129,529	0
1	3	5	29	0	0		2,442,722	2,442,722	0		0	**440**			2,442,722	0
1	3	6	30	0	0		2,225,026	2,225,026	0		0	**440**			2,225,026	0
1	3	7	31	0	0		2,183,058	2,183,058	0		0	**440**			2,183,058	0
1	3	8	32	0	0		2,188,052	2,188,052	0		0	**440**			2,188,052	0
1	3	9	33	0	0		2,214,867	2,214,867	0		0	**440**			2,214,867	0
1	3	10	34	0	0		2,679,549	2,679,549	0		0	**440**			2,679,549	0
1	3	11	35	0	0		3,813,604	3,813,604	0		0	**440**			3,813,604	0
1	3	12	36	0	0		4,555,656	4,555,656	0		0	**440**			4,555,656	0
1	4	1	37	0	0		4,061,046	4,061,046	0		0	**440**			4,061,046	0
1	4	2	38	0	0		5,295,760	5,295,760	0		0	**440**			5,295,760	0
1	4	3	39	0	0		3,795,428	3,795,428	0		0	**440**			3,795,428	0
1	4	4	40	0	0		3,114,173	3,114,173	0		0	**440**			3,114,173	0
1	4	5	41	0	0		2,438,482	2,438,482	0		0	**440**			2,438,482	0
1	4	6	42	0	0		2,224,314	2,224,314	0		0	**440**			2,224,314	0
1	4	7	43	0	0		2,183,027	2,183,027	0		0	**440**			2,183,027	0
1	4	8	44	0	0		2,187,941	2,187,941	0		0	**440**			2,187,941	0
1	4	9	45	0	0		2,214,318	2,214,318	0		0	**440**			2,214,318	0
1	4	10	46	0	0		2,671,413	2,671,413	0		0	**440**			2,671,413	0
1	4	11	47	0	0		3,786,919	3,786,919	0		0	**440**			3,786,919	0
1	4	12	48	0	0		4,516,788	4,516,788	0		0	**440**			4,516,788	0
1	5	**1**	49	0	0		4,030,233	4,030,233	0		11,396,615	**440**			4,030,233	0
1	5	2	50	0	0		5,244,638	5,244,638	0		22,793,230	**440**			5,244,638	0
1	5	3	51	0	0		3,768,896	3,768,896	0		34,189,844	**440**			3,768,896	0
1	5	4	52	0	0		3,098,817	3,098,817	0		45,586,459	**440**			3,098,817	0
1	5	5	53	0	0		2,434,241	2,434,241	0		56,983,074	**440**			2,434,241	0
1	5	6	54	0	0		2,223,602	2,223,602	0		68,379,689	**440**			2,223,602	0
1	5	7	55	0	0		2,182,997	2,182,997	0		79,776,303	**440**			2,182,997	0
1	5	8	56	0	0		2,187,829	2,187,829	0		91,172,918	**440**			2,187,829	0
1	5	9	57	0	0		2,213,768	2,213,768	0		102,569,533	**440**			2,213,768	0
1	5	10	58	0	0		2,663,278	2,663,278	0		113,966,148	**440**			2,663,278	0
1	5	11	59	0	0		3,760,235	3,760,235	0		125,362,762	**440**			3,760,235	0
1	**5**	**12**	60	**0**	0		4,477,920	4,477,920	0		136,759,377	**440**			**4,477,920**	0
2	**6**	**1**	61	0	**0**		3,995,363	3,995,363	0		148,155,992	**440**			**3,995,363**	0
2	6	2	62	0	0		5,180,056	0	5,180,056		159,552,607	**515**			5,180,056	572,110,061
2	6	3	63	0	0		3,498,588	0	8,678,644		170,949,221	**545**			8,678,644	564,132,431
2	6	4	64	0	0		2,748,759	0	11,427,403		182,345,836	**565**			11,427,403	556,154,800
2	6	5	65	0	0		2,038,381	0	13,465,783		193,742,451	**575**			13,465,783	548,177,170
2	6	6	66	0	0		1,802,393	0	15,268,176		205,139,066	**590**			15,268,176	540,199,540
2	6	7	67	0	0		1,716,344	0	16,984,520		216,535,680	**600**			16,984,520	532,221,909

Phase	Year	Month	Total Months	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	WMSA	Groundwater Inflow		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water Concentration	Insitue Treatment	First Year Load	Last Year Load	Pit Water Outflow Concentration
				lb/month		lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L		lb/yr	lb/yr	ug/L
1	**1**	**1**	**1**	0.05	5.03	0.55	82.00	11.18	0.00	0.00	0.00	0.00	0.00	64.76	**0%**			64.76
1	1	2	2	0.09	8.35	0.90	82.00	11.18	0.00	0.00	0.00	22.08	0.00	60.17	0%			60.17
1	1	3	3	0.04	4.33	0.46	82.00	11.18	0.00	0.00	0.00	14.60	0.00	66.03	0%			66.03
1	1	4	4	0.03	2.51	0.27	82.00	11.18	0.00	0.00	0.00	13.07	0.00	70.63	0%			70.63
1	1	5	5	0.01	0.69	0.07	82.00	11.18	0.00	0.00	0.00	10.83	0.00	77.94	0%			77.94
1	1	6	6	0.00	0.12	0.01	82.00	11.18	0.00	0.00	0.00	10.85	0.00	81.25	0%			81.25
1	1	7	7	0.00	0.00	0.00	82.00	11.18	0.00	0.00	0.00	11.09	0.00	81.97	0%			81.97
1	1	8	8	0.00	0.02	0.00	82.00	11.18	0.00	0.00	0.00	11.21	0.00	81.88	0%			81.88
1	1	9	9	0.00	0.09	0.01	82.00	11.18	0.00	0.00	0.00	11.34	0.00	81.41	0%			81.41
1	1	10	10	0.01	1.33	0.13	82.00	11.18	0.00	0.00	0.00	13.77	0.00	74.83	0%			74.83
1	1	11	11	0.05	4.36	0.44	82.00	11.18	0.00	0.00	0.00	18.26	0.00	65.65	0%			65.65
1	1	12	12	0.07	6.35	0.63	82.00	11.18	0.00	0.00	0.00	19.26	0.00	62.13	0%			62.13
1	2	1	13	0.06	5.03	0.49	82.00	11.18	0.00	0.00	0.00	16.21	0.00	64.24	0%			64.24
1	2	2	14	0.09	8.35	0.81	82.00	11.18	0.00	0.00	0.00	22.04	0.00	59.54	0%			59.54
1	2	3	15	0.05	4.33	0.42	82.00	11.18	0.00	0.00	0.00	14.51	0.00	65.54	0%			65.54
1	2	4	16	0.03	2.51	0.24	82.00	11.18	0.00	0.00	0.00	13.01	0.00	70.28	0%			70.28
1	2	5	17	0.01	0.69	0.07	82.00	11.18	0.00	0.00	0.00	10.79	0.00	77.80	0%			77.80
1	2	6	18	0.00	0.12	0.01	82.00	11.18	0.00	0.00	0.00	10.83	0.00	81.22	0%			81.22
1	2	7	19	0.00	0.00	0.00	82.00	11.18	0.00	0.00	0.00	11.08	0.00	81.97	0%			81.97
1	2	8	20	0.00	0.02	0.00	82.00	11.18	0.00	0.00	0.00	11.21	0.00	81.87	0%			81.87
1	2	9	21	0.00	0.09	0.01	82.00	11.18	0.00	0.00	0.00	11.34	0.00	81.39	0%			81.39
1	2	10	22	0.02	1.33	0.12	82.00	11.18	0.00	0.00	0.00	13.79	0.00	74.60	0%			74.60
1	2	11	23	0.05	4.36	0.39	82.00	11.18	0.00	0.00	0.00	18.29	0.00	65.17	0%			65.17
1	2	12	24	0.07	6.35	0.56	82.00	11.18	0.00	0.00	0.00	19.22	0.00	61.57	0%			61.57
1	3	1	25	0.06	5.03	0.44	82.00	11.18	0.00	0.00	0.00	16.14	0.00	63.73	0%			63.73
1	3	2	26	0.10	8.35	0.72	82.00	11.18	0.00	0.00	0.00	22.00	0.00	58.92	0%			58.92
1	3	3	27	0.05	4.33	0.37	82.00	11.18	0.00	0.00	0.00	14.43	0.00	65.07	**0%**			65.07
1	3	4	28	0.03	2.51	0.21	82.00	11.18	0.00	0.00	0.00	12.96	0.00	69.92	0%			69.92
1	3	5	29	0.01	0.69	0.06	82.00	11.18	0.00	0.00	0.00	10.75	0.00	77.66	0%			77.66
1	3	6	30	0.00	0.12	0.01	82.00	11.18	0.00	0.00	0.00	10.81	0.00	81.19	0%			81.19
1	3	7	31	0.00	0.00	0.00	82.00	11.18	0.00	0.00	0.00	11.08	0.00	81.96	0%			81.96
1	3	8	32	0.00	0.02	0.00	82.00	11.18	0.00	0.00	0.00	11.21	0.00	81.87	0%			81.87
1	3	9	33	0.00	0.09	0.01	82.00	11.18	0.00	0.00	0.00	11.35	0.00	81.37	0%			81.37
1	3	10	34	0.02	1.33	0.10	82.00	11.18	0.00	0.00	0.00	13.82	0.00	74.37	0%			74.37
1	3	11	35	0.05	4.36	0.34	82.00	11.18	0.00	0.00	0.00	18.31	0.00	64.69	0%			64.69
1	3	12	36	0.08	6.35	0.49	82.00	11.18	0.00	0.00	0.00	19.18	0.00	61.01	0%			61.01
1	4	1	37	0.06	5.03	0.38	82.00	11.18	0.00	0.00	0.00	16.07	0.00	63.22	0%			63.22
1	4	2	38	0.11	8.35	0.63	82.00	11.18	0.00	0.00	0.00	21.96	0.00	58.31	0%			58.31
1	4	3	39	0.05	4.33	0.32	82.00	11.18	0.00	0.00	0.00	14.34	0.00	64.59	0%			64.59
1	4	4	40	0.03	2.51	0.18	82.00	11.18	0.00	0.00	0.00	12.91	0.00	69.57	0%			69.57
1	4	5	41	0.01	0.69	0.05	82.00	11.18	0.00	0.00	0.00	10.70	0.00	77.53	0%			77.53
1	4	6	42	0.00	0.12	0.01	82.00	11.18	0.00	0.00	0.00	10.80	0.00	81.17	0%			81.17
1	4	7	43	0.00	0.00	0.00	82.00	11.18	0.00	0.00	0.00	11.08	0.00	81.96	0%			81.96
1	4	8	44	0.00	0.02	0.00	82.00	11.18	0.00	0.00	0.00	11.21	0.00	81.87	0%			81.87
1	4	9	45	0.00	0.09	0.01	82.00	11.18	0.00	0.00	0.00	11.35	0.00	81.35	0%			81.35
1	4	10	46	0.02	1.33	0.09	82.00	11.18	0.00	0.00	0.00	13.84	0.00	74.14	0%			74.14
1	4	11	47	0.06	4.36	0.29	82.00	11.18	0.00	0.00	0.00	18.34	0.00	64.22	0%			64.22
1	4	12	48	0.08	6.35	0.42	74.61	10.17	0.00	0.00	0.00	19.15	0.00	57.08	0%			57.08
1	5	**1**	49	0.07	5.03	0.33	67.96	9.26	0.00	0.00	0.00	15.11	0.00	55.49	0%			55.49
1	5	2	50	0.11	8.35	0.53	65.01	8.86	0.00	0.00	0.00	19.40	0.00	51.08	0%			51.08
1	5	3	51	0.06	4.33	0.27	61.31	8.36	0.00	0.00	0.00	12.62	0.00	52.71	0%			52.71
1	5	4	52	0.03	2.51	0.16	58.36	7.96	0.00	0.00	0.00	10.57	0.00	53.14	0%			53.14
1	5	5	53	0.01	0.69	0.04	55.40	7.55	0.00	0.00	0.00	8.19	0.00	53.86	0%			53.86
1	5	6	54	0.00	0.12	0.01	53.19	7.25	0.00	0.00	0.00	7.50	0.00	52.94	0%			52.94
1	5	7	55	0.00	0.00	0.00	50.97	6.95	0.00	0.00	0.00	7.22	0.00	50.96	0%			50.96
1	5	8	56	0.00	0.02	0.00	49.49	6.75	0.00	0.00	0.00	6.97	0.00	49.47	0%			49.47
1	5	9	57	0.00	0.09	0.01	47.28	6.44	0.00	0.00	0.00	6.86	0.00	47.18	0%			47.18
1	5	10	58	0.02	1.33	0.07	45.80	6.24	0.00	0.00	0.00	8.04	0.00	44.96	0%			44.96
1	5	11	59	0.06	4.36	0.24	43.58	5.94	0.00	0.00	0.00	11.17	0.00	42.67	0%			42.67
1	**5**	**12**	60	0.09	6.35	0.35	42.10	5.74	0.00	0.00	0.00	12.79	0.00	41.77	0%			41.77
2	**6**	**1**	61	0.07	4.99	0.27	40.63	5.54	0.00	0.00	0.00	11.11	0.00	40.86	0%			40.86
2	6	2	62	0.12	8.20	0.43	39.15	5.34	0.00	0.00	0.00	0.00	14.09	40.10	0%			0.00
2	6	3	63	0.06	4.22	0.22	37.67	4.55	0.00	0.00	0.00	0.00	23.14	39.64	0%			0.00
2	6	4	64	0.04	2.42	0.12	36.19	4.16	0.00	0.00	0.00	0.00	29.88	39.14	0%			0.00
2	6	5	65	0.01	0.66	0.03	34.72	3.86	0.00	0.00	0.00	0.00	34.44	38.60	0%			0.00
2	6	6	66	0.00	0.11	0.01	33.98	3.71	0.00	0.00	0.00	0.00	38.26	38.10	0%			0.00
2	6	7	67	0.00	0.00	0.00	32.50	3.45	0.00	0.00	0.00	0.00	41.72	37.56	0%			0.00

Phase	Year	Month	Total Months	Date	Quarry Area (Greenstone/Greywacke)	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	WMSA	WMSA	Groundwater Inflow	Undrained Backfill (No Surface Outlet)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	cu ft	sq ft	cu ft
2	6	8	68	8/1/2023	5,011,111	2,552	6,511,111	3,316	1,400,000	428	1,683,481	400,000	122
2	6	9	69	9/1/2023	5,025,000	12,563	6,450,000	16,125	1,350,000	2,025	1,652,374	450,000	675
2	6	10	70	10/1/2023	5,038,889	186,626	6,388,889	236,626	1,300,000	28,889	1,636,821	500,000	11,111
2	6	11	71	11/1/2023	5,052,778	613,819	6,327,778	768,708	1,250,000	91,111	1,590,162	550,000	40,089
2	6	12	72	12/1/2023	5,066,667	896,519	6,266,667	1,108,852	1,200,000	127,400	1,559,056	600,000	63,700
2	7	1	73	1/1/2024	5,080,556	712,689	6,205,556	870,502	1,150,000	96,792	1,512,396	650,000	54,708
2	7	2	74	2/1/2024	5,094,444	1,185,638	6,144,444	1,430,006	1,100,000	153,603	1,465,737	700,000	97,747
2	7	3	75	3/1/2024	5,108,333	617,020	6,083,333	734,788	1,050,000	76,096	1,419,077	750,000	54,354
2	7	4	76	4/1/2024	5,122,222	358,081	6,022,222	420,998	1,000,000	41,944	1,387,971	800,000	33,556
2	7	5	77	5/1/2024	5,136,111	99,155	5,961,111	115,083	950,000	11,004	1,372,418	850,000	9,846
2	7	6	78	6/1/2024	5,150,000	16,690	5,900,000	19,120	900,000	1,750	1,356,865	900,000	1,750
2	7	7	79	7/1/2024	5,163,889	717	5,838,889	811	850,000	71	1,341,312	950,000	79
2	7	8	80	8/1/2024	5,177,778	2,637	5,777,778	2,942	800,000	244	1,325,758	1,000,000	306
2	7	9	81	9/1/2024	5,191,667	12,979	5,716,667	14,292	750,000	1,125	1,310,205	1,050,000	1,575
2	7	10	82	10/1/2024	5,205,556	192,798	5,655,556	209,465	700,000	15,556	1,294,652	1,100,000	24,444
2	7	11	83	11/1/2024	5,219,444	634,066	5,594,444	679,621	650,000	47,378	1,279,099	1,150,000	83,822
2	7	12	84	12/1/2024	5,233,333	926,009	5,533,333	979,093	600,000	63,700	1,263,546	1,200,000	127,400
2	8	1	85	1/1/2025	5,247,222	736,069	5,472,222	767,631	550,000	46,292	1,232,440	1,250,000	105,208
2	8	2	86	2/1/2025	5,261,111	1,224,426	5,411,111	1,259,336	500,000	69,819	1,201,333	1,300,000	181,531
2	8	3	87	3/1/2025	5,275,000	637,152	5,350,000	646,211	450,000	32,613	1,170,227	1,350,000	97,838
2	8	4	88	4/1/2025	5,288,889	369,733	5,288,889	369,733	400,000	16,778	1,154,674	1,400,000	58,722
2	8	5	89	5/1/2025	5,302,778	102,373	5,227,778	100,925	350,000	4,054	1,139,121	1,450,000	16,796
2	8	6	90	6/1/2025	5,316,667	17,230	5,166,667	16,744	300,000	583	1,123,568	1,500,000	2,917
2	8	7	91	7/1/2025	5,330,556	740	5,105,556	709	250,000	21	1,123,568	1,550,000	129
2	8	8	92	8/1/2025	5,344,444	2,722	5,044,444	2,569	200,000	61	1,108,014	1,600,000	489
2	8	9	93	9/1/2025	5,358,333	13,396	4,983,333	12,458	150,000	225	1,108,014	1,650,000	2,475
2	8	10	94	10/1/2025	5,372,222	198,971	4,922,222	182,305	100,000	2,222	1,092,461	1,700,000	37,778
2	8	11	95	11/1/2025	5,386,111	654,313	4,861,111	590,535	50,000	3,644	1,092,461	1,750,000	127,556
2	**8**	12	96	**12/1/2025**	**5,400,000**	955,500	**4,800,000**	849,333	**0**	0	1,076,908	**1,800,000**	191,100
3	9	**1**	97	1/1/2026	5,287,500	741,719	4,700,000	659,306	0	0	1,232,440	1,762,500	148,344
3	9	2	98	2/1/2026	5,175,000	1,204,385	4,600,000	1,070,565	0	0	1,030,249	1,725,000	240,877
3	9	3	99	3/1/2026	5,062,500	611,484	4,500,000	543,542	0	0	1,014,696	1,687,500	122,297
3	9	4	100	4/1/2026	4,950,000	346,042	4,400,000	307,593	0	0	999,142	1,650,000	69,208
3	9	5	101	5/1/2026	4,837,500	93,391	4,300,000	83,014	0	0	983,589	1,612,500	18,678
3	9	6	102	6/1/2026	4,725,000	15,313	4,200,000	13,611	0	0	968,036	1,575,000	3,063
3	9	7	103	7/1/2026	4,612,500	641	4,100,000	569	0	0	968,036	1,537,500	128
3	9	8	104	8/1/2026	4,500,000	2,292	4,000,000	2,037	0	0	968,036	1,500,000	458
3	9	9	105	9/1/2026	4,387,500	10,969	3,900,000	9,750	0	0	952,483	1,462,500	2,194
3	9	10	106	10/1/2026	4,275,000	158,333	3,800,000	140,741	0	0	952,483	1,425,000	31,667
3	9	11	107	11/1/2026	4,162,500	505,667	3,700,000	449,481	0	0	936,930	1,387,500	101,133
3	9	12	108	12/1/2026	4,050,000	716,625	3,600,000	637,000	0	0	936,930	1,350,000	143,325
3	10	1	109	1/1/2027	3,937,500	552,344	3,500,000	490,972	0	0	921,377	1,312,500	110,469
3	10	2	110	2/1/2027	3,825,000	890,198	3,400,000	791,287	0	0	905,824	1,275,000	178,040
3	10	3	111	3/1/2027	3,712,500	448,422	3,300,000	398,597	0	0	890,270	1,237,500	89,684
3	10	4	112	4/1/2027	3,600,000	251,667	3,200,000	223,704	0	0	874,717	1,200,000	50,333
3	10	5	113	5/1/2027	3,487,500	67,328	3,100,000	59,847	0	0	874,717	1,162,500	13,466
3	10	6	114	6/1/2027	3,375,000	10,938	3,000,000	9,722	0	0	859,164	1,125,000	2,188
3	10	7	115	7/1/2027	3,262,500	453	2,900,000	403	0	0	859,164	1,087,500	91
3	10	8	116	8/1/2027	3,150,000	1,604	2,800,000	1,426	0	0	859,164	1,050,000	321
3	10	9	117	9/1/2027	3,037,500	7,594	2,700,000	6,750	0	0	859,164	1,012,500	1,519
3	10	10	118	10/1/2027	2,925,000	108,333	2,600,000	96,296	0	0	843,611	975,000	21,667
3	10	11	119	11/1/2027	2,812,500	341,667	2,500,000	303,704	0	0	843,611	937,500	68,333
3	10	12	120	12/1/2027	2,700,000	477,750	2,400,000	424,667	0	0	828,058	900,000	95,550
3	11	1	121	1/1/2028	2,587,500	362,969	2,300,000	322,639	0	0	828,058	862,500	72,594
3	11	2	122	2/1/2028	2,475,000	576,010	2,200,000	512,009	0	0	812,505	825,000	115,202
3	11	3	123	3/1/2028	2,362,500	285,359	2,100,000	253,653	0	0	796,952	787,500	57,072
3	11	4	124	4/1/2028	2,250,000	157,292	2,000,000	139,815	0	0	796,952	750,000	31,458
3	11	5	125	5/1/2028	2,137,500	41,266	1,900,000	36,681	0	0	796,952	712,500	8,253
3	11	6	126	6/1/2028	2,025,000	6,562	1,800,000	5,833	0	0	781,398	675,000	1,313
3	11	7	127	7/1/2028	1,912,500	266	1,700,000	236	0	0	781,398	637,500	53
3	11	8	128	8/1/2028	1,800,000	917	1,600,000	815	0	0	781,398	600,000	183
3	11	9	129	9/1/2028	1,687,500	4,219	1,500,000	3,750	0	0	781,398	562,500	844
3	11	10	130	10/1/2028	1,575,000	58,333	1,400,000	51,852	0	0	765,845	525,000	11,667
3	11	11	131	11/1/2028	1,462,500	177,667	1,300,000	157,926	0	0	765,845	487,500	35,533
3	11	12	132	12/1/2028	1,350,000	238,875	1,200,000	212,333	0	0	765,845	450,000	47,775
3	12	1	133	1/1/2029	1,237,500	173,594	1,100,000	154,306	0	0	750,292	412,500	34,719
3	12	2	134	2/1/2029	1,125,000	261,823	1,000,000	232,731	0	0	750,292	375,000	52,365
3	12	3	135	3/1/2029	1,012,500	122,297	900,000	108,708	0	0	750,292	337,500	24,459
3	12	4	136	4/1/2029	900,000	62,917	800,000	55,926	0	0	734,739	300,000	12,583
3	12	5	137	5/1/2029	787,500	15,203	700,000	13,514	0	0	734,739	262,500	3,041
3	12	6	138	6/1/2029	675,000	2,188	600,000	1,944	0	0	734,739	225,000	437
3	12	7	139	7/1/2029	562,500	78	500,000	69	0	0	734,739	187,500	16
3	12	8	140	8/1/2029	450,000	229	400,000	204	0	0	719,186	150,000	46
3	12	9	141	9/1/2029	337,500	844	300,000	750	0	0	719,186	112,500	169
3	12	10	142	10/1/2029	225,000	8,333	200,000	7,407	0	0	719,186	75,000	1,667
3	12	11	143	11/1/2029	112,500	13,667	100,000	12,148	0	0	719,186	37,500	2,733
3	**12**	**12**	144	**12/1/2029**	**0**	0	**0**	0	**0**	0	719,186	**0**	0
4	13	**1**	145	1/1/2030	0	0	0	0	0	0	703,633	0	0
4	13	2	146	2/1/2030	0	0	0	0	0	0	703,633	0	0
4	13	3	147	3/1/2030	0	0	0	0	0	0	703,633	0	0

Phase	Year	Month	Total Months	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit
				sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
2	6	8	68	0	0		1,689,898	0	18,674,418		227,932,295	**610**			18,674,418	524,244,279
2	6	9	69	0	0		1,683,762	0	20,358,180		239,328,910	**615**			20,358,180	516,266,649
2	6	10	70	0	0		2,100,072	0	22,458,252		250,725,525	**630**			22,458,252	508,289,018
2	6	11	71	0	0		3,103,889	0	25,562,141		262,122,140	**640**			25,562,141	500,311,388
2	6	12	72	0	0		3,755,526	0	29,317,667		273,518,754	**655**			29,317,667	492,333,758
2	7	1	73	0	0		3,247,087	0	32,564,754		284,915,369	**670**			32,564,754	484,356,127
2	7	2	74	0	0		4,332,730	0	36,897,484		296,311,984	**685**			36,897,484	476,378,497
2	7	3	75	0	0		2,901,335	0	39,798,819		307,708,599	**695**			39,798,819	468,400,867
2	7	4	76	0	0		2,242,550	0	42,041,369		319,105,213	**700**			42,041,369	460,423,236
2	7	5	77	0	0		1,607,506	0	43,648,875		330,501,828	**705**			43,648,875	452,445,606
2	7	6	78	0	0		1,396,175	0	45,045,050		341,898,443	**710**			45,045,050	444,467,976
2	7	7	79	0	0		1,342,990	0	46,388,040		353,295,058	**715**			46,388,040	436,490,345
2	7	8	80	0	0		1,331,888	0	47,719,927		364,691,672	**720**			47,719,927	428,512,715
2	7	9	81	0	0		1,340,176	0	49,060,103		376,088,287	**725**			49,060,103	420,535,085
2	7	10	82	0	0		1,736,915	0	50,797,019		387,484,902	**730**			50,797,019	412,557,454
2	7	11	83	0	0		2,723,986	0	53,521,005		398,881,517	**735**			53,521,005	404,579,824
2	7	12	84	0	0		3,359,748	0	56,880,753		410,278,131	**745**			56,880,753	396,602,194
2	8	1	85	0	0		2,887,639	0	59,768,392		421,674,746	**755**			59,768,392	388,624,563
2	8	2	86	0	0		3,936,445	0	63,704,837		433,071,361	**765**			63,704,837	380,646,933
2	8	3	87	0	0		2,584,039	0	66,288,877		444,467,976	**770**			66,288,877	372,669,303
2	8	4	88	0	0		1,969,639	0	68,258,515		455,864,590	**775**			68,258,515	364,691,672
2	8	5	89	0	0		1,363,269	0	69,621,784		467,261,205	**780**			69,621,784	356,714,042
2	8	6	90	0	0		1,161,041	0	70,782,826		478,657,820	**780**			70,782,826	348,736,412
2	8	7	91	0	0		1,125,167	0	71,907,993		490,054,435	**785**			71,907,993	340,758,781
2	8	8	92	0	0		1,113,855	0	73,021,848		501,451,049	**785**			73,021,848	332,781,151
2	8	9	93	0	0		1,136,569	0	74,158,416		512,847,664	**790**			74,158,416	324,803,521
2	8	10	94	0	0		1,513,737	0	75,672,153		524,244,279	**790**			75,672,153	316,825,890
2	8	11	95	0	0		2,468,509	0	78,140,662		535,640,894	**795**			78,140,662	308,848,260
2	**8**	12	96	**0**	0		3,072,841	0	81,213,504		547,037,509	**805**			81,213,504	300,870,630
3	9	**1**	97	16,667	1,403		2,783,210	0	83,996,714		558,434,123	**810**			59,663,963	292,892,999
3	9	2	98	33,333	4,655		3,550,731	0	87,547,445		569,830,738	**815**			87,547,445	284,915,369
3	9	3	99	50,000	3,624		2,295,642	0	89,843,087		581,227,353	**820**			89,843,087	276,937,739
3	9	4	100	66,667	2,796		1,724,781	0	91,567,868		592,623,968	**825**			91,567,868	268,960,108
3	9	5	101	83,333	965		1,179,637	0	92,747,505		604,020,582	**830**			92,747,505	260,982,478
3	9	6	102	100,000	194		1,000,217	0	93,747,722		615,417,197	**830**			93,747,722	253,004,848
3	9	7	103	116,667	10		969,384	0	94,717,106		626,813,812	**830**			94,717,106	245,027,217
3	9	8	104	133,333	41		972,864	0	95,689,970		638,210,427	**835**			95,689,970	237,049,587
3	9	9	105	150,000	225		975,620	0	96,665,590		649,607,041	**835**			96,665,590	229,071,957
3	9	10	106	166,667	3,704		1,286,927	0	97,952,518		661,003,656	**840**			97,952,518	221,094,326
3	9	11	107	183,333	13,363		2,006,574	0	99,959,092		672,400,271	**840**			99,959,092	211,725,504
3	9	12	108	200,000	21,233		2,455,113	0	102,414,205		683,796,886	**845**			102,414,205	200,328,889
3	10	1	109	216,667	18,236		2,093,398	0	104,507,603		683,796,886	**850**			104,507,603	200,328,889
3	10	2	110	233,333	32,582		2,797,930	0	107,305,533		683,796,886	**855**			107,305,533	200,328,889
3	10	3	111	250,000	18,118		1,845,092	0	109,150,625		683,796,886	**860**			109,150,625	200,328,889
3	10	4	112	266,667	11,185		1,411,606	0	110,562,231		683,796,886	**860**			110,562,231	200,328,889
3	10	5	113	283,333	3,282		1,018,640	0	111,580,872		683,796,886	**865**			111,580,872	200,328,889
3	10	6	114	300,000	583		882,595	0	112,463,466		683,796,886	**865**			112,463,466	200,328,889
3	10	7	115	316,667	26		860,137	0	113,323,603		683,796,886	**865**			113,323,603	200,328,889
3	10	8	116	333,333	102		862,617	0	114,186,220		683,796,886	**865**			114,186,220	200,328,889
3	10	9	117	350,000	525		875,552	0	115,061,772		683,796,886	**870**			115,061,772	200,328,889
3	10	10	118	366,667	8,148		1,078,055	0	116,139,827		683,796,886	**870**			116,139,827	200,328,889
3	10	11	119	383,333	27,941		1,585,255	0	117,725,083		683,796,886	**875**			117,725,083	200,328,889
3	10	12	120	400,000	42,467		1,868,491	0	119,593,574		683,796,886	**875**			119,593,574	200,328,889
3	11	1	121	416,667	35,069		1,621,329	0	121,214,902		683,796,886	**880**			121,214,902	200,328,889
3	11	2	122	433,333	60,510		2,076,237	0	123,291,139		683,796,886	**885**			123,291,139	200,328,889
3	11	3	123	450,000	32,613		1,425,648	0	124,716,787		683,796,886	**885**			124,716,787	200,328,889
3	11	4	124	466,667	19,574		1,145,090	0	125,861,878		683,796,886	**885**			125,861,878	200,328,889
3	11	5	125	483,333	5,599		888,749	0	126,750,627		683,796,886	**890**			126,750,627	200,328,889
3	11	6	126	500,000	972		796,079	0	127,546,706		683,796,886	**890**			127,546,706	200,328,889
3	11	7	127	516,667	43		781,996	0	128,328,702		683,796,886	**890**			128,328,702	200,328,889
3	11	8	128	533,333	163		783,476	0	129,112,179		683,796,886	**890**			129,112,179	200,328,889
3	11	9	129	550,000	825		791,036	0	129,903,215		683,796,886	**895**			129,903,215	200,328,889
3	11	10	130	566,667	12,593		900,290	0	130,803,504		683,796,886	**895**			130,803,504	200,328,889
3	11	11	131	583,333	42,519		1,179,490	0	131,982,994		683,796,886	**895**			131,982,994	200,328,889
3	11	12	132	600,000	63,700		1,328,529	0	133,311,523		683,796,886	**900**			133,311,523	200,328,889
3	12	1	133	616,667	51,903		1,164,813	0	134,476,336		683,796,886	**900**			134,476,336	200,328,889
3	12	2	134	633,333	88,438		1,385,649	0	135,861,985		683,796,886	**900**			135,861,985	200,328,889
3	12	3	135	650,000	47,107		1,052,864	0	136,914,848		683,796,886	**905**			136,914,848	200,328,889
3	12	4	136	666,667	27,963		894,128	0	137,808,976		683,796,886	**905**			137,808,976	200,328,889
3	12	5	137	683,333	7,915		774,412	0	138,583,388		683,796,886	**905**			138,583,388	200,328,889
3	12	6	138	700,000	1,361		740,670	0	139,324,058		683,796,886	**905**			139,324,058	200,328,889
3	12	7	139	716,667	60		734,962	0	140,059,019		683,796,886	**910**			140,059,019	200,328,889
3	12	8	140	733,333	224		719,889	0	140,778,908		683,796,886	**910**			140,778,908	200,328,889
3	12	9	141	750,000	1,125		722,073	0	141,500,981		683,796,886	**910**			141,500,981	200,328,889
3	12	10	142	766,667	17,037		753,630	0	142,254,612		683,796,886	**910**			142,254,612	200,328,889
3	12	11	143	783,333	57,096		804,830	0	143,059,442		683,796,886	**910**			143,059,442	200,328,889
3	**12**	**12**	144	**800,000**	84,933		804,119	0	143,863,561		683,796,886	**915**			143,863,561	200,328,889
4	13	**1**	145	800,000	67,333		770,966	0	144,634,527		683,796,886	**915**			144,634,527	200,328,889
4	13	2	146	800,000	111,711		815,344	0	145,449,871		683,796,886	**915**			145,449,871	200,328,889
4	13	3	147	800,000	57,978		761,610	0	146,211,482		683,796,886	**915**			146,211,482	200,328,889

Phase	Year	Month	Total Months	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	WMSA	Groundwater Inflow		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water Concentration	Insitue Treatment	First Year Load	Last Year Load	Pit Water Outflow Concentration
				lb/month		lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L		lb/yr	lb/yr	ug/L
2	6	8	68	0.00	0.02	0.00	31.02	3.26	0.00	0.00	0.00	0.00	45.11	38.65	0%			0.00
2	6	9	69	0.00	0.08	0.00	30.28	3.13	0.00	0.00	0.00	0.00	48.32	37.98	0%			0.00
2	6	10	70	0.01	1.21	0.05	28.81	2.95	0.00	0.00	0.00	0.00	52.55	37.44	0%			0.00
2	6	11	71	0.05	3.94	0.17	28.07	2.79	0.00	0.00	0.00	0.00	59.49	37.24	0%			0.00
2	6	12	72	0.07	5.68	0.23	26.59	2.59	0.00	0.00	0.00	0.00	68.07	37.15	0%			0.00
2	7	1	73	0.05	4.46	0.18	25.85	2.44	0.00	0.00	0.00	0.00	75.20	36.95	0%			0.00
2	7	2	74	0.09	7.33	0.28	25.11	2.30	0.01	0.00	0.00	0.00	85.21	36.95	0%			0.00
2	7	3	75	0.05	3.77	0.14	23.63	2.10	0.00	0.00	0.00	0.00	91.26	36.69	0%			0.00
2	7	4	76	0.03	2.16	0.08	22.89	1.99	0.00	0.00	0.00	0.00	95.50	36.35	0%			0.00
2	7	5	77	0.01	0.59	0.02	22.16	1.90	0.00	0.00	0.00	0.00	98.02	35.93	0%			0.00
2	7	6	78	0.00	0.10	0.00	20.68	1.75	0.00	0.00	0.00	0.00	99.88	35.48	0%			0.00
2	7	7	79	0.00	0.00	0.00	19.94	1.67	0.00	0.00	0.00	0.00	101.55	35.03	0%			0.00
2	7	8	80	0.00	0.02	0.00	19.20	1.59	0.00	0.00	0.00	0.00	103.16	34.59	0%			0.00
2	7	9	81	0.00	0.07	0.00	18.46	1.51	0.00	0.00	0.00	0.00	104.75	34.16	0%			0.00
2	7	10	82	0.01	1.07	0.03	17.72	1.43	0.00	0.00	0.00	0.00	107.30	33.80	0%			0.00
2	7	11	83	0.05	3.48	0.09	16.98	1.36	0.01	0.00	0.00	0.00	112.28	33.57	0%			0.00
2	7	12	84	0.07	5.02	0.12	15.51	1.22	0.01	0.00	0.00	0.00	118.72	33.39	0%			0.00
2	8	1	85	0.06	3.93	0.08	14.77	1.14	0.01	0.00	0.00	0.00	123.93	33.18	0%			0.00
2	8	2	86	0.09	6.45	0.13	14.03	1.05	0.01	0.00	0.00	0.00	131.67	33.07	0%			0.00
2	8	3	87	0.05	3.31	0.06	13.29	0.97	0.01	0.00	0.00	0.00	136.07	32.84	0%			0.00
2	8	4	88	0.03	1.89	0.03	12.55	0.91	0.00	0.00	0.00	0.00	138.93	32.57	0%			0.00
2	8	5	89	0.01	0.52	0.01	11.81	0.84	0.00	0.00	0.00	0.00	140.30	32.24	0%			0.00
2	8	6	90	0.00	0.09	0.00	11.07	0.78	0.00	0.00	0.00	0.00	141.17	31.91	0%			0.00
2	8	7	91	0.00	0.00	0.00	10.33	0.73	0.00	0.00	0.00	0.00	141.90	31.57	0%			0.00
2	8	8	92	0.00	0.01	0.00	9.60	0.66	0.00	0.00	0.00	0.00	142.58	31.24	0%			0.00
2	8	9	93	0.00	0.06	0.00	9.60	0.66	0.00	0.00	0.00	0.00	143.31	30.92	0%			0.00
2	8	10	94	0.01	0.93	0.00	8.86	0.60	0.00	0.00	0.00	0.00	144.87	30.63	0%			0.00
2	8	11	95	0.05	3.03	0.01	8.12	0.55	0.01	0.00	0.00	0.00	148.51	30.41	0%			0.00
2	**8**	12	96	0.07	4.35	0.00	7.38	0.50	0.01	0.00	0.00	0.00	153.45	30.23	0%			0.00
3	9	**1**	97	0.06	3.38	0.00	6.64	0.51	0.01	0.00	0.00	0.00	157.40	29.98	0%			0.00
3	9	2	98	0.09	5.49	0.00	5.90	0.38	0.02	0.00	0.00	0.00	163.37	29.86	0%			0.00
3	9	3	99	0.05	2.79	0.00	5.90	0.37	0.01	0.00	0.00	0.00	166.59	29.67	0%			0.00
3	9	4	100	0.03	1.58	0.00	5.16	0.32	0.00	0.00	0.00	0.00	168.52	29.45	0%			0.00
3	9	5	101	0.01	0.43	0.00	4.42	0.27	0.00	0.00	0.00	0.00	169.22	29.19	0%			0.00
3	9	6	102	0.00	0.07	0.00	3.69	0.22	0.00	0.00	0.00	0.00	169.52	28.93	0%			0.00
3	9	7	103	0.00	0.00	0.00	2.95	0.18	0.00	0.00	0.00	0.00	169.70	28.67	0%			0.00
3	9	8	104	0.00	0.01	0.00	2.95	0.18	0.00	0.00	0.00	0.00	169.89	28.41	0%			0.00
3	9	9	105	0.00	0.05	0.00	2.21	0.13	0.00	0.00	0.00	0.00	170.07	28.15	0%			0.00
3	9	10	106	0.01	0.72	0.00	1.47	0.09	0.00	0.00	0.00	0.00	170.89	27.91	0%			0.00
3	9	11	107	0.04	2.30	0.00	0.73	0.04	0.01	0.00	0.00	0.00	173.28	27.74	0%			0.00
3	9	12	108	0.05	3.26	0.00	0.73	0.04	0.01	0.00	0.00	0.00	176.65	27.60	0%			0.00
3	10	1	109	0.04	2.52	0.00	0.73	0.04	0.01	0.00	0.00	0.00	179.26	27.44	0%			0.00
3	10	2	110	0.07	4.06	0.00	0.73	0.04	0.01	0.00	0.00	0.00	183.44	27.35	0%			0.00
3	10	3	111	0.03	2.04	0.00	0.73	0.04	0.01	0.00	0.00	0.00	185.56	27.20	0%			0.00
3	10	4	112	0.02	1.15	0.00	0.73	0.04	0.00	0.00	0.00	0.00	186.77	27.03	0%			0.00
3	10	5	113	0.01	0.31	0.00	0.73	0.04	0.00	0.00	0.00	0.00	187.12	26.83	0%			0.00
3	10	6	114	0.00	0.05	0.00	0.73	0.04	0.00	0.00	0.00	0.00	187.21	26.63	0%			0.00
3	10	7	115	0.00	0.00	0.00	0.73	0.04	0.00	0.00	0.00	0.00	187.26	26.44	0%			0.00
3	10	8	116	0.00	0.01	0.00	0.73	0.04	0.00	0.00	0.00	0.00	187.30	26.25	0%			0.00
3	10	9	117	0.00	0.03	0.00	0.73	0.04	0.00	0.00	0.00	0.00	187.38	26.06	0%			0.00
3	10	10	118	0.01	0.49	0.00	0.73	0.04	0.00	0.00	0.00	0.00	187.92	25.89	0%			0.00
3	10	11	119	0.03	1.56	0.00	0.73	0.04	0.00	0.00	0.00	0.00	189.54	25.76	0%			0.00
3	10	12	120	0.04	2.18	0.00	0.73	0.04	0.01	0.00	0.00	0.00	191.80	25.66	0%			0.00
3	11	1	121	0.03	1.65	0.00	0.73	0.04	0.00	0.00	0.00	0.00	193.53	25.55	0%			0.00
3	11	2	122	0.04	2.62	0.00	0.73	0.04	0.01	0.00	0.00	0.00	196.24	25.47	0%			0.00
3	11	3	123	0.02	1.30	0.00	0.73	0.04	0.00	0.00	0.00	0.00	197.61	25.35	0%			0.00
3	11	4	124	0.01	0.72	0.00	0.73	0.04	0.00	0.00	0.00	0.00	198.38	25.22	0%			0.00
3	11	5	125	0.00	0.19	0.00	0.73	0.04	0.00	0.00	0.00	0.00	198.60	25.07	0%			0.00
3	11	6	126	0.00	0.03	0.00	0.73	0.04	0.00	0.00	0.00	0.00	198.67	24.92	0%			0.00
3	11	7	127	0.00	0.00	0.00	0.73	0.04	0.00	0.00	0.00	0.00	198.71	24.77	0%			0.00
3	11	8	128	0.00	0.00	0.00	0.73	0.04	0.00	0.00	0.00	0.00	198.75	24.63	0%			0.00
3	11	9	129	0.00	0.02	0.00	0.73	0.04	0.00	0.00	0.00	0.00	198.80	24.49	0%			0.00
3	11	10	130	0.00	0.27	0.00	0.73	0.03	0.00	0.00	0.00	0.00	199.11	24.36	0%			0.00
3	11	11	131	0.01	0.81	0.00	0.73	0.03	0.00	0.00	0.00	0.00	199.97	24.24	0%			0.00
3	11	12	132	0.02	1.09	0.00	0.73	0.03	0.00	0.00	0.00	0.00	201.12	24.14	0%			0.00
3	12	1	133	0.01	0.79	0.00	0.73	0.03	0.00	0.00	0.00	0.00	201.96	24.03	0%			0.00
3	12	2	134	0.02	1.19	0.00	0.73	0.03	0.00	0.01	0.00	0.00	203.22	23.93	0%			0.00
3	12	3	135	0.01	0.56	0.00	0.73	0.03	0.00	0.00	0.00	0.00	203.82	23.82	0%			0.00
3	12	4	136	0.00	0.29	0.00	0.73	0.03	0.00	0.00	0.00	0.00	204.15	23.70	0%			0.00
3	12	5	137	0.00	0.07	0.00	0.73	0.03	0.00	0.00	0.00	0.00	204.26	23.58	0%			0.00
3	12	6	138	0.00	0.01	0.00	0.73	0.03	0.00	0.00	0.00	0.00	204.30	23.46	0%			0.00
3	12	7	139	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	204.33	23.34	0%			0.00
3	12	8	140	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	204.37	23.23	0%			0.00
3	12	9	141	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	204.40	23.11	0%			0.00
3	12	10	142	0.00	0.04	0.00	0.73	0.03	0.00	0.00	0.00	0.00	204.48	23.00	0%			0.00
3	12	11	143	0.00	0.06	0.00	0.73	0.03	0.00	0.00	0.00	0.00	204.58	22.88	0%			0.00
3	**12**	**12**	144	0.00	0.00	0.00	0.73	0.03	0.00	0.01	0.00	0.00	204.61	22.76	0%			0.00
4	13	**1**	145	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	204.65	22.64	0%			0.00
4	13	2	146	0.00	0.00	0.00	0.73	0.03	0.00	0.01	0.00	0.00	204.69	22.52	0%			0.00
4	13	3	147	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	204.73	22.40	0%			0.00

Phase	Year	Month	Total Months	Date	Quarry Area (Greenstone/Greywacke)	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	WMSA	WMSA	Groundwater Inflow	Undrained Backfill (No Surface Outlet)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	cu ft	sq ft	cu ft
4	13	4	148	4/1/2030	0	0	0	0	0	0	703,633	0	0
4	13	5	149	5/1/2030	0	0	0	0	0	0	688,080	0	0
4	13	6	150	6/1/2030	0	0	0	0	0	0	688,080	0	0
4	13	7	151	7/1/2030	0	0	0	0	0	0	688,080	0	0
4	13	8	152	8/1/2030	0	0	0	0	0	0	688,080	0	0
4	13	9	153	9/1/2030	0	0	0	0	0	0	688,080	0	0
4	13	10	154	10/1/2030	0	0	0	0	0	0	672,526	0	0
4	13	11	155	11/1/2030	0	0	0	0	0	0	672,526	0	0
4	13	12	156	12/1/2030	0	0	0	0	0	0	672,526	0	0
4	14	1	157	1/1/2031	0	0	0	0	0	0	672,526	0	0
4	14	2	158	2/1/2031	0	0	0	0	0	0	672,526	0	0
4	14	3	159	3/1/2031	0	0	0	0	0	0	656,973	0	0
4	14	4	160	4/1/2031	0	0	0	0	0	0	656,973	0	0
4	14	5	161	5/1/2031	0	0	0	0	0	0	656,973	0	0
4	14	6	162	6/1/2031	0	0	0	0	0	0	656,973	0	0
4	14	7	163	7/1/2031	0	0	0	0	0	0	656,973	0	0
4	14	8	164	8/1/2031	0	0	0	0	0	0	656,973	0	0
4	14	9	165	9/1/2031	0	0	0	0	0	0	641,420	0	0
4	14	10	166	10/1/2031	0	0	0	0	0	0	641,420	0	0
4	14	11	167	11/1/2031	0	0	0	0	0	0	641,420	0	0
4	**14**	**12**	168	**12/1/2031**	**0**	0	**0**	0	**0**	0	641,420	**0**	0
5	15	**1**	169	1/1/2032	0	0	0	0	0	0	641,420	**0**	0
5	15	2	170	2/1/2032	0	0	0	0	0	0	625,867	0	0
5	15	3	171	3/1/2032	0	0	0	0	0	0	625,867	0	0
5	15	4	172	4/1/2032	0	0	0	0	0	0	625,867	0	0
5	15	5	173	5/1/2032	0	0	0	0	0	0	625,867	0	0
5	15	6	174	6/1/2032	0	0	0	0	0	0	625,867	0	0
5	15	7	175	7/1/2032	0	0	0	0	0	0	625,867	0	0
5	15	8	176	8/1/2032	0	0	0	0	0	0	610,314	0	0
5	15	9	177	9/1/2032	0	0	0	0	0	0	610,314	0	0
5	15	10	178	10/1/2032	0	0	0	0	0	0	610,314	0	0
5	15	11	179	11/1/2032	0	0	0	0	0	0	610,314	0	0
5	15	12	180	12/1/2032	0	0	0	0	0	0	610,314	0	0
5	16	1	181	1/1/2033	0	0	0	0	0	0	610,314	0	0
5	16	2	182	2/1/2033	0	0	0	0	0	0	610,314	0	0
5	16	3	183	3/1/2033	0	0	0	0	0	0	594,761	0	0
5	16	4	184	4/1/2033	0	0	0	0	0	0	594,761	0	0
5	16	5	185	5/1/2033	0	0	0	0	0	0	594,761	0	0
5	16	6	186	6/1/2033	0	0	0	0	0	0	594,761	0	0
5	16	7	187	7/1/2033	0	0	0	0	0	0	594,761	0	0
5	16	8	188	8/1/2033	0	0	0	0	0	0	594,761	0	0
5	16	9	189	9/1/2033	0	0	0	0	0	0	579,208	0	0
5	16	10	190	10/1/2033	0	0	0	0	0	0	579,208	0	0
5	16	11	191	11/1/2033	0	0	0	0	0	0	579,208	0	0
5	16	12	192	12/1/2033	0	0	0	0	0	0	579,208	0	0
5	17	1	193	1/1/2034	0	0	0	0	0	0	579,208	0	0
5	17	2	194	2/1/2034	0	0	0	0	0	0	579,208	0	0
5	17	3	195	3/1/2034	0	0	0	0	0	0	579,208	0	0
5	17	4	196	4/1/2034	0	0	0	0	0	0	563,654	0	0
5	17	5	197	5/1/2034	0	0	0	0	0	0	563,654	0	0
5	17	6	198	6/1/2034	0	0	0	0	0	0	563,654	0	0
5	17	7	199	7/1/2034	0	0	0	0	0	0	563,654	0	0
5	17	8	200	8/1/2034	0	0	0	0	0	0	563,654	0	0
5	17	9	201	9/1/2034	0	0	0	0	0	0	563,654	0	0
5	17	10	202	10/1/2034	0	0	0	0	0	0	563,654	0	0
5	17	11	203	11/1/2034	0	0	0	0	0	0	548,101	0	0
5	**17**	**12**	204	**12/1/2034**	**0**	0	**0**	0	**0**	0	548,101	**0**	0
NA	18	**1**	205	1/1/2035	**0**	0	**0**	0	**0**	0	548,101	**0**	0
NA	18	2	206	2/1/2035	0	0	0	0	0	0	548,101	0	0
NA	18	3	207	3/1/2035	0	0	0	0	0	0	548,101	0	0
NA	18	4	208	4/1/2035	0	0	0	0	0	0	548,101	0	0
NA	18	5	209	5/1/2035	0	0	0	0	0	0	548,101	0	0
NA	18	6	210	6/1/2035	0	0	0	0	0	0	548,101	0	0
NA	18	7	211	7/1/2035	0	0	0	0	0	0	532,548	0	0
NA	18	8	212	8/1/2035	0	0	0	0	0	0	532,548	0	0
NA	18	9	213	9/1/2035	0	0	0	0	0	0	532,548	0	0
NA	18	10	214	10/1/2035	0	0	0	0	0	0	532,548	0	0
NA	18	11	215	11/1/2035	0	0	0	0	0	0	532,548	0	0
NA	18	12	216	12/1/2035	0	0	0	0	0	0	532,548	0	0
NA	19	1	217	1/1/2036	0	0	0	0	0	0	532,548	0	0
NA	19	2	218	2/1/2036	0	0	0	0	0	0	532,548	0	0
NA	19	3	219	3/1/2036	0	0	0	0	0	0	516,995	0	0
NA	19	4	220	4/1/2036	0	0	0	0	0	0	516,995	0	0
NA	19	5	221	5/1/2036	0	0	0	0	0	0	516,995	0	0
NA	19	6	222	6/1/2036	0	0	0	0	0	0	516,995	0	0
NA	19	7	223	7/1/2036	0	0	0	0	0	0	516,995	0	0
NA	19	8	224	8/1/2036	0	0	0	0	0	0	516,995	0	0
NA	19	9	225	9/1/2036	0	0	0	0	0	0	516,995	0	0
NA	19	10	226	10/1/2036	0	0	0	0	0	0	516,995	0	0
NA	19	11	227	11/1/2036	0	0	0	0	0	0	501,442	0	0

Phase	Year	Month	Total Months	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit
				sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
4	13	4	148	800,000	33,556		737,188	0	146,948,670		683,796,886	920			146,948,670	200,328,889
4	13	5	149	800,000	9,267		697,346	0	147,646,016		683,796,886	920			147,646,016	200,328,889
4	13	6	150	800,000	1,556		689,635	0	148,335,651		683,796,886	920			148,335,651	200,328,889
4	13	7	151	800,000	67		688,146	0	149,023,797		683,796,886	920			149,023,797	200,328,889
4	13	8	152	800,000	244		688,324	0	149,712,121		683,796,886	920			149,712,121	200,328,889
4	13	9	153	800,000	1,200		689,280	0	150,401,401		683,796,886	925			150,401,401	200,328,889
4	13	10	154	800,000	17,778		690,304	0	151,091,705		683,796,886	925			151,091,705	200,328,889
4	13	11	155	800,000	58,311		730,838	0	151,822,543		683,796,886	925			151,822,543	200,328,889
4	13	12	156	800,000	84,933		757,460	0	152,580,002		683,796,886	925			152,580,002	200,328,889
4	14	1	157	800,000	67,333		739,860	0	153,319,862		683,796,886	925			153,319,862	200,328,889
4	14	2	158	800,000	111,711		784,238	0	154,104,100		683,796,886	930			154,104,100	200,328,889
4	14	3	159	800,000	57,978		714,951	0	154,819,051		683,796,886	930			154,819,051	200,328,889
4	14	4	160	800,000	33,556		690,529	0	155,509,580		683,796,886	930			155,509,580	200,328,889
4	14	5	161	800,000	9,267		666,240	0	156,175,820		683,796,886	930			156,175,820	200,328,889
4	14	6	162	800,000	1,556		658,529	0	156,834,348		683,796,886	930			156,834,348	200,328,889
4	14	7	163	800,000	67		657,040	0	157,491,388		683,796,886	930			157,491,388	200,328,889
4	14	8	164	800,000	244		657,218	0	158,148,606		683,796,886	935			158,148,606	200,328,889
4	14	9	165	800,000	1,200		642,620	0	158,791,226		683,796,886	935			158,791,226	200,328,889
4	14	10	166	800,000	17,778		659,198	0	159,450,424		683,796,886	935			159,450,424	200,328,889
4	14	11	167	800,000	58,311		699,731	0	160,150,155		683,796,886	935			160,150,155	200,328,889
4	**14**	**12**	168	**800,000**	84,933		726,353	0	160,876,509		683,796,886	**935**			160,876,509	200,328,889
5	15	**1**	169	**800,000**	67,333		708,753	0	161,585,262		683,796,886	**940**			161,585,262	200,328,889
5	15	2	170	800,000	111,711		737,578	0	162,322,840		683,796,886	**940**			162,322,840	200,328,889
5	15	3	171	800,000	57,978		683,845	0	163,006,685		683,796,886	**940**			163,006,685	200,328,889
5	15	4	172	800,000	33,556		659,423	0	163,666,108		683,796,886	**940**			163,666,108	200,328,889
5	15	5	173	800,000	9,267		635,134	0	164,301,241		683,796,886	**940**			164,301,241	200,328,889
5	15	6	174	800,000	1,556		627,423	0	164,928,664		683,796,886	**940**			164,928,664	200,328,889
5	15	7	175	800,000	67		625,934	0	165,554,598		683,796,886	**945**			165,554,598	200,328,889
5	15	8	176	800,000	244		610,558	0	166,165,156		683,796,886	**945**			166,165,156	200,328,889
5	15	9	177	800,000	1,200		611,514	0	166,776,670		683,796,886	**945**			166,776,670	200,328,889
5	15	10	178	800,000	17,778		628,092	0	167,404,761		683,796,886	**945**			167,404,761	200,328,889
5	15	11	179	800,000	58,311		668,625	0	168,073,386		683,796,886	**945**			168,073,386	200,328,889
5	15	12	180	800,000	84,933		695,247	0	168,768,633		683,796,886	**945**			168,768,633	200,328,889
5	16	1	181	800,000	67,333		677,647	0	169,446,281		683,796,886	**945**			169,446,281	200,328,889
5	16	2	182	800,000	111,711		722,025	0	170,168,306		683,796,886	**950**			170,168,306	200,328,889
5	16	3	183	800,000	57,978		652,738	0	170,821,044		683,796,886	**950**			170,821,044	200,328,889
5	16	4	184	800,000	33,556		628,316	0	171,449,360		683,796,886	**950**			171,449,360	200,328,889
5	16	5	185	800,000	9,267		604,027	0	172,053,388		683,796,886	**950**			172,053,388	200,328,889
5	16	6	186	800,000	1,556		596,316	0	172,649,704		683,796,886	**950**			172,649,704	200,328,889
5	16	7	187	800,000	67		594,827	0	173,244,531		683,796,886	**950**			173,244,531	200,328,889
5	16	8	188	800,000	244		595,005	0	173,839,536		683,796,886	**955**			173,839,536	200,328,889
5	16	9	189	800,000	1,200		580,408	0	174,419,944		683,796,886	**955**			174,419,944	200,328,889
5	16	10	190	800,000	17,778		596,985	0	175,016,929		683,796,886	**955**			175,016,929	200,328,889
5	16	11	191	800,000	58,311		637,519	0	175,654,448		683,796,886	**955**			175,654,448	200,328,889
5	16	12	192	800,000	84,933		664,141	0	176,318,589		683,796,886	**955**			176,318,589	200,328,889
5	17	1	193	800,000	67,333		646,541	0	176,965,130		683,796,886	**955**			176,965,130	200,328,889
5	17	2	194	800,000	111,711		690,919	0	177,656,049		683,796,886	**955**			177,656,049	200,328,889
5	17	3	195	800,000	57,978		637,185	0	178,293,234		683,796,886	**960**			178,293,234	200,328,889
5	17	4	196	800,000	33,556		597,210	0	178,890,444		683,796,886	**960**			178,890,444	200,328,889
5	17	5	197	800,000	9,267		572,921	0	179,463,365		683,796,886	**960**			179,463,365	200,328,889
5	17	6	198	800,000	1,556		565,210	0	180,028,575		683,796,886	**960**			180,028,575	200,328,889
5	17	7	199	800,000	67		563,721	0	180,592,296		683,796,886	**960**			180,592,296	200,328,889
5	17	8	200	800,000	244		563,899	0	181,156,195		683,796,886	**960**			181,156,195	200,328,889
5	17	9	201	800,000	1,200		564,854	0	181,721,049		683,796,886	**960**			181,721,049	200,328,889
5	17	10	202	800,000	17,778		581,432	0	182,302,482		683,796,886	**965**			182,302,482	200,328,889
5	17	11	203	800,000	58,311		606,412	0	182,908,894		683,796,886	**965**			182,908,894	200,328,889
5	**17**	**12**	204	**800,000**	84,933		633,035	0	183,541,929		683,796,886	**965**			183,541,929	200,328,889
NA	18	**1**	205	**800,000**	67,333		615,435	0	184,157,363		683,796,886	**965**			184,157,363	200,328,889
NA	18	2	206	800,000	111,711		659,812	0	184,817,176		683,796,886	**965**			184,817,176	200,328,889
NA	18	3	207	800,000	57,978		606,079	0	185,423,255		683,796,886	**965**			185,423,255	200,328,889
NA	18	4	208	800,000	33,556		581,657	0	186,004,911		683,796,886	**965**			186,004,911	200,328,889
NA	18	5	209	800,000	9,267		557,368	0	186,562,279		683,796,886	**965**			186,562,279	200,328,889
NA	18	6	210	800,000	1,556		549,657	0	187,111,936		683,796,886	**970**			187,111,936	200,328,889
NA	18	7	211	800,000	67		532,615	0	187,644,551		683,796,886	**970**			187,644,551	200,328,889
NA	18	8	212	800,000	244		532,793	0	188,177,344		683,796,886	**970**			188,177,344	200,328,889
NA	18	9	213	800,000	1,200		533,748	0	188,711,092		683,796,886	**970**			188,711,092	200,328,889
NA	18	10	214	800,000	17,778		550,326	0	189,261,418		683,796,886	**970**			189,261,418	200,328,889
NA	18	11	215	800,000	58,311		590,859	0	189,852,277		683,796,886	**970**			189,852,277	200,328,889
NA	18	12	216	800,000	84,933		617,481	0	190,469,758		683,796,886	**970**			190,469,758	200,328,889
NA	19	1	217	800,000	67,333		599,881	0	191,069,640		683,796,886	**970**			191,069,640	200,328,889
NA	19	2	218	800,000	111,711		644,259	0	191,713,899		683,796,886	**975**			191,713,899	200,328,889
NA	19	3	219	800,000	57,978		574,973	0	192,288,872		683,796,886	**975**			192,288,872	200,328,889
NA	19	4	220	800,000	33,556		550,551	0	192,839,422		683,796,886	**975**			192,839,422	200,328,889
NA	19	5	221	800,000	9,267		526,262	0	193,365,684		683,796,886	**975**			193,365,684	200,328,889
NA	19	6	222	800,000	1,556		518,551	0	193,884,235		683,796,886	**975**			193,884,235	200,328,889
NA	19	7	223	800,000	67		517,062	0	194,401,296		683,796,886	**975**			194,401,296	200,328,889
NA	19	8	224	800,000	244		517,239	0	194,918,536		683,796,886	**975**			194,918,536	200,328,889
NA	19	9	225	800,000	1,200		518,195	0	195,436,731		683,796,886	**975**			195,436,731	200,328,889
NA	19	10	226	800,000	17,778		534,773	0	195,971,504		683,796,886	**980**			195,971,504	200,328,889
NA	19	11	227	800,000	58,311		559,753	0	196,531,256		683,796,886	**980**			196,531,256	200,328,889

Phase	Year	Month	Total Months	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	WMSA	Groundwater Inflow		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water Concentration	Insitue Treatment	First Year Load	Last Year Load	Pit Water Outflow Concentration
				lb/month		lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L		lb/yr	lb/yr	ug/L
4	13	4	148	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	204.76	22.29	0%			0.00
4	13	5	149	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	204.79	22.19	0%			0.00
4	13	6	150	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	204.82	22.09	0%			0.00
4	13	7	151	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	204.85	21.99	0%			0.00
4	13	8	152	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	204.89	21.90	0%			0.00
4	13	9	153	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	204.92	21.80	0%			0.00
4	13	10	154	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	204.95	21.70	0%			0.00
4	13	11	155	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	204.98	21.60	0%			0.00
4	13	12	156	0.00	0.00	0.00	0.73	0.03	0.00	0.01	0.00	0.00	205.02	21.50	0%			0.00
4	14	1	157	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.05	21.40	0%			0.00
4	14	2	158	0.00	0.00	0.00	0.73	0.03	0.00	0.01	0.00	0.00	205.09	21.29	0%			0.00
4	14	3	159	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.13	21.20	0%			0.00
4	14	4	160	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.16	21.11	0%			0.00
4	14	5	161	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.19	21.02	0%			0.00
4	14	6	162	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.22	20.94	0%			0.00
4	14	7	163	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.25	20.85	0%			0.00
4	14	8	164	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.28	20.77	0%			0.00
4	14	9	165	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.31	20.69	0%			0.00
4	14	10	166	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.34	20.60	0%			0.00
4	14	11	167	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.37	20.52	0%			0.00
4	**14**	**12**	168	0.00	0.00	0.00	0.73	0.03	0.00	0.01	0.00	0.00	205.41	20.43	0%			0.00
5	15	**1**	169	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.44	20.34	0%			0.00
5	15	2	170	0.00	0.00	0.00	0.73	0.03	0.00	0.01	0.00	0.00	205.47	20.25	0%			0.00
5	15	3	171	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.51	20.17	0%			0.00
5	15	4	172	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.54	20.09	0%			0.00
5	15	5	173	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.57	20.02	0%			0.00
5	15	6	174	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.59	19.95	0%			0.00
5	15	7	175	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.62	19.87	0%			0.00
5	15	8	176	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.65	19.80	0%			0.00
5	15	9	177	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.68	19.73	0%			0.00
5	15	10	178	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.71	19.66	0%			0.00
5	15	11	179	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.74	19.59	0%			0.00
5	15	12	180	0.00	0.00	0.00	0.73	0.03	0.00	0.01	0.00	0.00	205.77	19.51	0%			0.00
5	16	1	181	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.80	19.43	0%			0.00
5	16	2	182	0.00	0.00	0.00	0.73	0.03	0.00	0.01	0.00	0.00	205.84	19.35	0%			0.00
5	16	3	183	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.87	19.28	0%			0.00
5	16	4	184	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.90	19.21	0%			0.00
5	16	5	185	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.93	19.15	0%			0.00
5	16	6	186	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.95	19.09	0%			0.00
5	16	7	187	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	205.98	19.02	0%			0.00
5	16	8	188	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	206.01	18.96	0%			0.00
5	16	9	189	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	206.04	18.90	0%			0.00
5	16	10	190	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	206.06	18.84	0%			0.00
5	16	11	191	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	206.09	18.77	0%			0.00
5	16	12	192	0.00	0.00	0.00	0.73	0.03	0.00	0.01	0.00	0.00	206.12	18.70	0%			0.00
5	17	1	193	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	206.16	18.64	0%			0.00
5	17	2	194	0.00	0.00	0.00	0.73	0.03	0.00	0.01	0.00	0.00	206.19	18.57	0%			0.00
5	17	3	195	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	206.22	18.51	0%			0.00
5	17	4	196	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	206.25	18.45	0%			0.00
5	17	5	197	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	206.27	18.39	0%			0.00
5	17	6	198	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	206.30	18.33	0%			0.00
5	17	7	199	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	206.32	18.28	0%			0.00
5	17	8	200	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	206.35	18.23	0%			0.00
5	17	9	201	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	206.38	18.17	0%			0.00
5	17	10	202	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	206.40	18.12	0%			0.00
5	17	11	203	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	206.43	18.06	0%			0.00
5	**17**	**12**	204	0.00	0.00	0.00	0.73	0.03	0.00	0.01	0.00	0.00	206.46	18.00	0%			0.00
NA	18	**1**	205	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	206.49	17.94	0%			0.00
NA	18	2	206	0.00	0.00	0.00	0.73	0.03	0.00	0.01	0.00	0.00	206.52	17.88	0%			0.00
NA	18	3	207	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	206.55	17.82	0%			0.00
NA	18	4	208	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	206.58	17.77	0%			0.00
NA	18	5	209	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	206.60	17.72	0%			0.00
NA	18	6	210	0.00	0.00	0.00	0.73	0.03	0.00	0.00	0.00	0.00	206.63	17.67	0%			0.00
NA	18	7	211	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.00	206.65	17.62	0%			0.00
NA	18	8	212	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.00	206.68	17.57	0%			0.00
NA	18	9	213	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.00	206.70	17.53	0%			0.00
NA	18	10	214	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.00	206.73	17.48	0%			0.00
NA	18	11	215	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.00	206.76	17.42	0%			0.00
NA	18	12	216	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.00	206.79	17.37	0%			0.00
NA	19	1	217	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.00	206.81	17.32	0%			0.00
NA	19	2	218	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.00	206.85	17.26	0%			0.00
NA	19	3	219	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.00	206.87	17.21	0%			0.00
NA	19	4	220	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.00	206.90	17.17	0%			0.00
NA	19	5	221	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.00	206.92	17.12	0%			0.00
NA	19	6	222	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.00	206.95	17.08	0%			0.00
NA	19	7	223	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.00	206.97	17.03	0%			0.00
NA	19	8	224	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.00	206.99	16.99	0%			0.00
NA	19	9	225	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.00	207.02	16.95	0%			0.00
NA	19	10	226	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.00	207.04	16.90	0%			0.00
NA	19	11	227	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.00	207.07	16.86	0%			0.00

Phase	Year	Month	Total Months	Date	Quarry Area (Greenstone/Greywacke)	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	WMSA	WMSA	Groundwater Inflow	Undrained Backfill (No Surface Outlet)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	cu ft	sq ft	cu ft
NA	19	12	228	12/1/2036	0	0	0	0	0	0	501,442	0	0
NA	20	1	229	1/1/2037	0	0	0	0	0	0	501,442	0	0
NA	20	2	230	2/1/2037	0	0	0	0	0	0	501,442	0	0
NA	20	3	231	3/1/2037	0	0	0	0	0	0	501,442	0	0
NA	20	4	232	4/1/2037	0	0	0	0	0	0	501,442	0	0
NA	20	5	233	5/1/2037	0	0	0	0	0	0	501,442	0	0
NA	20	6	234	6/1/2037	0	0	0	0	0	0	501,442	0	0
NA	20	7	235	7/1/2037	0	0	0	0	0	0	485,889	0	0
NA	20	8	236	8/1/2037	0	0	0	0	0	0	485,889	0	0
NA	20	9	237	9/1/2037	0	0	0	0	0	0	485,889	0	0
NA	20	10	238	10/1/2037	0	0	0	0	0	0	485,889	0	0
NA	20	11	239	11/1/2037	0	0	0	0	0	0	485,889	0	0
NA	20	12	240	12/1/2037	0	0	0	0	0	0	485,889	0	0
NA	21	1	241	1/1/2038	0	0	0	0	0	0	485,889	0	0
NA	21	2	242	2/1/2038	0	0	0	0	0	0	485,889	0	0
NA	21	3	243	3/1/2038	0	0	0	0	0	0	485,889	0	0
NA	21	4	244	4/1/2038	0	0	0	0	0	0	485,889	0	0
NA	21	5	245	5/1/2038	0	0	0	0	0	0	485,889	0	0
NA	21	6	246	6/1/2038	0	0	0	0	0	0	485,889	0	0
NA	21	7	247	7/1/2038	0	0	0	0	0	0	485,889	0	0
NA	21	8	248	8/1/2038	0	0	0	0	0	0	485,889	0	0
NA	21	9	249	9/1/2038	0	0	0	0	0	0	485,889	0	0
NA	21	10	250	10/1/2038	0	0	0	0	0	0	485,889	0	0
NA	21	11	251	11/1/2038	0	0	0	0	0	0	485,889	0	0
NA	21	12	252	12/1/2038	0	0	0	0	0	0	485,889	0	0
NA	22	1	253	1/1/2039	0	0	0	0	0	0	485,889	0	0
NA	22	2	254	2/1/2039	0	0	0	0	0	0	485,889	0	0
NA	22	3	255	3/1/2039	0	0	0	0	0	0	485,889	0	0
NA	22	4	256	4/1/2039	0	0	0	0	0	0	485,889	0	0
NA	22	5	257	5/1/2039	0	0	0	0	0	0	485,889	0	0
NA	22	6	258	6/1/2039	0	0	0	0	0	0	485,889	0	0
NA	22	7	259	7/1/2039	0	0	0	0	0	0	485,889	0	0
NA	22	8	260	8/1/2039	0	0	0	0	0	0	485,889	0	0
NA	22	9	261	9/1/2039	0	0	0	0	0	0	485,889	0	0
NA	22	10	262	10/1/2039	0	0	0	0	0	0	485,889	0	0
NA	22	11	263	11/1/2039	0	0	0	0	0	0	485,889	0	0
NA	22	12	264	12/1/2039	0	0	0	0	0	0	485,889	0	0
NA	23	1	265	1/1/2040	0	0	0	0	0	0	485,889	0	0
NA	23	2	266	2/1/2040	0	0	0	0	0	0	485,889	0	0
NA	23	3	267	3/1/2040	0	0	0	0	0	0	485,889	0	0
NA	23	4	268	4/1/2040	0	0	0	0	0	0	485,889	0	0
NA	23	5	269	5/1/2040	0	0	0	0	0	0	485,889	0	0
NA	23	6	270	6/1/2040	0	0	0	0	0	0	485,889	0	0
NA	23	7	271	7/1/2040	0	0	0	0	0	0	485,889	0	0
NA	23	8	272	8/1/2040	0	0	0	0	0	0	485,889	0	0
NA	23	9	273	9/1/2040	0	0	0	0	0	0	485,889	0	0
NA	23	10	274	10/1/2040	0	0	0	0	0	0	485,889	0	0
NA	23	11	275	11/1/2040	0	0	0	0	0	0	485,889	0	0
NA	23	12	276	12/1/2040	0	0	0	0	0	0	485,889	0	0
NA	24	1	277	1/1/2041	0	0	0	0	0	0	485,889	0	0
NA	24	2	278	2/1/2041	0	0	0	0	0	0	485,889	0	0
NA	24	3	279	3/1/2041	0	0	0	0	0	0	485,889	0	0
NA	24	4	280	4/1/2041	0	0	0	0	0	0	485,889	0	0
NA	24	5	281	5/1/2041	0	0	0	0	0	0	485,889	0	0
NA	24	6	282	6/1/2041	0	0	0	0	0	0	485,889	0	0
NA	24	7	283	7/1/2041	0	0	0	0	0	0	485,889	0	0
NA	24	8	284	8/1/2041	0	0	0	0	0	0	485,889	0	0
NA	24	9	285	9/1/2041	0	0	0	0	0	0	485,889	0	0
NA	24	10	286	10/1/2041	0	0	0	0	0	0	485,889	0	0
NA	24	11	287	11/1/2041	0	0	0	0	0	0	485,889	0	0
NA	24	12	288	12/1/2041	0	0	0	0	0	0	485,889	0	0
NA	25	1	289	1/1/2042	0	0	0	0	0	0	485,889	0	0
NA	25	2	290	2/1/2042	0	0	0	0	0	0	485,889	0	0
NA	25	3	291	3/1/2042	0	0	0	0	0	0	485,889	0	0
NA	25	4	292	4/1/2042	0	0	0	0	0	0	485,889	0	0
NA	25	5	293	5/1/2042	0	0	0	0	0	0	485,889	0	0
NA	25	6	294	6/1/2042	0	0	0	0	0	0	485,889	0	0
NA	25	7	295	7/1/2042	0	0	0	0	0	0	485,889	0	0
NA	25	8	296	8/1/2042	0	0	0	0	0	0	485,889	0	0
NA	25	9	297	9/1/2042	0	0	0	0	0	0	485,889	0	0
NA	25	10	298	10/1/2042	0	0	0	0	0	0	485,889	0	0
NA	25	11	299	11/1/2042	0	0	0	0	0	0	485,889	0	0
NA	25	12	300	12/1/2042	0	0	0	0	0	0	485,889	0	0
NA	26	1	301	1/1/2043	0	0	0	0	0	0	485,889	0	0
NA	26	2	302	2/1/2043	0	0	0	0	0	0	485,889	0	0
NA	26	3	303	3/1/2043	0	0	0	0	0	0	485,889	0	0
NA	26	4	304	4/1/2043	0	0	0	0	0	0	485,889	0	0
NA	26	5	305	5/1/2043	0	0	0	0	0	0	485,889	0	0
NA	26	6	306	6/1/2043	0	0	0	0	0	0	485,889	0	0
NA	26	7	307	7/1/2043	0	0	0	0	0	0	485,889	0	0

Phase	Year	Month	Total Months	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit
				sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
NA	19	12	228	800,000	84,933		586,375	0	197,117,632		683,796,886	**980**			197,117,632	200,328,889
NA	20	1	229	800,000	67,333		568,775	0	197,686,407		683,796,886	**980**			197,686,407	200,328,889
NA	20	2	230	800,000	111,711		613,153	0	198,299,560		683,796,886	**980**			198,299,560	200,328,889
NA	20	3	231	800,000	57,978		559,420	0	198,858,979		683,796,886	**980**			198,858,979	200,328,889
NA	20	4	232	800,000	33,556		534,997	0	199,393,977		683,796,886	**980**			199,393,977	200,328,889
NA	20	5	233	800,000	9,267		510,709	0	199,904,685		683,796,886	**980**			199,904,685	200,328,889
NA	20	6	234	800,000	1,556		502,997	78,794	200,328,889		683,796,886	**985**			200,407,683	200,328,889
NA	20	7	235	800,000	67		485,955	485,955	200,328,889		683,796,886	**985**			200,814,845	200,328,889
NA	20	8	236	800,000	244		486,133	486,133	200,328,889		683,796,886	**985**			200,815,022	200,328,889
NA	20	9	237	800,000	1,200		487,089	487,089	200,328,889		683,796,886	**985**			200,815,978	200,328,889
NA	20	10	238	800,000	17,778		503,666	503,666	200,328,889		683,796,886	**985**			200,832,556	200,328,889
NA	20	11	239	800,000	58,311		544,200	544,200	200,328,889		683,796,886	**985**			200,873,089	200,328,889
NA	20	12	240	800,000	84,933		570,822	570,822	200,328,889		683,796,886	**985**			200,899,711	200,328,889
NA	21	1	241	800,000	67,333		553,222	553,222	200,328,889		683,796,886	**985**			200,882,111	200,328,889
NA	21	2	242	800,000	111,711		597,600	597,600	200,328,889		683,796,886	**985**			200,926,489	200,328,889
NA	21	3	243	800,000	57,978		543,866	543,866	200,328,889		683,796,886	**985**			200,872,756	200,328,889
NA	21	4	244	800,000	33,556		519,444	519,444	200,328,889		683,796,886	**985**			200,848,334	200,328,889
NA	21	5	245	800,000	9,267		495,155	495,155	200,328,889		683,796,886	**985**			200,824,045	200,328,889
NA	21	6	246	800,000	1,556		487,444	487,444	200,328,889		683,796,886	**985**			200,816,334	200,328,889
NA	21	7	247	800,000	67		485,955	485,955	200,328,889		683,796,886	**985**			200,814,845	200,328,889
NA	21	8	248	800,000	244		486,133	486,133	200,328,889		683,796,886	**985**			200,815,022	200,328,889
NA	21	9	249	800,000	1,200		487,089	487,089	200,328,889		683,796,886	**985**			200,815,978	200,328,889
NA	21	10	250	800,000	17,778		503,666	503,666	200,328,889		683,796,886	**985**			200,832,556	200,328,889
NA	21	11	251	800,000	58,311		544,200	544,200	200,328,889		683,796,886	**985**			200,873,089	200,328,889
NA	21	12	252	800,000	84,933		570,822	570,822	200,328,889		683,796,886	**985**			200,899,711	200,328,889
NA	22	1	253	800,000	67,333		553,222	553,222	200,328,889		683,796,886	**985**			200,882,111	200,328,889
NA	22	2	254	800,000	111,711		597,600	597,600	200,328,889		683,796,886	**985**			200,926,489	200,328,889
NA	22	3	255	800,000	57,978		543,866	543,866	200,328,889		683,796,886	**985**			200,872,756	200,328,889
NA	22	4	256	800,000	33,556		519,444	519,444	200,328,889		683,796,886	**985**			200,848,334	200,328,889
NA	22	5	257	800,000	9,267		495,155	495,155	200,328,889		683,796,886	**985**			200,824,045	200,328,889
NA	22	6	258	800,000	1,556		487,444	487,444	200,328,889		683,796,886	**985**			200,816,334	200,328,889
NA	22	7	259	800,000	67		485,955	485,955	200,328,889		683,796,886	**985**			200,814,845	200,328,889
NA	22	8	260	800,000	244		486,133	486,133	200,328,889		683,796,886	**985**			200,815,022	200,328,889
NA	22	9	261	800,000	1,200		487,089	487,089	200,328,889		683,796,886	**985**			200,815,978	200,328,889
NA	22	10	262	800,000	17,778		503,666	503,666	200,328,889		683,796,886	**985**			200,832,556	200,328,889
NA	22	11	263	800,000	58,311		544,200	544,200	200,328,889		683,796,886	**985**			200,873,089	200,328,889
NA	22	12	264	800,000	84,933		570,822	570,822	200,328,889		683,796,886	**985**			200,899,711	200,328,889
NA	23	1	265	800,000	67,333		553,222	553,222	200,328,889		683,796,886	**985**			200,882,111	200,328,889
NA	23	2	266	800,000	111,711		597,600	597,600	200,328,889		683,796,886	**985**			200,926,489	200,328,889
NA	23	3	267	800,000	57,978		543,866	543,866	200,328,889		683,796,886	**985**			200,872,756	200,328,889
NA	23	4	268	800,000	33,556		519,444	519,444	200,328,889		683,796,886	**985**			200,848,334	200,328,889
NA	23	5	269	800,000	9,267		495,155	495,155	200,328,889		683,796,886	**985**			200,824,045	200,328,889
NA	23	6	270	800,000	1,556		487,444	487,444	200,328,889		683,796,886	**985**			200,816,334	200,328,889
NA	23	7	271	800,000	67		485,955	485,955	200,328,889		683,796,886	**985**			200,814,845	200,328,889
NA	23	8	272	800,000	244		486,133	486,133	200,328,889		683,796,886	**985**			200,815,022	200,328,889
NA	23	9	273	800,000	1,200		487,089	487,089	200,328,889		683,796,886	**985**			200,815,978	200,328,889
NA	23	10	274	800,000	17,778		503,666	503,666	200,328,889		683,796,886	**985**			200,832,556	200,328,889
NA	23	11	275	800,000	58,311		544,200	544,200	200,328,889		683,796,886	**985**			200,873,089	200,328,889
NA	23	12	276	800,000	84,933		570,822	570,822	200,328,889		683,796,886	**985**			200,899,711	200,328,889
NA	24	1	277	800,000	67,333		553,222	553,222	200,328,889		683,796,886	**985**			200,882,111	200,328,889
NA	24	2	278	800,000	111,711		597,600	597,600	200,328,889		683,796,886	**985**			200,926,489	200,328,889
NA	24	3	279	800,000	57,978		543,866	543,866	200,328,889		683,796,886	**985**			200,872,756	200,328,889
NA	24	4	280	800,000	33,556		519,444	519,444	200,328,889		683,796,886	**985**			200,848,334	200,328,889
NA	24	5	281	800,000	9,267		495,155	495,155	200,328,889		683,796,886	**985**			200,824,045	200,328,889
NA	24	6	282	800,000	1,556		487,444	487,444	200,328,889		683,796,886	**985**			200,816,334	200,328,889
NA	24	7	283	800,000	67		485,955	485,955	200,328,889		683,796,886	**985**			200,814,845	200,328,889
NA	24	8	284	800,000	244		486,133	486,133	200,328,889		683,796,886	**985**			200,815,022	200,328,889
NA	24	9	285	800,000	1,200		487,089	487,089	200,328,889		683,796,886	**985**			200,815,978	200,328,889
NA	24	10	286	800,000	17,778		503,666	503,666	200,328,889		683,796,886	**985**			200,832,556	200,328,889
NA	24	11	287	800,000	58,311		544,200	544,200	200,328,889		683,796,886	**985**			200,873,089	200,328,889
NA	24	12	288	800,000	84,933		570,822	570,822	200,328,889		683,796,886	**985**			200,899,711	200,328,889
NA	25	1	289	800,000	67,333		553,222	553,222	200,328,889		683,796,886	**985**			200,882,111	200,328,889
NA	25	2	290	800,000	111,711		597,600	597,600	200,328,889		683,796,886	**985**			200,926,489	200,328,889
NA	25	3	291	800,000	57,978		543,866	543,866	200,328,889		683,796,886	**985**			200,872,756	200,328,889
NA	25	4	292	800,000	33,556		519,444	519,444	200,328,889		683,796,886	**985**			200,848,334	200,328,889
NA	25	5	293	800,000	9,267		495,155	495,155	200,328,889		683,796,886	**985**			200,824,045	200,328,889
NA	25	6	294	800,000	1,556		487,444	487,444	200,328,889		683,796,886	**985**			200,816,334	200,328,889
NA	25	7	295	800,000	67		485,955	485,955	200,328,889		683,796,886	**985**			200,814,845	200,328,889
NA	25	8	296	800,000	244		486,133	486,133	200,328,889		683,796,886	**985**			200,815,022	200,328,889
NA	25	9	297	800,000	1,200		487,089	487,089	200,328,889		683,796,886	**985**			200,815,978	200,328,889
NA	25	10	298	800,000	17,778		503,666	503,666	200,328,889		683,796,886	**985**			200,832,556	200,328,889
NA	25	11	299	800,000	58,311		544,200	544,200	200,328,889		683,796,886	**985**			200,873,089	200,328,889
NA	25	12	300	800,000	84,933		570,822	570,822	200,328,889		683,796,886	**985**			200,899,711	200,328,889
NA	26	1	301	800,000	67,333		553,222	553,222	200,328,889		683,796,886	**985**			200,882,111	200,328,889
NA	26	2	302	800,000	111,711		597,600	597,600	200,328,889		683,796,886	**985**			200,926,489	200,328,889
NA	26	3	303	800,000	57,978		543,866	543,866	200,328,889		683,796,886	**985**			200,872,756	200,328,889
NA	26	4	304	800,000	33,556		519,444	519,444	200,328,889		683,796,886	**985**			200,848,334	200,328,889
NA	26	5	305	800,000	9,267		495,155	495,155	200,328,889		683,796,886	**985**			200,824,045	200,328,889
NA	26	6	306	800,000	1,556		487,444	487,444	200,328,889		683,796,886	**985**			200,816,334	200,328,889
NA	26	7	307	800,000	67		485,955	485,955	200,328,889		683,796,886	**985**			200,814,845	200,328,889

Phase	Year	Month	Total Months	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	WMSA	Groundwater Inflow		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water Concentration	Insitue Treatment	First Year Load	Last Year Load	Pit Water Outflow Concentration
				lb/month		lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L		lb/yr	lb/yr	ug/L
NA	19	12	228	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.00	207.10	16.81	0%			0.00
NA	20	1	229	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.00	207.12	16.76	0%			0.00
NA	20	2	230	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.00	207.15	16.71	0%			0.00
NA	20	3	231	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.00	207.18	16.67	0%			0.00
NA	20	4	232	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.00	207.20	16.63	0%			0.00
NA	20	5	233	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.00	207.23	16.59	0%			0.00
NA	20	6	234	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.08	207.17	16.55	0%			16.55
NA	20	7	235	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.50	206.69	16.51	0%			16.51
NA	20	8	236	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.50	206.21	16.47	0%			16.47
NA	20	9	237	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.50	205.73	16.43	0%			16.43
NA	20	10	238	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.52	205.24	16.39	0%			16.39
NA	20	11	239	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.56	204.70	16.35	0%			16.35
NA	20	12	240	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.58	204.15	16.31	0%			16.31
NA	21	1	241	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.56	203.61	16.26	0%			16.26
NA	21	2	242	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.61	203.03	16.22	0%			16.22
NA	21	3	243	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.55	202.51	16.17	0%			16.17
NA	21	4	244	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.53	202.01	16.13	0%			16.13
NA	21	5	245	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.50	201.53	16.10	0%			16.10
NA	21	6	246	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.49	201.06	16.06	0%			16.06
NA	21	7	247	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.49	200.60	16.02	0%			16.02
NA	21	8	248	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.49	200.13	15.98	0%			15.98
NA	21	9	249	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.49	199.67	15.95	0%			15.95
NA	21	10	250	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.50	199.19	15.91	0%			15.91
NA	21	11	251	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.54	198.67	15.87	0%			15.87
NA	21	12	252	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.57	198.14	15.82	0%			15.82
NA	22	1	253	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.55	197.61	15.78	0%			15.78
NA	22	2	254	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.59	197.05	15.74	0%			15.74
NA	22	3	255	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.53	196.54	15.70	0%			15.70
NA	22	4	256	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.51	196.06	15.66	0%			15.66
NA	22	5	257	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.48	195.60	15.62	0%			15.62
NA	22	6	258	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.48	195.14	15.59	0%			15.59
NA	22	7	259	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.47	194.69	15.55	0%			15.55
NA	22	8	260	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.47	194.24	15.51	0%			15.51
NA	22	9	261	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.47	193.79	15.48	0%			15.48
NA	22	10	262	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.49	193.33	15.44	0%			15.44
NA	22	11	263	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.53	192.83	15.40	0%			15.40
NA	22	12	264	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.55	192.31	15.36	0%			15.36
NA	23	1	265	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.53	191.80	15.32	0%			15.32
NA	23	2	266	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.57	191.26	15.28	0%			15.28
NA	23	3	267	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.52	190.77	15.24	0%			15.24
NA	23	4	268	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.49	190.30	15.20	0%			15.20
NA	23	5	269	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.47	189.85	15.16	0%			15.16
NA	23	6	270	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.46	189.41	15.13	0%			15.13
NA	23	7	271	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.46	188.97	15.09	0%			15.09
NA	23	8	272	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.46	188.53	15.06	0%			15.06
NA	23	9	273	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.46	188.10	15.02	0%			15.02
NA	23	10	274	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.47	187.65	14.99	0%			14.99
NA	23	11	275	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.51	187.16	14.95	0%			14.95
NA	23	12	276	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.53	186.66	14.91	0%			14.91
NA	24	1	277	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.52	186.17	14.87	0%			14.87
NA	24	2	278	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.56	185.64	14.83	0%			14.83
NA	24	3	279	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.50	185.17	14.79	0%			14.79
NA	24	4	280	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.48	184.71	14.75	0%			14.75
NA	24	5	281	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.46	184.28	14.72	0%			14.72
NA	24	6	282	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.45	183.85	14.68	0%			14.68
NA	24	7	283	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.45	183.43	14.65	0%			14.65
NA	24	8	284	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.45	183.00	14.62	0%			14.62
NA	24	9	285	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.44	182.58	14.58	0%			14.58
NA	24	10	286	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.46	182.14	14.55	0%			14.55
NA	24	11	287	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.49	181.68	14.51	0%			14.51
NA	24	12	288	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.52	181.19	14.47	0%			14.47
NA	25	1	289	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.50	180.71	14.43	0%			14.43
NA	25	2	290	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.54	180.20	14.39	0%			14.39
NA	25	3	291	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.49	179.74	14.36	0%			14.36
NA	25	4	292	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.47	179.30	14.32	0%			14.32
NA	25	5	293	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.44	178.88	14.29	0%			14.29
NA	25	6	294	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.44	178.46	14.25	0%			14.25
NA	25	7	295	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.43	178.05	14.22	0%			14.22
NA	25	8	296	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.43	177.64	14.19	0%			14.19
NA	25	9	297	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.43	177.23	14.16	0%			14.16
NA	25	10	298	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.45	176.81	14.12	0%			14.12
NA	25	11	299	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.48	176.36	14.09	0%			14.09
NA	25	12	300	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.50	175.88	14.05	0%			14.05
NA	26	1	301	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.49	175.42	14.01	0%			14.01
NA	26	2	302	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.52	174.93	13.97	0%			13.97
NA	26	3	303	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.47	174.48	13.94	0%			13.94
NA	26	4	304	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.45	174.05	13.90	0%			13.90
NA	26	5	305	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.43	173.64	13.87	0%			13.87
NA	26	6	306	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.42	173.24	13.84	0%			13.84
NA	26	7	307	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.42	172.84	13.80	0%			13.80

Phase	Year	Month	Total Months	Date	Quarry Area (Greenstone/Greywacke)	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	WMSA	WMSA	Groundwater Inflow	Undrained Backfill (No Surface Outlet)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	cu ft	sq ft	cu ft
NA	26	8	308	8/1/2043	0	0	0	0	0	0	485,889	0	0
NA	26	9	309	9/1/2043	0	0	0	0	0	0	485,889	0	0
NA	26	10	310	10/1/2043	0	0	0	0	0	0	485,889	0	0
NA	26	11	311	11/1/2043	0	0	0	0	0	0	485,889	0	0
NA	26	12	312	12/1/2043	0	0	0	0	0	0	485,889	0	0
NA	27	1	313	1/1/2044	0	0	0	0	0	0	485,889	0	0
NA	27	2	314	2/1/2044	0	0	0	0	0	0	485,889	0	0
NA	27	3	315	3/1/2044	0	0	0	0	0	0	485,889	0	0
NA	27	4	316	4/1/2044	0	0	0	0	0	0	485,889	0	0
NA	27	5	317	5/1/2044	0	0	0	0	0	0	485,889	0	0
NA	27	6	318	6/1/2044	0	0	0	0	0	0	485,889	0	0
NA	27	7	319	7/1/2044	0	0	0	0	0	0	485,889	0	0
NA	27	8	320	8/1/2044	0	0	0	0	0	0	485,889	0	0
NA	27	9	321	9/1/2044	0	0	0	0	0	0	485,889	0	0
NA	27	10	322	10/1/2044	0	0	0	0	0	0	485,889	0	0
NA	27	11	323	11/1/2044	0	0	0	0	0	0	485,889	0	0
NA	27	12	324	12/1/2044	0	0	0	0	0	0	485,889	0	0
NA	28	1	325	1/1/2045	0	0	0	0	0	0	485,889	0	0
NA	28	2	326	2/1/2045	0	0	0	0	0	0	485,889	0	0
NA	28	3	327	3/1/2045	0	0	0	0	0	0	485,889	0	0
NA	28	4	328	4/1/2045	0	0	0	0	0	0	485,889	0	0
NA	28	5	329	5/1/2045	0	0	0	0	0	0	485,889	0	0
NA	28	6	330	6/1/2045	0	0	0	0	0	0	485,889	0	0
NA	28	7	331	7/1/2045	0	0	0	0	0	0	485,889	0	0
NA	28	8	332	8/1/2045	0	0	0	0	0	0	485,889	0	0
NA	28	9	333	9/1/2045	0	0	0	0	0	0	485,889	0	0
NA	28	10	334	10/1/2045	0	0	0	0	0	0	485,889	0	0
NA	28	11	335	11/1/2045	0	0	0	0	0	0	485,889	0	0
NA	28	12	336	12/1/2045	0	0	0	0	0	0	485,889	0	0
NA	29	1	337	1/1/2046	0	0	0	0	0	0	485,889	0	0
NA	29	2	338	2/1/2046	0	0	0	0	0	0	485,889	0	0
NA	29	3	339	3/1/2046	0	0	0	0	0	0	485,889	0	0
NA	29	4	340	4/1/2046	0	0	0	0	0	0	485,889	0	0
NA	29	5	341	5/1/2046	0	0	0	0	0	0	485,889	0	0
NA	29	6	342	6/1/2046	0	0	0	0	0	0	485,889	0	0
NA	29	7	343	7/1/2046	0	0	0	0	0	0	485,889	0	0
NA	29	8	344	8/1/2046	0	0	0	0	0	0	485,889	0	0
NA	29	9	345	9/1/2046	0	0	0	0	0	0	485,889	0	0
NA	29	10	346	10/1/2046	0	0	0	0	0	0	485,889	0	0
NA	29	11	347	11/1/2046	0	0	0	0	0	0	485,889	0	0
NA	29	12	348	12/1/2046	0	0	0	0	0	0	485,889	0	0
NA	30	1	349	1/1/2047	0	0	0	0	0	0	485,889	0	0
NA	30	2	350	2/1/2047	0	0	0	0	0	0	485,889	0	0
NA	30	3	351	3/1/2047	0	0	0	0	0	0	485,889	0	0
NA	30	4	352	4/1/2047	0	0	0	0	0	0	485,889	0	0
NA	30	5	353	5/1/2047	0	0	0	0	0	0	485,889	0	0
NA	30	6	354	6/1/2047	0	0	0	0	0	0	485,889	0	0
NA	30	7	355	7/1/2047	0	0	0	0	0	0	485,889	0	0
NA	30	8	356	8/1/2047	0	0	0	0	0	0	485,889	0	0
NA	30	9	357	9/1/2047	0	0	0	0	0	0	485,889	0	0
NA	30	10	358	10/1/2047	0	0	0	0	0	0	485,889	0	0
NA	30	11	359	11/1/2047	0	0	0	0	0	0	485,889	0	0
NA	30	12	360	12/1/2047	0	0	0	0	0	0	485,889	0	0
NA	31	1	361	1/1/2048	0	0	0	0	0	0	485,889	0	0
NA	31	2	362	2/1/2048	0	0	0	0	0	0	485,889	0	0
NA	31	3	363	3/1/2048	0	0	0	0	0	0	485,889	0	0
NA	31	4	364	4/1/2048	0	0	0	0	0	0	485,889	0	0
NA	31	5	365	5/1/2048	0	0	0	0	0	0	485,889	0	0
NA	31	6	366	6/1/2048	0	0	0	0	0	0	485,889	0	0
NA	31	7	367	7/1/2048	0	0	0	0	0	0	485,889	0	0
NA	31	8	368	8/1/2048	0	0	0	0	0	0	485,889	0	0
NA	31	9	369	9/1/2048	0	0	0	0	0	0	485,889	0	0
NA	31	10	370	10/1/2048	0	0	0	0	0	0	485,889	0	0
NA	31	11	371	11/1/2048	0	0	0	0	0	0	485,889	0	0
NA	31	12	372	12/1/2048	0	0	0	0	0	0	485,889	0	0
NA	32	1	373	1/1/2049	0	0	0	0	0	0	485,889	0	0
NA	32	2	374	2/1/2049	0	0	0	0	0	0	485,889	0	0
NA	32	3	375	3/1/2049	0	0	0	0	0	0	485,889	0	0
NA	32	4	376	4/1/2049	0	0	0	0	0	0	485,889	0	0
NA	32	5	377	5/1/2049	0	0	0	0	0	0	485,889	0	0
NA	32	6	378	6/1/2049	0	0	0	0	0	0	485,889	0	0
NA	32	7	379	7/1/2049	0	0	0	0	0	0	485,889	0	0
NA	32	8	380	8/1/2049	0	0	0	0	0	0	485,889	0	0
NA	32	9	381	9/1/2049	0	0	0	0	0	0	485,889	0	0
NA	32	10	382	10/1/2049	0	0	0	0	0	0	485,889	0	0
NA	32	11	383	11/1/2049	0	0	0	0	0	0	485,889	0	0
NA	32	12	384	12/1/2049	0	0	0	0	0	0	485,889	0	0
NA	33	1	385	1/1/2050	0	0	0	0	0	0	485,889	0	0
NA	33	2	386	2/1/2050	0	0	0	0	0	0	485,889	0	0
NA	33	3	387	3/1/2050	0	0	0	0	0	0	485,889	0	0

Phase	Year	Month	Total Months	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit
				sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
NA	26	8	308	800,000	244		486,133	486,133	200,328,889		683,796,886	**985**			200,815,022	200,328,889
NA	26	9	309	800,000	1,200		487,089	487,089	200,328,889		683,796,886	**985**			200,815,978	200,328,889
NA	26	10	310	800,000	17,778		503,666	503,666	200,328,889		683,796,886	**985**			200,832,556	200,328,889
NA	26	11	311	800,000	58,311		544,200	544,200	200,328,889		683,796,886	**985**			200,873,089	200,328,889
NA	26	12	312	800,000	84,933		570,822	570,822	200,328,889		683,796,886	**985**			200,899,711	200,328,889
NA	27	1	313	800,000	67,333		553,222	553,222	200,328,889		683,796,886	**985**			200,882,111	200,328,889
NA	27	2	314	800,000	111,711		597,600	597,600	200,328,889		683,796,886	**985**			200,926,489	200,328,889
NA	27	3	315	800,000	57,978		543,866	543,866	200,328,889		683,796,886	**985**			200,872,756	200,328,889
NA	27	4	316	800,000	33,556		519,444	519,444	200,328,889		683,796,886	**985**			200,848,334	200,328,889
NA	27	5	317	800,000	9,267		495,155	495,155	200,328,889		683,796,886	**985**			200,824,045	200,328,889
NA	27	6	318	800,000	1,556		487,444	487,444	200,328,889		683,796,886	**985**			200,816,334	200,328,889
NA	27	7	319	800,000	67		485,955	485,955	200,328,889		683,796,886	**985**			200,814,845	200,328,889
NA	27	8	320	800,000	244		486,133	486,133	200,328,889		683,796,886	**985**			200,815,022	200,328,889
NA	27	9	321	800,000	1,200		487,089	487,089	200,328,889		683,796,886	**985**			200,815,978	200,328,889
NA	27	10	322	800,000	17,778		503,666	503,666	200,328,889		683,796,886	**985**			200,832,556	200,328,889
NA	27	11	323	800,000	58,311		544,200	544,200	200,328,889		683,796,886	**985**			200,873,089	200,328,889
NA	27	12	324	800,000	84,933		570,822	570,822	200,328,889		683,796,886	**985**			200,899,711	200,328,889
NA	28	1	325	800,000	67,333		553,222	553,222	200,328,889		683,796,886	**985**			200,882,111	200,328,889
NA	28	2	326	800,000	111,711		597,600	597,600	200,328,889		683,796,886	**985**			200,926,489	200,328,889
NA	28	3	327	800,000	57,978		543,866	543,866	200,328,889		683,796,886	**985**			200,872,756	200,328,889
NA	28	4	328	800,000	33,556		519,444	519,444	200,328,889		683,796,886	**985**			200,848,334	200,328,889
NA	28	5	329	800,000	9,267		495,155	495,155	200,328,889		683,796,886	**985**			200,824,045	200,328,889
NA	28	6	330	800,000	1,556		487,444	487,444	200,328,889		683,796,886	**985**			200,816,334	200,328,889
NA	28	7	331	800,000	67		485,955	485,955	200,328,889		683,796,886	**985**			200,814,845	200,328,889
NA	28	8	332	800,000	244		486,133	486,133	200,328,889		683,796,886	**985**			200,815,022	200,328,889
NA	28	9	333	800,000	1,200		487,089	487,089	200,328,889		683,796,886	**985**			200,815,978	200,328,889
NA	28	10	334	800,000	17,778		503,666	503,666	200,328,889		683,796,886	**985**			200,832,556	200,328,889
NA	28	11	335	800,000	58,311		544,200	544,200	200,328,889		683,796,886	**985**			200,873,089	200,328,889
NA	28	12	336	800,000	84,933		570,822	570,822	200,328,889		683,796,886	**985**			200,899,711	200,328,889
NA	29	1	337	800,000	67,333		553,222	553,222	200,328,889		683,796,886	**985**			200,882,111	200,328,889
NA	29	2	338	800,000	111,711		597,600	597,600	200,328,889		683,796,886	**985**			200,926,489	200,328,889
NA	29	3	339	800,000	57,978		543,866	543,866	200,328,889		683,796,886	**985**			200,872,756	200,328,889
NA	29	4	340	800,000	33,556		519,444	519,444	200,328,889		683,796,886	**985**			200,848,334	200,328,889
NA	29	5	341	800,000	9,267		495,155	495,155	200,328,889		683,796,886	**985**			200,824,045	200,328,889
NA	29	6	342	800,000	1,556		487,444	487,444	200,328,889		683,796,886	**985**			200,816,334	200,328,889
NA	29	7	343	800,000	67		485,955	485,955	200,328,889		683,796,886	**985**			200,814,845	200,328,889
NA	29	8	344	800,000	244		486,133	486,133	200,328,889		683,796,886	**985**			200,815,022	200,328,889
NA	29	9	345	800,000	1,200		487,089	487,089	200,328,889		683,796,886	**985**			200,815,978	200,328,889
NA	29	10	346	800,000	17,778		503,666	503,666	200,328,889		683,796,886	**985**			200,832,556	200,328,889
NA	29	11	347	800,000	58,311		544,200	544,200	200,328,889		683,796,886	**985**			200,873,089	200,328,889
NA	29	12	348	800,000	84,933		570,822	570,822	200,328,889		683,796,886	**985**			200,899,711	200,328,889
NA	30	1	349	800,000	67,333		553,222	553,222	200,328,889		683,796,886	**985**			200,882,111	200,328,889
NA	30	2	350	800,000	111,711		597,600	597,600	200,328,889		683,796,886	**985**			200,926,489	200,328,889
NA	30	3	351	800,000	57,978		543,866	543,866	200,328,889		683,796,886	**985**			200,872,756	200,328,889
NA	30	4	352	800,000	33,556		519,444	519,444	200,328,889		683,796,886	**985**			200,848,334	200,328,889
NA	30	5	353	800,000	9,267		495,155	495,155	200,328,889		683,796,886	**985**			200,824,045	200,328,889
NA	30	6	354	800,000	1,556		487,444	487,444	200,328,889		683,796,886	**985**			200,816,334	200,328,889
NA	30	7	355	800,000	67		485,955	485,955	200,328,889		683,796,886	**985**			200,814,845	200,328,889
NA	30	8	356	800,000	244		486,133	486,133	200,328,889		683,796,886	**985**			200,815,022	200,328,889
NA	30	9	357	800,000	1,200		487,089	487,089	200,328,889		683,796,886	**985**			200,815,978	200,328,889
NA	30	10	358	800,000	17,778		503,666	503,666	200,328,889		683,796,886	**985**			200,832,556	200,328,889
NA	30	11	359	800,000	58,311		544,200	544,200	200,328,889		683,796,886	**985**			200,873,089	200,328,889
NA	30	12	360	800,000	84,933		570,822	570,822	200,328,889		683,796,886	**985**			200,899,711	200,328,889
NA	31	1	361	800,000	67,333		553,222	553,222	200,328,889		683,796,886	**985**			200,882,111	200,328,889
NA	31	2	362	800,000	111,711		597,600	597,600	200,328,889		683,796,886	**985**			200,926,489	200,328,889
NA	31	3	363	800,000	57,978		543,866	543,866	200,328,889		683,796,886	**985**			200,872,756	200,328,889
NA	31	4	364	800,000	33,556		519,444	519,444	200,328,889		683,796,886	**985**			200,848,334	200,328,889
NA	31	5	365	800,000	9,267		495,155	495,155	200,328,889		683,796,886	**985**			200,824,045	200,328,889
NA	31	6	366	800,000	1,556		487,444	487,444	200,328,889		683,796,886	**985**			200,816,334	200,328,889
NA	31	7	367	800,000	67		485,955	485,955	200,328,889		683,796,886	**985**			200,814,845	200,328,889
NA	31	8	368	800,000	244		486,133	486,133	200,328,889		683,796,886	**985**			200,815,022	200,328,889
NA	31	9	369	800,000	1,200		487,089	487,089	200,328,889		683,796,886	**985**			200,815,978	200,328,889
NA	31	10	370	800,000	17,778		503,666	503,666	200,328,889		683,796,886	**985**			200,832,556	200,328,889
NA	31	11	371	800,000	58,311		544,200	544,200	200,328,889		683,796,886	**985**			200,873,089	200,328,889
NA	31	12	372	800,000	84,933		570,822	570,822	200,328,889		683,796,886	**985**			200,899,711	200,328,889
NA	32	1	373	800,000	67,333		553,222	553,222	200,328,889		683,796,886	**985**			200,882,111	200,328,889
NA	32	2	374	800,000	111,711		597,600	597,600	200,328,889		683,796,886	**985**			200,926,489	200,328,889
NA	32	3	375	800,000	57,978		543,866	543,866	200,328,889		683,796,886	**985**			200,872,756	200,328,889
NA	32	4	376	800,000	33,556		519,444	519,444	200,328,889		683,796,886	**985**			200,848,334	200,328,889
NA	32	5	377	800,000	9,267		495,155	495,155	200,328,889		683,796,886	**985**			200,824,045	200,328,889
NA	32	6	378	800,000	1,556		487,444	487,444	200,328,889		683,796,886	**985**			200,816,334	200,328,889
NA	32	7	379	800,000	67		485,955	485,955	200,328,889		683,796,886	**985**			200,814,845	200,328,889
NA	32	8	380	800,000	244		486,133	486,133	200,328,889		683,796,886	**985**			200,815,022	200,328,889
NA	32	9	381	800,000	1,200		487,089	487,089	200,328,889		683,796,886	**985**			200,815,978	200,328,889
NA	32	10	382	800,000	17,778		503,666	503,666	200,328,889		683,796,886	**985**			200,832,556	200,328,889
NA	32	11	383	800,000	58,311		544,200	544,200	200,328,889		683,796,886	**985**			200,873,089	200,328,889
NA	32	12	384	800,000	84,933		570,822	570,822	200,328,889		683,796,886	**985**			200,899,711	200,328,889
NA	33	1	385	800,000	67,333		553,222	553,222	200,328,889		683,796,886	**985**			200,882,111	200,328,889
NA	33	2	386	800,000	111,711		597,600	597,600	200,328,889		683,796,886	**985**			200,926,489	200,328,889
NA	33	3	387	800,000	57,978		543,866	543,866	200,328,889		683,796,886	**985**			200,872,756	200,328,889

Phase	Year	Month	Total Months	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	WMSA	Groundwater Inflow		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water Concentration	Insitue Treatment	First Year Load	Last Year Load	Pit Water Outflow Concentration
				lb/month		lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L		lb/yr	lb/yr	ug/L
NA	26	8	308	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.42	172.45	13.77	0%			13.77
NA	26	9	309	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.42	172.05	13.74	0%			13.74
NA	26	10	310	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.43	171.64	13.71	0%			13.71
NA	26	11	311	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.47	171.20	13.67	0%			13.67
NA	26	12	312	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.49	170.74	13.64	0%			13.64
NA	27	1	313	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.47	170.29	13.60	0%			13.60
NA	27	2	314	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.51	169.82	13.56	0%			13.56
NA	27	3	315	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.46	169.38	13.53	0%			13.53
NA	27	4	316	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.44	168.97	13.50	0%			13.50
NA	27	5	317	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.42	168.57	13.46	0%			13.46
NA	27	6	318	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.41	168.18	13.43	0%			13.43
NA	27	7	319	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.41	167.80	13.40	0%			13.40
NA	27	8	320	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.41	167.41	13.37	0%			13.37
NA	27	9	321	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.41	167.03	13.34	0%			13.34
NA	27	10	322	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.42	166.63	13.31	0%			13.31
NA	27	11	323	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.45	166.20	13.27	0%			13.27
NA	27	12	324	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.47	165.76	13.24	0%			13.24
NA	28	1	325	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.46	165.33	13.20	0%			13.20
NA	28	2	326	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.49	164.86	13.17	0%			13.17
NA	28	3	327	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.45	164.44	13.13	0%			13.13
NA	28	4	328	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.43	164.04	13.10	0%			13.10
NA	28	5	329	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.41	163.66	13.07	0%			13.07
NA	28	6	330	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.40	163.28	13.04	0%			13.04
NA	28	7	331	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.40	162.91	13.01	0%			13.01
NA	28	8	332	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.40	162.53	12.98	0%			12.98
NA	28	9	333	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.40	162.16	12.95	0%			12.95
NA	28	10	334	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.41	161.78	12.92	0%			12.92
NA	28	11	335	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.44	161.36	12.89	0%			12.89
NA	28	12	336	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.46	160.93	12.85	0%			12.85
NA	29	1	337	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.44	160.51	12.82	0%			12.82
NA	29	2	338	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.48	160.06	12.78	0%			12.78
NA	29	3	339	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.43	159.65	12.75	0%			12.75
NA	29	4	340	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.41	159.26	12.72	0%			12.72
NA	29	5	341	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.39	158.89	12.69	0%			12.69
NA	29	6	342	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.39	158.53	12.66	0%			12.66
NA	29	7	343	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.38	158.17	12.63	0%			12.63
NA	29	8	344	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.38	157.80	12.60	0%			12.60
NA	29	9	345	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.38	157.44	12.57	0%			12.57
NA	29	10	346	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.40	157.07	12.54	0%			12.54
NA	29	11	347	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.43	156.67	12.51	0%			12.51
NA	29	12	348	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.45	156.25	12.48	0%			12.48
NA	30	1	349	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.43	155.84	12.45	0%			12.45
NA	30	2	350	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.46	155.41	12.41	0%			12.41
NA	30	3	351	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.42	155.01	12.38	0%			12.38
NA	30	4	352	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.40	154.64	12.35	0%			12.35
NA	30	5	353	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.38	154.28	12.32	0%			12.32
NA	30	6	354	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.38	153.92	12.29	0%			12.29
NA	30	7	355	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.37	153.57	12.27	0%			12.27
NA	30	8	356	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.37	153.22	12.24	0%			12.24
NA	30	9	357	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.37	152.87	12.21	0%			12.21
NA	30	10	358	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.38	152.51	12.18	0%			12.18
NA	30	11	359	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.41	152.12	12.15	0%			12.15
NA	30	12	360	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.43	151.72	12.12	0%			12.12
NA	31	1	361	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.42	151.32	12.09	0%			12.09
NA	31	2	362	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.45	150.90	12.05	0%			12.05
NA	31	3	363	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.41	150.52	12.02	0%			12.02
NA	31	4	364	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.39	150.15	11.99	0%			11.99
NA	31	5	365	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.37	149.80	11.96	0%			11.96
NA	31	6	366	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.36	149.46	11.94	0%			11.94
NA	31	7	367	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.36	149.12	11.91	0%			11.91
NA	31	8	368	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.36	148.78	11.88	0%			11.88
NA	31	9	369	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.36	148.44	11.86	0%			11.86
NA	31	10	370	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.37	148.09	11.83	0%			11.83
NA	31	11	371	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.40	147.71	11.80	0%			11.80
NA	31	12	372	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.42	147.32	11.77	0%			11.77
NA	32	1	373	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.41	146.94	11.74	0%			11.74
NA	32	2	374	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.44	146.53	11.70	0%			11.70
NA	32	3	375	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.40	146.16	11.67	0%			11.67
NA	32	4	376	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.38	145.80	11.65	0%			11.65
NA	32	5	377	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.36	145.47	11.62	0%			11.62
NA	32	6	378	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.35	145.13	11.59	0%			11.59
NA	32	7	379	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.35	144.80	11.57	0%			11.57
NA	32	8	380	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.35	144.48	11.54	0%			11.54
NA	32	9	381	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.35	144.15	11.51	0%			11.51
NA	32	10	382	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.36	143.81	11.49	0%			11.49
NA	32	11	383	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.39	143.44	11.46	0%			11.46
NA	32	12	384	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.41	143.06	11.43	0%			11.43
NA	33	1	385	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.40	142.69	11.40	0%			11.40
NA	33	2	386	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.43	142.30	11.37	0%			11.37
NA	33	3	387	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.39	141.94	11.34	0%			11.34

Phase	Year	Month	Total Months	Date	Quarry Area (Greenstone/Greywacke)	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	WMSA	WMSA	Groundwater Inflow	Undrained Backfill (No Surface Outlet)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	cu ft	sq ft	cu ft
NA	33	4	388	4/1/2050	0	0	0	0	0	0	485,889	0	0
NA	33	5	389	5/1/2050	0	0	0	0	0	0	485,889	0	0
NA	33	6	390	6/1/2050	0	0	0	0	0	0	485,889	0	0
NA	33	7	391	7/1/2050	0	0	0	0	0	0	485,889	0	0
NA	33	8	392	8/1/2050	0	0	0	0	0	0	485,889	0	0
NA	33	9	393	9/1/2050	0	0	0	0	0	0	485,889	0	0
NA	33	10	394	10/1/2050	0	0	0	0	0	0	485,889	0	0
NA	33	11	395	11/1/2050	0	0	0	0	0	0	485,889	0	0
NA	33	12	396	12/1/2050	0	0	0	0	0	0	485,889	0	0
NA	34	1	397	1/1/2051	0	0	0	0	0	0	485,889	0	0
NA	34	2	398	2/1/2051	0	0	0	0	0	0	485,889	0	0
NA	34	3	399	3/1/2051	0	0	0	0	0	0	485,889	0	0
NA	34	4	400	4/1/2051	0	0	0	0	0	0	485,889	0	0
NA	34	5	401	5/1/2051	0	0	0	0	0	0	485,889	0	0
NA	34	6	402	6/1/2051	0	0	0	0	0	0	485,889	0	0
NA	34	7	403	7/1/2051	0	0	0	0	0	0	485,889	0	0
NA	34	8	404	8/1/2051	0	0	0	0	0	0	485,889	0	0
NA	34	9	405	9/1/2051	0	0	0	0	0	0	485,889	0	0
NA	34	10	406	10/1/2051	0	0	0	0	0	0	485,889	0	0
NA	34	11	407	11/1/2051	0	0	0	0	0	0	485,889	0	0
NA	34	12	408	12/1/2051	0	0	0	0	0	0	485,889	0	0
NA	35	1	409	1/1/2052	0	0	0	0	0	0	485,889	0	0
NA	35	2	410	2/1/2052	0	0	0	0	0	0	485,889	0	0
NA	35	3	411	3/1/2052	0	0	0	0	0	0	485,889	0	0
NA	35	4	412	4/1/2052	0	0	0	0	0	0	485,889	0	0
NA	35	5	413	5/1/2052	0	0	0	0	0	0	485,889	0	0
NA	35	6	414	6/1/2052	0	0	0	0	0	0	485,889	0	0
NA	35	7	415	7/1/2052	0	0	0	0	0	0	485,889	0	0
NA	35	8	416	8/1/2052	0	0	0	0	0	0	485,889	0	0
NA	35	9	417	9/1/2052	0	0	0	0	0	0	485,889	0	0
NA	35	10	418	10/1/2052	0	0	0	0	0	0	485,889	0	0
NA	35	11	419	11/1/2052	0	0	0	0	0	0	485,889	0	0
NA	35	12	420	12/1/2052	0	0	0	0	0	0	485,889	0	0
NA	36	1	421	1/1/2053	0	0	0	0	0	0	485,889	0	0
NA	36	2	422	2/1/2053	0	0	0	0	0	0	485,889	0	0
NA	36	3	423	3/1/2053	0	0	0	0	0	0	485,889	0	0
NA	36	4	424	4/1/2053	0	0	0	0	0	0	485,889	0	0
NA	36	5	425	5/1/2053	0	0	0	0	0	0	485,889	0	0
NA	36	6	426	6/1/2053	0	0	0	0	0	0	485,889	0	0
NA	36	7	427	7/1/2053	0	0	0	0	0	0	485,889	0	0
NA	36	8	428	8/1/2053	0	0	0	0	0	0	485,889	0	0
NA	36	9	429	9/1/2053	0	0	0	0	0	0	485,889	0	0
NA	36	10	430	10/1/2053	0	0	0	0	0	0	485,889	0	0
NA	36	11	431	11/1/2053	0	0	0	0	0	0	485,889	0	0
NA	36	12	432	12/1/2053	0	0	0	0	0	0	485,889	0	0
NA	37	1	433	1/1/2054	0	0	0	0	0	0	485,889	0	0
NA	37	2	434	2/1/2054	0	0	0	0	0	0	485,889	0	0
NA	37	3	435	3/1/2054	0	0	0	0	0	0	485,889	0	0
NA	37	4	436	4/1/2054	0	0	0	0	0	0	485,889	0	0
NA	37	5	437	5/1/2054	0	0	0	0	0	0	485,889	0	0
NA	37	6	438	6/1/2054	0	0	0	0	0	0	485,889	0	0
NA	37	7	439	7/1/2054	0	0	0	0	0	0	485,889	0	0
NA	37	8	440	8/1/2054	0	0	0	0	0	0	485,889	0	0
NA	37	9	441	9/1/2054	0	0	0	0	0	0	485,889	0	0
NA	37	10	442	10/1/2054	0	0	0	0	0	0	485,889	0	0
NA	37	11	443	11/1/2054	0	0	0	0	0	0	485,889	0	0
NA	37	12	444	12/1/2054	0	0	0	0	0	0	485,889	0	0
NA	38	1	445	1/1/2055	0	0	0	0	0	0	485,889	0	0
NA	38	2	446	2/1/2055	0	0	0	0	0	0	485,889	0	0
NA	38	3	447	3/1/2055	0	0	0	0	0	0	485,889	0	0
NA	38	4	448	4/1/2055	0	0	0	0	0	0	485,889	0	0
NA	38	5	449	5/1/2055	0	0	0	0	0	0	485,889	0	0
NA	38	6	450	6/1/2055	0	0	0	0	0	0	485,889	0	0
NA	38	7	451	7/1/2055	0	0	0	0	0	0	485,889	0	0
NA	38	8	452	8/1/2055	0	0	0	0	0	0	485,889	0	0
NA	38	9	453	9/1/2055	0	0	0	0	0	0	485,889	0	0
NA	38	10	454	10/1/2055	0	0	0	0	0	0	485,889	0	0
NA	38	11	455	11/1/2055	0	0	0	0	0	0	485,889	0	0
NA	38	12	456	12/1/2055	0	0	0	0	0	0	485,889	0	0
NA	39	1	457	1/1/2056	0	0	0	0	0	0	485,889	0	0
NA	39	2	458	2/1/2056	0	0	0	0	0	0	485,889	0	0
NA	39	3	459	3/1/2056	0	0	0	0	0	0	485,889	0	0
NA	39	4	460	4/1/2056	0	0	0	0	0	0	485,889	0	0
NA	39	5	461	5/1/2056	0	0	0	0	0	0	485,889	0	0
NA	39	6	462	6/1/2056	0	0	0	0	0	0	485,889	0	0
NA	39	7	463	7/1/2056	0	0	0	0	0	0	485,889	0	0
NA	39	8	464	8/1/2056	0	0	0	0	0	0	485,889	0	0
NA	39	9	465	9/1/2056	0	0	0	0	0	0	485,889	0	0
NA	39	10	466	10/1/2056	0	0	0	0	0	0	485,889	0	0
NA	39	11	467	11/1/2056	0	0	0	0	0	0	485,889	0	0

Phase	Year	Month	Total Months	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit
				sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
NA	33	4	388	800,000	33,556		519,444	519,444	200,328,889		683,796,886	**985**			200,848,334	200,328,889
NA	33	5	389	800,000	9,267		495,155	495,155	200,328,889		683,796,886	**985**			200,824,045	200,328,889
NA	33	6	390	800,000	1,556		487,444	487,444	200,328,889		683,796,886	**985**			200,816,334	200,328,889
NA	33	7	391	800,000	67		485,955	485,955	200,328,889		683,796,886	**985**			200,814,845	200,328,889
NA	33	8	392	800,000	244		486,133	486,133	200,328,889		683,796,886	**985**			200,815,022	200,328,889
NA	33	9	393	800,000	1,200		487,089	487,089	200,328,889		683,796,886	**985**			200,815,978	200,328,889
NA	33	10	394	800,000	17,778		503,666	503,666	200,328,889		683,796,886	**985**			200,832,556	200,328,889
NA	33	11	395	800,000	58,311		544,200	544,200	200,328,889		683,796,886	**985**			200,873,089	200,328,889
NA	33	12	396	800,000	84,933		570,822	570,822	200,328,889		683,796,886	**985**			200,899,711	200,328,889
NA	34	1	397	800,000	67,333		553,222	553,222	200,328,889		683,796,886	**985**			200,882,111	200,328,889
NA	34	2	398	800,000	111,711		597,600	597,600	200,328,889		683,796,886	**985**			200,926,489	200,328,889
NA	34	3	399	800,000	57,978		543,866	543,866	200,328,889		683,796,886	**985**			200,872,756	200,328,889
NA	34	4	400	800,000	33,556		519,444	519,444	200,328,889		683,796,886	**985**			200,848,334	200,328,889
NA	34	5	401	800,000	9,267		495,155	495,155	200,328,889		683,796,886	**985**			200,824,045	200,328,889
NA	34	6	402	800,000	1,556		487,444	487,444	200,328,889		683,796,886	**985**			200,816,334	200,328,889
NA	34	7	403	800,000	67		485,955	485,955	200,328,889		683,796,886	**985**			200,814,845	200,328,889
NA	34	8	404	800,000	244		486,133	486,133	200,328,889		683,796,886	**985**			200,815,022	200,328,889
NA	34	9	405	800,000	1,200		487,089	487,089	200,328,889		683,796,886	**985**			200,815,978	200,328,889
NA	34	10	406	800,000	17,778		503,666	503,666	200,328,889		683,796,886	**985**			200,832,556	200,328,889
NA	34	11	407	800,000	58,311		544,200	544,200	200,328,889		683,796,886	**985**			200,873,089	200,328,889
NA	34	12	408	800,000	84,933		570,822	570,822	200,328,889		683,796,886	**985**			200,899,711	200,328,889
NA	35	1	409	800,000	67,333		553,222	553,222	200,328,889		683,796,886	**985**			200,882,111	200,328,889
NA	35	2	410	800,000	111,711		597,600	597,600	200,328,889		683,796,886	**985**			200,926,489	200,328,889
NA	35	3	411	800,000	57,978		543,866	543,866	200,328,889		683,796,886	**985**			200,872,756	200,328,889
NA	35	4	412	800,000	33,556		519,444	519,444	200,328,889		683,796,886	**985**			200,848,334	200,328,889
NA	35	5	413	800,000	9,267		495,155	495,155	200,328,889		683,796,886	**985**			200,824,045	200,328,889
NA	35	6	414	800,000	1,556		487,444	487,444	200,328,889		683,796,886	**985**			200,816,334	200,328,889
NA	35	7	415	800,000	67		485,955	485,955	200,328,889		683,796,886	**985**			200,814,845	200,328,889
NA	35	8	416	800,000	244		486,133	486,133	200,328,889		683,796,886	**985**			200,815,022	200,328,889
NA	35	9	417	800,000	1,200		487,089	487,089	200,328,889		683,796,886	**985**			200,815,978	200,328,889
NA	35	10	418	800,000	17,778		503,666	503,666	200,328,889		683,796,886	**985**			200,832,556	200,328,889
NA	35	11	419	800,000	58,311		544,200	544,200	200,328,889		683,796,886	**985**			200,873,089	200,328,889
NA	35	12	420	800,000	84,933		570,822	570,822	200,328,889		683,796,886	**985**			200,899,711	200,328,889
NA	36	1	421	800,000	67,333		553,222	553,222	200,328,889		683,796,886	**985**			200,882,111	200,328,889
NA	36	2	422	800,000	111,711		597,600	597,600	200,328,889		683,796,886	**985**			200,926,489	200,328,889
NA	36	3	423	800,000	57,978		543,866	543,866	200,328,889		683,796,886	**985**			200,872,756	200,328,889
NA	36	4	424	800,000	33,556		519,444	519,444	200,328,889		683,796,886	**985**			200,848,334	200,328,889
NA	36	5	425	800,000	9,267		495,155	495,155	200,328,889		683,796,886	**985**			200,824,045	200,328,889
NA	36	6	426	800,000	1,556		487,444	487,444	200,328,889		683,796,886	**985**			200,816,334	200,328,889
NA	36	7	427	800,000	67		485,955	485,955	200,328,889		683,796,886	**985**			200,814,845	200,328,889
NA	36	8	428	800,000	244		486,133	486,133	200,328,889		683,796,886	**985**			200,815,022	200,328,889
NA	36	9	429	800,000	1,200		487,089	487,089	200,328,889		683,796,886	**985**			200,815,978	200,328,889
NA	36	10	430	800,000	17,778		503,666	503,666	200,328,889		683,796,886	**985**			200,832,556	200,328,889
NA	36	11	431	800,000	58,311		544,200	544,200	200,328,889		683,796,886	**985**			200,873,089	200,328,889
NA	36	12	432	800,000	84,933		570,822	570,822	200,328,889		683,796,886	**985**			200,899,711	200,328,889
NA	37	1	433	800,000	67,333		553,222	553,222	200,328,889		683,796,886	**985**			200,882,111	200,328,889
NA	37	2	434	800,000	111,711		597,600	597,600	200,328,889		683,796,886	**985**			200,926,489	200,328,889
NA	37	3	435	800,000	57,978		543,866	543,866	200,328,889		683,796,886	**985**			200,872,756	200,328,889
NA	37	4	436	800,000	33,556		519,444	519,444	200,328,889		683,796,886	**985**			200,848,334	200,328,889
NA	37	5	437	800,000	9,267		495,155	495,155	200,328,889		683,796,886	**985**			200,824,045	200,328,889
NA	37	6	438	800,000	1,556		487,444	487,444	200,328,889		683,796,886	**985**			200,816,334	200,328,889
NA	37	7	439	800,000	67		485,955	485,955	200,328,889		683,796,886	**985**			200,814,845	200,328,889
NA	37	8	440	800,000	244		486,133	486,133	200,328,889		683,796,886	**985**			200,815,022	200,328,889
NA	37	9	441	800,000	1,200		487,089	487,089	200,328,889		683,796,886	**985**			200,815,978	200,328,889
NA	37	10	442	800,000	17,778		503,666	503,666	200,328,889		683,796,886	**985**			200,832,556	200,328,889
NA	37	11	443	800,000	58,311		544,200	544,200	200,328,889		683,796,886	**985**			200,873,089	200,328,889
NA	37	12	444	800,000	84,933		570,822	570,822	200,328,889		683,796,886	**985**			200,899,711	200,328,889
NA	38	1	445	800,000	67,333		553,222	553,222	200,328,889		683,796,886	**985**			200,882,111	200,328,889
NA	38	2	446	800,000	111,711		597,600	597,600	200,328,889		683,796,886	**985**			200,926,489	200,328,889
NA	38	3	447	800,000	57,978		543,866	543,866	200,328,889		683,796,886	**985**			200,872,756	200,328,889
NA	38	4	448	800,000	33,556		519,444	519,444	200,328,889		683,796,886	**985**			200,848,334	200,328,889
NA	38	5	449	800,000	9,267		495,155	495,155	200,328,889		683,796,886	**985**			200,824,045	200,328,889
NA	38	6	450	800,000	1,556		487,444	487,444	200,328,889		683,796,886	**985**			200,816,334	200,328,889
NA	38	7	451	800,000	67		485,955	485,955	200,328,889		683,796,886	**985**			200,814,845	200,328,889
NA	38	8	452	800,000	244		486,133	486,133	200,328,889		683,796,886	**985**			200,815,022	200,328,889
NA	38	9	453	800,000	1,200		487,089	487,089	200,328,889		683,796,886	**985**			200,815,978	200,328,889
NA	38	10	454	800,000	17,778		503,666	503,666	200,328,889		683,796,886	**985**			200,832,556	200,328,889
NA	38	11	455	800,000	58,311		544,200	544,200	200,328,889		683,796,886	**985**			200,873,089	200,328,889
NA	38	12	456	800,000	84,933		570,822	570,822	200,328,889		683,796,886	**985**			200,899,711	200,328,889
NA	39	1	457	800,000	67,333		553,222	553,222	200,328,889		683,796,886	**985**			200,882,111	200,328,889
NA	39	2	458	800,000	111,711		597,600	597,600	200,328,889		683,796,886	**985**			200,926,489	200,328,889
NA	39	3	459	800,000	57,978		543,866	543,866	200,328,889		683,796,886	**985**			200,872,756	200,328,889
NA	39	4	460	800,000	33,556		519,444	519,444	200,328,889		683,796,886	**985**			200,848,334	200,328,889
NA	39	5	461	800,000	9,267		495,155	495,155	200,328,889		683,796,886	**985**			200,824,045	200,328,889
NA	39	6	462	800,000	1,556		487,444	487,444	200,328,889		683,796,886	**985**			200,816,334	200,328,889
NA	39	7	463	800,000	67		485,955	485,955	200,328,889		683,796,886	**985**			200,814,845	200,328,889
NA	39	8	464	800,000	244		486,133	486,133	200,328,889		683,796,886	**985**			200,815,022	200,328,889
NA	39	9	465	800,000	1,200		487,089	487,089	200,328,889		683,796,886	**985**			200,815,978	200,328,889
NA	39	10	466	800,000	17,778		503,666	503,666	200,328,889		683,796,886	**985**			200,832,556	200,328,889
NA	39	11	467	800,000	58,311		544,200	544,200	200,328,889		683,796,886	**985**			200,873,089	200,328,889

Phase	Year	Month	Total Months	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	WMSA	Groundwater Inflow		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water Concentration	Insitue Treatment	First Year Load	Last Year Load	Pit Water Outflow Concentration
				lb/month		lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L		lb/yr	lb/yr	ug/L
NA	33	4	388	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.37	141.59	11.31	0%			11.31
NA	33	5	389	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.35	141.26	11.28	0%			11.28
NA	33	6	390	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.34	140.94	11.26	0%			11.26
NA	33	7	391	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.34	140.62	11.23	0%			11.23
NA	33	8	392	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.34	140.30	11.21	0%			11.21
NA	33	9	393	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.34	139.99	11.18	0%			11.18
NA	33	10	394	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.35	139.66	11.15	0%			11.15
NA	33	11	395	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.38	139.30	11.13	0%			11.13
NA	33	12	396	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.40	138.93	11.10	0%			11.10
NA	34	1	397	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.38	138.58	11.07	0%			11.07
NA	34	2	398	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.41	138.19	11.04	0%			11.04
NA	34	3	399	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.38	137.84	11.01	0%			11.01
NA	34	4	400	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.36	137.51	10.98	0%			10.98
NA	34	5	401	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.34	137.19	10.96	0%			10.96
NA	34	6	402	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.33	136.88	10.93	0%			10.93
NA	34	7	403	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.33	136.57	10.91	0%			10.91
NA	34	8	404	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.33	136.26	10.88	0%			10.88
NA	34	9	405	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.33	135.95	10.86	0%			10.86
NA	34	10	406	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.34	135.63	10.83	0%			10.83
NA	34	11	407	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.37	135.29	10.81	0%			10.81
NA	34	12	408	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.39	134.93	10.78	0%			10.78
NA	35	1	409	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.37	134.59	10.75	0%			10.75
NA	35	2	410	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.40	134.22	10.72	0%			10.72
NA	35	3	411	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.36	133.88	10.69	0%			10.69
NA	35	4	412	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.35	133.55	10.67	0%			10.67
NA	35	5	413	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.33	133.25	10.64	0%			10.64
NA	35	6	414	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.32	132.94	10.62	0%			10.62
NA	35	7	415	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.32	132.64	10.59	0%			10.59
NA	35	8	416	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.32	132.34	10.57	0%			10.57
NA	35	9	417	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.32	132.04	10.55	0%			10.55
NA	35	10	418	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.33	131.74	10.52	0%			10.52
NA	35	11	419	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.36	131.40	10.50	0%			10.50
NA	35	12	420	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.37	131.06	10.47	0%			10.47
NA	36	1	421	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.36	130.72	10.44	0%			10.44
NA	36	2	422	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.39	130.36	10.41	0%			10.41
NA	36	3	423	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.35	130.03	10.39	0%			10.39
NA	36	4	424	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.34	129.72	10.36	0%			10.36
NA	36	5	425	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.32	129.42	10.34	0%			10.34
NA	36	6	426	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.31	129.13	10.31	0%			10.31
NA	36	7	427	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.31	128.84	10.29	0%			10.29
NA	36	8	428	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.31	128.55	10.27	0%			10.27
NA	36	9	429	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.31	128.26	10.24	0%			10.24
NA	36	10	430	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.32	127.96	10.22	0%			10.22
NA	36	11	431	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.35	127.64	10.19	0%			10.19
NA	36	12	432	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.36	127.30	10.17	0%			10.17
NA	37	1	433	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.35	126.97	10.14	0%			10.14
NA	37	2	434	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.38	126.63	10.11	0%			10.11
NA	37	3	435	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.34	126.31	10.09	0%			10.09
NA	37	4	436	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.33	126.00	10.06	0%			10.06
NA	37	5	437	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.31	125.72	10.04	0%			10.04
NA	37	6	438	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.31	125.43	10.02	0%			10.02
NA	37	7	439	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.30	125.15	10.00	0%			10.00
NA	37	8	440	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.30	124.87	9.97	0%			9.97
NA	37	9	441	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.30	124.59	9.95	0%			9.95
NA	37	10	442	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.31	124.30	9.93	0%			9.93
NA	37	11	443	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.34	123.98	9.90	0%			9.90
NA	37	12	444	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.35	123.66	9.88	0%			9.88
NA	38	1	445	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.34	123.34	9.85	0%			9.85
NA	38	2	446	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.37	123.01	9.82	0%			9.82
NA	38	3	447	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.33	122.70	9.80	0%			9.80
NA	38	4	448	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.32	122.40	9.78	0%			9.78
NA	38	5	449	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.30	122.12	9.75	0%			9.75
NA	38	6	450	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.30	121.85	9.73	0%			9.73
NA	38	7	451	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.30	121.58	9.71	0%			9.71
NA	38	8	452	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.30	121.30	9.69	0%			9.69
NA	38	9	453	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.29	121.03	9.67	0%			9.67
NA	38	10	454	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.30	120.75	9.64	0%			9.64
NA	38	11	455	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.33	120.45	9.62	0%			9.62
NA	38	12	456	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.34	120.13	9.59	0%			9.59
NA	39	1	457	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.33	119.83	9.57	0%			9.57
NA	39	2	458	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.36	119.50	9.54	0%			9.54
NA	39	3	459	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.32	119.20	9.52	0%			9.52
NA	39	4	460	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.31	118.91	9.50	0%			9.50
NA	39	5	461	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.29	118.64	9.48	0%			9.48
NA	39	6	462	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.29	118.38	9.45	0%			9.45
NA	39	7	463	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.29	118.11	9.43	0%			9.43
NA	39	8	464	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.29	117.85	9.41	0%			9.41
NA	39	9	465	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.29	117.58	9.39	0%			9.39
NA	39	10	466	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.30	117.31	9.37	0%			9.37
NA	39	11	467	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.32	117.02	9.35	0%			9.35

Phase	Year	Month	Total Months	Date	Quarry Area (Greenstone/Greywacke)	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	WMSA	WMSA	Groundwater Inflow	Undrained Backfill (No Surface Outlet)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	cu ft	sq ft	cu ft
NA	39	12	468	12/1/2056	0	0	0	0	0	0	485,889	0	0
NA	40	1	469	1/1/2057	0	0	0	0	0	0	485,889	0	0
NA	40	2	470	2/1/2057	0	0	0	0	0	0	485,889	0	0
NA	40	3	471	3/1/2057	0	0	0	0	0	0	485,889	0	0
NA	40	4	472	4/1/2057	0	0	0	0	0	0	485,889	0	0
NA	40	5	473	5/1/2057	0	0	0	0	0	0	485,889	0	0
NA	40	6	474	6/1/2057	0	0	0	0	0	0	485,889	0	0
NA	40	7	475	7/1/2057	0	0	0	0	0	0	485,889	0	0
NA	40	8	476	8/1/2057	0	0	0	0	0	0	485,889	0	0
NA	40	9	477	9/1/2057	0	0	0	0	0	0	485,889	0	0
NA	40	10	478	10/1/2057	0	0	0	0	0	0	485,889	0	0
NA	40	11	479	11/1/2057	0	0	0	0	0	0	485,889	0	0
NA	40	12	480	12/1/2057	0	0	0	0	0	0	485,889	0	0
NA	41	1	481	1/1/2058	0	0	0	0	0	0	485,889	0	0
NA	41	2	482	2/1/2058	0	0	0	0	0	0	485,889	0	0
NA	41	3	483	3/1/2058	0	0	0	0	0	0	485,889	0	0
NA	41	4	484	4/1/2058	0	0	0	0	0	0	485,889	0	0
NA	41	5	485	5/1/2058	0	0	0	0	0	0	485,889	0	0
NA	41	6	486	6/1/2058	0	0	0	0	0	0	485,889	0	0
NA	41	7	487	7/1/2058	0	0	0	0	0	0	485,889	0	0
NA	41	8	488	8/1/2058	0	0	0	0	0	0	485,889	0	0
NA	41	9	489	9/1/2058	0	0	0	0	0	0	485,889	0	0
NA	41	10	490	10/1/2058	0	0	0	0	0	0	485,889	0	0
NA	41	11	491	11/1/2058	0	0	0	0	0	0	485,889	0	0
NA	41	12	492	12/1/2058	0	0	0	0	0	0	485,889	0	0
NA	42	1	493	1/1/2059	0	0	0	0	0	0	485,889	0	0
NA	42	2	494	2/1/2059	0	0	0	0	0	0	485,889	0	0
NA	42	3	495	3/1/2059	0	0	0	0	0	0	485,889	0	0
NA	42	4	496	4/1/2059	0	0	0	0	0	0	485,889	0	0
NA	42	5	497	5/1/2059	0	0	0	0	0	0	485,889	0	0
NA	42	6	498	6/1/2059	0	0	0	0	0	0	485,889	0	0
NA	42	7	499	7/1/2059	0	0	0	0	0	0	485,889	0	0
NA	42	8	500	8/1/2059	0	0	0	0	0	0	485,889	0	0
NA	42	9	501	9/1/2059	0	0	0	0	0	0	485,889	0	0
NA	42	10	502	10/1/2059	0	0	0	0	0	0	485,889	0	0
NA	42	11	503	11/1/2059	0	0	0	0	0	0	485,889	0	0
NA	42	12	504	12/1/2059	0	0	0	0	0	0	485,889	0	0
NA	43	1	505	1/1/2060	0	0	0	0	0	0	485,889	0	0
NA	43	2	506	2/1/2060	0	0	0	0	0	0	485,889	0	0
NA	43	3	507	3/1/2060	0	0	0	0	0	0	485,889	0	0
NA	43	4	508	4/1/2060	0	0	0	0	0	0	485,889	0	0
NA	43	5	509	5/1/2060	0	0	0	0	0	0	485,889	0	0
NA	43	6	510	6/1/2060	0	0	0	0	0	0	485,889	0	0
NA	43	7	511	7/1/2060	0	0	0	0	0	0	485,889	0	0
NA	43	8	512	8/1/2060	0	0	0	0	0	0	485,889	0	0
NA	43	9	513	9/1/2060	0	0	0	0	0	0	485,889	0	0
NA	43	10	514	10/1/2060	0	0	0	0	0	0	485,889	0	0
NA	43	11	515	11/1/2060	0	0	0	0	0	0	485,889	0	0
NA	43	12	516	12/1/2060	0	0	0	0	0	0	485,889	0	0
						1,081		1,327		209	9,485		80

Phase	Year	Month	Total Months	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit
				sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
NA	39	12	468	800,000	84,933		570,822	570,822	200,328,889		683,796,886	**985**			200,899,711	200,328,889
NA	40	1	469	800,000	67,333		553,222	553,222	200,328,889		683,796,886	**985**			200,882,111	200,328,889
NA	40	2	470	800,000	111,711		597,600	597,600	200,328,889		683,796,886	**985**			200,926,489	200,328,889
NA	40	3	471	800,000	57,978		543,866	543,866	200,328,889		683,796,886	**985**			200,872,756	200,328,889
NA	40	4	472	800,000	33,556		519,444	519,444	200,328,889		683,796,886	**985**			200,848,334	200,328,889
NA	40	5	473	800,000	9,267		495,155	495,155	200,328,889		683,796,886	**985**			200,824,045	200,328,889
NA	40	6	474	800,000	1,556		487,444	487,444	200,328,889		683,796,886	**985**			200,816,334	200,328,889
NA	40	7	475	800,000	67		485,955	485,955	200,328,889		683,796,886	**985**			200,814,845	200,328,889
NA	40	8	476	800,000	244		486,133	486,133	200,328,889		683,796,886	**985**			200,815,022	200,328,889
NA	40	9	477	800,000	1,200		487,089	487,089	200,328,889		683,796,886	**985**			200,815,978	200,328,889
NA	40	10	478	800,000	17,778		503,666	503,666	200,328,889		683,796,886	**985**			200,832,556	200,328,889
NA	40	11	479	800,000	58,311		544,200	544,200	200,328,889		683,796,886	**985**			200,873,089	200,328,889
NA	40	12	480	800,000	84,933		570,822	570,822	200,328,889		683,796,886	**985**			200,899,711	200,328,889
NA	41	1	481	800,000	67,333		553,222	553,222	200,328,889		683,796,886	**985**			200,882,111	200,328,889
NA	41	2	482	800,000	111,711		597,600	597,600	200,328,889		683,796,886	**985**			200,926,489	200,328,889
NA	41	3	483	800,000	57,978		543,866	543,866	200,328,889		683,796,886	**985**			200,872,756	200,328,889
NA	41	4	484	800,000	33,556		519,444	519,444	200,328,889		683,796,886	**985**			200,848,334	200,328,889
NA	41	5	485	800,000	9,267		495,155	495,155	200,328,889		683,796,886	**985**			200,824,045	200,328,889
NA	41	6	486	800,000	1,556		487,444	487,444	200,328,889		683,796,886	**985**			200,816,334	200,328,889
NA	41	7	487	800,000	67		485,955	485,955	200,328,889		683,796,886	**985**			200,814,845	200,328,889
NA	41	8	488	800,000	244		486,133	486,133	200,328,889		683,796,886	**985**			200,815,022	200,328,889
NA	41	9	489	800,000	1,200		487,089	487,089	200,328,889		683,796,886	**985**			200,815,978	200,328,889
NA	41	10	490	800,000	17,778		503,666	503,666	200,328,889		683,796,886	**985**			200,832,556	200,328,889
NA	41	11	491	800,000	58,311		544,200	544,200	200,328,889		683,796,886	**985**			200,873,089	200,328,889
NA	41	12	492	800,000	84,933		570,822	570,822	200,328,889		683,796,886	**985**			200,899,711	200,328,889
NA	42	1	493	800,000	67,333		553,222	553,222	200,328,889		683,796,886	**985**			200,882,111	200,328,889
NA	42	2	494	800,000	111,711		597,600	597,600	200,328,889		683,796,886	**985**			200,926,489	200,328,889
NA	42	3	495	800,000	57,978		543,866	543,866	200,328,889		683,796,886	**985**			200,872,756	200,328,889
NA	42	4	496	800,000	33,556		519,444	519,444	200,328,889		683,796,886	**985**			200,848,334	200,328,889
NA	42	5	497	800,000	9,267		495,155	495,155	200,328,889		683,796,886	**985**			200,824,045	200,328,889
NA	42	6	498	800,000	1,556		487,444	487,444	200,328,889		683,796,886	**985**			200,816,334	200,328,889
NA	42	7	499	800,000	67		485,955	485,955	200,328,889		683,796,886	**985**			200,814,845	200,328,889
NA	42	8	500	800,000	244		486,133	486,133	200,328,889		683,796,886	**985**			200,815,022	200,328,889
NA	42	9	501	800,000	1,200		487,089	487,089	200,328,889		683,796,886	**985**			200,815,978	200,328,889
NA	42	10	502	800,000	17,778		503,666	503,666	200,328,889		683,796,886	**985**			200,832,556	200,328,889
NA	42	11	503	800,000	58,311		544,200	544,200	200,328,889		683,796,886	**985**			200,873,089	200,328,889
NA	42	12	504	800,000	84,933		570,822	570,822	200,328,889		683,796,886	**985**			200,899,711	200,328,889
NA	43	1	505	800,000	67,333		553,222	553,222	200,328,889		683,796,886	**985**			200,882,111	200,328,889
NA	43	2	506	800,000	111,711		597,600	597,600	200,328,889		683,796,886	**985**			200,926,489	200,328,889
NA	43	3	507	800,000	57,978		543,866	543,866	200,328,889		683,796,886	**985**			200,872,756	200,328,889
NA	43	4	508	800,000	33,556		519,444	519,444	200,328,889		683,796,886	**985**			200,848,334	200,328,889
NA	43	5	509	800,000	9,267		495,155	495,155	200,328,889		683,796,886	**985**			200,824,045	200,328,889
NA	43	6	510	800,000	1,556		487,444	487,444	200,328,889		683,796,886	**985**			200,816,334	200,328,889
NA	43	7	511	800,000	67		485,955	485,955	200,328,889		683,796,886	**985**			200,814,845	200,328,889
NA	43	8	512	800,000	244		486,133	486,133	200,328,889		683,796,886	**985**			200,815,022	200,328,889
NA	43	9	513	800,000	1,200		487,089	487,089	200,328,889		683,796,886	**985**			200,815,978	200,328,889
NA	43	10	514	800,000	17,778		503,666	503,666	200,328,889		683,796,886	**985**			200,832,556	200,328,889
NA	43	11	515	800,000	58,311		544,200	544,200	200,328,889		683,796,886	**985**			200,873,089	200,328,889
NA	43	12	516	800,000	84,933		570,822	570,822	200,328,889		683,796,886	**985**			200,899,711	200,328,889
					336	0	12,517	7,919								

Phase	Year	Month	Total Months	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	WMSA	Groundwater Inflow		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water Concentration	Insitue Treatment	First Year Load	Last Year Load	Pit Water Outflow Concentration
				lb/month		lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L		lb/yr	lb/yr	ug/L
NA	39	12	468	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.33	116.71	9.32	0%			9.32
NA	40	1	469	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.32	116.42	9.30	0%			9.30
NA	40	2	470	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.35	116.10	9.27	0%			9.27
NA	40	3	471	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.32	115.81	9.25	0%			9.25
NA	40	4	472	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.30	115.53	9.23	0%			9.23
NA	40	5	473	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.29	115.27	9.21	0%			9.21
NA	40	6	474	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.28	115.01	9.19	0%			9.19
NA	40	7	475	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.28	114.75	9.17	0%			9.17
NA	40	8	476	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.28	114.50	9.14	0%			9.14
NA	40	9	477	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.28	114.24	9.12	0%			9.12
NA	40	10	478	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.29	113.98	9.10	0%			9.10
NA	40	11	479	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.31	113.69	9.08	0%			9.08
NA	40	12	480	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.32	113.40	9.06	0%			9.06
NA	41	1	481	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.31	113.11	9.03	0%			9.03
NA	41	2	482	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.34	112.80	9.01	0%			9.01
NA	41	3	483	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.31	112.52	8.99	0%			8.99
NA	41	4	484	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.29	112.25	8.97	0%			8.97
NA	41	5	485	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.28	112.00	8.95	0%			8.95
NA	41	6	486	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.27	111.75	8.93	0%			8.93
NA	41	7	487	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.27	111.50	8.91	0%			8.91
NA	41	8	488	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.27	111.25	8.89	0%			8.89
NA	41	9	489	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.27	111.00	8.87	0%			8.87
NA	41	10	490	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.28	110.75	8.85	0%			8.85
NA	41	11	491	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.30	110.47	8.82	0%			8.82
NA	41	12	492	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.31	110.19	8.80	0%			8.80
NA	42	1	493	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.30	109.91	8.78	0%			8.78
NA	42	2	494	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.33	109.61	8.75	0%			8.75
NA	42	3	495	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.30	109.34	8.73	0%			8.73
NA	42	4	496	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.28	109.08	8.71	0%			8.71
NA	42	5	497	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.27	108.83	8.69	0%			8.69
NA	42	6	498	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.26	108.59	8.67	0%			8.67
NA	42	7	499	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.26	108.35	8.65	0%			8.65
NA	42	8	500	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.26	108.11	8.63	0%			8.63
NA	42	9	501	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.26	107.87	8.62	0%			8.62
NA	42	10	502	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.27	107.62	8.60	0%			8.60
NA	42	11	503	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.29	107.35	8.57	0%			8.57
NA	42	12	504	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.31	107.07	8.55	0%			8.55
NA	43	1	505	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.30	106.80	8.53	0%			8.53
NA	43	2	506	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.32	106.51	8.51	0%			8.51
NA	43	3	507	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.29	106.25	8.49	0%			8.49
NA	43	4	508	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.28	106.00	8.47	0%			8.47
NA	43	5	509	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.26	105.76	8.45	0%			8.45
NA	43	6	510	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.26	105.53	8.43	0%			8.43
NA	43	7	511	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.26	105.29	8.41	0%			8.41
NA	43	8	512	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.26	105.06	8.39	0%			8.39
NA	43	9	513	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.26	104.82	8.37	0%			8.37
NA	43	10	514	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.26	104.58	8.35	0%			8.35
NA	43	11	515	0.00	0.00	0.00	0.73	0.02	0.00	0.00	0.00	0.28	104.33	8.33	0%			8.33
NA	43	12	516	0.00	0.00	0.00	0.73	0.02	0.00	0.01	0.00	0.30	104.06	8.31	0%			8.31

Appendix D.1.2

D.1.2 North Quarry Runoff Water Quality Projections

North Quarry Runoff Water Budget

Inflows and Outflows	Parameters		Value	Units	Description and Rationale				
Precipitation	Precipitation		1.85	ft/yr	Los Altos climate station, direct precip on wasterock backfill area is based on monthly precip data				
			Phases						
			Initial	1	2	3	4	5	Long Term
Quarry Backfilling Areas	**Surface Water Drainage to Pit**								
	Quarry Area (Greenstone/Greywacke)					11,700,000	12,800,000	14,500,000	14,500,000
	Quarry Area (Limestone)					3,900,000	2,800,000	200,000	200,000
	WMSA					-	-	-	-
	Surface Infiltration to Pit (Through backfill)								
	Undrained Backfill (No Surface Outlet)		-						
	Drained Backfill (With Surface Outlet)								
	Spill Elevation		990.00	ft amsl	Based on mine plan				
	Bottom of Pit		440.00	ft amsl	Based on end of Phase 1 for South Quarry mine plan				
Groundwater Capture	Initial		371	gpm	MODFLOW model results for Phase 1, maximum excavation condition				
			2,181,181	cu ft/mo					
	At Spill Elevation		80	gpm	MODFLOW model results for ultimate condition				
			470,336	cu ft/mo					
Date Quarry Filling Starts		**1/1/2023**							
Assumptions	The pit is backfilled incrementally over a 4-year period, from 440 ft amsl to the spill-over elevation of 990 ft amsl								
	Backfill material has a porosity of 30-percent.								
	Surface runoff is only within the capture area of the pit and is based on water year 2009 data								
	Groundwater inflow into the pit varies by month and diminshes as the backfill increases								
	Precipitation directly infiltrates to the water table within the area of the backfill.								
	Evaporation of the pit lake is only applied when the cumulative volume of water in the pit is greater than the cumulative volume of void spaces within the backfill (based on 30-percent porosity)								
	The water level in the pit is dependent on the total cumulative volume of the backfill up to the spill-over elevation.								

Phase	Year	Month	Total Months	Date	Quarry Area (Greenstone/Greywacke)	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	WMSA	WMSA	Groundwater Inflow (Zerod out, included in pit water budget)	Undrained Backfill (No Surface Outlet)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	cu ft	sq ft	cu ft
1	**1**	**1**	**1**	**1/1/2018**	**0**	0	**0**	0	**0**	0	**0**	**0**	0
1	1	2	2	2/1/2018	0	0	0	0	0	0	0	0	0
1	1	3	3	3/1/2018	0	0	0	0	0	0	0	0	0
1	1	4	4	4/1/2018	0	0	0	0	0	0	0	0	0
1	1	5	5	5/1/2018	0	0	0	0	0	0	0	0	0
1	1	6	6	6/1/2018	0	0	0	0	0	0	0	0	0
1	1	7	7	7/1/2018	0	0	0	0	0	0	0	0	0
1	1	8	8	8/1/2018	0	0	0	0	0	0	0	0	0
1	1	9	9	9/1/2018	0	0	0	0	0	0	0	0	0
1	1	10	10	10/1/2018	0	0	0	0	0	0	0	0	0
1	1	11	11	11/1/2018	0	0	0	0	0	0	0	0	0
1	1	12	12	12/1/2018	0	0	0	0	0	0	0	0	0
1	2	1	13	1/1/2019	0	0	0	0	0	0	0	0	0
1	2	2	14	2/1/2019	0	0	0	0	0	0	0	0	0
1	2	3	15	3/1/2019	0	0	0	0	0	0	0	0	0
1	2	4	16	4/1/2019	0	0	0	0	0	0	0	0	0
1	2	5	17	5/1/2019	0	0	0	0	0	0	0	0	0
1	2	6	18	6/1/2019	0	0	0	0	0	0	0	0	0
1	2	7	19	7/1/2019	0	0	0	0	0	0	0	0	0
1	2	8	20	8/1/2019	0	0	0	0	0	0	0	0	0
1	2	9	21	9/1/2019	0	0	0	0	0	0	0	0	0
1	2	10	22	10/1/2019	0	0	0	0	0	0	0	0	0
1	2	11	23	11/1/2019	0	0	0	0	0	0	0	0	0
1	2	12	24	12/1/2019	0	0	0	0	0	0	0	0	0
1	3	1	25	1/1/2020	0	0	0	0	0	0	0	0	0
1	3	2	26	2/1/2020	0	0	0	0	0	0	0	0	0
1	3	3	27	3/1/2020	0	0	0	0	0	0	0	0	0
1	3	4	28	4/1/2020	0	0	0	0	0	0	0	0	0
1	3	5	29	5/1/2020	0	0	0	0	0	0	0	0	0
1	3	6	30	6/1/2020	0	0	0	0	0	0	0	0	0
1	3	7	31	7/1/2020	0	0	0	0	0	0	0	0	0
1	3	8	32	8/1/2020	0	0	0	0	0	0	0	0	0
1	3	9	33	9/1/2020	0	0	0	0	0	0	0	0	0
1	3	10	34	10/1/2020	0	0	0	0	0	0	0	0	0
1	3	11	35	11/1/2020	0	0	0	0	0	0	0	0	0
1	3	12	36	12/1/2020	0	0	0	0	0	0	0	0	0
1	4	1	37	1/1/2021	0	0	0	0	0	0	0	0	0
1	4	2	38	2/1/2021	0	0	0	0	0	0	0	0	0
1	4	3	39	3/1/2021	0	0	0	0	0	0	0	0	0
1	4	4	40	4/1/2021	0	0	0	0	0	0	0	0	0
1	4	5	41	5/1/2021	0	0	0	0	0	0	0	0	0
1	4	6	42	6/1/2021	0	0	0	0	0	0	0	0	0
1	4	7	43	7/1/2021	0	0	0	0	0	0	0	0	0
1	4	8	44	8/1/2021	0	0	0	0	0	0	0	0	0
1	4	9	45	9/1/2021	0	0	0	0	0	0	0	0	0
1	4	10	46	10/1/2021	0	0	0	0	0	0	0	0	0
1	4	11	47	11/1/2021	0	0	0	0	0	0	0	0	0
1	4	12	48	12/1/2021	0	0	0	0	0	0	0	0	0
1	5	**1**	49	1/1/2022	0	0	0	0	0	0	0	0	0
1	5	2	50	2/1/2022	0	0	0	0	0	0	0	0	0
1	5	3	51	3/1/2022	0	0	0	0	0	0	0	0	0
1	5	4	52	4/1/2022	0	0	0	0	0	0	0	0	0
1	5	5	53	5/1/2022	0	0	0	0	0	0	0	0	0
1	5	6	54	6/1/2022	0	0	0	0	0	0	0	0	0
1	5	7	55	7/1/2022	0	0	0	0	0	0	0	0	0
1	5	8	56	8/1/2022	0	0	0	0	0	0	0	0	0

Phase	Year	Month	Total Months	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit (Zerod out)
				sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
1	**1**	**1**	**1**	**0**	0		0	0	**0**		**0**	**440**	**NA**	**NA**	**0**	0
1	1	2	2	0	0		0	0	0	NA	0	**440**			0	0
1	1	3	3	0	0		0	0	0		0	**440**			0	0
1	1	4	4	0	0		0	0	0		0	**440**			0	0
1	1	5	5	0	0		0	0	0		0	**440**			0	0
1	1	6	6	0	0		0	0	0		0	**440**			0	0
1	1	7	7	0	0		0	0	0		0	**440**			0	0
1	1	8	8	0	0		0	0	0		0	**440**			0	0
1	1	9	9	0	0		0	0	0		0	**440**			0	0
1	1	10	10	0	0		0	0	0		0	**440**			0	0
1	1	11	11	0	0		0	0	0		0	**440**			0	0
1	1	12	12	0	0		0	0	0		0	**440**			0	0
1	2	1	13	0	0		0	0	0		0	**440**			0	0
1	2	2	14	0	0		0	0	0		0	**440**			0	0
1	2	3	15	0	0		0	0	0		0	**440**			0	0
1	2	4	16	0	0		0	0	0		0	**440**			0	0
1	2	5	17	0	0		0	0	0		0	**440**			0	0
1	2	6	18	0	0		0	0	0		0	**440**			0	0
1	2	7	19	0	0		0	0	0		0	**440**			0	0
1	2	8	20	0	0		0	0	0		0	**440**			0	0
1	2	9	21	0	0		0	0	0		0	**440**			0	0
1	2	10	22	0	0		0	0	0		0	**440**			0	0
1	2	11	23	0	0		0	0	0		0	**440**			0	0
1	2	12	24	0	0		0	0	0		0	**440**			0	0
1	3	1	25	0	0		0	0	0		0	**440**			0	0
1	3	2	26	0	0		0	0	0		0	**440**			0	0
1	3	3	27	0	0		0	0	0		0	**440**			0	0
1	3	4	28	0	0		0	0	0		0	**440**			0	0
1	3	5	29	0	0		0	0	0		0	**440**			0	0
1	3	6	30	0	0		0	0	0		0	**440**			0	0
1	3	7	31	0	0		0	0	0		0	**440**			0	0
1	3	8	32	0	0		0	0	0		0	**440**			0	0
1	3	9	33	0	0		0	0	0		0	**440**			0	0
1	3	10	34	0	0		0	0	0		0	**440**			0	0
1	3	11	35	0	0		0	0	0		0	**440**			0	0
1	3	12	36	0	0		0	0	0		0	**440**			0	0
1	4	1	37	0	0		0	0	0		0	**440**			0	0
1	4	2	38	0	0		0	0	0		0	**440**			0	0
1	4	3	39	0	0		0	0	0		0	**440**			0	0
1	4	4	40	0	0		0	0	0		0	**440**			0	0
1	4	5	41	0	0		0	0	0		0	**440**			0	0
1	4	6	42	0	0		0	0	0		0	**440**			0	0
1	4	7	43	0	0		0	0	0		0	**440**			0	0
1	4	8	44	0	0		0	0	0		0	**440**			0	0
1	4	9	45	0	0		0	0	0		0	**440**			0	0
1	4	10	46	0	0		0	0	0		0	**440**			0	0
1	4	11	47	0	0		0	0	0		0	**440**			0	0
1	4	12	48	0	0		0	0	0		0	**440**			0	0
1	5	**1**	49	0	0		0	0	0		11,396,615	**440**			0	0
1	5	2	50	0	0		0	0	0		22,793,230	**440**			0	0
1	5	3	51	0	0		0	0	0		34,189,844	**440**			0	0
1	5	4	52	0	0		0	0	0		45,586,459	**440**			0	0
1	5	5	53	0	0		0	0	0		56,983,074	**440**			0	0
1	5	6	54	0	0		0	0	0		68,379,689	**440**			0	0
1	5	7	55	0	0		0	0	0		79,776,303	**440**			0	0
1	5	8	56	0	0		0	0	0		91,172,918	**440**			0	0

Phase	Year	Month	Total Months	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	WMSA	Groundwater Inflow (Zerod out, included in pit water budget)		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water Concentration	Insitue Treatment	First Year Load	Last Year Load	Pit Water Outflow Concentration
				lb/month	lb/month	lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L		lb/yr	lb/yr	ug/L
1	**1**	**1**	**1**	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0%**			0.00
1	1	2	2	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%	0.00	4.28	0.00
1	1	3	3	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	1	4	4	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	1	5	5	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	1	6	6	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	1	7	7	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	1	8	8	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	1	9	9	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	1	10	10	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	1	11	11	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	1	12	12	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	2	1	13	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	2	2	14	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	2	3	15	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	2	4	16	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	2	5	17	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	2	6	18	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	2	7	19	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	2	8	20	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	2	9	21	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	2	10	22	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	2	11	23	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	2	12	24	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	3	1	25	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	3	2	26	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	3	3	27	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0%**			0.00
1	3	4	28	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	3	5	29	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	3	6	30	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	3	7	31	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	3	8	32	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	3	9	33	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	3	10	34	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	3	11	35	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	3	12	36	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	4	1	37	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	4	2	38	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	4	3	39	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	4	4	40	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	4	5	41	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	4	6	42	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	4	7	43	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	4	8	44	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	4	9	45	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	4	10	46	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	4	11	47	0.00	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	4	12	48	0.00	0.00	0.00	145.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	5	**1**	49	0.00	0.00	0.00	133.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	5	2	50	0.00	0.00	0.00	127.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	5	3	51	0.00	0.00	0.00	120.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	5	4	52	0.00	0.00	0.00	114.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	5	5	53	0.00	0.00	0.00	108.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	5	6	54	0.00	0.00	0.00	104.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	5	7	55	0.00	0.00	0.00	100.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	5	8	56	0.00	0.00	0.00	97.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00

Phase	Year	Month	Total Months	Date	Quarry Area (Greenstone/Greywacke)	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	WMSA	WMSA	Groundwater Inflow (Zerod out, included in pit water budget)	Undrained Backfill (No Surface Outlet)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	cu ft	sq ft	cu ft
1	5	9	57	9/1/2022	0	0	0	0	0	0	0	0	0
1	5	10	58	10/1/2022	0	0	0	0	0	0	0	0	0
1	5	11	59	11/1/2022	0	0	0	0	0	0	0	0	0
1	**5**	**12**	60	**12/1/2022**	**0**	0	**0**	0	**0**	0	0	**0**	0
2	**6**	**1**	61	**1/1/2023**	0	**0**	0	**0**	0	**0**	0	0	**0**
2	6	2	62	2/1/2023	0	0	0	0	0	0	0	0	0
2	6	3	63	3/1/2023	0	0	0	0	0	0	0	0	0
2	6	4	64	4/1/2023	0	0	0	0	0	0	0	0	0
2	6	5	65	5/1/2023	0	0	0	0	0	0	0	0	0
2	6	6	66	6/1/2023	0	0	0	0	0	0	0	0	0
2	6	7	67	7/1/2023	0	0	0	0	0	0	0	0	0
2	6	8	68	8/1/2023	0	0	0	0	0	0	0	0	0
2	6	9	69	9/1/2023	0	0	0	0	0	0	0	0	0
2	6	10	70	10/1/2023	0	0	0	0	0	0	0	0	0
2	6	11	71	11/1/2023	0	0	0	0	0	0	0	0	0
2	6	12	72	12/1/2023	0	0	0	0	0	0	0	0	0
2	7	1	73	1/1/2024	0	0	0	0	0	0	0	0	0
2	7	2	74	2/1/2024	0	0	0	0	0	0	0	0	0
2	7	3	75	3/1/2024	0	0	0	0	0	0	0	0	0
2	7	4	76	4/1/2024	0	0	0	0	0	0	0	0	0
2	7	5	77	5/1/2024	0	0	0	0	0	0	0	0	0
2	7	6	78	6/1/2024	0	0	0	0	0	0	0	0	0
2	7	7	79	7/1/2024	0	0	0	0	0	0	0	0	0
2	7	8	80	8/1/2024	0	0	0	0	0	0	0	0	0
2	7	9	81	9/1/2024	0	0	0	0	0	0	0	0	0
2	7	10	82	10/1/2024	0	0	0	0	0	0	0	0	0
2	7	11	83	11/1/2024	0	0	0	0	0	0	0	0	0
2	7	12	84	12/1/2024	0	0	0	0	0	0	0	0	0
2	8	1	85	1/1/2025	0	0	0	0	0	0	0	0	0
2	8	2	86	2/1/2025	0	0	0	0	0	0	0	0	0
2	8	3	87	3/1/2025	0	0	0	0	0	0	0	0	0
2	8	4	88	4/1/2025	0	0	0	0	0	0	0	0	0
2	8	5	89	5/1/2025	0	0	0	0	0	0	0	0	0
2	8	6	90	6/1/2025	0	0	0	0	0	0	0	0	0
2	8	7	91	7/1/2025	0	0	0	0	0	0	0	0	0
2	8	8	92	8/1/2025	0	0	0	0	0	0	0	0	0
2	8	9	93	9/1/2025	0	0	0	0	0	0	0	0	0
2	8	10	94	10/1/2025	0	0	0	0	0	0	0	0	0
2	8	11	95	11/1/2025	0	0	0	0	0	0	0	0	0
2	**8**	12	96	**12/1/2025**	**0**	0	**0**	0	**0**	0	0	**0**	0
3	9	**1**	97	1/1/2026	168,750	23,672	81,250	11,398	0	0	0	0	0
3	9	2	98	2/1/2026	337,500	78,547	162,500	37,819	0	0	0	0	0
3	9	3	99	3/1/2026	506,250	61,148	243,750	29,442	0	0	0	0	0
3	9	4	100	4/1/2026	675,000	47,188	325,000	22,720	0	0	0	0	0
3	9	5	101	5/1/2026	843,750	16,289	406,250	7,843	0	0	0	0	0
3	9	6	102	6/1/2026	1,012,500	3,281	487,500	1,580	0	0	0	0	0
3	9	7	103	7/1/2026	1,181,250	164	568,750	79	0	0	0	0	0
3	9	8	104	8/1/2026	1,350,000	687	650,000	331	0	0	0	0	0
3	9	9	105	9/1/2026	1,518,750	3,797	731,250	1,828	0	0	0	0	0
3	9	10	106	10/1/2026	1,687,500	62,500	812,500	30,093	0	0	0	0	0
3	9	11	107	11/1/2026	1,856,250	225,500	893,750	108,574	0	0	0	0	0
3	9	12	108	12/1/2026	2,025,000	358,313	975,000	172,521	0	0	0	0	0
3	10	1	109	1/1/2027	2,193,750	307,734	1,056,250	148,168	0	0	0	0	0
3	10	2	110	2/1/2027	2,362,500	549,828	1,137,500	264,732	0	0	0	0	0
3	10	3	111	3/1/2027	2,531,250	305,742	1,218,750	147,209	0	0	0	0	0
3	10	4	112	4/1/2027	2,700,000	188,750	1,300,000	90,880	0	0	0	0	0
3	10	5	113	5/1/2027	2,868,750	55,383	1,381,250	26,666	0	0	0	0	0
3	10	6	114	6/1/2027	3,037,500	9,844	1,462,500	4,740	0	0	0	0	0
3	10	11	119	11/1/2027	3,881,250	471,500	1,868,750	227,004	0	0	0	0	0
3	11	3	123	3/1/2028	4,556,250	550,336	2,193,750	264,977	0	0	0	0	0
3	11	4	124	4/1/2028	4,725,000	330,313	2,275,000	159,039	0	0	0	0	0
3	11	5	125	5/1/2028	4,893,750	94,477	2,356,250	45,489	0	0	0	0	0
3	11	6	126	6/1/2028	5,062,500	16,406	2,437,500	7,899	0	0	0	0	0
3	11	7	127	7/1/2028	5,231,250	727	2,518,750	350	0	0	0	0	0
3	11	8	128	8/1/2028	5,400,000	2,750	2,600,000	1,324	0	0	0	0	0
3	11	9	129	9/1/2028	5,568,750	13,922	2,681,250	6,703	0	0	0	0	0
3	11	10	130	10/1/2028	5,737,500	212,500	2,762,500	102,315	0	0	0	0	0
3	11	11	131	11/1/2028	5,906,250	717,500	2,843,750	345,463	0	0	0	0	0

Phase	Year	Month	Total Months	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit (Zerod out)
				sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
1	5	9	57	0	0		0	0	0		102,569,533	**440**			0	0
1	5	10	58	0	0		0	0	0		113,966,148	**440**			0	0
1	5	11	59	0	0		0	0	0		125,362,762	**440**			0	0
1	**5**	**12**	60	**0**	0		0	0	0		136,759,377	**440**			**0**	0
2	**6**	**1**	61	0	**0**		0	0	0		148,155,992	**440**			**0**	0
2	6	2	62	0	0		0	0	0		159,552,607	**440**			0	0
2	6	3	63	0	0		0	0	0		170,949,221	**440**			0	0
2	6	4	64	0	0		0	0	0		182,345,836	**440**			0	0
2	6	5	65	0	0		0	0	0		193,742,451	**440**			0	0
2	6	6	66	0	0		0	0	0		205,139,066	**440**			0	0
2	6	7	67	0	0		0	0	0		216,535,680	**440**			0	0
2	6	8	68	0	0		0	0	0		227,932,295	**440**			0	0
2	6	9	69	0	0		0	0	0		239,328,910	**440**			0	0
2	6	10	70	0	0		0	0	0		250,725,525	**440**			0	0
2	6	11	71	0	0		0	0	0		262,122,140	**440**			0	0
2	6	12	72	0	0		0	0	0		273,518,754	**440**			0	0
2	7	1	73	0	0		0	0	0		284,915,369	**440**			0	0
2	7	2	74	0	0		0	0	0		296,311,984	**440**			0	0
2	7	3	75	0	0		0	0	0		307,708,599	**440**			0	0
2	7	4	76	0	0		0	0	0		319,105,213	**440**			0	0
2	7	5	77	0	0		0	0	0		330,501,828	**440**			0	0
2	7	6	78	0	0		0	0	0		341,898,443	**440**			0	0
2	7	7	79	0	0		0	0	0		353,295,058	**440**			0	0
2	7	8	80	0	0		0	0	0		364,691,672	**440**			0	0
2	7	9	81	0	0		0	0	0		376,088,287	**440**			0	0
2	7	10	82	0	0		0	0	0		387,484,902	**440**			0	0
2	7	11	83	0	0		0	0	0		398,881,517	**440**			0	0
2	7	12	84	0	0		0	0	0		410,278,131	**440**			0	0
2	8	1	85	0	0		0	0	0		421,674,746	**440**			0	0
2	8	2	86	0	0		0	0	0		433,071,361	**440**			0	0
2	8	3	87	0	0		0	0	0		444,467,976	**440**			0	0
2	8	4	88	0	0		0	0	0		455,864,590	**440**			0	0
2	8	5	89	0	0		0	0	0		467,261,205	**440**			0	0
2	8	6	90	0	0		0	0	0		478,657,820	**440**			0	0
2	8	7	91	0	0		0	0	0		490,054,435	**440**			0	0
2	8	8	92	0	0		0	0	0		501,451,049	**440**			0	0
2	8	9	93	0	0		0	0	0		512,847,664	**440**			0	0
2	8	10	94	0	0		0	0	0		524,244,279	**440**			0	0
2	8	11	95	0	0		0	0	0		535,640,894	**440**			0	0
2	**8**	12	96	**0**	0		0	0	0		547,037,509	**440**			0	0
3	9	**1**	97	0	0		35,069	35,069	0		558,434,123	**440**			35,069	0
3	9	2	98	0	0		116,366	116,366	0		569,830,738	**440**			116,366	0
3	9	3	99	0	0		90,590	90,590	0		581,227,353	**440**			90,590	0
3	9	4	100	0	0		69,907	69,907	0		592,623,968	**440**			69,907	0
3	9	5	101	0	0		24,132	24,132	0		604,020,582	**440**			24,132	0
3	9	6	102	0	0		4,861	4,861	0		615,417,197	**440**			4,861	0
3	9	7	103	0	0		243	243	0		626,813,812	**440**			243	0
3	9	8	104	0	0		1,019	1,019	0		638,210,427	**440**			1,019	0
3	9	9	105	0	0		5,625	5,625	0		649,607,041	**440**			5,625	0
3	9	10	106	0	0		92,593	92,593	0		661,003,656	**440**			92,593	0
3	9	11	107	0	0		334,074	334,074	0		672,400,271	**440**			334,074	0
3	9	12	108	0	0		530,833	530,833	0		683,796,886	**440**			530,833	0
3	10	1	109	0	0		455,903	455,903	0		683,796,886	**440**			455,903	0
3	10	2	110	0	0		814,560	814,560	0		683,796,886	**440**			814,560	0
3	10	3	111	0	0		452,951	452,951	0		683,796,886	**440**			452,951	0
3	10	4	112	0	0		279,630	279,630	0		683,796,886	**440**			279,630	0
3	10	5	113	0	0		82,049	82,049	0		683,796,886	**440**			82,049	0
3	10	6	114	0	0		14,583	14,583	0		683,796,886	**440**			14,583	0
3	10	7	115	0	0		1,215	1,215	0		683,796,886	**440**			1,215	0
3	10	8	116	0	0		0	0	0		683,796,886	**440**			0	0
3	10	9	117	0	0		0	0	0		683,796,886	**440**			0	0
3	10	10	118	0	0		0	0	0		683,796,886	**440**			0	0
3	10	11	119	0	0		0	0	0		683,796,886	**440**			0	0
3	10	12	120	0	0		0	0	0		683,796,886	**440**			0	0
3	11	1	121	0	0		0	0	0		683,796,886	**440**			0	0
3	11	2	122	0	0		0	0	0		683,796,886	**440**			0	0
3	11	3	123	0	0		815,313	815,313	0		683,796,886	**440**			815,313	0
3	11	4	124	0	0		489,352	489,352	0		683,796,886	**440**			489,352	0
3	11	5	125	0	0		139,965	139,965	0		683,796,886	**440**			139,965	0
3	11	6	126	0	0		24,306	24,306	0		683,796,886	**440**			24,306	0
3	11	7	127	0	0		1,076	1,076	0		683,796,886	**440**			1,076	0
3	11	8	128	0	0		4,074	4,074	0		683,796,886	**440**			4,074	0
3	11	9	129	0	0		20,625	20,625	0		683,796,886	**440**			20,625	0
3	11	10	130	0	0		314,815	314,815	0		683,796,886	**440**			314,815	0
3	11	11	131	0	0		1,062,963	1,062,963	0		683,796,886	**440**			1,062,963	0

Phase	Year	Month	Total Months	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	WMSA	Groundwater Inflow (Zerod out, included in pit water budget)		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water Concentration	Insitue Treatment	First Year Load	Last Year Load	Pit Water Outflow Concentration
				lb/month	lb/month	lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L		lb/yr	lb/yr	ug/L
1	5	9	57	0.00	0.00	0.00	93.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	5	10	58	0.00	0.00	0.00	90.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	5	11	59	0.00	0.00	0.00	86.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
1	**5**	**12**	60	0.00	0.00	0.00	83.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	**6**	**1**	61	0.00	0.00	0.00	80.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	6	2	62	0.00	0.00	0.00	77.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	6	3	63	0.00	0.00	0.00	74.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	6	4	64	0.00	0.00	0.00	72.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	6	5	65	0.00	0.00	0.00	69.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	6	6	66	0.00	0.00	0.00	67.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	6	7	67	0.00	0.00	0.00	65.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	6	8	68	0.00	0.00	0.00	62.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	6	9	69	0.00	0.00	0.00	60.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	6	10	70	0.00	0.00	0.00	57.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	6	11	71	0.00	0.00	0.00	56.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	6	12	72	0.00	0.00	0.00	53.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	7	1	73	0.00	0.00	0.00	52.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	7	2	74	0.00	0.00	0.00	50.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	7	3	75	0.00	0.00	0.00	48.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	7	4	76	0.00	0.00	0.00	46.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	7	5	77	0.00	0.00	0.00	45.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	7	6	78	0.00	0.00	0.00	42.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	7	7	79	0.00	0.00	0.00	40.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	7	8	80	0.00	0.00	0.00	39.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	7	9	81	0.00	0.00	0.00	38.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	7	10	82	0.00	0.00	0.00	36.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	7	11	83	0.00	0.00	0.00	35.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	7	12	84	0.00	0.00	0.00	32.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	8	1	85	0.00	0.00	0.00	31.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	8	2	86	0.00	0.00	0.00	29.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	8	3	87	0.00	0.00	0.00	28.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	8	4	88	0.00	0.00	0.00	26.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	8	5	89	0.00	0.00	0.00	25.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	8	6	90	0.00	0.00	0.00	23.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	8	7	91	0.00	0.00	0.00	22.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	8	8	92	0.00	0.00	0.00	21.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	8	9	93	0.00	0.00	0.00	21.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	8	10	94	0.00	0.00	0.00	19.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	8	11	95	0.00	0.00	0.00	18.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
2	**8**	12	96	0.00	0.00	0.00	16.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%			0.00
3	9	**1**	97	0.00	0.11	0.00	15.47	0.00	0.00	0.00	0.00	0.00	0.00	53.96	0%			53.96
3	9	2	98	0.01	0.38	0.00	14.05	0.00	0.00	0.00	0.00	0.39	0.00	53.96	0%			53.96
3	9	3	99	0.01	0.29	0.00	14.05	0.00	0.00	0.00	0.00	0.31	0.00	53.96	0%			53.96
3	9	4	100	0.01	0.23	0.00	12.63	0.00	0.00	0.00	0.00	0.24	0.00	53.96	0%			53.96
3	9	5	101	0.00	0.08	0.00	11.22	0.00	0.00	0.00	0.00	0.08	0.00	53.96	0%			53.96
3	9	6	102	0.00	0.02	0.00	9.80	0.00	0.00	0.00	0.00	0.02	0.00	53.96	0%			53.96
3	9	7	103	0.00	0.00	0.00	8.38	0.00	0.00	0.00	0.00	0.00	0.00	53.96	0%			53.96
3	9	8	104	0.00	0.00	0.00	8.38	0.00	0.00	0.00	0.00	0.00	0.00	53.96	0%			53.96
3	9	9	105	0.00	0.02	0.00	6.96	0.00	0.00	0.00	0.00	0.02	0.00	53.96	0%			53.96
3	9	10	106	0.01	0.30	0.00	5.55	0.00	0.00	0.00	0.00	0.31	0.00	53.96	0%			53.96
3	9	11	107	0.04	1.09	0.00	4.13	0.00	0.00	0.00	0.00	1.13	0.00	53.96	0%			53.96
3	9	12	108	0.06	1.73	0.00	4.13	0.00	0.00	0.00	0.00	1.79	0.00	53.96	0%			53.96
3	10	1	109	0.06	1.48	0.00	4.13	0.00	0.00	0.00	0.00	1.54	0.00	53.96	0%			53.96
3	10	2	110	0.10	2.65	0.00	4.13	0.00	0.00	0.00	0.00	2.75	0.00	53.96	0%			53.96
3	10	3	111	0.06	1.47	0.00	4.13	0.00	0.00	0.00	0.00	1.53	0.00	53.96	0%			53.96
3	10	4	112	0.03	0.91	0.00	4.13	0.00	0.00	0.00	0.00	0.94	0.00	53.96	0%			53.96
3	10	5	113	0.01	0.27	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	53.96	0%			53.96
~~3~~	~~10~~	~~6~~	~~114~~	~~0.00~~	~~0.07~~	~~0.00~~	~~4.13~~	~~0.00~~	~~0.00~~	~~0.00~~	~~0.00~~	~~0.07~~	~~0.00~~	~~53.96~~	~~0%~~			~~53.96~~
~~3~~	~~10~~	~~11~~	~~115~~	~~0.00~~	~~0.01~~	~~0.00~~	~~4.13~~	~~0.00~~	~~0.00~~	~~0.00~~	~~0.00~~	~~0.01~~	~~0.00~~	~~53.96~~	~~0%~~			~~53.96~~
3	11	3	123	0.10	2.65	0.00	4.13	0.00	0.00	0.00	0.00	2.75	0.00	53.96	0%			53.96
3	11	4	124	0.06	1.59	0.00	4.13	0.00	0.00	0.00	0.00	1.65	0.00	53.96	0%			53.96
3	11	5	125	0.02	0.45	0.00	4.13	0.00	0.00	0.00	0.00	0.47	0.00	53.96	0%			53.96
3	11	6	126	0.00	0.08	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	53.96	0%			53.96
3	11	7	127	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	53.96	0%			53.96
3	11	8	128	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	53.96	0%			53.96
3	11	9	129	0.00	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.07	0.00	53.96	0%			53.96
3	11	10	130	0.04	1.02	0.00	4.13	0.00	0.00	0.00	0.00	1.06	0.00	53.96	0%			53.96
3	11	11	131	0.13	3.45	0.00	4.13	0.00	0.00	0.00	0.00	3.58	0.00	53.96	0%			53.96

Phase	Year	Month	Total Months	Date	Quarry Area (Greenstone/Greywacke)	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	WMSA	WMSA	Groundwater Inflow (Zerod out, included in pit water budget)	Undrained Backfill (No Surface Outlet)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	cu ft	sq ft	cu ft
3	11	12	132	12/1/2028	6,075,000	1,074,938	2,925,000	517,563	0	0	0	0	0
3	12	1	133	1/1/2029	6,243,750	875,859	3,006,250	421,710	0	0	0	0	0
3	12	2	134	2/1/2029	6,412,500	1,492,391	3,087,500	718,558	0	0	0	0	0
3	12	3	135	3/1/2029	6,581,250	794,930	3,168,750	382,744	0	0	0	0	0
3	12	4	136	4/1/2029	6,750,000	471,875	3,250,000	227,199	0	0	0	0	0
3	12	5	137	5/1/2029	6,918,750	133,570	3,331,250	64,312	0	0	0	0	0
3	12	6	138	6/1/2029	7,087,500	22,969	3,412,500	11,059	0	0	0	0	0
3	12	7	139	7/1/2029	7,256,250	1,008	3,493,750	485	0	0	0	0	0
3	12	8	140	8/1/2029	7,425,000	3,781	3,575,000	1,821	0	0	0	0	0
3	12	9	141	9/1/2029	7,593,750	18,984	3,656,250	9,141	0	0	0	0	0
3	12	10	142	10/1/2029	7,762,500	287,500	3,737,500	138,426	0	0	0	0	0
3	12	11	143	11/1/2029	7,931,250	963,500	3,818,750	463,907	0	0	0	0	0
3	**12**	**12**	144	**12/1/2029**	**8,100,000**	1,433,250	**3,900,000**	690,083	**0**	0	0	**0**	0
4	13	**1**	145	1/1/2030	8,145,833	1,142,679	3,854,167	540,654	0	0	0	0	0
4	13	2	146	2/1/2030	8,191,667	1,906,459	3,808,333	886,319	0	0	0	0	0
4	13	3	147	3/1/2030	8,237,500	994,983	3,762,500	454,461	0	0	0	0	0
4	13	4	148	4/1/2030	8,283,333	579,066	3,716,667	259,823	0	0	0	0	0
4	13	5	149	5/1/2030	8,329,167	160,799	3,670,833	70,867	0	0	0	0	0
4	13	6	150	6/1/2030	8,375,000	27,141	3,625,000	11,748	0	0	0	0	0
4	13	7	151	7/1/2030	8,420,833	1,170	3,579,167	497	0	0	0	0	0
4	13	8	152	8/1/2030	8,466,667	4,312	3,533,333	1,799	0	0	0	0	0
4	13	9	153	9/1/2030	8,512,500	21,281	3,487,500	8,719	0	0	0	0	0
4	13	10	154	10/1/2030	8,558,333	316,975	3,441,667	127,469	0	0	0	0	0
4	13	11	155	11/1/2030	8,604,167	1,045,247	3,395,833	412,531	0	0	0	0	0
4	13	12	156	12/1/2030	8,650,000	1,530,569	3,350,000	592,764	0	0	0	0	0
4	14	1	157	1/1/2031	8,695,833	1,219,832	3,304,167	463,501	0	0	0	0	0
4	14	2	158	2/1/2031	8,741,667	2,034,461	3,258,333	758,317	0	0	0	0	0
4	14	3	159	3/1/2031	8,787,500	1,061,416	3,212,500	388,028	0	0	0	0	0
4	14	4	160	4/1/2031	8,833,333	617,515	3,166,667	221,373	0	0	0	0	0
4	14	5	161	5/1/2031	8,879,167	171,417	3,120,833	60,249	0	0	0	0	0
4	14	6	162	6/1/2031	8,925,000	28,924	3,075,000	9,965	0	0	0	0	0
4	14	7	163	7/1/2031	8,970,833	1,246	3,029,167	421	0	0	0	0	0
4	14	8	164	8/1/2031	9,016,667	4,592	2,983,333	1,519	0	0	0	0	0
4	14	9	165	9/1/2031	9,062,500	22,656	2,937,500	7,344	0	0	0	0	0
4	14	10	166	10/1/2031	9,108,333	337,346	2,891,667	107,099	0	0	0	0	0
4	14	11	167	11/1/2031	9,154,167	1,112,062	2,845,833	345,716	0	0	0	0	0
4	**14**	**12**	168	**12/1/2031**	**9,200,000**	1,627,889	**2,800,000**	495,444	**0**	0	0	**0**	0
5	15	**1**	169	1/1/2032	9,247,222	1,297,180	2,727,778	382,647	0	0	0	**0**	0
5	15	2	170	2/1/2032	9,294,444	2,163,110	2,655,556	618,031	0	0	0	0	0
5	15	3	171	3/1/2032	9,341,667	1,128,352	2,583,333	312,033	0	0	0	0	0
5	15	4	172	4/1/2032	9,388,889	656,353	2,511,111	175,545	0	0	0	0	0
5	15	5	173	5/1/2032	9,436,111	182,169	2,438,889	47,084	0	0	0	0	0
5	15	6	174	6/1/2032	9,483,333	30,733	2,366,667	7,670	0	0	0	0	0
5	15	7	175	7/1/2032	9,530,556	1,324	2,294,444	319	0	0	0	0	0
5	15	8	176	8/1/2032	9,577,778	4,878	2,222,222	1,132	0	0	0	0	0
5	15	9	177	9/1/2032	9,625,000	24,063	2,150,000	5,375	0	0	0	0	0
5	15	10	178	10/1/2032	9,672,222	358,230	2,077,778	76,955	0	0	0	0	0
5	15	11	179	11/1/2032	9,719,444	1,180,733	2,005,556	243,638	0	0	0	0	0
5	15	12	180	12/1/2032	9,766,667	1,728,157	1,933,333	342,093	0	0	0	0	0
5	16	1	181	1/1/2033	9,813,889	1,376,671	1,861,111	261,073	0	0	0	0	0
5	16	2	182	2/1/2033	9,861,111	2,294,991	1,788,889	416,331	0	0	0	0	0
5	16	3	183	3/1/2033	9,908,333	1,196,798	1,716,667	207,351	0	0	0	0	0
5	16	4	184	4/1/2033	9,955,556	695,967	1,644,444	114,959	0	0	0	0	0
5	16	5	185	5/1/2033	10,002,778	193,109	1,572,222	30,353	0	0	0	0	0
5	16	6	186	6/1/2033	10,050,000	32,569	1,500,000	4,861	0	0	0	0	0
5	16	7	187	7/1/2033	10,097,222	1,402	1,427,778	198	0	0	0	0	0
5	16	8	188	8/1/2033	10,144,444	5,166	1,355,556	690	0	0	0	0	0
5	16	9	189	9/1/2033	10,191,667	25,479	1,283,333	3,208	0	0	0	0	0
5	16	10	190	10/1/2033	10,238,889	379,218	1,211,111	44,856	0	0	0	0	0
5	16	11	191	11/1/2033	10,286,111	1,249,572	1,138,889	138,354	0	0	0	0	0
5	17	10	202	10/1/2034	10,805,556	400,206	344,444	12,757	0	0	0	0	0
5	17	11	203	11/1/2034	10,852,778	1,318,412	272,222	33,070	0	0	0	0	0
5	**17**	**12**	204	**12/1/2034**	**10,900,000**	1,928,694	**200,000**	35,389	**0**	0	0	**0**	0
NA	18	**1**	205	1/1/2035	**10,900,000**	1,529,028	**200,000**	28,056	**0**	0	0	**0**	0
NA	18	2	206	2/1/2035	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	18	3	207	3/1/2035	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	18	4	208	4/1/2035	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	18	5	209	5/1/2035	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	18	6	210	6/1/2035	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	18	7	211	7/1/2035	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	18	8	212	8/1/2035	10,900,000	5,551	200,000	102	0	0	0	0	0

Phase	Year	Month	Total Months	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit (Zerod out)
				sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
3	11	12	132	0	0		1,592,500	1,592,500	0		683,796,886	**440**			1,592,500	0
3	12	1	133	0	0		1,297,569	1,297,569	0		683,796,886	**440**			1,297,569	0
3	12	2	134	0	0		2,210,949	2,210,949	0		683,796,886	**440**			2,210,949	0
3	12	3	135	0	0		1,177,674	1,177,674	0		683,796,886	**440**			1,177,674	0
3	12	4	136	0	0		699,074	699,074	0		683,796,886	**440**			699,074	0
3	12	5	137	0	0		197,882	197,882	0		683,796,886	**440**			197,882	0
3	12	6	138	0	0		34,028	34,028	0		683,796,886	**440**			34,028	0
3	12	7	139	0	0		1,493	1,493	0		683,796,886	**440**			1,493	0
3	12	8	140	0	0		5,602	5,602	0		683,796,886	**440**			5,602	0
3	12	9	141	0	0		28,125	28,125	0		683,796,886	**440**			28,125	0
3	12	10	142	0	0		425,926	425,926	0		683,796,886	**440**			425,926	0
3	12	11	143	0	0		1,427,407	1,427,407	0		683,796,886	**440**			1,427,407	0
3	**12**	**12**	144	**0**	0		2,123,333	2,123,333	0		683,796,886	**440**			2,123,333	0
4	13	**1**	145	0	0		1,683,333	1,683,333	0		683,796,886	**440**			1,683,333	0
4	13	2	146	0	0		2,792,778	2,792,778	0		683,796,886	**440**			2,792,778	0
4	13	3	147	0	0		1,449,444	1,449,444	0		683,796,886	**440**			1,449,444	0
4	13	4	148	0	0		838,889	838,889	0		683,796,886	**440**			838,889	0
4	13	5	149	0	0		231,667	231,667	0		683,796,886	**440**			231,667	0
4	13	6	150	0	0		38,889	38,889	0		683,796,886	**440**			38,889	0
4	13	7	151	0	0		1,667	1,667	0		683,796,886	**440**			1,667	0
4	13	8	152	0	0		6,111	6,111	0		683,796,886	**440**			6,111	0
4	13	9	153	0	0		30,000	30,000	0		683,796,886	**440**			30,000	0
4	13	10	154	0	0		444,444	444,444	0		683,796,886	**440**			444,444	0
4	13	11	155	0	0		1,457,778	1,457,778	0		683,796,886	**440**			1,457,778	0
4	13	12	156	0	0		2,123,333	2,123,333	0		683,796,886	**440**			2,123,333	0
4	14	1	157	0	0		1,683,333	1,683,333	0		683,796,886	**440**			1,683,333	0
4	14	2	158	0	0		2,792,778	2,792,778	0		683,796,886	**440**			2,792,778	0
4	14	3	159	0	0		1,449,444	1,449,444	0		683,796,886	**440**			1,449,444	0
4	14	4	160	0	0		838,889	838,889	0		683,796,886	**440**			838,889	0
4	14	5	161	0	0		231,667	231,667	0		683,796,886	**440**			231,667	0
4	14	6	162	0	0		38,889	38,889	0		683,796,886	**440**			38,889	0
4	14	7	163	0	0		1,667	1,667	0		683,796,886	**440**			1,667	0
4	14	8	164	0	0		6,111	6,111	0		683,796,886	**440**			6,111	0
4	14	9	165	0	0		30,000	30,000	0		683,796,886	**440**			30,000	0
4	14	10	166	0	0		444,444	444,444	0		683,796,886	**440**			444,444	0
4	14	11	167	0	0		1,457,778	1,457,778	0		683,796,886	**440**			1,457,778	0
4	**14**	**12**	168	**0**	0		2,123,333	2,123,333	0		683,796,886	**440**			2,123,333	0
5	15	**1**	169	**0**	0		1,679,826	1,679,826	0		683,796,886	**440**			1,679,826	0
5	15	2	170	0	0		2,781,141	2,781,141	0		683,796,886	**440**			2,781,141	0
5	15	3	171	0	0		1,440,385	1,440,385	0		683,796,886	**440**			1,440,385	0
5	15	4	172	0	0		831,898	831,898	0		683,796,886	**440**			831,898	0
5	15	5	173	0	0		229,253	229,253	0		683,796,886	**440**			229,253	0
5	15	6	174	0	0		38,403	38,403	0		683,796,886	**440**			38,403	0
5	15	7	175	0	0		1,642	1,642	0		683,796,886	**440**			1,642	0
5	15	8	176	0	0		6,009	6,009	0		683,796,886	**440**			6,009	0
5	15	9	177	0	0		29,438	29,438	0		683,796,886	**440**			29,438	0
5	15	10	178	0	0		435,185	435,185	0		683,796,886	**440**			435,185	0
5	15	11	179	0	0		1,424,370	1,424,370	0		683,796,886	**440**			1,424,370	0
5	15	12	180	0	0		2,070,250	2,070,250	0		683,796,886	**440**			2,070,250	0
5	16	1	181	0	0		1,637,743	1,637,743	0		683,796,886	**440**			1,637,743	0
5	16	2	182	0	0		2,711,322	2,711,322	0		683,796,886	**440**			2,711,322	0
5	16	3	183	0	0		1,404,149	1,404,149	0		683,796,886	**440**			1,404,149	0
5	16	4	184	0	0		810,926	810,926	0		683,796,886	**440**			810,926	0
5	16	5	185	0	0		223,462	223,462	0		683,796,886	**440**			223,462	0
5	16	6	186	0	0		37,431	37,431	0		683,796,886	**440**			37,431	0
5	16	7	187	0	0		1,601	1,601	0		683,796,886	**440**			1,601	0
5	16	8	188	0	0		5,856	5,856	0		683,796,886	**440**			5,856	0
5	16	9	189	0	0		28,688	28,688	0		683,796,886	**440**			28,688	0
5	16	10	190	0	0		424,074	424,074	0		683,796,886	**440**			424,074	0
5	16	11	191	0	0		1,387,926	1,387,926	0		683,796,886	**440**			1,387,926	0
5	17	10	202	0	0		412,963	412,963	0		683,796,886	**440**			412,963	0
5	17	11	203	0	0		1,351,481	1,351,481	0		683,796,886	**440**			1,351,481	0
5	**17**	**12**	204	**0**	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	18	**1**	205	**0**	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	18	2	206	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	18	3	207	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	18	4	208	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	18	5	209	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	18	6	210	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	18	7	211	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	18	8	212	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0

Phase	Year	Month	Total Months	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	WMSA	Groundwater Inflow (Zerod out, included in pit water budget)		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water Concentration	Insitue Treatment	First Year Load	Last Year Load	Pit Water Outflow Concentration
				lb/month	lb/month	lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L		lb/yr	lb/yr	ug/L
3	11	12	132	0.19	5.18	0.00	4.13	0.00	0.00	0.00	0.00	5.37	0.00	53.96	0%			53.96
3	12	1	133	0.16	4.22	0.00	4.13	0.00	0.00	0.00	0.00	4.38	0.00	53.96	0%			53.96
3	12	2	134	0.27	7.19	0.00	4.13	0.00	0.00	0.00	0.00	7.46	0.00	53.96	0%			53.96
3	12	3	135	0.14	3.83	0.00	4.13	0.00	0.00	0.00	0.00	3.97	0.00	53.96	0%			53.96
3	12	4	136	0.09	2.27	0.00	4.13	0.00	0.00	0.00	0.00	2.36	0.00	53.96	0%			53.96
3	12	5	137	0.02	0.64	0.00	4.13	0.00	0.00	0.00	0.00	0.67	0.00	53.96	0%			53.96
3	12	6	138	0.00	0.11	0.00	4.13	0.00	0.00	0.00	0.00	0.11	0.00	53.96	0%			53.96
3	12	7	139	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	53.96	0%			53.96
3	12	8	140	0.00	0.02	0.00	4.13	0.00	0.00	0.00	0.00	0.02	0.00	53.96	0%			53.96
3	12	9	141	0.00	0.09	0.00	4.13	0.00	0.00	0.00	0.00	0.09	0.00	53.96	0%			53.96
3	12	10	142	0.05	1.38	0.00	4.13	0.00	0.00	0.00	0.00	1.44	0.00	53.96	0%			53.96
3	12	11	143	0.17	4.64	0.00	4.13	0.00	0.00	0.00	0.00	4.81	0.00	53.96	0%			53.96
3	**12**	**12**	144	0.26	6.90	0.00	4.13	0.00	0.00	0.00	0.00	7.16	0.00	53.96	0%			53.96
4	13	**1**	145	0.21	5.41	0.00	4.13	0.00	0.00	0.00	0.00	5.68	0.00	53.36	0%			53.36
4	13	2	146	0.35	8.86	0.00	4.13	0.00	0.00	0.00	0.00	9.31	0.00	52.76	0%			52.76
4	13	3	147	0.18	4.54	0.00	4.13	0.00	0.00	0.00	0.00	4.78	0.00	52.16	0%			52.16
4	13	4	148	0.10	2.60	0.00	4.13	0.00	0.00	0.00	0.00	2.73	0.00	51.56	0%			51.56
4	13	5	149	0.03	0.71	0.00	4.13	0.00	0.00	0.00	0.00	0.75	0.00	50.96	0%			50.96
4	13	6	150	0.00	0.12	0.00	4.13	0.00	0.00	0.00	0.00	0.12	0.00	50.36	0%			50.36
4	13	7	151	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	49.76	0%			49.76
4	13	8	152	0.00	0.02	0.00	4.13	0.00	0.00	0.00	0.00	0.02	0.00	49.16	0%			49.16
4	13	9	153	0.00	0.09	0.00	4.13	0.00	0.00	0.00	0.00	0.09	0.00	48.56	0%			48.56
4	13	10	154	0.06	1.27	0.00	4.13	0.00	0.00	0.00	0.00	1.35	0.00	47.96	0%			47.96
4	13	11	155	0.19	4.13	0.00	4.13	0.00	0.00	0.00	0.00	4.37	0.00	47.36	0%			47.36
4	13	12	156	0.28	5.93	0.00	4.13	0.00	0.00	0.00	0.00	6.28	0.00	46.76	0%			46.76
4	14	1	157	0.22	4.64	0.00	4.13	0.00	0.00	0.00	0.00	4.92	0.00	46.16	0%			46.16
4	14	2	158	0.37	7.58	0.00	4.13	0.00	0.00	0.00	0.00	8.06	0.00	45.56	0%			45.56
4	14	3	159	0.19	3.88	0.00	4.13	0.00	0.00	0.00	0.00	4.13	0.00	44.96	0%			44.96
4	14	4	160	0.11	2.21	0.00	4.13	0.00	0.00	0.00	0.00	2.36	0.00	44.36	0%			44.36
4	14	5	161	0.03	0.60	0.00	4.13	0.00	0.00	0.00	0.00	0.64	0.00	43.76	0%			43.76
4	14	6	162	0.01	0.10	0.00	4.13	0.00	0.00	0.00	0.00	0.11	0.00	43.16	0%			43.16
4	14	7	163	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	42.56	0%			42.56
4	14	8	164	0.00	0.02	0.00	4.13	0.00	0.00	0.00	0.00	0.02	0.00	41.96	0%			41.96
4	14	9	165	0.00	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	41.36	0%			41.36
4	14	10	166	0.06	1.07	0.00	4.13	0.00	0.00	0.00	0.00	1.15	0.00	40.76	0%			40.76
4	14	11	167	0.20	3.46	0.00	4.13	0.00	0.00	0.00	0.00	3.71	0.00	40.16	0%			40.16
4	**14**	**12**	168	0.30	4.95	0.00	4.13	0.00	0.00	0.00	0.00	5.33	0.00	39.56	0%			39.56
5	15	**1**	169	0.24	3.83	0.00	4.13	0.00	0.00	0.00	0.00	4.15	0.00	38.69	0%			38.69
5	15	2	170	0.39	6.18	0.00	4.13	0.00	0.00	0.00	0.00	6.72	0.00	37.81	0%			37.81
5	15	3	171	0.20	3.12	0.00	4.13	0.00	0.00	0.00	0.00	3.40	0.00	36.93	0%			36.93
5	15	4	172	0.12	1.76	0.00	4.13	0.00	0.00	0.00	0.00	1.92	0.00	36.05	0%			36.05
5	15	5	173	0.03	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.52	0.00	35.17	0%			35.17
5	15	6	174	0.01	0.08	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	34.28	0%			34.28
5	15	7	175	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	33.38	0%			33.38
5	15	8	176	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	32.49	0%			32.49
5	15	9	177	0.00	0.05	0.00	4.13	0.00	0.00	0.00	0.00	0.06	0.00	31.58	0%			31.58
5	15	10	178	0.06	0.77	0.00	4.13	0.00	0.00	0.00	0.00	0.86	0.00	30.68	0%			30.68
5	15	11	179	0.21	2.44	0.00	4.13	0.00	0.00	0.00	0.00	2.73	0.00	29.77	0%			29.77
5	15	12	180	0.31	3.42	0.00	4.13	0.00	0.00	0.00	0.00	3.85	0.00	28.86	0%			28.86
5	16	1	181	0.25	2.61	0.00	4.13	0.00	0.00	0.00	0.00	2.95	0.00	27.94	0%			27.94
5	16	2	182	0.42	4.16	0.00	4.13	0.00	0.00	0.00	0.00	4.74	0.00	27.02	0%			27.02
5	16	3	183	0.22	2.07	0.00	4.13	0.00	0.00	0.00	0.00	2.37	0.00	26.10	0%			26.10
5	16	4	184	0.13	1.15	0.00	4.13	0.00	0.00	0.00	0.00	1.32	0.00	25.17	0%			25.17
5	16	5	185	0.04	0.30	0.00	4.13	0.00	0.00	0.00	0.00	0.35	0.00	24.24	0%			24.24
5	16	6	186	0.01	0.05	0.00	4.13	0.00	0.00	0.00	0.00	0.06	0.00	23.30	0%			23.30
5	16	7	187	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	22.36	0%			22.36
5	16	8	188	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	21.42	0%			21.42
5	16	9	189	0.00	0.03	0.00	4.13	0.00	0.00	0.00	0.00	0.04	0.00	20.47	0%			20.47
5	16	10	190	0.07	0.45	0.00	4.13	0.00	0.00	0.00	0.00	0.54	0.00	19.52	0%			19.52
5	16	11	191	0.23	1.38	0.00	4.13	0.00	0.00	0.00	0.00	1.69	0.00	18.56	0%			18.56
5	17	10	202	0.07	0.13	0.00	4.13	0.00	0.00	0.00	0.00	0.23	0.00	7.75	0%			7.75
5	17	11	203	0.24	0.33	0.00	4.13	0.00	0.00	0.00	0.00	0.65	0.00	6.74	0%			6.74
5	**17**	**12**	204	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.83	0.00	5.73	0%			5.73
NA	18	**1**	205	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	18	2	206	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	18	3	207	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	18	4	208	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	18	5	209	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	18	6	210	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	18	7	211	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	18	8	212	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73

Phase	Year	Month	Total Months	Date	Quarry Area (Greenstone/Greywacke)	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	WMSA	WMSA	Groundwater Inflow (Zerod out, included in pit water budget)	Undrained Backfill (No Surface Outlet)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	cu ft	sq ft	cu ft
NA	18	9	213	9/1/2035	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	18	10	214	10/1/2035	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	18	11	215	11/1/2035	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	18	12	216	12/1/2035	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	19	1	217	1/1/2036	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	19	2	218	2/1/2036	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	19	3	219	3/1/2036	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	19	4	220	4/1/2036	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	19	5	221	5/1/2036	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	19	6	222	6/1/2036	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	19	7	223	7/1/2036	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	19	8	224	8/1/2036	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	19	9	225	9/1/2036	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	19	10	226	10/1/2036	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	19	11	227	11/1/2036	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	19	12	228	12/1/2036	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	20	1	229	1/1/2037	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	20	2	230	2/1/2037	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	20	3	231	3/1/2037	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	20	4	232	4/1/2037	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	20	5	233	5/1/2037	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	20	6	234	6/1/2037	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	20	7	235	7/1/2037	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	20	8	236	8/1/2037	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	20	9	237	9/1/2037	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	20	10	238	10/1/2037	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	20	11	239	11/1/2037	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	20	12	240	12/1/2037	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	21	1	241	1/1/2038	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	21	2	242	2/1/2038	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	21	3	243	3/1/2038	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	21	4	244	4/1/2038	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	21	5	245	5/1/2038	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	21	6	246	6/1/2038	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	21	7	247	7/1/2038	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	21	8	248	8/1/2038	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	21	9	249	9/1/2038	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	21	10	250	10/1/2038	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	21	11	251	11/1/2038	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	21	12	252	12/1/2038	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	22	1	253	1/1/2039	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	22	2	254	2/1/2039	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	22	3	255	3/1/2039	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	22	4	256	4/1/2039	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	22	5	257	5/1/2039	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	22	6	258	6/1/2039	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	22	7	259	7/1/2039	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	22	8	260	8/1/2039	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	22	9	261	9/1/2039	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	22	10	262	10/1/2039	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	22	11	263	11/1/2039	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	22	12	264	12/1/2039	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	23	1	265	1/1/2040	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	23	2	266	2/1/2040	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	23	3	267	3/1/2040	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	23	4	268	4/1/2040	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	23	5	269	5/1/2040	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	23	6	270	6/1/2040	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	23	7	271	7/1/2040	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	23	8	272	8/1/2040	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	23	9	273	9/1/2040	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	23	10	274	10/1/2040	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	23	11	275	11/1/2040	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	23	12	276	12/1/2040	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	24	1	277	1/1/2041	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	24	2	278	2/1/2041	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	24	3	279	3/1/2041	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	24	4	280	4/1/2041	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	24	5	281	5/1/2041	10,900,000	210,431	200,000	3,861	0	0	0	0	0

Phase	Year	Month	Total Months	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit (Zerod out)
				sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
NA	18	9	213	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	18	10	214	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	18	11	215	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	18	12	216	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	19	1	217	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	19	2	218	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	19	3	219	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	19	4	220	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	19	5	221	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	19	6	222	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	19	7	223	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	19	8	224	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	19	9	225	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	19	10	226	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	19	11	227	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	19	12	228	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	20	1	229	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	20	2	230	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	20	3	231	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	20	4	232	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	20	5	233	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	20	6	234	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	20	7	235	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	20	8	236	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	20	9	237	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	20	10	238	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	20	11	239	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	20	12	240	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	21	1	241	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	21	2	242	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	21	3	243	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	21	4	244	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	21	5	245	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	21	6	246	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	21	7	247	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	21	8	248	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	21	9	249	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	21	10	250	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	21	11	251	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	21	12	252	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	22	1	253	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	22	2	254	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	22	3	255	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	22	4	256	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	22	5	257	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	22	6	258	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	22	7	259	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	22	8	260	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	22	9	261	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	22	10	262	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	22	11	263	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	22	12	264	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	23	1	265	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	23	2	266	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	23	3	267	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	23	4	268	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	23	5	269	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	23	6	270	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	23	7	271	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	23	8	272	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	23	9	273	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	23	10	274	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	23	11	275	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	23	12	276	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	24	1	277	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	24	2	278	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	24	3	279	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	24	4	280	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	24	5	281	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0

Phase	Year	Month	Total Months	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	WMSA	Groundwater Inflow (Zerod out, included in pit water budget)		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water Concentration	Insitue Treatment	First Year Load	Last Year Load	Pit Water Outflow Concentration
				lb/month	lb/month	lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L		lb/yr	lb/yr	ug/L
NA	18	9	213	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	18	10	214	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	18	11	215	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	18	12	216	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	19	1	217	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	19	2	218	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	19	3	219	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	19	4	220	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	19	5	221	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	19	6	222	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	19	7	223	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	19	8	224	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	19	9	225	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	19	10	226	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	19	11	227	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	19	12	228	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	20	1	229	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	20	2	230	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	20	3	231	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	20	4	232	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	20	5	233	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	20	6	234	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	20	7	235	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	20	8	236	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	20	9	237	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	20	10	238	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	20	11	239	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	20	12	240	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	21	1	241	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	21	2	242	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	21	3	243	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	21	4	244	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	21	5	245	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	21	6	246	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	21	7	247	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	21	8	248	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	21	9	249	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	21	10	250	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	21	11	251	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	21	12	252	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	22	1	253	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	22	2	254	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	22	3	255	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	22	4	256	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	22	5	257	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	22	6	258	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	22	7	259	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	22	8	260	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	22	9	261	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	22	10	262	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	22	11	263	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	22	12	264	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	23	1	265	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	23	2	266	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	23	3	267	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	23	4	268	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	23	5	269	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	23	6	270	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	23	7	271	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	23	8	272	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	23	9	273	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	23	10	274	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	23	11	275	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	23	12	276	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	24	1	277	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	24	2	278	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	24	3	279	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	24	4	280	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	24	5	281	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73

Phase	Year	Month	Total Months	Date	Quarry Area (Greenstone/Greywacke)	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	WMSA	WMSA	Groundwater Inflow (Zerod out, included in pit water budget)	Undrained Backfill (No Surface Outlet)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	cu ft	sq ft	cu ft
NA	24	6	282	6/1/2041	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	24	7	283	7/1/2041	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	24	8	284	8/1/2041	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	24	9	285	9/1/2041	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	24	10	286	10/1/2041	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	24	11	287	11/1/2041	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	24	12	288	12/1/2041	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	25	1	289	1/1/2042	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	25	2	290	2/1/2042	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	25	3	291	3/1/2042	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	25	4	292	4/1/2042	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	25	5	293	5/1/2042	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	25	6	294	6/1/2042	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	25	7	295	7/1/2042	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	25	8	296	8/1/2042	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	25	9	297	9/1/2042	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	25	10	298	10/1/2042	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	25	11	299	11/1/2042	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	25	12	300	12/1/2042	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	26	1	301	1/1/2043	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	26	2	302	2/1/2043	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	26	3	303	3/1/2043	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	26	4	304	4/1/2043	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	26	5	305	5/1/2043	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	26	6	306	6/1/2043	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	26	7	307	7/1/2043	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	26	8	308	8/1/2043	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	26	9	309	9/1/2043	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	26	10	310	10/1/2043	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	26	11	311	11/1/2043	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	26	12	312	12/1/2043	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	27	1	313	1/1/2044	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	27	2	314	2/1/2044	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	27	3	315	3/1/2044	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	27	4	316	4/1/2044	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	27	5	317	5/1/2044	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	27	6	318	6/1/2044	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	27	7	319	7/1/2044	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	27	8	320	8/1/2044	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	27	9	321	9/1/2044	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	27	10	322	10/1/2044	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	27	11	323	11/1/2044	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	27	12	324	12/1/2044	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	28	1	325	1/1/2045	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	28	2	326	2/1/2045	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	28	3	327	3/1/2045	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	28	4	328	4/1/2045	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	28	5	329	5/1/2045	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	28	6	330	6/1/2045	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	28	7	331	7/1/2045	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	28	8	332	8/1/2045	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	28	9	333	9/1/2045	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	28	10	334	10/1/2045	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	28	11	335	11/1/2045	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	28	12	336	12/1/2045	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	29	1	337	1/1/2046	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	29	2	338	2/1/2046	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	29	3	339	3/1/2046	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	29	4	340	4/1/2046	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	29	5	341	5/1/2046	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	29	6	342	6/1/2046	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	29	7	343	7/1/2046	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	29	8	344	8/1/2046	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	29	9	345	9/1/2046	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	29	10	346	10/1/2046	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	29	11	347	11/1/2046	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	29	12	348	12/1/2046	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	30	1	349	1/1/2047	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	30	2	350	2/1/2047	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	30	3	351	3/1/2047	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	30	4	352	4/1/2047	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	30	5	353	5/1/2047	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	30	6	354	6/1/2047	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	30	7	355	7/1/2047	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	30	8	356	8/1/2047	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	30	9	357	9/1/2047	10,900,000	27,250	200,000	500	0	0	0	0	0

Phase	Year	Month	Total Months	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit (Zerod out)
				sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
NA	24	6	282	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	24	7	283	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	24	8	284	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	24	9	285	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	24	10	286	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	24	11	287	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	24	12	288	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	25	1	289	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	25	2	290	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	25	3	291	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	25	4	292	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	25	5	293	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	25	6	294	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	25	7	295	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	25	8	296	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	25	9	297	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	25	10	298	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	25	11	299	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	25	12	300	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	26	1	301	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	26	2	302	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	26	3	303	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	26	4	304	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	26	5	305	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	26	6	306	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	26	7	307	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	26	8	308	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	26	9	309	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	26	10	310	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	26	11	311	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	26	12	312	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	27	1	313	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	27	2	314	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	27	3	315	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	27	4	316	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	27	5	317	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	27	6	318	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	27	7	319	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	27	8	320	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	27	9	321	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	27	10	322	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	27	11	323	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	27	12	324	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	28	1	325	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	28	2	326	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	28	3	327	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	28	4	328	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	28	5	329	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	28	6	330	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	28	7	331	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	28	8	332	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	28	9	333	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	28	10	334	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	28	11	335	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	28	12	336	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	29	1	337	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	29	2	338	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	29	3	339	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	29	4	340	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	29	5	341	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	29	6	342	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	29	7	343	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	29	8	344	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	29	9	345	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	29	10	346	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	29	11	347	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	29	12	348	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	30	1	349	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	30	2	350	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	30	3	351	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	30	4	352	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	30	5	353	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	30	6	354	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	30	7	355	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	30	8	356	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	30	9	357	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0

Phase	Year	Month	Total Months	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	WMSA	Groundwater Inflow (Zerod out, included in pit water budget)		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water Concentration	Insitue Treatment	First Year Load	Last Year Load	Pit Water Outflow Concentration
				lb/month	lb/month	lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L		lb/yr	lb/yr	ug/L
NA	24	6	282	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	24	7	283	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	24	8	284	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	24	9	285	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	24	10	286	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	24	11	287	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	24	12	288	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	25	1	289	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	25	2	290	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	25	3	291	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	25	4	292	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	25	5	293	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	25	6	294	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	25	7	295	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	25	8	296	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	25	9	297	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	25	10	298	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	25	11	299	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	25	12	300	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	26	1	301	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	26	2	302	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	26	3	303	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	26	4	304	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	26	5	305	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	26	6	306	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	26	7	307	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	26	8	308	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	26	9	309	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	26	10	310	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	26	11	311	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	26	12	312	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	27	1	313	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	27	2	314	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	27	3	315	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	27	4	316	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	27	5	317	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	27	6	318	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	27	7	319	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	27	8	320	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	27	9	321	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	27	10	322	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	27	11	323	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	27	12	324	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	28	1	325	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	28	2	326	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	28	3	327	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	28	4	328	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	28	5	329	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	28	6	330	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	28	7	331	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	28	8	332	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	28	9	333	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	28	10	334	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	28	11	335	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	28	12	336	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	29	1	337	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	29	2	338	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	29	3	339	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	29	4	340	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	29	5	341	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	29	6	342	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	29	7	343	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	29	8	344	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	29	9	345	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	29	10	346	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	29	11	347	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	29	12	348	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	30	1	349	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	30	2	350	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	30	3	351	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	30	4	352	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	30	5	353	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	30	6	354	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	30	7	355	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	30	8	356	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	30	9	357	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73

Phase	Year	Month	Total Months	Date	Quarry Area (Greenstone/Greywacke)	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	WMSA	WMSA	Groundwater Inflow (Zerod out, included in pit water budget)	Undrained Backfill (No Surface Outlet)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	cu ft	sq ft	cu ft
NA	30	10	358	10/1/2047	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	30	11	359	11/1/2047	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	30	12	360	12/1/2047	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	31	1	361	1/1/2048	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	31	2	362	2/1/2048	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	31	3	363	3/1/2048	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	31	4	364	4/1/2048	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	31	5	365	5/1/2048	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	31	6	366	6/1/2048	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	31	7	367	7/1/2048	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	31	8	368	8/1/2048	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	31	9	369	9/1/2048	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	31	10	370	10/1/2048	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	31	11	371	11/1/2048	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	31	12	372	12/1/2048	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	32	1	373	1/1/2049	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	32	2	374	2/1/2049	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	32	3	375	3/1/2049	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	32	4	376	4/1/2049	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	32	5	377	5/1/2049	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	32	6	378	6/1/2049	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	32	7	379	7/1/2049	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	32	8	380	8/1/2049	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	32	9	381	9/1/2049	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	32	10	382	10/1/2049	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	32	11	383	11/1/2049	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	32	12	384	12/1/2049	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	33	1	385	1/1/2050	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	33	2	386	2/1/2050	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	33	3	387	3/1/2050	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	33	4	388	4/1/2050	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	33	5	389	5/1/2050	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	33	6	390	6/1/2050	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	33	7	391	7/1/2050	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	33	8	392	8/1/2050	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	33	9	393	9/1/2050	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	33	10	394	10/1/2050	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	33	11	395	11/1/2050	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	33	12	396	12/1/2050	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	34	1	397	1/1/2051	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	34	2	398	2/1/2051	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	34	3	399	3/1/2051	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	34	4	400	4/1/2051	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	34	5	401	5/1/2051	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	34	6	402	6/1/2051	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	34	7	403	7/1/2051	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	34	8	404	8/1/2051	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	34	9	405	9/1/2051	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	34	10	406	10/1/2051	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	34	11	407	11/1/2051	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	34	12	408	12/1/2051	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	35	1	409	1/1/2052	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	35	2	410	2/1/2052	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	35	3	411	3/1/2052	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	35	4	412	4/1/2052	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	35	5	413	5/1/2052	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	35	6	414	6/1/2052	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	35	7	415	7/1/2052	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	35	8	416	8/1/2052	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	35	9	417	9/1/2052	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	35	10	418	10/1/2052	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	35	11	419	11/1/2052	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	35	12	420	12/1/2052	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	36	1	421	1/1/2053	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	36	2	422	2/1/2053	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	36	3	423	3/1/2053	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	36	4	424	4/1/2053	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	36	5	425	5/1/2053	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	36	6	426	6/1/2053	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	36	7	427	7/1/2053	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	36	8	428	8/1/2053	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	36	9	429	9/1/2053	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	36	10	430	10/1/2053	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	36	11	431	11/1/2053	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	36	12	432	12/1/2053	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	37	1	433	1/1/2054	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	37	2	434	2/1/2054	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	37	3	435	3/1/2054	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0

Phase	Year	Month	Total Months	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit (Zerod out)
				sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
NA	30	10	358	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	30	11	359	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	30	12	360	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	31	1	361	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	31	2	362	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	31	3	363	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	31	4	364	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	31	5	365	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	31	6	366	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	31	7	367	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	31	8	368	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	31	9	369	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	31	10	370	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	31	11	371	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	31	12	372	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	32	1	373	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	32	2	374	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	32	3	375	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	32	4	376	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	32	5	377	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	32	6	378	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	32	7	379	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	32	8	380	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	32	9	381	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	32	10	382	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	32	11	383	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	32	12	384	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	33	1	385	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	33	2	386	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	33	3	387	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	33	4	388	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	33	5	389	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	33	6	390	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	33	7	391	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	33	8	392	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	33	9	393	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	33	10	394	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	33	11	395	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	33	12	396	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	34	1	397	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	34	2	398	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	34	3	399	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	34	4	400	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	34	5	401	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	34	6	402	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	34	7	403	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	34	8	404	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	34	9	405	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	34	10	406	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	34	11	407	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	34	12	408	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	35	1	409	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	35	2	410	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	35	3	411	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	35	4	412	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	35	5	413	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	35	6	414	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	35	7	415	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	35	8	416	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	35	9	417	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	35	10	418	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	35	11	419	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	35	12	420	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	36	1	421	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	36	2	422	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	36	3	423	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	36	4	424	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	36	5	425	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	36	6	426	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	36	7	427	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	36	8	428	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	36	9	429	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	36	10	430	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	36	11	431	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	36	12	432	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	37	1	433	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	37	2	434	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	37	3	435	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0

Phase	Year	Month	Total Months	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	WMSA	Groundwater Inflow (Zerod out, included in pit water budget)		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water Concentration	Insitue Treatment	First Year Load	Last Year Load	Pit Water Outflow Concentration
				lb/month	lb/month	lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L		lb/yr	lb/yr	ug/L
NA	30	10	358	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	30	11	359	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	30	12	360	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	31	1	361	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	31	2	362	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	31	3	363	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	31	4	364	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	31	5	365	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	31	6	366	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	31	7	367	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	31	8	368	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	31	9	369	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	31	10	370	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	31	11	371	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	31	12	372	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	32	1	373	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	32	2	374	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	32	3	375	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	32	4	376	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	32	5	377	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	32	6	378	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	32	7	379	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	32	8	380	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	32	9	381	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	32	10	382	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	32	11	383	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	32	12	384	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	33	1	385	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	33	2	386	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	33	3	387	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	33	4	388	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	33	5	389	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	33	6	390	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	33	7	391	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	33	8	392	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	33	9	393	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	33	10	394	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	33	11	395	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	33	12	396	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	34	1	397	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	34	2	398	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	34	3	399	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	34	4	400	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	34	5	401	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	34	6	402	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	34	7	403	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	34	8	404	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	34	9	405	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	34	10	406	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	34	11	407	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	34	12	408	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	35	1	409	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	35	2	410	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	35	3	411	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	35	4	412	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	35	5	413	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	35	6	414	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	35	7	415	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	35	8	416	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	35	9	417	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	35	10	418	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	35	11	419	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	35	12	420	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	36	1	421	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	36	2	422	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	36	3	423	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	36	4	424	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	36	5	425	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	36	6	426	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	36	7	427	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	36	8	428	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	36	9	429	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	36	10	430	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	36	11	431	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	36	12	432	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	37	1	433	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	37	2	434	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	37	3	435	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73

Phase	Year	Month	Total Months	Date	Quarry Area (Greenstone/Greywacke)	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	WMSA	WMSA	Groundwater Inflow (Zerod out, included in pit water budget)	Undrained Backfill (No Surface Outlet)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	cu ft	sq ft	cu ft
NA	37	4	436	4/1/2054	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	37	5	437	5/1/2054	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	37	6	438	6/1/2054	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	37	7	439	7/1/2054	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	37	8	440	8/1/2054	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	37	9	441	9/1/2054	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	37	10	442	10/1/2054	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	37	11	443	11/1/2054	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	37	12	444	12/1/2054	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	38	1	445	1/1/2055	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	38	2	446	2/1/2055	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	38	3	447	3/1/2055	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	38	4	448	4/1/2055	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	38	5	449	5/1/2055	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	38	6	450	6/1/2055	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	38	7	451	7/1/2055	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	38	8	452	8/1/2055	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	38	9	453	9/1/2055	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	38	10	454	10/1/2055	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	38	11	455	11/1/2055	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	38	12	456	12/1/2055	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	39	1	457	1/1/2056	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	39	2	458	2/1/2056	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	39	3	459	3/1/2056	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	39	4	460	4/1/2056	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	39	5	461	5/1/2056	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	39	6	462	6/1/2056	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	39	7	463	7/1/2056	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	39	8	464	8/1/2056	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	39	9	465	9/1/2056	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	39	10	466	10/1/2056	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	39	11	467	11/1/2056	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	39	12	468	12/1/2056	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	40	1	469	1/1/2057	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	40	2	470	2/1/2057	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	40	3	471	3/1/2057	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	40	4	472	4/1/2057	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	40	5	473	5/1/2057	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	40	6	474	6/1/2057	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	40	7	475	7/1/2057	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	40	8	476	8/1/2057	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	40	9	477	9/1/2057	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	40	10	478	10/1/2057	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	40	11	479	11/1/2057	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	40	12	480	12/1/2057	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	41	1	481	1/1/2058	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	41	2	482	2/1/2058	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	41	3	483	3/1/2058	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	41	4	484	4/1/2058	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	41	5	485	5/1/2058	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	41	6	486	6/1/2058	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	41	7	487	7/1/2058	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	41	8	488	8/1/2058	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	41	9	489	9/1/2058	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	41	10	490	10/1/2058	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	41	11	491	11/1/2058	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	41	12	492	12/1/2058	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	42	1	493	1/1/2059	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	42	2	494	2/1/2059	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	42	3	495	3/1/2059	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	42	4	496	4/1/2059	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	42	5	497	5/1/2059	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	42	6	498	6/1/2059	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	42	7	499	7/1/2059	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	42	8	500	8/1/2059	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	42	9	501	9/1/2059	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	42	10	502	10/1/2059	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	42	11	503	11/1/2059	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0
NA	42	12	504	12/1/2059	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0
NA	43	1	505	1/1/2060	10,900,000	1,529,028	200,000	28,056	0	0	0	0	0
NA	43	2	506	2/1/2060	10,900,000	2,536,773	200,000	46,546	0	0	0	0	0
NA	43	3	507	3/1/2060	10,900,000	1,316,579	200,000	24,157	0	0	0	0	0
NA	43	4	508	4/1/2060	10,900,000	761,991	200,000	13,981	0	0	0	0	0
NA	43	5	509	5/1/2060	10,900,000	210,431	200,000	3,861	0	0	0	0	0
NA	43	6	510	6/1/2060	10,900,000	35,324	200,000	648	0	0	0	0	0
NA	43	7	511	7/1/2060	10,900,000	1,514	200,000	28	0	0	0	0	0
NA	43	8	512	8/1/2060	10,900,000	5,551	200,000	102	0	0	0	0	0
NA	43	9	513	9/1/2060	10,900,000	27,250	200,000	500	0	0	0	0	0
NA	43	10	514	10/1/2060	10,900,000	403,704	200,000	7,407	0	0	0	0	0
NA	43	11	515	11/1/2060	10,900,000	1,324,148	200,000	24,296	0	0	0	0	0

Phase	Year	Month	Total Months	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit (Zerod out)
				sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
NA	37	4	436	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	37	5	437	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	37	6	438	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	37	7	439	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	37	8	440	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	37	9	441	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	37	10	442	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	37	11	443	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	37	12	444	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	38	1	445	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	38	2	446	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	38	3	447	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	38	4	448	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	38	5	449	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	38	6	450	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	38	7	451	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	38	8	452	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	38	9	453	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	38	10	454	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	38	11	455	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	38	12	456	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	39	1	457	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	39	2	458	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	39	3	459	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	39	4	460	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	39	5	461	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	39	6	462	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	39	7	463	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	39	8	464	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	39	9	465	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	39	10	466	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	39	11	467	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	39	12	468	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	40	1	469	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	40	2	470	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	40	3	471	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	40	4	472	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	40	5	473	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	40	6	474	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	40	7	475	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	40	8	476	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	40	9	477	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	40	10	478	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	40	11	479	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	40	12	480	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	41	1	481	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	41	2	482	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	41	3	483	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	41	4	484	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	41	5	485	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	41	6	486	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	41	7	487	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	41	8	488	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	41	9	489	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	41	10	490	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	41	11	491	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	41	12	492	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	42	1	493	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	42	2	494	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	42	3	495	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	42	4	496	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	42	5	497	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	42	6	498	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	42	7	499	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	42	8	500	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	42	9	501	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	42	10	502	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	42	11	503	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0
NA	42	12	504	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0
NA	43	1	505	0	0		1,557,083	1,557,083	0		683,796,886	**440**			1,557,083	0
NA	43	2	506	0	0		2,583,319	2,583,319	0		683,796,886	**440**			2,583,319	0
NA	43	3	507	0	0		1,340,736	1,340,736	0		683,796,886	**440**			1,340,736	0
NA	43	4	508	0	0		775,972	775,972	0		683,796,886	**440**			775,972	0
NA	43	5	509	0	0		214,292	214,292	0		683,796,886	**440**			214,292	0
NA	43	6	510	0	0		35,972	35,972	0		683,796,886	**440**			35,972	0
NA	43	7	511	0	0		1,542	1,542	0		683,796,886	**440**			1,542	0
NA	43	8	512	0	0		5,653	5,653	0		683,796,886	**440**			5,653	0
NA	43	9	513	0	0		27,750	27,750	0		683,796,886	**440**			27,750	0
NA	43	10	514	0	0		411,111	411,111	0		683,796,886	**440**			411,111	0
NA	43	11	515	0	0		1,348,444	1,348,444	0		683,796,886	**440**			1,348,444	0

Phase	Year	Month	Total Months	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	WMSA	Groundwater Inflow (Zerod out, included in pit water budget)		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water Concentration	Insitue Treatment	First Year Load	Last Year Load	Pit Water Outflow Concentration
				lb/month	lb/month	lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L		lb/yr	lb/yr	ug/L
NA	37	4	436	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	37	5	437	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	37	6	438	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	37	7	439	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	37	8	440	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	37	9	441	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	37	10	442	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	37	11	443	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	37	12	444	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	38	1	445	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	38	2	446	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	38	3	447	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	38	4	448	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	38	5	449	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	38	6	450	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	38	7	451	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	38	8	452	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	38	9	453	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	38	10	454	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	38	11	455	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	38	12	456	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	39	1	457	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	39	2	458	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	39	3	459	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	39	4	460	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	39	5	461	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	39	6	462	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	39	7	463	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	39	8	464	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	39	9	465	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	39	10	466	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	39	11	467	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	39	12	468	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	40	1	469	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	40	2	470	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	40	3	471	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	40	4	472	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	40	5	473	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	40	6	474	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	40	7	475	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	40	8	476	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	40	9	477	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	40	10	478	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	40	11	479	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	40	12	480	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	41	1	481	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	41	2	482	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	41	3	483	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	41	4	484	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	41	5	485	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	41	6	486	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	41	7	487	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	41	8	488	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	41	9	489	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	41	10	490	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	41	11	491	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	41	12	492	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	42	1	493	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	42	2	494	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	42	3	495	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	42	4	496	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	42	5	497	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	42	6	498	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	42	7	499	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	42	8	500	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	42	9	501	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	42	10	502	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	42	11	503	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	42	12	504	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73
NA	43	1	505	0.28	0.28	0.00	4.13	0.00	0.00	0.00	0.00	0.56	0.00	5.73	0%			5.73
NA	43	2	506	0.46	0.47	0.00	4.13	0.00	0.00	0.00	0.00	0.93	0.00	5.73	0%			5.73
NA	43	3	507	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73
NA	43	4	508	0.14	0.14	0.00	4.13	0.00	0.00	0.00	0.00	0.28	0.00	5.73	0%			5.73
NA	43	5	509	0.04	0.04	0.00	4.13	0.00	0.00	0.00	0.00	0.08	0.00	5.73	0%			5.73
NA	43	6	510	0.01	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	43	7	511	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	43	8	512	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	5.73	0%			5.73
NA	43	9	513	0.00	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.00	5.73	0%			5.73
NA	43	10	514	0.07	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.15	0.00	5.73	0%			5.73
NA	43	11	515	0.24	0.24	0.00	4.13	0.00	0.00	0.00	0.00	0.48	0.00	5.73	0%			5.73

Phase	Year	Month	Total Months	Date	Quarry Area (Greenstone/Greywacke)	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	WMSA	WMSA	Groundwater Inflow (Zerod out, included in pit water budget)	Undrained Backfill (No Surface Outlet)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	cu ft	sq ft	cu ft
NA	43	12	516	12/1/2060	10,900,000	1,928,694	200,000	35,389	0	0	0	0	0

Phase	Year	Month	Total Months	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit (Zerod out)
				sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
NA	43	12	516	0	0		1,964,083	1,964,083	0		683,796,886	**440**			1,964,083	0

Phase	Year	Month	Total Months	Quarry Area (Greenstone/Greywacke)	Quarry Area (Limestone)	WMSA	Groundwater Inflow (Zerod out, included in pit water budget)		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water Concentration	Insitue Treatment	First Year Load	Last Year Load	Pit Water Outflow Concentration
				lb/month	lb/month	lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L		lb/yr	lb/yr	ug/L
NA	43	12	516	0.35	0.35	0.00	4.13	0.00	0.00	0.00	0.00	0.70	0.00	5.73	0%			5.73

Appendix D.2.1

D.2.1 South Quarry Reclamation Water Quality Projections

South Quarry Pit Lake Water Budget
Condition: All Phases

Inflows and Outflows	Parameters	Value	Units	cription and Rationale				
Precipitation	Precipitation	2.05	ft/yr	on wasterock backfill area is based on monthly precip data				
	End of Mining	Phases						
	12/31/2034	Initial	1	2	3	4A	4B	5
Quarry Backfilling Areas	**Surface Water Drainage to Pit**							
	Quarry Area (Limestone)	-	-	-	-	600,000	700,000	-
	Quarry Area (Breccia & Greywacke)	-	-	-	-	280,000	500,000	-
	Quarry Area -Un Mined	-	-	-	-	-	-	-
	Surface Infiltration to Pit (Through backfill)	-	-	-	-	-	-	-
	Undrained Backfill (No Surface Outlet)	-	-	-	-	-	-	-
	Drained Backfill (With Surface Outlet)	0	0	0	-	-	-	570,000
Groundwater Capture	Spill Elevation	1,100	ft amsl					
	Bottom of Pit	925	ft amsl					
	Pit Bottom	1,122	1,122	990	925	925	925	925
	At Pit Bottom	90	gpm					
		529,128	cu ft/mo					
	At Spill Elevation	10	gpm					
		58,792	cu ft/mo					
	Unmined	-	gpm					
		1,122	ft amsl	calculated				
Date Quarry Filling Starts	**1/1/2036**							
Assumptions	The pit is backfilled incrementally over a 4-year period, from 440 ft amsl to the spill-over elevation of 990 ft amsl							
	Backfill material has a porosity of 30-percent.							
	Surface runoff is only within the capture area of the pit and is based on water year 2009 data							
	Groundwater inflow into the pit varies by month and diminshes as the backfill increases							
	Precipitation directly infiltrates to the water table within the area of the backfill.							
	Evaporation of the pit lake is only applied when the cumulative volume of water in the pit is greater than the cumulative volume of void spaces within the backfill (based on 30-percent porosity)							
	The water level in the pit is dependent on the total cumulative volume of the backfill up to the spill-over elevation.							

Phase	Year	Month	Total Months	Date	Quarry Area (Breccia & Greywacke)	Quarry Area (Breccia & Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	Quarry Area -Un Mined	Quarry Area -Un Mined	Pit Invert Level	Groundwater Inflow (Zero out through 12/31/2034)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	ft amsl	cu ft	sq ft
1	**1**	**1**	**1**	**1/1/2018**	**0**	0	**0**	0	**0**	0	**1,122**	**0**	**0**
1	1	2	2	2/1/2018	0	0	0	0	0	0	1,122	0	0
1	1	3	3	3/1/2018	0	0	0	0	0	0	1,122	0	0
1	1	4	4	4/1/2018	0	0	0	0	0	0	1,122	0	0
1	1	5	5	5/1/2018	0	0	0	0	0	0	1,122	0	0
1	1	6	6	6/1/2018	0	0	0	0	0	0	1,122	0	0
1	1	7	7	7/1/2018	0	0	0	0	0	0	1,122	0	0
1	1	8	8	8/1/2018	0	0	0	0	0	0	1,122	0	0
1	1	9	9	9/1/2018	0	0	0	0	0	0	1,122	0	0
1	1	10	10	10/1/2018	0	0	0	0	0	0	1,122	0	0
1	1	11	11	11/1/2018	0	0	0	0	0	0	1,122	0	0
1	1	12	12	12/1/2018	0	0	0	0	0	0	1,122	0	0
1	2	1	13	1/1/2019	0	0	0	0	0	0	1,122	0	0
1	2	2	14	2/1/2019	0	0	0	0	0	0	1,122	0	0
1	2	3	15	3/1/2019	0	0	0	0	0	0	1,122	0	0
1	2	4	16	4/1/2019	0	0	0	0	0	0	1,122	0	0
1	2	5	17	5/1/2019	0	0	0	0	0	0	1,122	0	0
1	2	6	18	6/1/2019	0	0	0	0	0	0	1,122	0	0
1	2	7	19	7/1/2019	0	0	0	0	0	0	1,122	0	0
1	2	8	20	8/1/2019	0	0	0	0	0	0	1,122	0	0
1	2	9	21	9/1/2019	0	0	0	0	0	0	1,122	0	0
1	2	10	22	10/1/2019	0	0	0	0	0	0	1,122	0	0
1	2	11	23	11/1/2019	0	0	0	0	0	0	1,122	0	0
1	2	12	24	12/1/2019	0	0	0	0	0	0	1,122	0	0
1	3	1	25	1/1/2020	0	0	0	0	0	0	1,122	0	0
1	3	2	26	2/1/2020	0	0	0	0	0	0	1,122	0	0
1	3	3	27	3/1/2020	0	0	0	0	0	0	1,122	0	0
1	3	4	28	4/1/2020	0	0	0	0	0	0	1,122	0	0
1	3	5	29	5/1/2020	0	0	0	0	0	0	1,122	0	0
1	3	6	30	6/1/2020	0	0	0	0	0	0	1,122	0	0
1	3	7	31	7/1/2020	0	0	0	0	0	0	1,122	0	0
1	3	8	32	8/1/2020	0	0	0	0	0	0	1,122	0	0
1	3	9	33	9/1/2020	0	0	0	0	0	0	1,122	0	0
1	3	10	34	10/1/2020	0	0	0	0	0	0	1,122	0	0
1	3	11	35	11/1/2020	0	0	0	0	0	0	1,122	0	0
1	3	12	36	12/1/2020	0	0	0	0	0	0	1,122	0	0
1	4	1	37	1/1/2021	0	0	0	0	0	0	1,122	0	0
1	4	2	38	2/1/2021	0	0	0	0	0	0	1,122	0	0
1	4	3	39	3/1/2021	0	0	0	0	0	0	1,122	0	0
1	4	4	40	4/1/2021	0	0	0	0	0	0	1,122	0	0
1	4	5	41	5/1/2021	0	0	0	0	0	0	1,122	0	0
1	4	6	42	6/1/2021	0	0	0	0	0	0	1,122	0	0
1	4	7	43	7/1/2021	0	0	0	0	0	0	1,122	0	0
1	4	8	44	8/1/2021	0	0	0	0	0	0	1,122	0	0
1	4	9	45	9/1/2021	0	0	0	0	0	0	1,122	0	0
1	4	10	46	10/1/2021	0	0	0	0	0	0	1,122	0	0
1	4	11	47	11/1/2021	0	0	0	0	0	0	1,122	0	0
1	4	12	48	12/1/2021	0	0	0	0	0	0	1,122	0	0

Phase	Year	Month	Total Months	Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit
				cu ft	sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
1	**1**	**1**	**1**	0	**0**	0		0	0	**0**		**0**	**1,122**	**0**	**0**	**0**	0
1	1	2	2	0	0	0		0	0	0	NA	0	1,122			0	0
1	1	3	3	0	0	0		0	0	0		0	1,122			0	0
1	1	4	4	0	0	0		0	0	0		0	1,122			0	0
1	1	5	5	0	0	0		0	0	0		0	1,122			0	0
1	1	6	6	0	0	0		0	0	0		0	1,122			0	0
1	1	7	7	0	0	0		0	0	0		0	1,122			0	0
1	1	8	8	0	0	0		0	0	0		0	1,122			0	0
1	1	9	9	0	0	0		0	0	0		0	1,122			0	0
1	1	10	10	0	0	0		0	0	0		0	1,122			0	0
1	1	11	11	0	0	0		0	0	0		0	1,122			0	0
1	1	12	12	0	0	0		0	0	0		0	1,122			0	0
1	2	1	13	0	0	0		0	0	0		0	1,122			0	0
1	2	2	14	0	0	0		0	0	0		0	1,122			0	0
1	2	3	15	0	0	0		0	0	0		0	1,122			0	0
1	2	4	16	0	0	0		0	0	0		0	1,122			0	0
1	2	5	17	0	0	0		0	0	0		0	1,122			0	0
1	2	6	18	0	0	0		0	0	0		0	1,122			0	0
1	2	7	19	0	0	0		0	0	0		0	1,122			0	0
1	2	8	20	0	0	0		0	0	0		0	1,122			0	0
1	2	9	21	0	0	0		0	0	0		0	1,122			0	0
1	2	10	22	0	0	0		0	0	0		0	1,122			0	0
1	2	11	23	0	0	0		0	0	0		0	1,122			0	0
1	2	12	24	0	0	0		0	0	0		0	1,122			0	0
1	3	1	25	0	0	0		0	0	0		0	1,122			0	0
1	3	2	26	0	0	0		0	0	0		0	1,122			0	0
1	3	3	27	0	0	0		0	0	0		0	1,122			0	0
1	3	4	28	0	0	0		0	0	0		0	1,122			0	0
1	3	5	29	0	0	0		0	0	0		0	1,122			0	0
1	3	6	30	0	0	0		0	0	0		0	1,122			0	0
1	3	7	31	0	0	0		0	0	0		0	1,122			0	0
1	3	8	32	0	0	0		0	0	0		0	1,122			0	0
1	3	9	33	0	0	0		0	0	0		0	1,122			0	0
1	3	10	34	0	0	0		0	0	0		0	1,122			0	0
1	3	11	35	0	0	0		0	0	0		0	1,122			0	0
1	3	12	36	0	0	0		0	0	0		0	1,122			0	0
1	4	1	37	0	0	0		0	0	0		0	1,122			0	0
1	4	2	38	0	0	0		0	0	0		0	1,122			0	0
1	4	3	39	0	0	0		0	0	0		0	1,122			0	0
1	4	4	40	0	0	0		0	0	0		0	1,122			0	0
1	4	5	41	0	0	0		0	0	0		0	1,122			0	0
1	4	6	42	0	0	0		0	0	0		0	1,122			0	0
1	4	7	43	0	0	0		0	0	0		0	1,122			0	0
1	4	8	44	0	0	0		0	0	0		0	1,122			0	0
1	4	9	45	0	0	0		0	0	0		0	1,122			0	0
1	4	10	46	0	0	0		0	0	0		0	1,122			0	0
1	4	11	47	0	0	0		0	0	0		0	1,122			0	0
1	4	12	48	0	0	0		0	0	0		0	1,122			0	0

Phase	Year	Month	Total Months	Quarry Area (Breccia & Greywacke)	Quarry Area (Limestone)	Quarry Area - Un Mined	Groundwater Inflow (Zero out through 12/31/2034)		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Total Pit Inflow	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water & Outflow Concentration
				lb/month	lb/month	lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L
1	**1**	**1**	**1**	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	1	2	2	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	1	3	3	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	1	4	4	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	1	5	5	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	1	6	6	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	1	7	7	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	1	8	8	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	1	9	9	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	1	10	10	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	1	11	11	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	1	12	12	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	2	1	13	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	2	2	14	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	2	3	15	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	2	4	16	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	2	5	17	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	2	6	18	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	2	7	19	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	2	8	20	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	2	9	21	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	2	10	22	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	2	11	23	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	2	12	24	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	3	1	25	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	3	2	26	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	3	3	27	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	3	4	28	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	3	5	29	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	3	6	30	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	3	7	31	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	3	8	32	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	3	9	33	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	3	10	34	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	3	11	35	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	3	12	36	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	4	1	37	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	4	2	38	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	4	3	39	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	4	4	40	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	4	5	41	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	4	6	42	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	4	7	43	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	4	8	44	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	4	9	45	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	4	10	46	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	4	11	47	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	4	12	48	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase	Year	Month	Total Months	Date	Quarry Area (Breccia & Greywacke)	Quarry Area (Breccia & Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	Quarry Area -Un Mined	Quarry Area -Un Mined	Pit Invert Level	Groundwater Inflow (Zero out through 12/31/2034)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	ft amsl	cu ft	sq ft
2	5	**1**	49	1/1/2022	**0**	0	**0**	0	**0**	0	1,122	0	**0**
2	5	2	50	2/1/2022	0	0	0	0	0	0	1,122	0	0
2	5	3	51	3/1/2022	0	0	0	0	0	0	1,122	0	0
2	5	4	52	4/1/2022	0	0	0	0	0	0	1,122	0	0
2	5	5	53	5/1/2022	0	0	0	0	0	0	1,122	0	0
2	5	6	54	6/1/2022	0	0	0	0	0	0	1,122	0	0
2	5	7	55	7/1/2022	0	0	0	0	0	0	1,122	0	0
2	5	8	56	8/1/2022	0	0	0	0	0	0	1,122	0	0
2	5	9	57	9/1/2022	0	0	0	0	0	0	1,122	0	0
2	5	10	58	10/1/2022	0	0	0	0	0	0	1,122	0	0
2	5	11	59	11/1/2022	0	0	0	0	0	0	1,122	0	0
2	5	12	60	12/1/2022	0	0	0	0	0	0	1,122	0	0
2	6	1	61	1/1/2023	0	0	0	0	0	0	1,122	0	0
2	6	2	62	2/1/2023	0	0	0	0	0	0	1,122	0	0
2	6	3	63	3/1/2023	0	0	0	0	0	0	1,122	0	0
2	6	4	64	4/1/2023	0	0	0	0	0	0	1,122	0	0
2	6	5	65	5/1/2023	0	0	0	0	0	0	1,122	0	0
2	6	6	66	6/1/2023	0	0	0	0	0	0	1,122	0	0
2	6	7	67	7/1/2023	0	0	0	0	0	0	1,122	0	0
2	6	8	68	8/1/2023	0	0	0	0	0	0	1,122	0	0
2	6	9	69	9/1/2023	0	0	0	0	0	0	1,122	0	0
2	6	10	70	10/1/2023	0	0	0	0	0	0	1,122	0	0
2	6	11	71	11/1/2023	0	0	0	0	0	0	1,122	0	0
2	6	12	72	12/1/2023	0	0	0	0	0	0	1,122	0	0
2	7	1	73	1/1/2024	0	0	0	0	0	0	1,122	0	0
2	7	2	74	2/1/2024	0	0	0	0	0	0	1,122	0	0
2	7	3	75	3/1/2024	0	0	0	0	0	0	1,122	0	0
2	7	4	76	4/1/2024	0	0	0	0	0	0	1,122	0	0
2	7	5	77	5/1/2024	0	0	0	0	0	0	1,122	0	0
2	7	6	78	6/1/2024	0	0	0	0	0	0	1,122	0	0
2	7	7	79	7/1/2024	0	0	0	0	0	0	1,122	0	0
2	7	8	80	8/1/2024	0	0	0	0	0	0	1,122	0	0
2	7	9	81	9/1/2024	0	0	0	0	0	0	1,122	0	0
2	7	10	82	10/1/2024	0	0	0	0	0	0	1,122	0	0
2	7	11	83	11/1/2024	0	0	0	0	0	0	1,122	0	0
2	7	12	84	12/1/2024	0	0	0	0	0	0	1,122	0	0
2	8	1	85	1/1/2025	0	0	0	0	0	0	1,122	0	0
2	8	2	86	2/1/2025	0	0	0	0	0	0	1,122	0	0
2	8	3	87	3/1/2025	0	0	0	0	0	0	1,122	0	0
2	8	4	88	4/1/2025	0	0	0	0	0	0	1,122	0	0
2	8	5	89	5/1/2025	0	0	0	0	0	0	1,122	0	0
2	8	6	90	6/1/2025	0	0	0	0	0	0	1,122	0	0
2	8	7	91	7/1/2025	0	0	0	0	0	0	1,122	0	0
2	8	8	92	8/1/2025	0	0	0	0	0	0	1,122	0	0
2	8	9	93	9/1/2025	0	0	0	0	0	0	1,122	0	0
2	8	10	94	10/1/2025	0	0	0	0	0	0	1,122	0	0
2	8	11	95	11/1/2025	0	0	0	0	0	0	1,122	0	0

Phase	Year	Month	Total Months	Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit
				cu ft	sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
2	5	**1**	49	0	**0**	0		0	0	0		0	1,122			0	0
2	5	2	50	0	0	0		0	0	0		0	1,122			0	0
2	5	3	51	0	0	0		0	0	0		0	1,122			0	0
2	5	4	52	0	0	0		0	0	0		0	1,122			0	0
2	5	5	53	0	0	0		0	0	0		0	1,122			0	0
2	5	6	54	0	0	0		0	0	0		0	1,122			0	0
2	5	7	55	0	0	0		0	0	0		0	1,122			0	0
2	5	8	56	0	0	0		0	0	0		0	1,122			0	0
2	5	9	57	0	0	0		0	0	0		0	1,122			0	0
2	5	10	58	0	0	0		0	0	0		0	1,122			0	0
2	5	11	59	0	0	0		0	0	0		0	1,122			0	0
2	5	12	60	0	0	0		0	0	0		0	1,122			0	0
2	6	1	61	0	0	0		0	0	0		0	1,122			0	0
2	6	2	62	0	0	0		0	0	0		0	1,122			0	0
2	6	3	63	0	0	0		0	0	0		0	1,122			0	0
2	6	4	64	0	0	0		0	0	0		0	1,122			0	0
2	6	5	65	0	0	0		0	0	0		0	1,122			0	0
2	6	6	66	0	0	0		0	0	0		0	1,122			0	0
2	6	7	67	0	0	0		0	0	0		0	1,122			0	0
2	6	8	68	0	0	0		0	0	0		0	1,122			0	0
2	6	9	69	0	0	0		0	0	0		0	1,122			0	0
2	6	10	70	0	0	0		0	0	0		0	1,122			0	0
2	6	11	71	0	0	0		0	0	0		0	1,122			0	0
2	6	12	72	0	0	0		0	0	0		0	1,122			0	0
2	7	1	73	0	0	0		0	0	0		0	1,122			0	0
2	7	2	74	0	0	0		0	0	0		0	1,122			0	0
2	7	3	75	0	0	0		0	0	0		0	1,122			0	0
2	7	4	76	0	0	0		0	0	0		0	1,122			0	0
2	7	5	77	0	0	0		0	0	0		0	1,122			0	0
2	7	6	78	0	0	0		0	0	0		0	1,122			0	0
2	7	7	79	0	0	0		0	0	0		0	1,122			0	0
2	7	8	80	0	0	0		0	0	0		0	1,122			0	0
2	7	9	81	0	0	0		0	0	0		0	1,122			0	0
2	7	10	82	0	0	0		0	0	0		0	1,122			0	0
2	7	11	83	0	0	0		0	0	0		0	1,122			0	0
2	7	12	84	0	0	0		0	0	0		0	1,122			0	0
2	8	1	85	0	0	0		0	0	0		0	1,122			0	0
2	8	2	86	0	0	0		0	0	0		0	1,122			0	0
2	8	3	87	0	0	0		0	0	0		0	1,122			0	0
2	8	4	88	0	0	0		0	0	0		0	1,122			0	0
2	8	5	89	0	0	0		0	0	0		0	1,122			0	0
2	8	6	90	0	0	0		0	0	0		0	1,122			0	0
2	8	7	91	0	0	0		0	0	0		0	1,122			0	0
2	8	8	92	0	0	0		0	0	0		0	1,122			0	0
2	8	9	93	0	0	0		0	0	0		0	1,122			0	0
2	8	10	94	0	0	0		0	0	0		0	1,122			0	0
2	8	11	95	0	0	0		0	0	0		0	1,122			0	0

Phase	Year	Month	Total Months	Quarry Area (Breccia & Greywacke)	Quarry Area (Limestone)	Quarry Area - Un Mined	Groundwater Inflow (Zero out through 12/31/2034)		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Total Pit Inflow	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water & Outflow Concentration
				lb/month	lb/month	lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L
2	5	**1**	49	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	5	2	50	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	5	3	51	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	5	4	52	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	5	5	53	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	5	6	54	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	5	7	55	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	5	8	56	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	5	9	57	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	5	10	58	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	5	11	59	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	5	12	60	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	6	1	61	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	6	2	62	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	6	3	63	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	6	4	64	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	6	5	65	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	6	6	66	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	6	7	67	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	6	8	68	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	6	9	69	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	6	10	70	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	6	11	71	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	6	12	72	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	7	1	73	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	7	2	74	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	7	3	75	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	7	4	76	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	7	5	77	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	7	6	78	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	7	7	79	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	7	8	80	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	7	9	81	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	7	10	82	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	7	11	83	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	7	12	84	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	8	1	85	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	8	2	86	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	8	3	87	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	8	4	88	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	8	5	89	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	8	6	90	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	8	7	91	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	8	8	92	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	8	9	93	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	8	10	94	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	8	11	95	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase	Year	Month	Total Months	Date	Quarry Area (Breccia & Greywacke)	Quarry Area (Breccia & Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	Quarry Area -Un Mined	Quarry Area -Un Mined	Pit Invert Level	Groundwater Inflow (Zero out through 12/31/2034)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	ft amsl	cu ft	sq ft
2	8	12	96	12/1/2025	0	0	0	0	0	0	1,122	0	0
3	9	**1**	97	1/1/2026	**0**	0	**0**	0	**0**	0	1,122	0	**0**
3	9	2	98	2/1/2026	0	0	0	0	0	0	1,122	0	0
3	9	3	99	3/1/2026	0	0	0	0	0	0	1,122	0	0
3	9	4	100	4/1/2026	0	0	0	0	0	0	1,122	0	0
3	9	5	101	5/1/2026	0	0	0	0	0	0	1,122	0	0
3	9	6	102	6/1/2026	0	0	0	0	0	0	1,122	0	0
3	9	7	103	7/1/2026	0	0	0	0	0	0	1,122	0	0
3	9	8	104	8/1/2026	0	0	0	0	0	0	1,122	0	0
3	9	9	105	9/1/2026	0	0	0	0	0	0	1,122	0	0
3	9	10	106	10/1/2026	0	0	0	0	0	0	1,122	0	0
3	9	11	107	11/1/2026	0	0	0	0	0	0	1,122	0	0
3	9	12	108	12/1/2026	0	0	0	0	0	0	1,122	0	0
3	10	1	109	1/1/2027	0	0	0	0	0	0	1,122	0	0
3	10	2	110	2/1/2027	0	0	0	0	0	0	1,122	0	0
3	10	3	111	3/1/2027	0	0	0	0	0	0	1,122	0	0
3	10	4	112	4/1/2027	0	0	0	0	0	0	1,122	0	0
3	10	5	113	5/1/2027	0	0	0	0	0	0	1,122	0	0
3	10	6	114	6/1/2027	0	0	0	0	0	0	1,122	0	0
3	10	7	115	7/1/2027	0	0	0	0	0	0	1,122	0	0
3	10	8	116	8/1/2027	0	0	0	0	0	0	1,122	0	0
3	10	9	117	9/1/2027	0	0	0	0	0	0	1,122	0	0
3	10	10	118	10/1/2027	0	0	0	0	0	0	1,122	0	0
3	10	11	119	11/1/2027	0	0	0	0	0	0	1,122	0	0
3	10	12	120	12/1/2027	0	0	0	0	0	0	1,122	0	0
3	11	1	121	1/1/2028	0	0	0	0	0	0	1,122	0	0
3	11	2	122	2/1/2028	0	0	0	0	0	0	1,122	0	0
3	11	3	123	3/1/2028	0	0	0	0	0	0	1,122	0	0
3	11	4	124	4/1/2028	0	0	0	0	0	0	1,122	0	0
3	11	5	125	5/1/2028	0	0	0	0	0	0	1,122	0	0
3	11	6	126	6/1/2028	0	0	0	0	0	0	1,122	0	0
3	11	7	127	7/1/2028	0	0	0	0	0	0	1,122	0	0
3	11	8	128	8/1/2028	0	0	0	0	0	0	1,122	0	0
3	11	9	129	9/1/2028	0	0	0	0	0	0	1,122	0	0
3	11	10	130	10/1/2028	0	0	0	0	0	0	1,122	0	0
3	11	11	131	11/1/2028	0	0	0	0	0	0	1,122	0	0
3	11	12	132	12/1/2028	0	0	0	0	0	0	1,122	0	0
3	12	1	133	1/1/2029	0	0	0	0	0	0	1,122	0	0
3	12	2	134	2/1/2029	0	0	0	0	0	0	1,122	0	0
3	12	3	135	3/1/2029	0	0	0	0	0	0	1,122	0	0
3	12	4	136	4/1/2029	0	0	0	0	0	0	1,122	0	0
3	12	5	137	5/1/2029	0	0	0	0	0	0	1,122	0	0
3	12	6	138	6/1/2029	0	0	0	0	0	0	1,122	0	0
3	12	7	139	7/1/2029	0	0	0	0	0	0	1,122	0	0
3	12	8	140	8/1/2029	0	0	0	0	0	0	1,122	0	0
3	12	9	141	9/1/2029	0	0	0	0	0	0	1,122	0	0
3	12	10	142	10/1/2029	0	0	0	0	0	0	1,122	0	0
3	12	11	143	11/1/2029	0	0	0	0	0	0	1,122	0	0
3	12	12	144	12/1/2029	0	0	0	0	0	0	**1,122**	0	0
4	13	**1**	145	1/1/2030	**0**	0	**0**	0	**0**	0	1,119	0	**0**
4	13	2	146	2/1/2030	11,667	3,009	25,000	6,448	0	0	1,115	8,674	0
4	13	3	147	3/1/2030	23,333	3,124	50,000	6,693	0	0	1,112	17,348	0
4	13	4	148	4/1/2030	35,000	2,712	75,000	5,811	0	0	1,109	26,023	0
4	13	5	149	5/1/2030	46,667	998	100,000	2,140	0	0	1,106	34,697	0

Phase	Year	Month	Total Months	Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit
				cu ft	sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
2	8	12	96	0	0	0		0	0	0		0	1,122			0	0
3	9	**1**	97	0	**0**	0		0	0	0		0	1,122			0	0
3	9	2	98	0	0	0		0	0	0		0	1,122			0	0
3	9	3	99	0	0	0		0	0	0		0	1,122			0	0
3	9	4	100	0	0	0		0	0	0		0	1,122			0	0
3	9	5	101	0	0	0		0	0	0		0	1,122			0	0
3	9	6	102	0	0	0		0	0	0		0	1,122			0	0
3	9	7	103	0	0	0		0	0	0		0	1,122			0	0
3	9	8	104	0	0	0		0	0	0		0	1,122			0	0
3	9	9	105	0	0	0		0	0	0		0	1,122			0	0
3	9	10	106	0	0	0		0	0	0		0	1,122			0	0
3	9	11	107	0	0	0		0	0	0		0	1,122			0	0
3	9	12	108	0	0	0		0	0	0		0	1,122			0	0
3	10	1	109	0	0	0		0	0	0		0	1,122			0	0
3	10	2	110	0	0	0		0	0	0		0	1,122			0	0
3	10	3	111	0	0	0		0	0	0		0	1,122			0	0
3	10	4	112	0	0	0		0	0	0		0	1,122			0	0
3	10	5	113	0	0	0		0	0	0		0	1,122			0	0
3	10	6	114	0	0	0		0	0	0		0	1,122			0	0
3	10	7	115	0	0	0		0	0	0		0	1,122			0	0
3	10	8	116	0	0	0		0	0	0		0	1,122			0	0
3	10	9	117	0	0	0		0	0	0		0	1,122			0	0
3	10	10	118	0	0	0		0	0	0		0	1,122			0	0
3	10	11	119	0	0	0		0	0	0		0	1,122			0	0
3	10	12	120	0	0	0		0	0	0		0	1,122			0	0
3	11	1	121	0	0	0		0	0	0		0	1,122			0	0
3	11	2	122	0	0	0		0	0	0		0	1,122			0	0
3	11	3	123	0	0	0		0	0	0		0	1,122			0	0
3	11	4	124	0	0	0		0	0	0		0	1,122			0	0
3	11	5	125	0	0	0		0	0	0		0	1,122			0	0
3	11	6	126	0	0	0		0	0	0		0	1,122			0	0
3	11	7	127	0	0	0		0	0	0		0	1,122			0	0
3	11	8	128	0	0	0		0	0	0		0	1,122			0	0
3	11	9	129	0	0	0		0	0	0		0	1,122			0	0
3	11	10	130	0	0	0		0	0	0		0	1,122			0	0
3	11	11	131	0	0	0		0	0	0		0	1,122			0	0
3	11	12	132	0	0	0		0	0	0		0	1,122			0	0
3	12	1	133	0	0	0		0	0	0		0	1,122			0	0
3	12	2	134	0	0	0		0	0	0		0	1,122			0	0
3	12	3	135	0	0	0		0	0	0		0	1,122			0	0
3	12	4	136	0	0	0		0	0	0		0	1,122			0	0
3	12	5	137	0	0	0		0	0	0		0	1,122			0	0
3	12	6	138	0	0	0		0	0	0		0	1,122			0	0
3	12	7	139	0	0	0		0	0	0		0	1,122			0	0
3	12	8	140	0	0	0		0	0	0		0	1,122			0	0
3	12	9	141	0	0	0		0	0	0		0	1,122			0	0
3	12	10	142	0	0	0		0	0	0		0	1,122			0	0
3	12	11	143	0	0	0		0	0	0		0	1,122			0	0
3	12	12	144	0	0	0		0	0	0		0	1,122			0	0
4	13	**1**	145	0	**0**	0		0	0	0		0	1,119			0	0
4	13	2	146	0	0	0		18,132	18,132	0		0	1,115			18,132	0
4	13	3	147	0	0	0		27,165	27,165	0		0	1,112			27,165	0
4	13	4	148	0	0	0		34,545	34,545	0		0	1,109			34,545	0
4	13	5	149	0	0	0		37,835	37,835	0		0	1,106			37,835	0

Phase	Year	Month	Total Months	Quarry Area (Breccia & Greywacke)	Quarry Area (Limestone)	Quarry Area - Un Mined	Groundwater Inflow (Zero out through 12/31/2034)		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Total Pit Inflow	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water & Outflow Concentration
				lb/month	lb/month	lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L
2	8	12	96	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	9	**1**	97	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	9	2	98	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	9	3	99	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	9	4	100	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	9	5	101	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	9	6	102	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	9	7	103	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	9	8	104	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	9	9	105	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	9	10	106	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	9	11	107	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	9	12	108	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	10	1	109	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	10	2	110	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	10	3	111	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	10	4	112	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	10	5	113	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	10	6	114	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	10	7	115	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	10	8	116	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	10	9	117	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	10	10	118	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	10	11	119	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	10	12	120	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	11	1	121	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	11	2	122	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	11	3	123	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	11	4	124	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	11	5	125	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	11	6	126	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	11	7	127	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	11	8	128	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	11	9	129	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	11	10	130	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	11	11	131	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	11	12	132	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	12	1	133	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	12	2	134	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	12	3	135	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	12	4	136	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	12	5	137	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	12	6	138	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	12	7	139	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	12	8	140	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	12	9	141	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	12	10	142	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	12	11	143	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	12	12	144	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	13	**1**	145	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	13	2	146	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.15
4	13	3	147	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.01	0.01	0.00	4.23
4	13	4	148	0.00	0.00	0.00	4.40	0.01	0.00	0.00	0.00	0.01	0.01	0.00	4.28
4	13	5	149	0.00	0.00	0.00	4.40	0.01	0.00	0.00	0.00	0.01	0.01	0.00	4.36

Phase	Year	Month	Total Months	Date	Quarry Area (Breccia & Greywacke)	Quarry Area (Breccia & Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	Quarry Area -Un Mined	Quarry Area -Un Mined	Pit Invert Level	Groundwater Inflow (Zero out through 12/31/2034)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	ft amsl	cu ft	sq ft
4	13	6	150	6/1/2030	58,333	210	125,000	449	0	0	1,103	43,371	0
4	13	7	151	7/1/2030	70,000	11	150,000	23	0	0	1,099	52,045	0
4	13	8	152	8/1/2030	81,667	46	175,000	99	0	0	1,096	60,720	0
4	13	9	153	9/1/2030	93,333	259	200,000	554	0	0	1,093	69,394	0
4	13	10	154	10/1/2030	105,000	4,310	225,000	9,236	0	0	1,090	78,068	0
4	13	11	155	11/1/2030	116,667	15,707	250,000	33,659	0	0	1,086	86,742	0
4	13	12	156	12/1/2030	128,333	25,167	275,000	53,928	0	0	1,083	95,416	0
4	14	1	157	1/1/2031	140,000	21,765	300,000	46,640	0	0	1,080	104,091	0
4	14	2	158	2/1/2031	151,667	39,119	325,000	83,827	0	0	1,077	112,765	0
4	14	3	159	3/1/2031	163,333	21,865	350,000	46,853	0	0	1,073	121,439	0
4	14	4	160	4/1/2031	175,000	13,558	375,000	29,054	0	0	1,070	130,113	0
4	14	5	161	5/1/2031	186,667	3,994	400,000	8,558	0	0	1,067	138,788	0
4	14	6	162	6/1/2031	198,333	712	425,000	1,526	0	0	1,064	147,462	0
4	14	7	163	7/1/2031	210,000	32	450,000	69	0	0	1,061	156,136	0
4	14	8	164	8/1/2031	221,667	125	475,000	268	0	0	1,057	164,810	0
4	14	9	165	9/1/2031	233,333	646	500,000	1,385	0	0	1,054	173,484	0
4	14	10	166	10/1/2031	245,000	10,057	525,000	21,550	0	0	1,051	182,159	0
4	14	11	167	11/1/2031	256,667	34,556	550,000	74,049	0	0	1,048	190,833	0
4	14	12	168	12/1/2031	268,333	52,621	575,000	112,759	0	0	1,044	199,507	0
5	15	**1**	169	1/1/2032	**280,000**	43,531	**600,000**	93,280	**0**	0	1,041	208,181	**0**
5	15	2	170	2/1/2032	286,111	73,797	602,778	155,475	0	0	1,038	216,856	0
5	15	3	171	3/1/2032	292,222	39,118	605,556	81,063	0	0	1,035	225,530	0
5	15	4	172	4/1/2032	298,333	23,114	608,333	47,132	0	0	1,032	234,204	0
5	15	5	173	5/1/2032	304,444	6,514	611,111	13,075	0	0	1,028	242,878	0
5	15	6	174	6/1/2032	310,556	1,115	613,889	2,205	0	0	1,025	251,552	0
5	15	7	175	7/1/2032	316,667	49	616,667	95	0	0	1,022	260,227	0
5	15	8	176	8/1/2032	322,778	182	619,444	350	0	0	1,019	268,901	0
5	15	9	177	9/1/2032	328,889	911	622,222	1,724	0	0	1,015	277,575	0
5	15	10	178	10/1/2032	335,000	13,751	625,000	25,655	0	0	1,012	286,249	0
5	15	11	179	11/1/2032	341,111	45,925	627,778	84,521	0	0	1,009	294,924	0
5	15	12	180	12/1/2032	347,222	68,091	630,556	123,654	0	0	1,006	303,598	0
5	16	1	181	1/1/2033	353,333	54,931	633,333	98,462	0	0	1,002	312,272	0
5	16	2	182	2/1/2033	359,444	92,712	636,111	164,072	0	0	999	320,946	0
5	16	3	183	3/1/2033	365,556	48,935	638,889	85,525	0	0	996	329,620	0
5	16	4	184	4/1/2033	371,667	28,795	641,667	49,714	0	0	993	338,295	0
5	16	5	185	5/1/2033	377,778	8,083	644,444	13,788	0	0	990	346,969	0
5	16	6	186	6/1/2033	383,889	1,379	647,222	2,325	0	0	986	355,643	0
5	16	7	187	7/1/2033	390,000	60	650,000	100	0	0	983	364,317	0
5	16	8	188	8/1/2033	396,111	224	652,778	368	0	0	980	372,992	0
5	16	9	189	9/1/2033	402,222	1,114	655,556	1,816	0	0	977	381,666	0
5	16	10	190	10/1/2033	408,333	16,761	658,333	27,023	0	0	973	390,340	0
5	16	11	191	11/1/2033	414,444	55,799	661,111	89,009	0	0	970	399,014	0
5	16	12	192	12/1/2033	420,556	82,472	663,889	130,191	0	0	967	407,688	0
5	17	1	193	1/1/2034	426,667	66,332	666,667	103,644	0	0	964	416,363	0
5	17	2	194	2/1/2034	432,778	111,627	669,444	172,670	0	0	961	425,037	0
5	17	3	195	3/1/2034	438,889	58,752	672,222	89,987	0	0	957	433,711	0
5	17	4	196	4/1/2034	445,000	34,477	675,000	52,297	0	0	954	442,385	0
5	17	5	197	5/1/2034	451,111	9,652	677,778	14,502	0	0	951	451,060	0
5	17	6	198	6/1/2034	457,222	1,642	680,556	2,444	0	0	948	459,734	0
5	17	7	199	7/1/2034	463,333	71	683,333	105	0	0	944	468,408	0
5	17	8	200	8/1/2034	469,444	265	686,111	387	0	0	941	477,082	0
5	17	9	201	9/1/2034	475,556	1,318	688,889	1,909	0	0	938	485,756	0
5	17	10	202	10/1/2034	481,667	19,771	691,667	28,391	0	0	935	494,431	0
5	17	11	203	11/1/2034	487,778	65,672	694,444	93,496	0	0	931	503,105	0
5	17	12	204	12/1/2034	493,889	96,853	697,222	136,727	0	0	928	503,105	0
NA	18	**1**	205	1/1/2035	**500,000**	77,733	**700,000**	108,826	**0**	0	**925**	520,453	**0**
NA	18	2	206	2/1/2035	458,333	118,218	641,667	165,505	0	0	925	529,128	0

Phase	Year	Month	Total Months	Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit
				cu ft	sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
4	13	6	150	0	0	0		44,030	44,030	0		0	1,103			44,030	0
4	13	7	151	0	0	0		52,079	52,079	0		0	1,099			52,079	0
4	13	8	152	0	0	0		60,864	60,864	0		0	1,096			60,864	0
4	13	9	153	0	0	0		70,207	70,207	0		0	1,093			70,207	0
4	13	10	154	0	0	0		91,614	91,614	0		0	1,090			91,614	0
4	13	11	155	0	0	0		136,108	136,108	0		0	1,086			136,108	0
4	13	12	156	0	0	0		174,511	174,511	0		0	1,083			174,511	0
4	14	1	157	0	0	0		172,496	172,496	0		0	1,080			172,496	0
4	14	2	158	0	0	0		235,712	235,712	0		0	1,077			235,712	0
4	14	3	159	0	0	0		190,157	190,157	0		0	1,073			190,157	0
4	14	4	160	0	0	0		172,725	172,725	0		0	1,070			172,725	0
4	14	5	161	0	0	0		151,340	151,340	0		0	1,067			151,340	0
4	14	6	162	0	0	0		149,701	149,701	0		0	1,064			149,701	0
4	14	7	163	0	0	0		156,238	156,238	0		0	1,061			156,238	0
4	14	8	164	0	0	0		165,203	165,203	0		0	1,057			165,203	0
4	14	9	165	0	0	0		175,516	175,516	0		0	1,054			175,516	0
4	14	10	166	0	0	0		213,765	213,765	0		0	1,051			213,765	0
4	14	11	167	0	0	0		299,438	299,438	0		0	1,048			299,438	0
4	14	12	168	0	0	0		364,887	364,887	0		0	1,044			364,887	0
5	15	**1**	169	0	**0**	0		344,992	344,992	0		0	1,041			344,992	0
5	15	2	170	0	0	0		446,127	446,127	0		0	1,038			446,127	0
5	15	3	171	0	0	0		345,711	345,711	0		0	1,035			345,711	0
5	15	4	172	0	0	0		304,449	304,449	0		0	1,032			304,449	0
5	15	5	173	0	0	0		262,467	262,467	0		0	1,028			262,467	0
5	15	6	174	0	0	0		254,873	254,873	0		0	1,025			254,873	0
5	15	7	175	0	0	0		260,370	260,370	0		0	1,022			260,370	0
5	15	8	176	0	0	0		269,433	269,433	0		0	1,019			269,433	0
5	15	9	177	0	0	0		280,210	280,210	0		0	1,015			280,210	0
5	15	10	178	0	0	0		325,655	325,655	0		0	1,012			325,655	0
5	15	11	179	0	0	0		425,370	425,370	0		0	1,009			425,370	0
5	15	12	180	0	0	0		495,343	495,343	0		0	1,006			495,343	0
5	16	1	181	0	0	0		465,665	465,665	0		0	1,002			465,665	0
5	16	2	182	0	0	0		577,730	577,730	0		0	999			577,730	0
5	16	3	183	0	0	0		464,081	464,081	0		0	996			464,081	0
5	16	4	184	0	0	0		416,804	416,804	0		0	993			416,804	0
5	16	5	185	0	0	0		368,840	368,840	0		0	990			368,840	0
5	16	6	186	0	0	0		359,346	359,346	0		0	986			359,346	0
5	16	7	187	0	0	0		364,477	364,477	0		0	983			364,477	0
5	16	8	188	0	0	0		373,584	373,584	0		0	980			373,584	0
5	16	9	189	0	0	0		384,597	384,597	0		0	977			384,597	0
5	16	10	190	0	0	0		434,124	434,124	0		0	973			434,124	0
5	16	11	191	0	0	0		543,821	543,821	0		0	970			543,821	0
5	16	12	192	0	0	0		620,351	620,351	0		0	967			620,351	0
5	17	1	193	0	0	0		586,339	586,339	0		0	964			586,339	0
5	17	2	194	0	0	0		709,333	709,333	0		0	961			709,333	0
5	17	3	195	0	0	0		582,450	582,450	0		0	957			582,450	0
5	17	4	196	0	0	0		529,159	529,159	0		0	954			529,159	0
5	17	5	197	0	0	0		475,213	475,213	0		0	951			475,213	0
5	17	6	198	0	0	0		463,820	463,820	0		0	948			463,820	0
5	17	7	199	0	0	0		468,584	468,584	0		0	944			468,584	0
5	17	8	200	0	0	0		477,734	477,734	0		0	941			477,734	0
5	17	9	201	0	0	0		488,983	488,983	0		0	938			488,983	0
5	17	10	202	0	0	0		542,593	542,593	0		0	935			542,593	0
5	17	11	203	0	0	0		662,273	662,273	0		0	931			662,273	0
5	17	12	204	0	0	0		736,685	736,685	0		0	928			736,685	0
NA	18	**1**	205	0	**0**	0		707,013	707,013	0		3,805,386	925			707,013	0
NA	18	2	206	0	47,500	3,676		816,526	816,526	0		7,610,771	925			816,526	0

Phase	Year	Month	Total Months	Quarry Area (Breccia & Greywacke)	Quarry Area (Limestone)	Quarry Area - Un Mined	Groundwater Inflow (Zero out through 12/31/2034)		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Total Pit Inflow	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water & Outflow Concentration
				lb/month	lb/month	lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L
4	13	6	150	0.00	0.00	0.00	4.40	0.01	0.00	0.00	0.00	0.01	0.01	0.00	4.39
4	13	7	151	0.00	0.00	0.00	4.40	0.01	0.00	0.00	0.00	0.01	0.01	0.00	4.40
4	13	8	152	0.00	0.00	0.00	4.40	0.02	0.00	0.00	0.00	0.02	0.02	0.00	4.40
4	13	9	153	0.00	0.00	0.00	4.40	0.02	0.00	0.00	0.00	0.02	0.02	0.00	4.39
4	13	10	154	0.00	0.00	0.00	4.40	0.02	0.00	0.00	0.00	0.02	0.02	0.00	4.33
4	13	11	155	0.00	0.01	0.00	4.40	0.02	0.00	0.00	0.00	0.04	0.04	0.00	4.23
4	13	12	156	0.00	0.01	0.00	4.40	0.03	0.00	0.00	0.00	0.05	0.05	0.00	4.18
4	14	1	157	0.00	0.01	0.00	4.40	0.03	0.00	0.00	0.00	0.05	0.05	0.00	4.21
4	14	2	158	0.01	0.02	0.00	4.40	0.03	0.00	0.00	0.00	0.06	0.06	0.00	4.15
4	14	3	159	0.00	0.01	0.00	4.40	0.03	0.00	0.00	0.00	0.05	0.05	0.00	4.23
4	14	4	160	0.00	0.01	0.00	4.40	0.04	0.00	0.00	0.00	0.05	0.05	0.00	4.28
4	14	5	161	0.00	0.00	0.00	4.40	0.04	0.00	0.00	0.00	0.04	0.04	0.00	4.36
4	14	6	162	0.00	0.00	0.00	4.40	0.04	0.00	0.00	0.00	0.04	0.04	0.00	4.39
4	14	7	163	0.00	0.00	0.00	4.40	0.04	0.00	0.00	0.00	0.04	0.04	0.00	4.40
4	14	8	164	0.00	0.00	0.00	4.40	0.05	0.00	0.00	0.00	0.05	0.05	0.00	4.40
4	14	9	165	0.00	0.00	0.00	4.40	0.05	0.00	0.00	0.00	0.05	0.05	0.00	4.39
4	14	10	166	0.00	0.01	0.00	4.40	0.05	0.00	0.00	0.00	0.06	0.06	0.00	4.33
4	14	11	167	0.01	0.02	0.00	4.40	0.05	0.00	0.00	0.00	0.08	0.08	0.00	4.23
4	14	12	168	0.01	0.03	0.00	4.40	0.05	0.00	0.00	0.00	0.10	0.10	0.00	4.18
5	15	**1**	169	0.01	0.03	0.00	4.40	0.06	0.00	0.00	0.00	0.09	0.09	0.00	4.21
5	15	2	170	0.01	0.04	0.00	4.40	0.06	0.00	0.00	0.00	0.12	0.12	0.00	4.15
5	15	3	171	0.01	0.02	0.00	4.40	0.06	0.00	0.00	0.00	0.09	0.09	0.00	4.23
5	15	4	172	0.00	0.01	0.00	4.40	0.06	0.00	0.00	0.00	0.08	0.08	0.00	4.29
5	15	5	173	0.00	0.00	0.00	4.40	0.07	0.00	0.00	0.00	0.07	0.07	0.00	4.36
5	15	6	174	0.00	0.00	0.00	4.40	0.07	0.00	0.00	0.00	0.07	0.07	0.00	4.39
5	15	7	175	0.00	0.00	0.00	4.40	0.07	0.00	0.00	0.00	0.07	0.07	0.00	4.40
5	15	8	176	0.00	0.00	0.00	4.40	0.07	0.00	0.00	0.00	0.07	0.07	0.00	4.40
5	15	9	177	0.00	0.00	0.00	4.40	0.08	0.00	0.00	0.00	0.08	0.08	0.00	4.40
5	15	10	178	0.00	0.01	0.00	4.40	0.08	0.00	0.00	0.00	0.09	0.09	0.00	4.34
5	15	11	179	0.01	0.02	0.00	4.40	0.08	0.00	0.00	0.00	0.11	0.11	0.00	4.24
5	15	12	180	0.01	0.03	0.00	4.40	0.08	0.00	0.00	0.00	0.13	0.13	0.00	4.19
5	16	1	181	0.01	0.03	0.00	4.40	0.09	0.00	0.00	0.00	0.12	0.12	0.00	4.22
5	16	2	182	0.02	0.05	0.00	4.40	0.09	0.00	0.00	0.00	0.15	0.15	0.00	4.16
5	16	3	183	0.01	0.02	0.00	4.40	0.09	0.00	0.00	0.00	0.12	0.12	0.00	4.24
5	16	4	184	0.01	0.01	0.00	4.40	0.09	0.00	0.00	0.00	0.11	0.11	0.00	4.30
5	16	5	185	0.00	0.00	0.00	4.40	0.10	0.00	0.00	0.00	0.10	0.10	0.00	4.37
5	16	6	186	0.00	0.00	0.00	4.40	0.10	0.00	0.00	0.00	0.10	0.10	0.00	4.39
5	16	7	187	0.00	0.00	0.00	4.40	0.10	0.00	0.00	0.00	0.10	0.10	0.00	4.40
5	16	8	188	0.00	0.00	0.00	4.40	0.10	0.00	0.00	0.00	0.10	0.10	0.00	4.40
5	16	9	189	0.00	0.00	0.00	4.40	0.10	0.00	0.00	0.00	0.11	0.11	0.00	4.40
5	16	10	190	0.00	0.01	0.00	4.40	0.11	0.00	0.00	0.00	0.12	0.12	0.00	4.34
5	16	11	191	0.01	0.02	0.00	4.40	0.11	0.00	0.00	0.00	0.14	0.14	0.00	4.25
5	16	12	192	0.01	0.04	0.00	4.40	0.11	0.00	0.00	0.00	0.16	0.16	0.00	4.20
5	17	1	193	0.01	0.03	0.00	4.40	0.11	0.00	0.00	0.00	0.16	0.16	0.00	4.23
5	17	2	194	0.02	0.05	0.00	4.40	0.12	0.00	0.00	0.00	0.18	0.18	0.00	4.16
5	17	3	195	0.01	0.02	0.00	4.40	0.12	0.00	0.00	0.00	0.15	0.15	0.00	4.25
5	17	4	196	0.01	0.01	0.00	4.40	0.12	0.00	0.00	0.00	0.14	0.14	0.00	4.30
5	17	5	197	0.00	0.00	0.00	4.40	0.12	0.00	0.00	0.00	0.13	0.13	0.00	4.37
5	17	6	198	0.00	0.00	0.00	4.40	0.13	0.00	0.00	0.00	0.13	0.13	0.00	4.39
5	17	7	199	0.00	0.00	0.00	4.40	0.13	0.00	0.00	0.00	0.13	0.13	0.00	4.40
5	17	8	200	0.00	0.00	0.00	4.40	0.13	0.00	0.00	0.00	0.13	0.13	0.00	4.40
5	17	9	201	0.00	0.00	0.00	4.40	0.13	0.00	0.00	0.00	0.13	0.13	0.00	4.40
5	17	10	202	0.00	0.01	0.00	4.40	0.14	0.00	0.00	0.00	0.15	0.15	0.00	4.35
5	17	11	203	0.01	0.03	0.00	4.40	0.14	0.00	0.00	0.00	0.18	0.18	0.00	4.25
5	17	12	204	0.02	0.04	0.00	4.40	0.14	0.00	0.00	0.00	0.19	0.19	0.00	4.20
NA	18	**1**	205	0.01	0.03	0.00	4.38	0.14	0.00	0.00	0.00	0.19	0.19	0.00	4.22
NA	18	2	206	0.02	0.05	0.00	4.36	0.14	0.00	0.00	0.00	0.21	0.21	0.00	4.14

Phase	Year	Month	Total Months	Date	Quarry Area (Breccia & Greywacke)	Quarry Area (Breccia & Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	Quarry Area -Un Mined	Quarry Area -Un Mined	Pit Invert Level	Groundwater Inflow (Zero out through 12/31/2034)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	ft amsl	cu ft	sq ft
NA	18	3	207	3/1/2035	416,667	55,777	583,333	78,088	0	0	925	529,128	0
NA	18	4	208	4/1/2035	375,000	29,054	525,000	40,675	0	0	925	529,128	0
NA	18	5	209	5/1/2035	333,333	7,132	466,667	9,985	0	0	925	529,128	0
NA	18	6	210	6/1/2035	291,667	1,048	408,333	1,467	0	0	925	529,128	0
NA	18	7	211	7/1/2035	250,000	38	350,000	54	0	0	925	529,128	0
NA	18	8	212	8/1/2035	208,333	118	291,667	165	0	0	925	529,128	0
NA	18	9	213	9/1/2035	166,667	462	233,333	646	0	0	925	529,128	0
NA	18	10	214	10/1/2035	125,000	5,131	175,000	7,183	0	0	925	529,128	0
NA	18	11	215	11/1/2035	83,333	11,220	116,667	15,707	0	0	925	529,128	0
NA	18	12	216	12/1/2035	41,667	8,171	58,333	11,439	0	0	925	529,128	0
NA	19	1	217	1/1/2036	**0**	0	**0**	0	**0**	0	925	529,128	**0**
NA	19	2	218	2/1/2036	0	0	0	0	0	0	925	529,128	0
NA	19	3	219	3/1/2036	0	0	0	0	0	0	925	529,128	0
NA	19	4	220	4/1/2036	0	0	0	0	0	0	925	529,128	0
NA	19	5	221	5/1/2036	0	0	0	0	0	0	925	381,308	0
NA	19	6	222	6/1/2036	0	0	0	0	0	0	925	354,431	0
NA	19	7	223	7/1/2036	0	0	0	0	0	0	925	340,993	0
NA	19	8	224	8/1/2036	0	0	0	0	0	0	925	327,555	0
NA	19	9	225	9/1/2036	0	0	0	0	0	0	925	314,117	0
NA	19	10	226	10/1/2036	0	0	0	0	0	0	925	300,679	0
NA	19	11	227	11/1/2036	0	0	0	0	0	0	925	287,241	0
NA	19	12	228	12/1/2036	0	0	0	0	0	0	925	273,802	0
NA	20	1	229	1/1/2037	0	0	0	0	0	0	925	273,802	0
NA	20	2	230	2/1/2037	0	0	0	0	0	0	925	260,364	0
NA	20	3	231	3/1/2037	0	0	0	0	0	0	925	246,926	0
NA	20	4	232	4/1/2037	0	0	0	0	0	0	925	246,926	0
NA	20	5	233	5/1/2037	0	0	0	0	0	0	925	233,488	0
NA	20	6	234	6/1/2037	0	0	0	0	0	0	925	233,488	0
NA	20	7	235	7/1/2037	0	0	0	0	0	0	925	220,050	0
NA	20	8	236	8/1/2037	0	0	0	0	0	0	925	220,050	0
NA	20	9	237	9/1/2037	0	0	0	0	0	0	925	206,612	0
NA	20	10	238	10/1/2037	0	0	0	0	0	0	925	206,612	0
NA	20	11	239	11/1/2037	0	0	0	0	0	0	925	206,612	0
NA	20	12	240	12/1/2037	0	0	0	0	0	0	925	193,174	0
NA	21	1	241	1/1/2038	0	0	0	0	0	0	925	193,174	0
NA	21	2	242	2/1/2038	0	0	0	0	0	0	925	179,735	0
NA	21	3	243	3/1/2038	0	0	0	0	0	0	925	179,735	0
NA	21	4	244	4/1/2038	0	0	0	0	0	0	925	179,735	0
NA	21	5	245	5/1/2038	0	0	0	0	0	0	925	166,297	0
NA	21	6	246	6/1/2038	0	0	0	0	0	0	925	166,297	0
NA	21	7	247	7/1/2038	0	0	0	0	0	0	925	166,297	0
NA	21	8	248	8/1/2038	0	0	0	0	0	0	925	166,297	0
NA	21	9	249	9/1/2038	0	0	0	0	0	0	925	152,859	0
NA	21	10	250	10/1/2038	0	0	0	0	0	0	925	152,859	0
NA	21	11	251	11/1/2038	0	0	0	0	0	0	925	152,859	0
NA	21	12	252	12/1/2038	0	0	0	0	0	0	925	152,859	0
NA	22	1	253	1/1/2039	0	0	0	0	0	0	925	139,421	0
NA	22	2	254	2/1/2039	0	0	0	0	0	0	925	139,421	0
NA	22	3	255	3/1/2039	0	0	0	0	0	0	925	139,421	0
NA	22	4	256	4/1/2039	0	0	0	0	0	0	925	139,421	0
NA	22	5	257	5/1/2039	0	0	0	0	0	0	925	125,983	0
NA	22	6	258	6/1/2039	0	0	0	0	0	0	925	125,983	0
NA	22	7	259	7/1/2039	0	0	0	0	0	0	925	125,983	0
NA	22	8	260	8/1/2039	0	0	0	0	0	0	925	125,983	0
NA	22	9	261	9/1/2039	0	0	0	0	0	0	925	125,983	0
NA	22	10	262	10/1/2039	0	0	0	0	0	0	925	112,545	0
NA	22	11	263	11/1/2039	0	0	0	0	0	0	925	112,545	0
NA	22	12	264	12/1/2039	0	0	0	0	0	0	925	112,545	0
NA	23	1	265	1/1/2040	0	0	0	0	0	0	925	112,545	0
NA	23	2	266	2/1/2040	0	0	0	0	0	0	925	112,545	0
NA	23	3	267	3/1/2040	0	0	0	0	0	0	925	112,545	0
NA	23	4	268	4/1/2040	0	0	0	0	0	0	925	99,106	0
NA	23	5	269	5/1/2040	0	0	0	0	0	0	925	99,106	0
NA	23	6	270	6/1/2040	0	0	0	0	0	0	925	99,106	0

Phase	Year	Month	Total Months	Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit
				cu ft	sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
NA	18	3	207	0	95,000	3,815		666,808	666,808	0		11,416,157	925			666,808	0
NA	18	4	208	0	142,500	3,312		602,169	602,169	0		15,221,542	925			602,169	0
NA	18	5	209	0	190,000	1,220		547,464	547,464	0		19,026,928	925			547,464	0
NA	18	6	210	0	237,500	256		531,898	531,898	0		22,832,314	925			531,898	0
NA	18	7	211	0	285,000	13		529,233	529,233	0		26,637,699	925			529,233	0
NA	18	8	212	0	332,500	56		529,466	529,466	0		30,443,085	925			529,466	0
NA	18	9	213	0	380,000	316		530,552	530,552	0		34,248,471	925			530,552	0
NA	18	10	214	0	427,500	5,264		546,706	546,706	0		38,053,856	925			546,706	0
NA	18	11	215	0	475,000	19,185		575,240	575,240	0		41,859,242	925			575,240	0
NA	18	12	216	0	522,500	30,739		579,477	579,477	0		45,664,627	925			579,477	0
NA	19	1	217	0	**570,000**	26,585		555,712	555,712	0		45,664,627	925			555,712	0
NA	19	2	218	0	570,000	44,106		573,234	0	573,234		45,664,627	925			573,234	12,934,437
NA	19	3	219	0	570,000	22,891		552,018	0	1,125,252		45,664,627	925			1,125,252	12,934,437
NA	19	4	220	0	570,000	13,248		542,376	0	1,667,628		45,664,627	980			1,667,628	12,934,437
NA	19	5	221	0	570,000	3,659		384,966	0	2,052,595		45,664,627	990			2,052,595	12,934,437
NA	19	6	222	0	570,000	614		355,046	0	2,407,640		45,664,627	995			2,407,640	12,934,437
NA	19	7	223	0	570,000	26		341,020	0	2,748,660		45,664,627	1,000			2,748,660	12,934,437
NA	19	8	224	0	570,000	97		327,652	0	3,076,311		45,664,627	1,005			3,076,311	12,934,437
NA	19	9	225	0	570,000	474		314,591	0	3,390,902		45,664,627	1,010			3,390,902	12,934,437
NA	19	10	226	0	570,000	7,019		307,698	0	3,698,600		45,664,627	1,015			3,698,600	12,934,437
NA	19	11	227	0	570,000	23,023		310,263	0	4,008,863		45,664,627	1,020			4,008,863	12,934,437
NA	19	12	228	0	570,000	33,534		307,336	0	4,316,199		45,664,627	1,020			4,316,199	12,934,437
NA	20	1	229	0	570,000	26,585		300,387	0	4,616,587		45,664,627	1,025			4,616,587	12,934,437
NA	20	2	230	0	570,000	44,106		304,470	0	4,921,057		45,664,627	1,030			4,921,057	12,934,437
NA	20	3	231	0	570,000	22,891		269,817	0	5,190,874		45,664,627	1,030			5,190,874	12,934,437
NA	20	4	232	0	570,000	13,248		260,175	0	5,451,049		45,664,627	1,035			5,451,049	12,934,437
NA	20	5	233	0	570,000	3,659		237,147	0	5,688,196		45,664,627	1,035			5,688,196	12,934,437
NA	20	6	234	0	570,000	614		234,102	0	5,922,298		45,664,627	1,040			5,922,298	12,934,437
NA	20	7	235	0	570,000	26		220,076	0	6,142,374		45,664,627	1,040			6,142,374	12,934,437
NA	20	8	236	0	570,000	97		220,146	0	6,362,520		45,664,627	1,045			6,362,520	12,934,437
NA	20	9	237	0	570,000	474		207,085	0	6,569,606		45,664,627	1,045			6,569,606	12,934,437
NA	20	10	238	0	570,000	7,019		213,631	0	6,783,237		45,664,627	1,045			6,783,237	12,934,437
NA	20	11	239	0	570,000	23,023		229,634	0	7,012,871		45,664,627	1,050			7,012,871	12,934,437
NA	20	12	240	0	570,000	33,534		226,707	0	7,239,578		45,664,627	1,050			7,239,578	12,934,437
NA	21	1	241	0	570,000	26,585		219,758	0	7,459,336		45,664,627	1,055			7,459,336	12,934,437
NA	21	2	242	0	570,000	44,106		223,841	0	7,683,178		45,664,627	1,055			7,683,178	12,934,437
NA	21	3	243	0	570,000	22,891		202,626	0	7,885,804		45,664,627	1,055			7,885,804	12,934,437
NA	21	4	244	0	570,000	13,248		192,984	0	8,078,788		45,664,627	1,060			8,078,788	12,934,437
NA	21	5	245	0	570,000	3,659		169,956	0	8,248,744		45,664,627	1,060			8,248,744	12,934,437
NA	21	6	246	0	570,000	614		166,911	0	8,415,655		45,664,627	1,060			8,415,655	12,934,437
NA	21	7	247	0	570,000	26		166,324	0	8,581,979		45,664,627	1,060			8,581,979	12,934,437
NA	21	8	248	0	570,000	97		166,394	0	8,748,372		45,664,627	1,065			8,748,372	12,934,437
NA	21	9	249	0	570,000	474		153,333	0	8,901,705		45,664,627	1,065			8,901,705	12,934,437
NA	21	10	250	0	570,000	7,019		159,878	0	9,061,583		45,664,627	1,065			9,061,583	12,934,437
NA	21	11	251	0	570,000	23,023		175,882	0	9,237,465		45,664,627	1,065			9,237,465	12,934,437
NA	21	12	252	0	570,000	33,534		186,393	0	9,423,858		45,664,627	1,070			9,423,858	12,934,437
NA	22	1	253	0	570,000	26,585		166,006	0	9,589,863		45,664,627	1,070			9,589,863	12,934,437
NA	22	2	254	0	570,000	44,106		183,527	0	9,773,390		45,664,627	1,070			9,773,390	12,934,437
NA	22	3	255	0	570,000	22,891		162,312	0	9,935,702		45,664,627	1,070			9,935,702	12,934,437
NA	22	4	256	0	570,000	13,248		152,669	0	10,088,372		45,664,627	1,075			10,088,372	12,934,437
NA	22	5	257	0	570,000	3,659		129,641	0	10,218,013		45,664,627	1,075			10,218,013	12,934,437
NA	22	6	258	0	570,000	614		126,597	0	10,344,610		45,664,627	1,075			10,344,610	12,934,437
NA	22	7	259	0	570,000	26		126,009	0	10,470,619		45,664,627	1,075			10,470,619	12,934,437
NA	22	8	260	0	570,000	97		126,079	0	10,596,698		45,664,627	1,075			10,596,698	12,934,437
NA	22	9	261	0	570,000	474		126,457	0	10,723,155		45,664,627	1,080			10,723,155	12,934,437
NA	22	10	262	0	570,000	7,019		119,564	0	10,842,718		45,664,627	1,080			10,842,718	12,934,437
NA	22	11	263	0	570,000	23,023		135,567	0	10,978,286		45,664,627	1,080			10,978,286	12,934,437
NA	22	12	264	0	570,000	33,534		146,078	0	11,124,364		45,664,627	1,080			11,124,364	12,934,437
NA	23	1	265	0	570,000	26,585		139,129	0	11,263,493		45,664,627	1,080			11,263,493	12,934,437
NA	23	2	266	0	570,000	44,106		156,651	0	11,420,144		45,664,627	1,080			11,420,144	12,934,437
NA	23	3	267	0	570,000	22,891		135,436	0	11,555,579		45,664,627	1,085			11,555,579	12,934,437
NA	23	4	268	0	570,000	13,248		112,355	0	11,667,934		45,664,627	1,085			11,667,934	12,934,437
NA	23	5	269	0	570,000	3,659		102,765	0	11,770,699		45,664,627	1,085			11,770,699	12,934,437
NA	23	6	270	0	570,000	614		99,721	0	11,870,420		45,664,627	1,085			11,870,420	12,934,437

Phase	Year	Month	Total Months	Quarry Area (Breccia & Greywacke)	Quarry Area (Limestone)	Quarry Area - Un Mined	Groundwater Inflow (Zero out through 12/31/2034)		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Total Pit Inflow	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water & Outflow Concentration
				lb/month	lb/month	lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L
NA	18	3	207	0.01	0.02	0.00	4.33	0.14	0.00	0.00	0.00	0.18	0.18	0.00	4.20
NA	18	4	208	0.01	0.01	0.00	4.31	0.14	0.00	0.00	0.00	0.16	0.16	0.00	4.23
NA	18	5	209	0.00	0.00	0.00	4.29	0.14	0.00	0.00	0.00	0.15	0.15	0.00	4.26
NA	18	6	210	0.00	0.00	0.00	4.27	0.14	0.00	0.00	0.00	0.14	0.14	0.00	4.26
NA	18	7	211	0.00	0.00	0.00	4.24	0.14	0.00	0.00	0.00	0.14	0.14	0.00	4.24
NA	18	8	212	0.00	0.00	0.00	4.22	0.14	0.00	0.00	0.00	0.14	0.14	0.00	4.22
NA	18	9	213	0.00	0.00	0.00	4.20	0.14	0.00	0.00	0.00	0.14	0.14	0.00	4.19
NA	18	10	214	0.00	0.00	0.00	4.18	0.14	0.00	0.00	0.00	0.14	0.14	0.00	4.14
NA	18	11	215	0.00	0.00	0.00	4.15	0.14	0.00	0.00	0.00	0.15	0.15	0.00	4.04
NA	18	12	216	0.00	0.00	0.00	4.13	0.14	0.00	0.00	0.00	0.14	0.14	0.00	3.96
NA	19	1	217	0.00	0.00	0.00	4.13	0.14	0.00	0.00	0.00	0.14	0.14	0.00	3.99
NA	19	2	218	0.00	0.00	0.00	4.13	0.14	0.00	0.00	0.00	0.14	0.00	0.14	3.91
NA	19	3	219	0.00	0.00	0.00	4.13	0.14	0.00	0.00	0.00	0.14	0.00	0.28	3.96
NA	19	4	220	0.00	0.00	0.00	4.13	0.14	0.00	0.00	0.00	0.14	0.00	0.42	3.99
NA	19	5	221	0.00	0.00	0.00	4.13	0.10	0.00	0.00	0.00	0.10	0.00	0.51	4.01
NA	19	6	222	0.00	0.00	0.00	4.13	0.09	0.00	0.00	0.00	0.09	0.00	0.61	4.03
NA	19	7	223	0.00	0.00	0.00	4.13	0.09	0.00	0.00	0.00	0.09	0.00	0.69	4.04
NA	19	8	224	0.00	0.00	0.00	4.13	0.08	0.00	0.00	0.00	0.08	0.00	0.78	4.05
NA	19	9	225	0.00	0.00	0.00	4.13	0.08	0.00	0.00	0.00	0.08	0.00	0.86	4.06
NA	19	10	226	0.00	0.00	0.00	4.13	0.08	0.00	0.00	0.00	0.08	0.00	0.94	4.06
NA	19	11	227	0.00	0.00	0.00	4.13	0.07	0.00	0.00	0.00	0.08	0.00	1.01	4.05
NA	19	12	228	0.00	0.00	0.00	4.13	0.07	0.00	0.00	0.00	0.07	0.00	1.09	4.03
NA	20	1	229	0.00	0.00	0.00	4.13	0.07	0.00	0.00	0.00	0.07	0.00	1.16	4.02
NA	20	2	230	0.00	0.00	0.00	4.13	0.07	0.00	0.00	0.00	0.07	0.00	1.23	4.00
NA	20	3	231	0.00	0.00	0.00	4.13	0.06	0.00	0.00	0.00	0.07	0.00	1.30	3.99
NA	20	4	232	0.00	0.00	0.00	4.13	0.06	0.00	0.00	0.00	0.06	0.00	1.36	3.99
NA	20	5	233	0.00	0.00	0.00	4.13	0.06	0.00	0.00	0.00	0.06	0.00	1.42	4.00
NA	20	6	234	0.00	0.00	0.00	4.13	0.06	0.00	0.00	0.00	0.06	0.00	1.48	4.00
NA	20	7	235	0.00	0.00	0.00	4.13	0.06	0.00	0.00	0.00	0.06	0.00	1.54	4.01
NA	20	8	236	0.00	0.00	0.00	4.13	0.06	0.00	0.00	0.00	0.06	0.00	1.60	4.01
NA	20	9	237	0.00	0.00	0.00	4.13	0.05	0.00	0.00	0.00	0.05	0.00	1.65	4.01
NA	20	10	238	0.00	0.00	0.00	4.13	0.05	0.00	0.00	0.00	0.05	0.00	1.70	4.02
NA	20	11	239	0.00	0.00	0.00	4.13	0.05	0.00	0.00	0.00	0.06	0.00	1.76	4.01
NA	20	12	240	0.00	0.00	0.00	4.13	0.05	0.00	0.00	0.00	0.05	0.00	1.81	4.00
NA	21	1	241	0.00	0.00	0.00	4.13	0.05	0.00	0.00	0.00	0.05	0.00	1.86	3.99
NA	21	2	242	0.00	0.00	0.00	4.13	0.05	0.00	0.00	0.00	0.05	0.00	1.91	3.98
NA	21	3	243	0.00	0.00	0.00	4.13	0.05	0.00	0.00	0.00	0.05	0.00	1.96	3.98
NA	21	4	244	0.00	0.00	0.00	4.13	0.05	0.00	0.00	0.00	0.05	0.00	2.01	3.97
NA	21	5	245	0.00	0.00	0.00	4.13	0.04	0.00	0.00	0.00	0.04	0.00	2.05	3.98
NA	21	6	246	0.00	0.00	0.00	4.13	0.04	0.00	0.00	0.00	0.04	0.00	2.09	3.98
NA	21	7	247	0.00	0.00	0.00	4.13	0.04	0.00	0.00	0.00	0.04	0.00	2.14	3.98
NA	21	8	248	0.00	0.00	0.00	4.13	0.04	0.00	0.00	0.00	0.04	0.00	2.18	3.99
NA	21	9	249	0.00	0.00	0.00	4.13	0.04	0.00	0.00	0.00	0.04	0.00	2.22	3.99
NA	21	10	250	0.00	0.00	0.00	4.13	0.04	0.00	0.00	0.00	0.04	0.00	2.26	3.99
NA	21	11	251	0.00	0.00	0.00	4.13	0.04	0.00	0.00	0.00	0.04	0.00	2.30	3.98
NA	21	12	252	0.00	0.00	0.00	4.13	0.04	0.00	0.00	0.00	0.04	0.00	2.34	3.98
NA	22	1	253	0.00	0.00	0.00	4.13	0.04	0.00	0.00	0.00	0.04	0.00	2.38	3.97
NA	22	2	254	0.00	0.00	0.00	4.13	0.04	0.00	0.00	0.00	0.04	0.00	2.42	3.96
NA	22	3	255	0.00	0.00	0.00	4.13	0.04	0.00	0.00	0.00	0.04	0.00	2.46	3.96
NA	22	4	256	0.00	0.00	0.00	4.13	0.04	0.00	0.00	0.00	0.04	0.00	2.49	3.96
NA	22	5	257	0.00	0.00	0.00	4.13	0.03	0.00	0.00	0.00	0.03	0.00	2.53	3.96
NA	22	6	258	0.00	0.00	0.00	4.13	0.03	0.00	0.00	0.00	0.03	0.00	2.56	3.96
NA	22	7	259	0.00	0.00	0.00	4.13	0.03	0.00	0.00	0.00	0.03	0.00	2.59	3.96
NA	22	8	260	0.00	0.00	0.00	4.13	0.03	0.00	0.00	0.00	0.03	0.00	2.62	3.96
NA	22	9	261	0.00	0.00	0.00	4.13	0.03	0.00	0.00	0.00	0.03	0.00	2.66	3.96
NA	22	10	262	0.00	0.00	0.00	4.13	0.03	0.00	0.00	0.00	0.03	0.00	2.69	3.96
NA	22	11	263	0.00	0.00	0.00	4.13	0.03	0.00	0.00	0.00	0.03	0.00	2.72	3.96
NA	22	12	264	0.00	0.00	0.00	4.13	0.03	0.00	0.00	0.00	0.03	0.00	2.75	3.95
NA	23	1	265	0.00	0.00	0.00	4.13	0.03	0.00	0.00	0.00	0.03	0.00	2.78	3.95
NA	23	2	266	0.00	0.00	0.00	4.13	0.03	0.00	0.00	0.00	0.03	0.00	2.81	3.94
NA	23	3	267	0.00	0.00	0.00	4.13	0.03	0.00	0.00	0.00	0.03	0.00	2.84	3.94
NA	23	4	268	0.00	0.00	0.00	4.13	0.03	0.00	0.00	0.00	0.03	0.00	2.87	3.94
NA	23	5	269	0.00	0.00	0.00	4.13	0.03	0.00	0.00	0.00	0.03	0.00	2.90	3.94
NA	23	6	270	0.00	0.00	0.00	4.13	0.03	0.00	0.00	0.00	0.03	0.00	2.92	3.94

Phase	Year	Month	Total Months	Date	Quarry Area (Breccia & Greywacke)	Quarry Area (Breccia & Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	Quarry Area -Un Mined	Quarry Area -Un Mined	Pit Invert Level	Groundwater Inflow (Zero out through 12/31/2034)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	ft amsl	cu ft	sq ft
NA	23	7	271	7/1/2040	0	0	0	0	0	0	925	99,106	0
NA	23	8	272	8/1/2040	0	0	0	0	0	0	925	99,106	0
NA	23	9	273	9/1/2040	0	0	0	0	0	0	925	99,106	0
NA	23	10	274	10/1/2040	0	0	0	0	0	0	925	99,106	0
NA	23	11	275	11/1/2040	0	0	0	0	0	0	925	85,668	0
NA	23	12	276	12/1/2040	0	0	0	0	0	0	925	85,668	0
NA	24	1	277	1/1/2041	0	0	0	0	0	0	925	85,668	0
NA	24	2	278	2/1/2041	0	0	0	0	0	0	925	85,668	0
NA	24	3	279	3/1/2041	0	0	0	0	0	0	925	85,668	0
NA	24	4	280	4/1/2041	0	0	0	0	0	0	925	85,668	0
NA	24	5	281	5/1/2041	0	0	0	0	0	0	925	85,668	0
NA	24	6	282	6/1/2041	0	0	0	0	0	0	925	85,668	0
NA	24	7	283	7/1/2041	0	0	0	0	0	0	925	85,668	0
NA	24	8	284	8/1/2041	0	0	0	0	0	0	925	85,668	0
NA	24	9	285	9/1/2041	0	0	0	0	0	0	925	85,668	0
NA	24	10	286	10/1/2041	0	0	0	0	0	0	925	85,668	0
NA	24	11	287	11/1/2041	0	0	0	0	0	0	925	85,668	0
NA	24	12	288	12/1/2041	0	0	0	0	0	0	925	85,668	0
NA	25	1	289	1/1/2042	0	0	0	0	0	0	925	85,668	0
NA	25	2	290	2/1/2042	0	0	0	0	0	0	925	85,668	0
NA	25	3	291	3/1/2042	0	0	0	0	0	0	925	85,668	0
NA	25	4	292	4/1/2042	0	0	0	0	0	0	925	85,668	0
NA	25	5	293	5/1/2042	0	0	0	0	0	0	925	85,668	0
NA	25	6	294	6/1/2042	0	0	0	0	0	0	925	85,668	0
NA	25	7	295	7/1/2042	0	0	0	0	0	0	925	85,668	0
NA	25	8	296	8/1/2042	0	0	0	0	0	0	925	85,668	0
NA	25	9	297	9/1/2042	0	0	0	0	0	0	925	85,668	0
NA	25	10	298	10/1/2042	0	0	0	0	0	0	925	85,668	0
NA	25	11	299	11/1/2042	0	0	0	0	0	0	925	85,668	0
NA	25	12	300	12/1/2042	0	0	0	0	0	0	925	85,668	0
NA	26	1	301	1/1/2043	0	0	0	0	0	0	925	85,668	0
NA	26	2	302	2/1/2043	0	0	0	0	0	0	925	85,668	0
NA	26	3	303	3/1/2043	0	0	0	0	0	0	925	85,668	0
NA	26	4	304	4/1/2043	0	0	0	0	0	0	925	85,668	0
NA	26	5	305	5/1/2043	0	0	0	0	0	0	925	85,668	0
NA	26	6	306	6/1/2043	0	0	0	0	0	0	925	85,668	0
NA	26	7	307	7/1/2043	0	0	0	0	0	0	925	85,668	0
NA	26	8	308	8/1/2043	0	0	0	0	0	0	925	85,668	0
NA	26	9	309	9/1/2043	0	0	0	0	0	0	925	85,668	0
NA	26	10	310	10/1/2043	0	0	0	0	0	0	925	85,668	0
NA	26	11	311	11/1/2043	0	0	0	0	0	0	925	85,668	0
NA	26	12	312	12/1/2043	0	0	0	0	0	0	925	85,668	0
NA	27	1	313	1/1/2044	0	0	0	0	0	0	925	85,668	0
NA	27	2	314	2/1/2044	0	0	0	0	0	0	925	85,668	0
NA	27	3	315	3/1/2044	0	0	0	0	0	0	925	85,668	0
NA	27	4	316	4/1/2044	0	0	0	0	0	0	925	85,668	0
NA	27	5	317	5/1/2044	0	0	0	0	0	0	925	85,668	0
NA	27	6	318	6/1/2044	0	0	0	0	0	0	925	85,668	0
NA	27	7	319	7/1/2044	0	0	0	0	0	0	925	85,668	0
NA	27	8	320	8/1/2044	0	0	0	0	0	0	925	85,668	0
NA	27	9	321	9/1/2044	0	0	0	0	0	0	925	85,668	0
NA	27	10	322	10/1/2044	0	0	0	0	0	0	925	85,668	0
NA	27	11	323	11/1/2044	0	0	0	0	0	0	925	85,668	0
NA	27	12	324	12/1/2044	0	0	0	0	0	0	925	85,668	0

Phase	Year	Month	Total Months	Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit
				cu ft	sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
NA	23	7	271	0	570,000	26		99,133	0	11,969,553		45,664,627	1,085			11,969,553	12,934,437
NA	23	8	272	0	570,000	97		99,203	0	12,068,756		45,664,627	1,085			12,068,756	12,934,437
NA	23	9	273	0	570,000	474		99,580	0	12,168,336		45,664,627	1,085			12,168,336	12,934,437
NA	23	10	274	0	570,000	7,019		106,125	0	12,274,461		45,664,627	1,090			12,274,461	12,934,437
NA	23	11	275	0	570,000	23,023		108,691	0	12,383,152		45,664,627	1,090			12,383,152	12,934,437
NA	23	12	276	0	570,000	33,534		119,202	0	12,502,354		45,664,627	1,090			12,502,354	12,934,437
NA	24	1	277	0	570,000	26,585		112,253	0	12,614,607		45,664,627	1,090			12,614,607	12,934,437
NA	24	2	278	0	570,000	44,106		129,774	0	12,744,381		45,664,627	1,090			12,744,381	12,934,437
NA	24	3	279	0	570,000	22,891		108,559	0	12,852,941		45,664,627	1,090			12,852,941	12,934,437
NA	24	4	280	0	570,000	13,248		98,917	17,420	12,934,437		45,664,627	1,090			12,951,857	12,934,437
NA	24	5	281	0	570,000	3,659		89,327	89,327	12,934,437		45,664,627	1,090			13,023,764	12,934,437
NA	24	6	282	0	570,000	614		86,282	86,282	12,934,437		45,664,627	1,090			13,020,720	12,934,437
NA	24	7	283	0	570,000	26		85,695	85,695	12,934,437		45,664,627	1,090			13,020,132	12,934,437
NA	24	8	284	0	570,000	97		85,765	85,765	12,934,437		45,664,627	1,090			13,020,202	12,934,437
NA	24	9	285	0	570,000	474		86,142	86,142	12,934,437		45,664,627	1,090			13,020,580	12,934,437
NA	24	10	286	0	570,000	7,019		92,687	92,687	12,934,437		45,664,627	1,090			13,027,125	12,934,437
NA	24	11	287	0	570,000	23,023		108,691	108,691	12,934,437		45,664,627	1,090			13,043,128	12,934,437
NA	24	12	288	0	570,000	33,534		119,202	119,202	12,934,437		45,664,627	1,090			13,053,639	12,934,437
NA	25	1	289	0	570,000	26,585		112,253	112,253	12,934,437		45,664,627	1,090			13,046,690	12,934,437
NA	25	2	290	0	570,000	44,106		129,774	129,774	12,934,437		45,664,627	1,090			13,064,212	12,934,437
NA	25	3	291	0	570,000	22,891		108,559	108,559	12,934,437		45,664,627	1,090			13,042,997	12,934,437
NA	25	4	292	0	570,000	13,248		98,917	98,917	12,934,437		45,664,627	1,090			13,033,354	12,934,437
NA	25	5	293	0	570,000	3,659		89,327	89,327	12,934,437		45,664,627	1,090			13,023,764	12,934,437
NA	25	6	294	0	570,000	614		86,282	86,282	12,934,437		45,664,627	1,090			13,020,720	12,934,437
NA	25	7	295	0	570,000	26		85,695	85,695	12,934,437		45,664,627	1,090			13,020,132	12,934,437
NA	25	8	296	0	570,000	97		85,765	85,765	12,934,437		45,664,627	1,090			13,020,202	12,934,437
NA	25	9	297	0	570,000	474		86,142	86,142	12,934,437		45,664,627	1,090			13,020,580	12,934,437
NA	25	10	298	0	570,000	7,019		92,687	92,687	12,934,437		45,664,627	1,090			13,027,125	12,934,437
NA	25	11	299	0	570,000	23,023		108,691	108,691	12,934,437		45,664,627	1,090			13,043,128	12,934,437
NA	25	12	300	0	570,000	33,534		119,202	119,202	12,934,437		45,664,627	1,090			13,053,639	12,934,437
NA	26	1	301	0	570,000	26,585		112,253	112,253	12,934,437		45,664,627	1,090			13,046,690	12,934,437
NA	26	2	302	0	570,000	44,106		129,774	129,774	12,934,437		45,664,627	1,090			13,064,212	12,934,437
NA	26	3	303	0	570,000	22,891		108,559	108,559	12,934,437		45,664,627	1,090			13,042,997	12,934,437
NA	26	4	304	0	570,000	13,248		98,917	98,917	12,934,437		45,664,627	1,090			13,033,354	12,934,437
NA	26	5	305	0	570,000	3,659		89,327	89,327	12,934,437		45,664,627	1,090			13,023,764	12,934,437
NA	26	6	306	0	570,000	614		86,282	86,282	12,934,437		45,664,627	1,090			13,020,720	12,934,437
NA	26	7	307	0	570,000	26		85,695	85,695	12,934,437		45,664,627	1,090			13,020,132	12,934,437
NA	26	8	308	0	570,000	97		85,765	85,765	12,934,437		45,664,627	1,090			13,020,202	12,934,437
NA	26	9	309	0	570,000	474		86,142	86,142	12,934,437		45,664,627	1,090			13,020,580	12,934,437
NA	26	10	310	0	570,000	7,019		92,687	92,687	12,934,437		45,664,627	1,090			13,027,125	12,934,437
NA	26	11	311	0	570,000	23,023		108,691	108,691	12,934,437		45,664,627	1,090			13,043,128	12,934,437
NA	26	12	312	0	570,000	33,534		119,202	119,202	12,934,437		45,664,627	1,090			13,053,639	12,934,437
NA	27	1	313	0	570,000	26,585		112,253	112,253	12,934,437		45,664,627	1,090			13,046,690	12,934,437
NA	27	2	314	0	570,000	44,106		129,774	129,774	12,934,437		45,664,627	1,090			13,064,212	12,934,437
NA	27	3	315	0	570,000	22,891		108,559	108,559	12,934,437		45,664,627	1,090			13,042,997	12,934,437
NA	27	4	316	0	570,000	13,248		98,917	98,917	12,934,437		45,664,627	1,090			13,033,354	12,934,437
NA	27	5	317	0	570,000	3,659		89,327	89,327	12,934,437		45,664,627	1,090			13,023,764	12,934,437
NA	27	6	318	0	570,000	614		86,282	86,282	12,934,437		45,664,627	1,090			13,020,720	12,934,437
NA	27	7	319	0	570,000	26		85,695	85,695	12,934,437		45,664,627	1,090			13,020,132	12,934,437
NA	27	8	320	0	570,000	97		85,765	85,765	12,934,437		45,664,627	1,090			13,020,202	12,934,437
NA	27	9	321	0	570,000	474		86,142	86,142	12,934,437		45,664,627	1,090			13,020,580	12,934,437
NA	27	10	322	0	570,000	7,019		92,687	92,687	12,934,437		45,664,627	1,090			13,027,125	12,934,437
NA	27	11	323	0	570,000	23,023		108,691	108,691	12,934,437		45,664,627	1,090			13,043,128	12,934,437
NA	27	12	324	0	570,000	33,534		119,202	119,202	12,934,437		45,664,627	1,090			13,053,639	12,934,437

Phase	Year	Month	Total Months	Quarry Area (Breccia & Greywacke)	Quarry Area (Limestone)	Quarry Area - Un Mined	Groundwater Inflow (Zero out through 12/31/2034)		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Total Pit Inflow	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water & Outflow Concentration
				lb/month	lb/month	lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L
NA	23	7	271	0.00	0.00	0.00	4.13	0.03	0.00	0.00	0.00	0.03	0.00	2.95	3.94
NA	23	8	272	0.00	0.00	0.00	4.13	0.03	0.00	0.00	0.00	0.03	0.00	2.97	3.94
NA	23	9	273	0.00	0.00	0.00	4.13	0.03	0.00	0.00	0.00	0.03	0.00	3.00	3.94
NA	23	10	274	0.00	0.00	0.00	4.13	0.03	0.00	0.00	0.00	0.03	0.00	3.02	3.94
NA	23	11	275	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.00	3.05	3.94
NA	23	12	276	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.00	3.07	3.93
NA	24	1	277	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.00	3.10	3.93
NA	24	2	278	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.03	0.00	3.12	3.92
NA	24	3	279	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.00	3.15	3.92
NA	24	4	280	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.00	3.16	3.92
NA	24	5	281	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.17	3.92
NA	24	6	282	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.17	3.92
NA	24	7	283	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.17	3.92
NA	24	8	284	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.17	3.92
NA	24	9	285	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.17	3.92
NA	24	10	286	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.17	3.92
NA	24	11	287	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.03	3.17	3.92
NA	24	12	288	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.03	3.16	3.91
NA	25	1	289	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.03	3.16	3.91
NA	25	2	290	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.03	0.03	3.15	3.90
NA	25	3	291	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.03	3.15	3.90
NA	25	4	292	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.15	3.90
NA	25	5	293	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.15	3.90
NA	25	6	294	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.15	3.90
NA	25	7	295	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.15	3.90
NA	25	8	296	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.15	3.90
NA	25	9	297	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.15	3.90
NA	25	10	298	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.15	3.90
NA	25	11	299	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.03	3.15	3.90
NA	25	12	300	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.03	3.15	3.89
NA	26	1	301	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.03	3.14	3.89
NA	26	2	302	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.03	0.03	3.14	3.88
NA	26	3	303	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.03	3.14	3.88
NA	26	4	304	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.14	3.88
NA	26	5	305	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.14	3.88
NA	26	6	306	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.14	3.88
NA	26	7	307	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.14	3.88
NA	26	8	308	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.14	3.88
NA	26	9	309	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.14	3.89
NA	26	10	310	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.14	3.89
NA	26	11	311	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.03	3.14	3.88
NA	26	12	312	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.03	3.13	3.88
NA	27	1	313	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.03	3.13	3.87
NA	27	2	314	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.03	0.03	3.13	3.87
NA	27	3	315	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.03	3.12	3.86
NA	27	4	316	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.12	3.86
NA	27	5	317	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.12	3.86
NA	27	6	318	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.12	3.86
NA	27	7	319	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.13	3.87
NA	27	8	320	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.13	3.87
NA	27	9	321	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.13	3.87
NA	27	10	322	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.02	3.13	3.87
NA	27	11	323	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.03	3.13	3.87
NA	27	12	324	0.00	0.00	0.00	4.13	0.02	0.00	0.00	0.00	0.02	0.03	3.12	3.86

Appendix D.2.2

D.2.2 South Quarry Runoff Water Quality Projections

South Quarry Runoff Water Budget
Condition: All Phases

Inflows and Outflows	Parameters	Value	Units	cription and Rationale				
Precipitation	Precipitation	2.05	ft/yr	on wasterock backfill area is based on monthly precip da				
	End of Mining	Phases						
	12/31/2034	Initial	1	2	3	4A	4B	5
Quarry Backfilling Areas	**Surface Water Drainage to Pit**							
	Quarry Area (Limestone)	-	1,500,000	1,800,000	2,100,000	1,400,000	1,300,000	1,600,000
	Quarry Area (Breccia & Greywacke)	-	-	2,300,000	3,700,000	4,600,000	5,200,000	6,100,000
	Quarry Area -Un Mined	3,900,000	2,400,000	570,000	-	-	-	-
	Surface Infiltration to Pit (Through backfill)							
	Undrained Backfill (No Surface Outlet)	-	-	-	-		-	
	Drained Backfill (With Surface Outlet)							-
Groundwater Capture	Spill Elevation	1,100	ft amsl					
	Bottom of Pit	925	ft amsl					
	Pit Bottom	1,122	1,122	990	925	925	925	925
	At Pit Bottom	90	gpm					
		529,128	cu ft/mo					
	At Spill Elevation	10	gpm					
		58,792	cu ft/mo					
	Unmined	-	gpm					
		1,122	ft amsl	calculated				
Date Quarry Filling Starts	**1/1/2036**							
Assumptions	The pit is backfilled incrementally over a 4-year period, from 440 ft amsl to the spill-over elevation of 990 ft amsl							
	Backfill material has a porosity of 30-percent.							
	Surface runoff is only within the capture area of the pit and is based on water year 2009 data							
	Groundwater inflow into the pit varies by month and diminshes as the backfill increases							
	Precipitation directly infiltrates to the water table within the area of the backfill.							
	Evaporation of the pit lake is only applied when the cumulative volume of water in the pit is greater than the cumulative volume of void spaces within the backfill (based on 30-percent porosity)							
	The water level in the pit is dependent on the total cumulative volume of the backfill up to the spill-over elevatic							

Phase	Year	Month	Total Months	Date	Quarry Area (Breccia & Greywacke)	Quarry Area (Breccia & Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	Quarry Area -Un Mined	Quarry Area -Un Mined	Pit Invert Level	Groundwater Inflow (Zerod out, included in pit water balance)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	ft amsl	cu ft	sq ft
1	**1**	**1**	**1**	**1/1/2018**	**0**	0	**0**	0	**3,900,000**	363,791	**1,122**	**0**	**0**
1	1	2	2	2/1/2018	0	0	31,250	8,060	3,868,750	598,721	1,122	0	0
1	1	3	3	3/1/2018	0	0	62,500	8,367	3,837,500	308,225	1,122	0	0
1	1	4	4	4/1/2018	0	0	93,750	7,263	3,806,250	176,937	1,122	0	0
1	1	5	5	5/1/2018	0	0	125,000	2,674	3,775,000	48,462	1,122	0	0
1	1	6	6	6/1/2018	0	0	156,250	561	3,743,750	8,068	1,122	0	0
1	1	7	7	7/1/2018	0	0	187,500	29	3,712,500	343	1,122	0	0
1	1	8	8	8/1/2018	0	0	218,750	123	3,681,250	1,247	1,122	0	0
1	1	9	9	9/1/2018	0	0	250,000	693	3,650,000	6,068	1,122	0	0
1	1	10	10	10/1/2018	0	0	281,250	11,545	3,618,750	89,124	1,122	0	0
1	1	11	11	11/1/2018	0	0	312,500	42,073	3,587,500	289,801	1,122	0	0
1	1	12	12	12/1/2018	0	0	343,750	67,410	3,556,250	418,435	1,122	0	0
1	2	1	13	1/1/2019	0	0	375,000	58,300	3,525,000	328,811	1,122	0	0
1	2	2	14	2/1/2019	0	0	406,250	104,784	3,493,750	540,687	1,122	0	0
1	2	3	15	3/1/2019	0	0	437,500	58,566	3,462,500	278,105	1,122	0	0
1	2	4	16	4/1/2019	0	0	468,750	36,317	3,431,250	159,505	1,122	0	0
1	2	5	17	5/1/2019	0	0	500,000	10,698	3,400,000	43,648	1,122	0	0
1	2	6	18	6/1/2019	0	0	531,250	1,908	3,368,750	7,260	1,122	0	0
1	2	7	19	7/1/2019	0	0	562,500	87	3,337,500	308	1,122	0	0
1	2	8	20	8/1/2019	0	0	593,750	335	3,306,250	1,120	1,122	0	0
1	2	9	21	9/1/2019	0	0	625,000	1,732	3,275,000	5,444	1,122	0	0
1	2	10	22	10/1/2019	0	0	656,250	26,937	3,243,750	79,888	1,122	0	0
1	2	11	23	11/1/2019	0	0	687,500	92,561	3,212,500	259,509	1,122	0	0
1	2	12	24	12/1/2019	0	0	718,750	140,949	3,181,250	374,312	1,122	0	0
1	3	1	25	1/1/2020	0	0	750,000	116,600	3,150,000	293,831	1,122	0	0
1	3	2	26	2/1/2020	0	0	781,250	201,508	3,118,750	482,652	1,122	0	0
1	3	3	27	3/1/2020	0	0	812,500	108,765	3,087,500	247,985	1,122	0	0
1	3	4	28	4/1/2020	0	0	843,750	65,371	3,056,250	142,073	1,122	0	0
1	3	5	29	5/1/2020	0	0	875,000	18,721	3,025,000	38,833	1,122	0	0
1	3	6	30	6/1/2020	0	0	906,250	3,255	2,993,750	6,451	1,122	0	0
1	3	7	31	7/1/2020	0	0	937,500	144	2,962,500	274	1,122	0	0
1	3	8	32	8/1/2020	0	0	968,750	547	2,931,250	993	1,122	0	0
1	3	9	33	9/1/2020	0	0	1,000,000	2,771	2,900,000	4,821	1,122	0	0
1	3	10	34	10/1/2020	0	0	1,031,250	42,330	2,868,750	70,653	1,122	0	0
1	3	11	35	11/1/2020	0	0	1,062,500	143,050	2,837,500	229,216	1,122	0	0
1	3	12	36	12/1/2020	0	0	1,093,750	214,488	2,806,250	330,188	1,122	0	0
1	4	1	37	1/1/2021	0	0	1,125,000	174,900	2,775,000	258,851	1,122	0	0
1	4	2	38	2/1/2021	0	0	1,156,250	298,232	2,743,750	424,618	1,122	0	0
1	4	3	39	3/1/2021	0	0	1,187,500	158,965	2,712,500	217,866	1,122	0	0
1	4	4	40	4/1/2021	0	0	1,218,750	94,425	2,681,250	124,640	1,122	0	0
1	4	5	41	5/1/2021	0	0	1,250,000	26,745	2,650,000	34,019	1,122	0	0
1	4	6	42	6/1/2021	0	0	1,281,250	4,602	2,618,750	5,643	1,122	0	0
1	4	7	43	7/1/2021	0	0	1,312,500	202	2,587,500	239	1,122	0	0
1	4	8	44	8/1/2021	0	0	1,343,750	758	2,556,250	866	1,122	0	0
1	4	9	45	9/1/2021	0	0	1,375,000	3,810	2,525,000	4,198	1,122	0	0

Year	Month	Total Months	Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit
			cu ft	sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
1	**1**	**1**	0	**0**	0		363,791	363,791	**0**		**0**	**1,122**	**NA**	**NA**	**363,791**	0
1	2	2	0	0	0		606,781	606,781	0	NA	0	1,122			606,781	0
1	3	3	0	0	0		316,591	316,591	0		0	1,122			316,591	0
1	4	4	0	0	0		184,201	184,201	0		0	1,122			184,201	0
1	5	5	0	0	0		51,136	51,136	0		0	1,122			51,136	0
1	6	6	0	0	0		8,629	8,629	0		0	1,122			8,629	0
1	7	7	0	0	0		372	372	0		0	1,122			372	0
1	8	8	0	0	0		1,370	1,370	0		0	1,122			1,370	0
1	9	9	0	0	0		6,760	6,760	0		0	1,122			6,760	0
1	10	10	0	0	0		100,668	100,668	0		0	1,122			100,668	0
1	11	11	0	0	0		331,875	331,875	0		0	1,122			331,875	0
1	12	12	0	0	0		485,845	485,845	0		0	1,122			485,845	0
2	1	13	0	0	0		387,111	387,111	0		0	1,122			387,111	0
2	2	14	0	0	0		645,471	645,471	0		0	1,122			645,471	0
2	3	15	0	0	0		336,671	336,671	0		0	1,122			336,671	0
2	4	16	0	0	0		195,822	195,822	0		0	1,122			195,822	0
2	5	17	0	0	0		54,345	54,345	0		0	1,122			54,345	0
2	6	18	0	0	0		9,168	9,168	0		0	1,122			9,168	0
2	7	19	0	0	0		395	395	0		0	1,122			395	0
2	8	20	0	0	0		1,455	1,455	0		0	1,122			1,455	0
2	9	21	0	0	0		7,176	7,176	0		0	1,122			7,176	0
2	10	22	0	0	0		106,825	106,825	0		0	1,122			106,825	0
2	11	23	0	0	0		352,070	352,070	0		0	1,122			352,070	0
2	12	24	0	0	0		515,261	515,261	0		0	1,122			515,261	0
3	1	25	0	0	0		410,431	410,431	0		0	1,122			410,431	0
3	2	26	0	0	0		684,160	684,160	0		0	1,122			684,160	0
3	3	27	0	0	0		356,751	356,751	0		0	1,122			356,751	0
3	4	28	0	0	0		207,444	207,444	0		0	1,122			207,444	0
3	5	29	0	0	0		57,555	57,555	0		0	1,122			57,555	0
3	6	30	0	0	0		9,706	9,706	0		0	1,122			9,706	0
3	7	31	0	0	0		418	418	0		0	1,122			418	0
3	8	32	0	0	0		1,539	1,539	0		0	1,122			1,539	0
3	9	33	0	0	0		7,592	7,592	0		0	1,122			7,592	0
3	10	34	0	0	0		112,982	112,982	0		0	1,122			112,982	0
3	11	35	0	0	0		372,265	372,265	0		0	1,122			372,265	0
3	12	36	0	0	0		544,676	544,676	0		0	1,122			544,676	0
4	1	37	0	0	0		433,751	433,751	0		0	1,122			433,751	0
4	2	38	0	0	0		722,850	722,850	0		0	1,122			722,850	0
4	3	39	0	0	0		376,831	376,831	0		0	1,122			376,831	0
4	4	40	0	0	0		219,065	219,065	0		0	1,122			219,065	0
4	5	41	0	0	0		60,764	60,764	0		0	1,122			60,764	0
4	6	42	0	0	0		10,245	10,245	0		0	1,122			10,245	0
4	7	43	0	0	0		441	441	0		0	1,122			441	0
4	8	44	0	0	0		1,624	1,624	0		0	1,122			1,624	0
4	9	45	0	0	0		8,007	8,007	0		0	1,122			8,007	0

Year	Month	Total Months	Quarry Area (Breccia & Greywacke)	Quarry Area (Limestone)	Quarry Area - Un Mined	Groundwater Inflow (Zerod out, included in pit water balance)		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Total Pit Inflow	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water & Outflow Concentration
			lb/month	lb/month	lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L
1	**1**	**1**	0.00	0.00	0.07	4.40	0.00	0.00	0.00	0.00	0.07	0.00	0.07	0.00
1	2	2	0.00	0.00	0.11	4.40	0.00	0.00	0.00	0.00	0.11	0.11	0.00	2.92
1	3	3	0.00	0.00	0.06	4.40	0.00	0.00	0.00	0.00	0.06	0.06	0.00	2.94
1	4	4	0.00	0.00	0.03	4.40	0.00	0.00	0.00	0.00	0.03	0.03	0.00	2.96
1	5	5	0.00	0.00	0.01	4.40	0.00	0.00	0.00	0.00	0.01	0.01	0.00	2.98
1	6	6	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00
1	7	7	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.02
1	8	8	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.04
1	9	9	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.05
1	10	10	0.00	0.00	0.02	4.40	0.00	0.00	0.00	0.00	0.02	0.02	0.00	3.07
1	11	11	0.00	0.01	0.05	4.40	0.00	0.00	0.00	0.00	0.06	0.06	0.00	3.09
1	12	12	0.00	0.02	0.08	4.40	0.00	0.00	0.00	0.00	0.09	0.09	0.00	3.11
2	1	13	0.00	0.02	0.06	4.40	0.00	0.00	0.00	0.00	0.08	0.08	0.00	3.13
2	2	14	0.00	0.03	0.10	4.40	0.00	0.00	0.00	0.00	0.13	0.13	0.00	3.14
2	3	15	0.00	0.02	0.05	4.40	0.00	0.00	0.00	0.00	0.07	0.07	0.00	3.16
2	4	16	0.00	0.01	0.03	4.40	0.00	0.00	0.00	0.00	0.04	0.04	0.00	3.18
2	5	17	0.00	0.00	0.01	4.40	0.00	0.00	0.00	0.00	0.01	0.01	0.00	3.20
2	6	18	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
2	7	19	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.23
2	8	20	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.25
2	9	21	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.26
2	10	22	0.00	0.01	0.01	4.40	0.00	0.00	0.00	0.00	0.02	0.02	0.00	3.28
2	11	23	0.00	0.03	0.05	4.40	0.00	0.00	0.00	0.00	0.07	0.07	0.00	3.29
2	12	24	0.00	0.04	0.07	4.40	0.00	0.00	0.00	0.00	0.11	0.11	0.00	3.31
3	1	25	0.00	0.03	0.05	4.40	0.00	0.00	0.00	0.00	0.09	0.09	0.00	3.33
3	2	26	0.00	0.06	0.09	4.40	0.00	0.00	0.00	0.00	0.14	0.14	0.00	3.34
3	3	27	0.00	0.03	0.04	4.40	0.00	0.00	0.00	0.00	0.07	0.07	0.00	3.36
3	4	28	0.00	0.02	0.03	4.40	0.00	0.00	0.00	0.00	0.04	0.04	0.00	3.37
3	5	29	0.00	0.01	0.01	4.40	0.00	0.00	0.00	0.00	0.01	0.01	0.00	3.39
3	6	30	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.40
3	7	31	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.42
3	8	32	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.43
3	9	33	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.45
3	10	34	0.00	0.01	0.01	4.40	0.00	0.00	0.00	0.00	0.02	0.02	0.00	3.46
3	11	35	0.00	0.04	0.04	4.40	0.00	0.00	0.00	0.00	0.08	0.08	0.00	3.48
3	12	36	0.00	0.06	0.06	4.40	0.00	0.00	0.00	0.00	0.12	0.12	0.00	3.49
4	1	37	0.00	0.05	0.05	4.40	0.00	0.00	0.00	0.00	0.10	0.10	0.00	3.50
4	2	38	0.00	0.08	0.08	4.40	0.00	0.00	0.00	0.00	0.16	0.16	0.00	3.52
4	3	39	0.00	0.04	0.04	4.40	0.00	0.00	0.00	0.00	0.08	0.08	0.00	3.53
4	4	40	0.00	0.03	0.02	4.40	0.00	0.00	0.00	0.00	0.05	0.05	0.00	3.55
4	5	41	0.00	0.01	0.01	4.40	0.00	0.00	0.00	0.00	0.01	0.01	0.00	3.56
4	6	42	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.57
4	7	43	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.59
4	8	44	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.60
4	9	45	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.61

Phase	Year	Month	Total Months	Date	Quarry Area (Breccia & Greywacke)	Quarry Area (Breccia & Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	Quarry Area -Un Mined	Quarry Area -Un Mined	Pit Invert Level	Groundwater Inflow (Zerod out, included in pit water balance)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	ft amsl	cu ft	sq ft
1	4	10	46	10/1/2021	0	0	1,406,250	57,723	2,493,750	61,417	1,122	0	0
1	4	11	47	11/1/2021	0	0	1,437,500	193,538	2,462,500	198,923	1,122	0	0
1	4	12	48	12/1/2021	0	0	1,468,750	288,026	2,431,250	286,065	1,122	0	0
2	**3**	**1**	49	1/1/2022	**0**	0	**1,500,000**	233,199	**2,400,000**	223,871	1,122	0	**0**
2	3	2	50	2/1/2022	47,917	12,359	1,506,250	388,508	2,361,875	365,520	1,122	0	0
2	3	3	51	3/1/2022	96,853	12,965	1,512,500	202,471	2,323,750	186,642	1,122	0	0
2	3	4	52	4/1/2022	145,789	11,295	1,518,750	117,668	2,285,625	106,249	1,122	0	0
2	3	5	53	5/1/2022	194,725	4,166	1,525,000	32,629	2,247,500	28,852	1,122	0	0
2	3	6	54	6/1/2022	243,661	875	1,531,250	5,500	2,209,375	4,761	1,122	0	0
2	3	7	55	7/1/2022	292,598	45	1,537,500	237	2,171,250	201	1,122	0	0
2	3	8	56	8/1/2022	341,534	193	1,543,750	871	2,133,125	722	1,122	0	0
2	3	9	57	9/1/2022	390,470	1,082	1,550,000	4,295	2,095,000	3,483	1,122	0	0
2	3	10	58	10/1/2022	439,406	18,036	1,556,250	63,880	2,056,875	50,657	1,122	0	0
2	3	11	59	11/1/2022	488,342	65,748	1,562,500	210,367	2,018,750	163,076	1,122	0	0
2	3	12	60	12/1/2022	537,278	105,362	1,568,750	307,637	1,980,625	233,044	1,122	0	0
2	4	1	61	1/1/2023	586,215	91,137	1,575,000	244,859	1,942,500	181,196	1,122	0	0
2	4	2	62	2/1/2023	635,151	163,825	1,581,250	407,852	1,904,375	294,718	1,122	0	0
2	4	3	63	3/1/2023	684,087	91,575	1,587,500	212,511	1,866,250	149,896	1,122	0	0
2	4	4	64	4/1/2023	733,023	56,792	1,593,750	123,478	1,828,125	84,982	1,122	0	0
2	4	5	65	5/1/2023	781,959	16,731	1,600,000	34,233	1,790,000	22,979	1,122	0	0
2	4	6	66	6/1/2023	830,895	2,984	1,606,250	5,769	1,751,875	3,775	1,122	0	0
2	4	7	67	7/1/2023	879,832	135	1,612,500	248	1,713,750	158	1,122	0	0
2	4	8	68	8/1/2023	928,768	524	1,618,750	914	1,675,625	567	1,122	0	0
2	4	9	69	9/1/2023	977,704	2,709	1,625,000	4,502	1,637,500	2,722	1,122	0	0
2	4	10	70	10/1/2023	1,026,640	42,141	1,631,250	66,958	1,599,375	39,390	1,122	0	0
2	4	11	71	11/1/2023	1,075,576	144,810	1,637,500	220,465	1,561,250	126,119	1,122	0	0
2	4	12	72	12/1/2023	1,124,512	220,520	1,643,750	322,344	1,523,125	179,214	1,122	0	0
2	5	1	73	1/1/2024	1,173,449	182,432	1,650,000	256,519	1,485,000	138,520	1,122	0	0
2	5	2	74	2/1/2024	1,222,385	315,290	1,656,250	427,197	1,446,875	223,916	1,122	0	0
2	5	3	75	3/1/2024	1,271,321	170,186	1,662,500	222,551	1,408,750	113,150	1,122	0	0
2	5	4	76	4/1/2024	1,320,257	102,289	1,668,750	129,289	1,370,625	63,715	1,122	0	0
2	5	5	77	5/1/2024	1,369,193	29,295	1,675,000	35,838	1,332,500	17,106	1,122	0	0
2	5	6	78	6/1/2024	1,418,129	5,093	1,681,250	6,038	1,294,375	2,789	1,122	0	0
2	5	7	79	7/1/2024	1,467,066	226	1,687,500	260	1,256,250	116	1,122	0	0
2	5	8	80	8/1/2024	1,516,002	856	1,693,750	956	1,218,125	413	1,122	0	0
2	5	9	81	9/1/2024	1,564,938	4,336	1,700,000	4,710	1,180,000	1,962	1,122	0	0
2	5	10	82	10/1/2024	1,613,874	66,245	1,706,250	70,037	1,141,875	28,122	1,122	0	0
2	5	11	83	11/1/2024	1,662,810	223,872	1,712,500	230,562	1,103,750	89,162	1,122	0	0
2	5	12	84	12/1/2024	1,711,746	335,679	1,718,750	337,052	1,065,625	125,383	1,122	0	0
2	6	1	85	1/1/2025	1,760,683	273,727	1,725,000	268,179	1,027,500	95,845	1,122	0	0
2	6	2	86	2/1/2025	1,809,619	466,756	1,731,250	446,542	989,375	153,114	1,122	0	0
2	6	3	87	3/1/2025	1,858,555	248,796	1,737,500	232,591	951,250	76,404	1,122	0	0
2	6	4	88	4/1/2025	1,907,491	147,786	1,743,750	135,100	913,125	42,447	1,122	0	0
2	6	5	89	5/1/2025	1,956,427	41,859	1,750,000	37,443	875,000	11,233	1,122	0	0
2	6	6	90	6/1/2025	2,005,363	7,203	1,756,250	6,308	836,875	1,803	1,122	0	0
2	6	7	91	7/1/2025	2,054,300	316	1,762,500	271	798,750	74	1,122	0	0
2	6	8	92	8/1/2025	2,103,236	1,187	1,768,750	998	760,625	258	1,122	0	0
2	6	9	93	9/1/2025	2,152,172	5,963	1,775,000	4,918	722,500	1,201	1,122	0	0

Year	Month	Total Months	Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit
			cu ft	sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
4	10	46	0	0	0		119,140	119,140	0		0	1,122			119,140	0
4	11	47	0	0	0		392,461	392,461	0		0	1,122			392,461	0
4	12	48	0	0	0		574,092	574,092	0		0	1,122			574,092	0
3	**1**	49	0	**0**	0		457,071	457,071	0		0	1,122			457,071	0
3	2	50	0	0	0		766,386	766,386	0		0	1,122			766,386	0
3	3	51	0	0	0		402,078	402,078	0		0	1,122			402,078	0
3	4	52	0	0	0		235,212	235,212	0		0	1,122			235,212	0
3	5	53	0	0	0		65,647	65,647	0		0	1,122			65,647	0
3	6	54	0	0	0		11,136	11,136	0		0	1,122			11,136	0
3	7	55	0	0	0		482	482	0		0	1,122			482	0
3	8	56	0	0	0		1,786	1,786	0		0	1,122			1,786	0
3	9	57	0	0	0		8,859	8,859	0		0	1,122			8,859	0
3	10	58	0	0	0		132,573	132,573	0		0	1,122			132,573	0
3	11	59	0	0	0		439,191	439,191	0		0	1,122			439,191	0
3	12	60	0	0	0		646,042	646,042	0		0	1,122			646,042	0
4	1	61	0	0	0		517,192	517,192	0		0	1,122			517,192	0
4	2	62	0	0	0		866,395	866,395	0		0	1,122			866,395	0
4	3	63	0	0	0		453,982	453,982	0		0	1,122			453,982	0
4	4	64	0	0	0		265,253	265,253	0		0	1,122			265,253	0
4	5	65	0	0	0		73,943	73,943	0		0	1,122			73,943	0
4	6	66	0	0	0		12,529	12,529	0		0	1,122			12,529	0
4	7	67	0	0	0		542	542	0		0	1,122			542	0
4	8	68	0	0	0		2,005	2,005	0		0	1,122			2,005	0
4	9	69	0	0	0		9,933	9,933	0		0	1,122			9,933	0
4	10	70	0	0	0		148,489	148,489	0		0	1,122			148,489	0
4	11	71	0	0	0		491,394	491,394	0		0	1,122			491,394	0
4	12	72	0	0	0		722,078	722,078	0		0	1,122			722,078	0
5	1	73	0	0	0		577,472	577,472	0		0	1,122			577,472	0
5	2	74	0	0	0		966,403	966,403	0		0	1,122			966,403	0
5	3	75	0	0	0		505,886	505,886	0		0	1,122			505,886	0
5	4	76	0	0	0		295,293	295,293	0		0	1,122			295,293	0
5	5	77	0	0	0		82,239	82,239	0		0	1,122			82,239	0
5	6	78	0	0	0		13,921	13,921	0		0	1,122			13,921	0
5	7	79	0	0	0		602	602	0		0	1,122			602	0
5	8	80	0	0	0		2,224	2,224	0		0	1,122			2,224	0
5	9	81	0	0	0		11,008	11,008	0		0	1,122			11,008	0
5	10	82	0	0	0		164,404	164,404	0		0	1,122			164,404	0
5	11	83	0	0	0		543,596	543,596	0		0	1,122			543,596	0
5	12	84	0	0	0		798,114	798,114	0		0	1,122			798,114	0
6	1	85	0	0	0		637,751	637,751	0		0	1,122			637,751	0
6	2	86	0	0	0		1,066,412	1,066,412	0		0	1,122			1,066,412	0
6	3	87	0	0	0		557,790	557,790	0		0	1,122			557,790	0
6	4	88	0	0	0		325,333	325,333	0		0	1,122			325,333	0
6	5	89	0	0	0		90,535	90,535	0		0	1,122			90,535	0
6	6	90	0	0	0		15,314	15,314	0		0	1,122			15,314	0
6	7	91	0	0	0		661	661	0		0	1,122			661	0
6	8	92	0	0	0		2,443	2,443	0		0	1,122			2,443	0
6	9	93	0	0	0		12,082	12,082	0		0	1,122			12,082	0

Year	Month	Total Months	Quarry Area (Breccia & Greywacke)	Quarry Area (Limestone)	Quarry Area - Un Mined	Groundwater Inflow (Zerod out, included in pit water balance)		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Total Pit Inflow	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water & Outflow Concentration
			lb/month	lb/month	lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L
4	10	46	0.00	0.02	0.01	4.40	0.00	0.00	0.00	0.00	0.03	0.03	0.00	3.63
4	11	47	0.00	0.05	0.04	4.40	0.00	0.00	0.00	0.00	0.09	0.09	0.00	3.64
4	12	48	0.00	0.08	0.05	4.40	0.00	0.00	0.00	0.00	0.13	0.13	0.00	3.65
3	**1**	49	0.00	0.06	0.04	4.40	0.00	0.00	0.00	0.00	0.10	0.10	0.00	3.67
3	2	50	0.00	0.11	0.07	4.40	0.00	0.00	0.00	0.00	0.18	0.18	0.00	3.66
3	3	51	0.00	0.06	0.03	4.40	0.00	0.00	0.00	0.00	0.09	0.09	0.00	3.66
3	4	52	0.00	0.03	0.02	4.40	0.00	0.00	0.00	0.00	0.05	0.05	0.00	3.65
3	5	53	0.00	0.01	0.01	4.40	0.00	0.00	0.00	0.00	0.01	0.01	0.00	3.65
3	6	54	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.64
3	7	55	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.64
3	8	56	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.63
3	9	57	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.63
3	10	58	0.00	0.02	0.01	4.40	0.00	0.00	0.00	0.00	0.03	0.03	0.00	3.62
3	11	59	0.01	0.06	0.03	4.40	0.00	0.00	0.00	0.00	0.10	0.10	0.00	3.62
3	12	60	0.02	0.08	0.04	4.40	0.00	0.00	0.00	0.00	0.15	0.15	0.00	3.61
4	1	61	0.02	0.07	0.03	4.40	0.00	0.00	0.00	0.00	0.12	0.12	0.00	3.61
4	2	62	0.03	0.11	0.05	4.40	0.00	0.00	0.00	0.00	0.20	0.20	0.00	3.61
4	3	63	0.02	0.06	0.03	4.40	0.00	0.00	0.00	0.00	0.10	0.10	0.00	3.60
4	4	64	0.01	0.03	0.02	4.40	0.00	0.00	0.00	0.00	0.06	0.06	0.00	3.60
4	5	65	0.00	0.01	0.00	4.40	0.00	0.00	0.00	0.00	0.02	0.02	0.00	3.59
4	6	66	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.59
4	7	67	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.59
4	8	68	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.58
4	9	69	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.58
4	10	70	0.01	0.02	0.01	4.40	0.00	0.00	0.00	0.00	0.03	0.03	0.00	3.58
4	11	71	0.03	0.06	0.02	4.40	0.00	0.00	0.00	0.00	0.11	0.11	0.00	3.57
4	12	72	0.04	0.09	0.03	4.40	0.00	0.00	0.00	0.00	0.16	0.16	0.00	3.57
5	1	73	0.03	0.07	0.03	4.40	0.00	0.00	0.00	0.00	0.13	0.13	0.00	3.57
5	2	74	0.06	0.12	0.04	4.40	0.00	0.00	0.00	0.00	0.22	0.22	0.00	3.56
5	3	75	0.03	0.06	0.02	4.40	0.00	0.00	0.00	0.00	0.11	0.11	0.00	3.56
5	4	76	0.02	0.04	0.01	4.40	0.00	0.00	0.00	0.00	0.07	0.07	0.00	3.56
5	5	77	0.01	0.01	0.00	4.40	0.00	0.00	0.00	0.00	0.02	0.02	0.00	3.55
5	6	78	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.55
5	7	79	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.55
5	8	80	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.54
5	9	81	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.54
5	10	82	0.01	0.02	0.01	4.40	0.00	0.00	0.00	0.00	0.04	0.04	0.00	3.54
5	11	83	0.04	0.06	0.02	4.40	0.00	0.00	0.00	0.00	0.12	0.12	0.00	3.54
5	12	84	0.06	0.09	0.02	4.40	0.00	0.00	0.00	0.00	0.18	0.18	0.00	3.53
6	1	85	0.05	0.07	0.02	4.40	0.00	0.00	0.00	0.00	0.14	0.14	0.00	3.53
6	2	86	0.08	0.12	0.03	4.40	0.00	0.00	0.00	0.00	0.24	0.24	0.00	3.53
6	3	87	0.05	0.06	0.01	4.40	0.00	0.00	0.00	0.00	0.12	0.12	0.00	3.53
6	4	88	0.03	0.04	0.01	4.40	0.00	0.00	0.00	0.00	0.07	0.07	0.00	3.52
6	5	89	0.01	0.01	0.00	4.40	0.00	0.00	0.00	0.00	0.02	0.02	0.00	3.52
6	6	90	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.52
6	7	91	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.52
6	8	92	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.51
6	9	93	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.51

Phase	Year	Month	Total Months	Date	Quarry Area (Breccia & Greywacke)	Quarry Area (Breccia & Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	Quarry Area -Un Mined	Quarry Area -Un Mined	Pit Invert Level	Groundwater Inflow (Zerod out, included in pit water balance)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	ft amsl	cu ft	sq ft
2	6	10	94	10/1/2025	2,201,108	90,349	1,781,250	73,115	684,375	16,855	1,122	0	0
2	6	11	95	11/1/2025	2,250,044	302,934	1,787,500	240,660	646,250	52,205	1,122	0	0
2	6	12	96	12/1/2025	2,298,980	450,837	1,793,750	351,760	608,125	71,553	1,122	0	0
3	**6**	**1**	97	1/1/2026	**2,300,000**	357,572	**1,800,000**	279,839	**570,000**	53,169	1,122	0	**0**
3	6	2	98	2/1/2026	2,329,167	600,763	1,806,250	465,887	558,125	86,374	1,122	0	0
3	6	3	99	3/1/2026	2,358,333	315,699	1,812,500	242,631	546,250	43,874	1,122	0	0
3	6	4	100	4/1/2026	2,387,500	184,975	1,818,750	140,911	534,375	24,841	1,122	0	0
3	6	5	101	5/1/2026	2,416,667	51,707	1,825,000	39,047	522,500	6,708	1,122	0	0
3	6	6	102	6/1/2026	2,445,833	8,785	1,831,250	6,577	510,625	1,100	1,122	0	0
3	6	7	103	7/1/2026	2,475,000	381	1,837,500	283	498,750	46	1,122	0	0
3	6	8	104	8/1/2026	2,504,167	1,413	1,843,750	1,041	486,875	165	1,122	0	0
3	6	9	105	9/1/2026	2,533,333	7,019	1,850,000	5,126	475,000	790	1,122	0	0
3	6	10	106	10/1/2026	2,562,500	105,183	1,856,250	76,194	463,125	11,406	1,122	0	0
3	6	11	107	11/1/2026	2,591,667	348,929	1,862,500	250,757	451,250	36,452	1,122	0	0
3	6	12	108	12/1/2026	2,620,833	513,953	1,868,750	366,468	439,375	51,698	1,122	0	0
3	7	1	109	1/1/2027	2,650,000	411,986	1,875,000	291,499	427,500	39,877	1,122	0	0
3	7	2	110	2/1/2027	2,679,167	691,038	1,881,250	485,232	415,625	64,321	1,122	0	0
3	7	3	111	3/1/2027	2,708,333	362,552	1,887,500	252,671	403,750	32,429	1,122	0	0
3	7	4	112	4/1/2027	2,737,500	212,092	1,893,750	146,721	391,875	18,217	1,122	0	0
3	7	5	113	5/1/2027	2,766,667	59,195	1,900,000	40,652	380,000	4,878	1,122	0	0
3	7	6	114	6/1/2027	2,795,833	10,042	1,906,250	6,847	368,125	793	1,122	0	0
3	7	7	115	7/1/2027	2,825,000	435	1,912,500	294	356,250	33	1,122	0	0
3	7	8	116	8/1/2027	2,854,167	1,611	1,918,750	1,083	344,375	117	1,122	0	0
3	7	9	117	9/1/2027	2,883,333	7,989	1,925,000	5,334	332,500	553	1,122	0	0
3	7	10	118	10/1/2027	2,912,500	119,550	1,931,250	79,272	320,625	7,896	1,122	0	0
3	7	11	119	11/1/2027	2,941,667	396,051	1,937,500	260,855	308,750	24,941	1,122	0	0
3	7	12	120	12/1/2027	2,970,833	582,589	1,943,750	381,175	296,875	34,931	1,122	0	0
3	8	1	121	1/1/2028	3,000,000	466,399	1,950,000	303,159	285,000	26,585	1,122	0	0
3	8	2	122	2/1/2028	3,029,167	781,314	1,956,250	504,576	273,125	42,268	1,122	0	0
3	8	3	123	3/1/2028	3,058,333	409,404	1,962,500	262,710	261,250	20,983	1,122	0	0
3	8	4	124	4/1/2028	3,087,500	239,209	1,968,750	152,532	249,375	11,592	1,122	0	0
3	8	5	125	5/1/2028	3,116,667	66,684	1,975,000	42,257	237,500	3,049	1,122	0	0
3	8	6	126	6/1/2028	3,145,833	11,299	1,981,250	7,116	225,625	486	1,122	0	0
3	8	7	127	7/1/2028	3,175,000	489	1,987,500	306	213,750	20	1,122	0	0
3	8	8	128	8/1/2028	3,204,167	1,808	1,993,750	1,125	201,875	68	1,122	0	0
3	8	9	129	9/1/2028	3,233,333	8,959	2,000,000	5,541	190,000	316	1,122	0	0
3	8	10	130	10/1/2028	3,262,500	133,917	2,006,250	82,351	178,125	4,387	1,122	0	0
3	8	11	131	11/1/2028	3,291,667	443,173	2,012,500	270,953	166,250	13,430	1,122	0	0
3	8	12	132	12/1/2028	3,320,833	651,225	2,018,750	395,883	154,375	18,164	1,122	0	0
3	9	1	133	1/1/2029	3,350,000	520,812	2,025,000	314,819	142,500	13,292	1,122	0	0
3	9	2	134	2/1/2029	3,379,167	871,590	2,031,250	523,921	130,625	20,215	1,122	0	0
3	9	3	135	3/1/2029	3,408,333	456,257	2,037,500	272,750	118,750	9,538	1,122	0	0
3	9	4	136	4/1/2029	3,437,500	266,326	2,043,750	158,343	106,875	4,968	1,122	0	0
3	9	5	137	5/1/2029	3,466,667	74,172	2,050,000	43,862	95,000	1,220	1,122	0	0
3	9	6	138	6/1/2029	3,495,833	12,556	2,056,250	7,385	83,125	179	1,122	0	0
3	9	7	139	7/1/2029	3,525,000	543	2,062,500	317	71,250	7	1,122	0	0
3	9	8	140	8/1/2029	3,554,167	2,006	2,068,750	1,168	59,375	20	1,122	0	0
3	9	9	141	9/1/2029	3,583,333	9,928	2,075,000	5,749	47,500	79	1,122	0	0
3	9	10	142	10/1/2029	3,612,500	148,283	2,081,250	85,429	35,625	877	1,122	0	0

Year	Month	Total Months	Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit
			cu ft	sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
6	10	94	0	0	0		180,320	180,320	0		0	1,122			180,320	0
6	11	95	0	0	0		595,799	595,799	0		0	1,122			595,799	0
6	12	96	0	0	0		874,150	874,150	0		0	1,122			874,150	0
6	**1**	97	0	**0**	0		690,581	690,581	0		0	1,122			690,581	0
6	2	98	0	0	0		1,153,024	1,153,024	0		0	1,122			1,153,024	0
6	3	99	0	0	0		602,204	602,204	0		0	1,122			602,204	0
6	4	100	0	0	0		350,727	350,727	0		0	1,122			350,727	0
6	5	101	0	0	0		97,462	97,462	0		0	1,122			97,462	0
6	6	102	0	0	0		16,462	16,462	0		0	1,122			16,462	0
6	7	103	0	0	0		710	710	0		0	1,122			710	0
6	8	104	0	0	0		2,619	2,619	0		0	1,122			2,619	0
6	9	105	0	0	0		12,934	12,934	0		0	1,122			12,934	0
6	10	106	0	0	0		192,783	192,783	0		0	1,122			192,783	0
6	11	107	0	0	0		636,138	636,138	0		0	1,122			636,138	0
6	12	108	0	0	0		932,119	932,119	0		0	1,122			932,119	0
7	1	109	0	0	0		743,362	743,362	0		0	1,122			743,362	0
7	2	110	0	0	0		1,240,591	1,240,591	0		0	1,122			1,240,591	0
7	3	111	0	0	0		647,651	647,651	0		0	1,122			647,651	0
7	4	112	0	0	0		377,030	377,030	0		0	1,122			377,030	0
7	5	113	0	0	0		104,726	104,726	0		0	1,122			104,726	0
7	6	114	0	0	0		17,681	17,681	0		0	1,122			17,681	0
7	7	115	0	0	0		762	762	0		0	1,122			762	0
7	8	116	0	0	0		2,810	2,810	0		0	1,122			2,810	0
7	9	117	0	0	0		13,875	13,875	0		0	1,122			13,875	0
7	10	118	0	0	0		206,719	206,719	0		0	1,122			206,719	0
7	11	119	0	0	0		681,847	681,847	0		0	1,122			681,847	0
7	12	120	0	0	0		998,695	998,695	0		0	1,122			998,695	0
8	1	121	0	0	0		796,143	796,143	0		0	1,122			796,143	0
8	2	122	0	0	0		1,328,159	1,328,159	0		0	1,122			1,328,159	0
8	3	123	0	0	0		693,098	693,098	0		0	1,122			693,098	0
8	4	124	0	0	0		403,333	403,333	0		0	1,122			403,333	0
8	5	125	0	0	0		111,989	111,989	0		0	1,122			111,989	0
8	6	126	0	0	0		18,901	18,901	0		0	1,122			18,901	0
8	7	127	0	0	0		814	814	0		0	1,122			814	0
8	8	128	0	0	0		3,002	3,002	0		0	1,122			3,002	0
8	9	129	0	0	0		14,816	14,816	0		0	1,122			14,816	0
8	10	130	0	0	0		220,654	220,654	0		0	1,122			220,654	0
8	11	131	0	0	0		727,555	727,555	0		0	1,122			727,555	0
8	12	132	0	0	0		1,065,272	1,065,272	0		0	1,122			1,065,272	0
9	1	133	0	0	0		848,924	848,924	0		0	1,122			848,924	0
9	2	134	0	0	0		1,415,726	1,415,726	0		0	1,122			1,415,726	0
9	3	135	0	0	0		738,545	738,545	0		0	1,122			738,545	0
9	4	136	0	0	0		429,637	429,637	0		0	1,122			429,637	0
9	5	137	0	0	0		119,253	119,253	0		0	1,122			119,253	0
9	6	138	0	0	0		20,120	20,120	0		0	1,122			20,120	0
9	7	139	0	0	0		867	867	0		0	1,122			867	0
9	8	140	0	0	0		3,194	3,194	0		0	1,122			3,194	0
9	9	141	0	0	0		15,756	15,756	0		0	1,122			15,756	0
9	10	142	0	0	0		234,590	234,590	0		0	1,122			234,590	0

Year	Month	Total Months	Quarry Area (Breccia & Greywacke)	Quarry Area (Limestone)	Quarry Area - Un Mined	Groundwater Inflow (Zerod out, included in pit water balance)		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Total Pit Inflow	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water & Outflow Concentration
			lb/month	lb/month	lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L
6	10	94	0.02	0.02	0.00	4.40	0.00	0.00	0.00	0.00	0.04	0.04	0.00	3.51
6	11	95	0.05	0.07	0.01	4.40	0.00	0.00	0.00	0.00	0.13	0.13	0.00	3.51
6	12	96	0.08	0.10	0.01	4.40	0.00	0.00	0.00	0.00	0.19	0.19	0.00	3.50
6	**1**	97	0.06	0.08	0.01	4.40	0.00	0.00	0.00	0.00	0.15	0.15	0.00	3.51
6	2	98	0.11	0.13	0.02	4.40	0.00	0.00	0.00	0.00	0.25	0.25	0.00	3.51
6	3	99	0.06	0.07	0.01	4.40	0.00	0.00	0.00	0.00	0.13	0.13	0.00	3.50
6	4	100	0.03	0.04	0.00	4.40	0.00	0.00	0.00	0.00	0.08	0.08	0.00	3.50
6	5	101	0.01	0.01	0.00	4.40	0.00	0.00	0.00	0.00	0.02	0.02	0.00	3.50
6	6	102	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.50
6	7	103	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.50
6	8	104	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.50
6	9	105	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.49
6	10	106	0.02	0.02	0.00	4.40	0.00	0.00	0.00	0.00	0.04	0.04	0.00	3.49
6	11	107	0.06	0.07	0.01	4.40	0.00	0.00	0.00	0.00	0.14	0.14	0.00	3.49
6	12	108	0.09	0.10	0.01	4.40	0.00	0.00	0.00	0.00	0.20	0.20	0.00	3.49
7	1	109	0.07	0.08	0.01	4.40	0.00	0.00	0.00	0.00	0.16	0.16	0.00	3.49
7	2	110	0.13	0.13	0.01	4.40	0.00	0.00	0.00	0.00	0.27	0.27	0.00	3.49
7	3	111	0.07	0.07	0.01	4.40	0.00	0.00	0.00	0.00	0.14	0.14	0.00	3.49
7	4	112	0.04	0.04	0.00	4.40	0.00	0.00	0.00	0.00	0.08	0.08	0.00	3.48
7	5	113	0.01	0.01	0.00	4.40	0.00	0.00	0.00	0.00	0.02	0.02	0.00	3.48
7	6	114	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.48
7	7	115	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.48
7	8	116	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.48
7	9	117	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.48
7	10	118	0.02	0.02	0.00	4.40	0.00	0.00	0.00	0.00	0.04	0.04	0.00	3.48
7	11	119	0.07	0.07	0.00	4.40	0.00	0.00	0.00	0.00	0.15	0.15	0.00	3.47
7	12	120	0.11	0.10	0.01	4.40	0.00	0.00	0.00	0.00	0.22	0.22	0.00	3.47
8	1	121	0.08	0.08	0.00	4.40	0.00	0.00	0.00	0.00	0.17	0.17	0.00	3.47
8	2	122	0.14	0.14	0.01	4.40	0.00	0.00	0.00	0.00	0.29	0.29	0.00	3.47
8	3	123	0.07	0.07	0.00	4.40	0.00	0.00	0.00	0.00	0.15	0.15	0.00	3.47
8	4	124	0.04	0.04	0.00	4.40	0.00	0.00	0.00	0.00	0.09	0.09	0.00	3.47
8	5	125	0.01	0.01	0.00	4.40	0.00	0.00	0.00	0.00	0.02	0.02	0.00	3.47
8	6	126	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.46
8	7	127	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.46
8	8	128	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.46
8	9	129	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.46
8	10	130	0.02	0.02	0.00	4.40	0.00	0.00	0.00	0.00	0.05	0.05	0.00	3.46
8	11	131	0.08	0.07	0.00	4.40	0.00	0.00	0.00	0.00	0.16	0.16	0.00	3.46
8	12	132	0.12	0.11	0.00	4.40	0.00	0.00	0.00	0.00	0.23	0.23	0.00	3.46
9	1	133	0.09	0.09	0.00	4.40	0.00	0.00	0.00	0.00	0.18	0.18	0.00	3.46
9	2	134	0.16	0.14	0.00	4.40	0.00	0.00	0.00	0.00	0.31	0.31	0.00	3.46
9	3	135	0.08	0.08	0.00	4.40	0.00	0.00	0.00	0.00	0.16	0.16	0.00	3.45
9	4	136	0.05	0.04	0.00	4.40	0.00	0.00	0.00	0.00	0.09	0.09	0.00	3.45
9	5	137	0.01	0.01	0.00	4.40	0.00	0.00	0.00	0.00	0.03	0.03	0.00	3.45
9	6	138	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.45
9	7	139	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.45
9	8	140	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.45
9	9	141	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.45
9	10	142	0.03	0.02	0.00	4.40	0.00	0.00	0.00	0.00	0.05	0.05	0.00	3.45

Phase	Year	Month	Total Months	Date	Quarry Area (Breccia & Greywacke)	Quarry Area (Breccia & Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	Quarry Area -Un Mined	Quarry Area -Un Mined	Pit Invert Level	Groundwater Inflow (Zerod out, included in pit water balance)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	ft amsl	cu ft	sq ft
3	9	11	143	11/1/2029	3,641,667	490,295	2,087,500	281,050	23,750	1,919	1,122	0	0
3	9	12	144	12/1/2029	3,670,833	719,861	2,093,750	410,591	11,875	1,397	1,122	0	0
4	10	**1**	145	1/1/2030	**3,700,000**	575,225	**2,100,000**	326,479	**0**	0	1,119	0	**0**
4	10	2	146	2/1/2030	3,737,500	964,015	2,070,833	534,131	0	0	1,115	0	0
4	10	3	147	3/1/2030	3,775,000	505,341	2,041,667	273,308	0	0	1,112	0	0
4	10	4	148	4/1/2030	3,812,500	295,380	2,012,500	155,922	0	0	1,109	0	0
4	10	5	149	5/1/2030	3,850,000	82,374	1,983,333	42,435	0	0	1,106	0	0
4	10	6	150	6/1/2030	3,887,500	13,962	1,954,167	7,019	0	0	1,103	0	0
4	10	7	151	7/1/2030	3,925,000	604	1,925,000	296	0	0	1,099	0	0
4	10	8	152	8/1/2030	3,962,500	2,236	1,895,833	1,070	0	0	1,096	0	0
4	10	9	153	9/1/2030	4,000,000	11,083	1,866,667	5,172	0	0	1,093	0	0
4	10	10	154	10/1/2030	4,037,500	165,728	1,837,500	75,424	0	0	1,090	0	0
4	10	11	155	11/1/2030	4,075,000	548,637	1,808,333	243,465	0	0	1,086	0	0
4	10	12	156	12/1/2030	4,112,500	806,474	1,779,167	348,900	0	0	1,083	0	0
4	11	1	157	1/1/2031	4,150,000	645,185	1,750,000	272,066	0	0	1,080	0	0
4	11	2	158	2/1/2031	4,187,500	1,080,083	1,720,833	443,855	0	0	1,077	0	0
4	11	3	159	3/1/2031	4,225,000	565,580	1,691,667	226,455	0	0	1,073	0	0
4	11	4	160	4/1/2031	4,262,500	330,244	1,662,500	128,805	0	0	1,070	0	0
4	11	5	161	5/1/2031	4,300,000	92,002	1,633,333	34,947	0	0	1,067	0	0
4	11	6	162	6/1/2031	4,337,500	15,579	1,604,167	5,762	0	0	1,064	0	0
4	11	7	163	7/1/2031	4,375,000	673	1,575,000	242	0	0	1,061	0	0
4	11	8	164	8/1/2031	4,412,500	2,490	1,545,833	872	0	0	1,057	0	0
4	11	9	165	9/1/2031	4,450,000	12,330	1,516,667	4,202	0	0	1,054	0	0
4	11	10	166	10/1/2031	4,487,500	184,199	1,487,500	61,058	0	0	1,051	0	0
4	11	11	167	11/1/2031	4,525,000	609,223	1,458,333	196,342	0	0	1,048	0	0
4	11	12	168	12/1/2031	4,562,500	894,720	1,429,167	280,264	0	0	1,044	0	0
5	12	**1**	169	1/1/2032	**4,600,000**	715,145	**1,400,000**	217,653	**0**	0	1,041	0	**0**
5	12	2	170	2/1/2032	4,616,667	1,190,779	1,397,222	360,386	0	0	1,038	0	0
5	12	3	171	3/1/2032	4,633,333	620,242	1,394,444	186,668	0	0	1,035	0	0
5	12	4	172	4/1/2032	4,650,000	360,266	1,391,667	107,822	0	0	1,032	0	0
5	12	5	173	5/1/2032	4,666,667	99,847	1,388,889	29,716	0	0	1,028	0	0
5	12	6	174	6/1/2032	4,683,333	16,821	1,386,111	4,978	0	0	1,025	0	0
5	12	7	175	7/1/2032	4,700,000	723	1,383,333	213	0	0	1,022	0	0
5	12	8	176	8/1/2032	4,716,667	2,662	1,380,556	779	0	0	1,019	0	0
5	12	9	177	9/1/2032	4,733,333	13,115	1,377,778	3,817	0	0	1,015	0	0
5	12	10	178	10/1/2032	4,750,000	194,974	1,375,000	56,440	0	0	1,012	0	0
5	12	11	179	11/1/2032	4,766,667	641,759	1,372,222	184,749	0	0	1,009	0	0
5	12	12	180	12/1/2032	4,783,333	938,026	1,369,444	268,552	0	0	1,006	0	0
5	13	1	181	1/1/2033	4,800,000	746,238	1,366,667	212,471	0	0	1,002	0	0
5	13	2	182	2/1/2033	4,816,667	1,242,365	1,363,889	351,788	0	0	999	0	0
5	13	3	183	3/1/2033	4,833,333	647,015	1,361,111	182,205	0	0	996	0	0
5	13	4	184	4/1/2033	4,850,000	375,762	1,358,333	105,239	0	0	993	0	0
5	13	5	185	5/1/2033	4,866,667	104,126	1,355,556	29,003	0	0	990	0	0
5	13	6	186	6/1/2033	4,883,333	17,539	1,352,778	4,859	0	0	986	0	0
5	13	7	187	7/1/2033	4,900,000	754	1,350,000	208	0	0	983	0	0
5	13	8	188	8/1/2033	4,916,667	2,775	1,347,222	760	0	0	980	0	0

Year	Month	Total Months	Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit
			cu ft	sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
9	11	143	0	0	0		773,264	773,264	0		0	1,122			773,264	0
9	12	144	0	0	0		1,131,849	1,131,849	0		0	1,122			1,131,849	0
10	1	145	0	0	0		901,704	901,704	0		0	1,119			901,704	0
10	2	146	0	0	0		1,498,146	1,498,146	0		0	1,115			1,498,146	0
10	3	147	0	0	0		778,649	778,649	0		0	1,112			778,649	0
10	4	148	0	0	0		451,301	451,301	0		0	1,109			451,301	0
10	5	149	0	0	0		124,809	124,809	0		0	1,106			124,809	0
10	6	150	0	0	0		20,981	20,981	0		0	1,103			20,981	0
10	7	151	0	0	0		900	900	0		0	1,099			900	0
10	8	152	0	0	0		3,306	3,306	0		0	1,096			3,306	0
10	9	153	0	0	0		16,255	16,255	0		0	1,093			16,255	0
10	10	154	0	0	0		241,152	241,152	0		0	1,090			241,152	0
10	11	155	0	0	0		792,102	792,102	0		0	1,086			792,102	0
10	12	156	0	0	0		1,155,374	1,155,374	0		0	1,083			1,155,374	0
11	1	157	0	0	0		917,251	917,251	0		0	1,080			917,251	0
11	2	158	0	0	0		1,523,939	1,523,939	0		0	1,077			1,523,939	0
11	3	159	0	0	0		792,036	792,036	0		0	1,073			792,036	0
11	4	160	0	0	0		459,049	459,049	0		0	1,070			459,049	0
11	5	161	0	0	0		126,949	126,949	0		0	1,067			126,949	0
11	6	162	0	0	0		21,340	21,340	0		0	1,064			21,340	0
11	7	163	0	0	0		916	916	0		0	1,061			916	0
11	8	164	0	0	0		3,363	3,363	0		0	1,057			3,363	0
11	9	165	0	0	0		16,532	16,532	0		0	1,054			16,532	0
11	10	166	0	0	0		245,257	245,257	0		0	1,051			245,257	0
11	11	167	0	0	0		805,565	805,565	0		0	1,048			805,565	0
11	12	168	0	0	0		1,174,984	1,174,984	0		0	1,044			1,174,984	0
12	1	169	0	0	0		932,798	932,798	0		0	1,041			932,798	0
12	2	170	0	0	0		1,551,165	1,551,165	0		0	1,038			1,551,165	0
12	3	171	0	0	0		806,910	806,910	0		0	1,035			806,910	0
12	4	172	0	0	0		468,088	468,088	0		0	1,032			468,088	0
12	5	173	0	0	0		129,564	129,564	0		0	1,028			129,564	0
12	6	174	0	0	0		21,799	21,799	0		0	1,025			21,799	0
12	7	175	0	0	0		936	936	0		0	1,022			936	0
12	8	176	0	0	0		3,441	3,441	0		0	1,019			3,441	0
12	9	177	0	0	0		16,932	16,932	0		0	1,015			16,932	0
12	10	178	0	0	0		251,414	251,414	0		0	1,012			251,414	0
12	11	179	0	0	0		826,508	826,508	0		0	1,009			826,508	0
12	12	180	0	0	0		1,206,578	1,206,578	0		0	1,006			1,206,578	0
13	1	181	0	0	0		958,709	958,709	0		0	1,002			958,709	0
13	2	182	0	0	0		1,594,153	1,594,153	0		0	999			1,594,153	0
13	3	183	0	0	0		829,221	829,221	0		0	996			829,221	0
13	4	184	0	0	0		481,001	481,001	0		0	993			481,001	0
13	5	185	0	0	0		133,130	133,130	0		0	990			133,130	0
13	6	186	0	0	0		22,398	22,398	0		0	986			22,398	0
13	7	187	0	0	0		962	962	0		0	983			962	0
13	8	188	0	0	0		3,535	3,535	0		0	980			3,535	0

Year	Month	Total Months	Quarry Area (Breccia & Greywacke)	Quarry Area (Limestone)	Quarry Area - Un Mined	Groundwater Inflow (Zerod out, included in pit water balance)		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Total Pit Inflow	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water & Outflow Concentration
			lb/month	lb/month	lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L
9	11	143	0.09	0.08	0.00	4.40	0.00	0.00	0.00	0.00	0.17	0.17	0.00	3.45
9	12	144	0.13	0.11	0.00	4.40	0.00	0.00	0.00	0.00	0.24	0.24	0.00	3.44
10	1	145	0.10	0.09	0.00	4.40	0.00	0.00	0.00	0.00	0.19	0.19	0.00	3.44
10	2	146	0.17	0.15	0.00	4.40	0.00	0.00	0.00	0.00	0.32	0.32	0.00	3.43
10	3	147	0.09	0.08	0.00	4.40	0.00	0.00	0.00	0.00	0.17	0.17	0.00	3.43
10	4	148	0.05	0.04	0.00	4.40	0.00	0.00	0.00	0.00	0.10	0.10	0.00	3.42
10	5	149	0.01	0.01	0.00	4.40	0.00	0.00	0.00	0.00	0.03	0.03	0.00	3.41
10	6	150	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.40
10	7	151	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.39
10	8	152	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.39
10	9	153	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.38
10	10	154	0.03	0.02	0.00	4.40	0.00	0.00	0.00	0.00	0.05	0.05	0.00	3.37
10	11	155	0.10	0.07	0.00	4.40	0.00	0.00	0.00	0.00	0.17	0.17	0.00	3.36
10	12	156	0.15	0.10	0.00	4.40	0.00	0.00	0.00	0.00	0.24	0.24	0.00	3.35
11	1	157	0.12	0.07	0.00	4.40	0.00	0.00	0.00	0.00	0.19	0.19	0.00	3.34
11	2	158	0.20	0.12	0.00	4.40	0.00	0.00	0.00	0.00	0.32	0.32	0.00	3.34
11	3	159	0.10	0.06	0.00	4.40	0.00	0.00	0.00	0.00	0.16	0.16	0.00	3.33
11	4	160	0.06	0.04	0.00	4.40	0.00	0.00	0.00	0.00	0.10	0.10	0.00	3.32
11	5	161	0.02	0.01	0.00	4.40	0.00	0.00	0.00	0.00	0.03	0.03	0.00	3.31
11	6	162	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.30
11	7	163	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.30
11	8	164	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.29
11	9	165	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.28
11	10	166	0.03	0.02	0.00	4.40	0.00	0.00	0.00	0.00	0.05	0.05	0.00	3.27
11	11	167	0.11	0.05	0.00	4.40	0.00	0.00	0.00	0.00	0.16	0.16	0.00	3.27
11	12	168	0.16	0.08	0.00	4.40	0.00	0.00	0.00	0.00	0.24	0.24	0.00	3.26
12	1	169	0.13	0.06	0.00	4.40	0.00	0.00	0.00	0.00	0.19	0.19	0.00	3.25
12	2	170	0.22	0.10	0.00	4.40	0.00	0.00	0.00	0.00	0.31	0.31	0.00	3.25
12	3	171	0.11	0.05	0.00	4.40	0.00	0.00	0.00	0.00	0.16	0.16	0.00	3.25
12	4	172	0.07	0.03	0.00	4.40	0.00	0.00	0.00	0.00	0.09	0.09	0.00	3.25
12	5	173	0.02	0.01	0.00	4.40	0.00	0.00	0.00	0.00	0.03	0.03	0.00	3.24
12	6	174	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.24
12	7	175	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.24
12	8	176	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.24
12	9	177	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.24
12	10	178	0.04	0.02	0.00	4.40	0.00	0.00	0.00	0.00	0.05	0.05	0.00	3.24
12	11	179	0.12	0.05	0.00	4.40	0.00	0.00	0.00	0.00	0.17	0.17	0.00	3.24
12	12	180	0.17	0.07	0.00	4.40	0.00	0.00	0.00	0.00	0.24	0.24	0.00	3.23
13	1	181	0.14	0.06	0.00	4.40	0.00	0.00	0.00	0.00	0.19	0.19	0.00	3.23
13	2	182	0.23	0.10	0.00	4.40	0.00	0.00	0.00	0.00	0.32	0.32	0.00	3.23
13	3	183	0.12	0.05	0.00	4.40	0.00	0.00	0.00	0.00	0.17	0.17	0.00	3.23
13	4	184	0.07	0.03	0.00	4.40	0.00	0.00	0.00	0.00	0.10	0.10	0.00	3.23
13	5	185	0.02	0.01	0.00	4.40	0.00	0.00	0.00	0.00	0.03	0.03	0.00	3.23
13	6	186	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.23
13	7	187	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.22
13	8	188	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.22

Phase	Year	Month	Total Months	Date	Quarry Area (Breccia & Greywacke)	Quarry Area (Breccia & Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	Quarry Area -Un Mined	Quarry Area -Un Mined	Pit Invert Level	Groundwater Inflow (Zerod out, included in pit water balance)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	ft amsl	cu ft	sq ft
5	13	9	189	9/1/2033	4,933,333	13,669	1,344,444	3,725	0	0	977	0	0
5	13	10	190	10/1/2033	4,950,000	203,184	1,341,667	55,072	0	0	973	0	0
5	13	11	191	11/1/2033	4,966,667	668,686	1,338,889	180,261	0	0	970	0	0
5	13	12	192	12/1/2033	4,983,333	977,247	1,336,111	262,015	0	0	967	0	0
5	14	1	193	1/1/2034	5,000,000	777,331	1,333,333	207,288	0	0	964	0	0
5	14	2	194	2/1/2034	5,016,667	1,293,951	1,330,556	343,191	0	0	961	0	0
5	14	3	195	3/1/2034	5,033,333	673,788	1,327,778	177,743	0	0	957	0	0
5	14	4	196	4/1/2034	5,050,000	391,257	1,325,000	102,656	0	0	954	0	0
5	14	5	197	5/1/2034	5,066,667	108,406	1,322,222	28,290	0	0	951	0	0
5	14	6	198	6/1/2034	5,083,333	18,257	1,319,444	4,739	0	0	948	0	0
5	14	7	199	7/1/2034	5,100,000	785	1,316,667	203	0	0	944	0	0
5	14	8	200	8/1/2034	5,116,667	2,888	1,313,889	742	0	0	941	0	0
5	14	9	201	9/1/2034	5,133,333	14,223	1,311,111	3,633	0	0	938	0	0
5	14	10	202	10/1/2034	5,150,000	211,393	1,308,333	53,703	0	0	935	0	0
5	14	11	203	11/1/2034	5,166,667	695,613	1,305,556	175,773	0	0	931	0	0
5	14	12	204	12/1/2034	5,183,333	1,016,467	1,302,778	255,479	0	0	928	0	0
NA	15	**1**	205	1/1/2035	**5,200,000**	808,425	**1,300,000**	202,106	**0**	0	**925**	0	**0**
NA	15	2	206	2/1/2035	5,275,000	1,360,583	1,325,000	341,758	0	0	925	0	0
NA	15	3	207	3/1/2035	5,350,000	716,179	1,350,000	180,718	0	0	925	0	0
NA	15	4	208	4/1/2035	5,425,000	420,311	1,375,000	106,530	0	0	925	0	0
NA	15	5	209	5/1/2035	5,500,000	117,677	1,400,000	29,954	0	0	925	0	0
NA	15	6	210	6/1/2035	5,575,000	20,023	1,425,000	5,118	0	0	925	0	0
NA	15	7	211	7/1/2035	5,650,000	870	1,450,000	223	0	0	925	0	0
NA	15	8	212	8/1/2035	5,725,000	3,231	1,475,000	832	0	0	925	0	0
NA	15	9	213	9/1/2035	5,800,000	16,070	1,500,000	4,156	0	0	925	0	0
NA	15	10	214	10/1/2035	5,875,000	241,152	1,525,000	62,597	0	0	925	0	0
NA	15	11	215	11/1/2035	5,950,000	801,077	1,550,000	208,684	0	0	925	0	0
NA	15	12	216	12/1/2035	6,025,000	1,181,521	1,575,000	308,862	0	0	925	0	0
NA	16	1	217	1/1/2036	6,100,000	948,344	1,600,000	248,746	0	0	925	0	0
NA	16	2	218	2/1/2036	6,100,000	1,573,375	1,600,000	412,689	0	0	925	0	0
NA	16	3	219	3/1/2036	6,100,000	816,578	1,600,000	214,184	0	0	925	0	0
NA	16	4	220	4/1/2036	6,100,000	472,607	1,600,000	123,963	0	0	925	0	0
NA	16	5	221	5/1/2036	6,100,000	130,515	1,600,000	34,233	0	0	925	0	0
NA	16	6	222	6/1/2036	6,100,000	21,909	1,600,000	5,747	0	0	925	0	0
NA	16	7	223	7/1/2036	6,100,000	939	1,600,000	246	0	0	925	0	0
NA	16	8	224	8/1/2036	6,100,000	3,443	1,600,000	903	0	0	925	0	0
NA	16	9	225	9/1/2036	6,100,000	16,901	1,600,000	4,433	0	0	925	0	0
NA	16	10	226	10/1/2036	6,100,000	250,388	1,600,000	65,676	0	0	925	0	0
NA	16	11	227	11/1/2036	6,100,000	821,272	1,600,000	215,416	0	0	925	0	0
NA	16	12	228	12/1/2036	6,100,000	1,196,228	1,600,000	313,765	0	0	925	0	0
NA	17	1	229	1/1/2037	6,100,000	948,344	1,600,000	248,746	0	0	925	0	0
NA	17	2	230	2/1/2037	6,100,000	1,573,375	1,600,000	412,689	0	0	925	0	0
NA	17	3	231	3/1/2037	6,100,000	816,578	1,600,000	214,184	0	0	925	0	0
NA	17	4	232	4/1/2037	6,100,000	472,607	1,600,000	123,963	0	0	925	0	0
NA	17	5	233	5/1/2037	6,100,000	130,515	1,600,000	34,233	0	0	925	0	0
NA	17	6	234	6/1/2037	6,100,000	21,909	1,600,000	5,747	0	0	925	0	0
NA	17	7	235	7/1/2037	6,100,000	939	1,600,000	246	0	0	925	0	0
NA	17	8	236	8/1/2037	6,100,000	3,443	1,600,000	903	0	0	925	0	0
NA	17	9	237	9/1/2037	6,100,000	16,901	1,600,000	4,433	0	0	925	0	0
NA	17	10	238	10/1/2037	6,100,000	250,388	1,600,000	65,676	0	0	925	0	0
NA	17	11	239	11/1/2037	6,100,000	821,272	1,600,000	215,416	0	0	925	0	0
NA	17	12	240	12/1/2037	6,100,000	1,196,228	1,600,000	313,765	0	0	925	0	0

Year	Month	Total Months	Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit
			cu ft	sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
13	9	189	0	0	0		17,394	17,394	0		0	977			17,394	0
13	10	190	0	0	0		258,255	258,255	0		0	973			258,255	0
13	11	191	0	0	0		848,947	848,947	0		0	970			848,947	0
13	12	192	0	0	0		1,239,262	1,239,262	0		0	967			1,239,262	0
14	1	193	0	0	0		984,620	984,620	0		0	964			984,620	0
14	2	194	0	0	0		1,637,141	1,637,141	0		0	961			1,637,141	0
14	3	195	0	0	0		851,531	851,531	0		0	957			851,531	0
14	4	196	0	0	0		493,913	493,913	0		0	954			493,913	0
14	5	197	0	0	0		136,696	136,696	0		0	951			136,696	0
14	6	198	0	0	0		22,996	22,996	0		0	948			22,996	0
14	7	199	0	0	0		988	988	0		0	944			988	0
14	8	200	0	0	0		3,629	3,629	0		0	941			3,629	0
14	9	201	0	0	0		17,856	17,856	0		0	938			17,856	0
14	10	202	0	0	0		265,097	265,097	0		0	935			265,097	0
14	11	203	0	0	0		871,387	871,387	0		0	931			871,387	0
14	12	204	0	0	0		1,271,946	1,271,946	0		0	928			1,271,946	0
15	1	205	0	0	0		1,010,531	1,010,531	0		3,805,386	925			1,010,531	0
15	2	206	0	0	0		1,702,340	1,702,340	0		7,610,771	925			1,702,340	0
15	3	207	0	0	0		896,897	896,897	0		11,416,157	925			896,897	0
15	4	208	0	0	0		526,841	526,841	0		15,221,542	925			526,841	0
15	5	209	0	0	0		147,631	147,631	0		19,026,928	925			147,631	0
15	6	210	0	0	0		25,141	25,141	0		22,832,314	925			25,141	0
15	7	211	0	0	0		1,093	1,093	0		26,637,699	925			1,093	0
15	8	212	0	0	0		4,064	4,064	0		30,443,085	925			4,064	0
15	9	213	0	0	0		20,226	20,226	0		34,248,471	925			20,226	0
15	10	214	0	0	0		303,749	303,749	0		38,053,856	925			303,749	0
15	11	215	0	0	0		1,009,761	1,009,761	0		41,859,242	925			1,009,761	0
15	12	216	0	0	0		1,490,383	1,490,383	0		45,664,627	925			1,490,383	0
16	1	217	0	0	0		1,197,090	1,197,090	0		45,664,627	925			1,197,090	0
16	2	218	0	0	0		1,986,064	1,986,064	0		45,664,627	925			1,986,064	0
16	3	219	0	0	0		1,030,762	1,030,762	0		45,664,627	925			1,030,762	0
16	4	220	0	0	0		596,570	596,570	0		45,664,627	925			596,570	0
16	5	221	0	0	0		164,748	164,748	0		45,664,627	925			164,748	0
16	6	222	0	0	0		27,656	27,656	0		45,664,627	925			27,656	0
16	7	223	0	0	0		1,185	1,185	0		45,664,627	925			1,185	0
16	8	224	0	0	0		4,346	4,346	0		45,664,627	925			4,346	0
16	9	225	0	0	0		21,334	21,334	0		45,664,627	925			21,334	0
16	10	226	0	0	0		316,063	316,063	0		45,664,627	925			316,063	0
16	11	227	0	0	0		1,036,688	1,036,688	0		45,664,627	925			1,036,688	0
16	12	228	0	0	0		1,509,993	1,509,993	0		45,664,627	925			1,509,993	0
17	1	229	0	0	0		1,197,090	1,197,090	0		45,664,627	925			1,197,090	0
17	2	230	0	0	0		1,986,064	1,986,064	0		45,664,627	925			1,986,064	0
17	3	231	0	0	0		1,030,762	1,030,762	0		45,664,627	925			1,030,762	0
17	4	232	0	0	0		596,570	596,570	0		45,664,627	925			596,570	0
17	5	233	0	0	0		164,748	164,748	0		45,664,627	925			164,748	0
17	6	234	0	0	0		27,656	27,656	0		45,664,627	925			27,656	0
17	7	235	0	0	0		1,185	1,185	0		45,664,627	925			1,185	0
17	8	236	0	0	0		4,346	4,346	0		45,664,627	925			4,346	0
17	9	237	0	0	0		21,334	21,334	0		45,664,627	925			21,334	0
17	10	238	0	0	0		316,063	316,063	0		45,664,627	925			316,063	0
17	11	239	0	0	0		1,036,688	1,036,688	0		45,664,627	925			1,036,688	0
17	12	240	0	0	0		1,509,993	1,509,993	0		45,664,627	925			1,509,993	0

Year	Month	Total Months	Quarry Area (Breccia & Greywacke)	Quarry Area (Limestone)	Quarry Area - Un Mined	Groundwater Inflow (Zerod out, included in pit water balance)		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Total Pit Inflow	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water & Outflow Concentration
			lb/month	lb/month	lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L
13	9	189	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.22
13	10	190	0.04	0.02	0.00	4.40	0.00	0.00	0.00	0.00	0.05	0.05	0.00	3.22
13	11	191	0.12	0.05	0.00	4.40	0.00	0.00	0.00	0.00	0.17	0.17	0.00	3.22
13	12	192	0.18	0.07	0.00	4.40	0.00	0.00	0.00	0.00	0.25	0.25	0.00	3.22
14	1	193	0.14	0.06	0.00	4.40	0.00	0.00	0.00	0.00	0.20	0.20	0.00	3.22
14	2	194	0.23	0.09	0.00	4.40	0.00	0.00	0.00	0.00	0.33	0.33	0.00	3.21
14	3	195	0.12	0.05	0.00	4.40	0.00	0.00	0.00	0.00	0.17	0.17	0.00	3.21
14	4	196	0.07	0.03	0.00	4.40	0.00	0.00	0.00	0.00	0.10	0.10	0.00	3.21
14	5	197	0.02	0.01	0.00	4.40	0.00	0.00	0.00	0.00	0.03	0.03	0.00	3.21
14	6	198	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
14	7	199	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
14	8	200	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
14	9	201	0.00	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
14	10	202	0.04	0.01	0.00	4.40	0.00	0.00	0.00	0.00	0.05	0.05	0.00	3.20
14	11	203	0.13	0.05	0.00	4.40	0.00	0.00	0.00	0.00	0.17	0.17	0.00	3.20
14	12	204	0.18	0.07	0.00	4.40	0.00	0.00	0.00	0.00	0.25	0.25	0.00	3.20
15	1	205	0.15	0.06	0.00	4.38	0.00	0.00	0.00	0.00	0.20	0.20	0.00	3.20
15	2	206	0.25	0.09	0.00	4.36	0.00	0.00	0.00	0.00	0.34	0.34	0.00	3.20
15	3	207	0.13	0.05	0.00	4.33	0.00	0.00	0.00	0.00	0.18	0.18	0.00	3.20
15	4	208	0.08	0.03	0.00	4.31	0.00	0.00	0.00	0.00	0.11	0.11	0.00	3.20
15	5	209	0.02	0.01	0.00	4.29	0.00	0.00	0.00	0.00	0.03	0.03	0.00	3.20
15	6	210	0.00	0.00	0.00	4.27	0.00	0.00	0.00	0.00	0.01	0.01	0.00	3.21
15	7	211	0.00	0.00	0.00	4.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
15	8	212	0.00	0.00	0.00	4.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
15	9	213	0.00	0.00	0.00	4.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
15	10	214	0.04	0.02	0.00	4.18	0.00	0.00	0.00	0.00	0.06	0.06	0.00	3.21
15	11	215	0.15	0.06	0.00	4.15	0.00	0.00	0.00	0.00	0.20	0.20	0.00	3.21
15	12	216	0.21	0.08	0.00	4.13	0.00	0.00	0.00	0.00	0.30	0.30	0.00	3.21
16	1	217	0.17	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.24	0.24	0.00	3.21
16	2	218	0.29	0.11	0.00	4.13	0.00	0.00	0.00	0.00	0.40	0.40	0.00	3.21
16	3	219	0.15	0.06	0.00	4.13	0.00	0.00	0.00	0.00	0.21	0.21	0.00	3.21
16	4	220	0.09	0.03	0.00	4.13	0.00	0.00	0.00	0.00	0.12	0.12	0.00	3.21
16	5	221	0.02	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.03	0.03	0.00	3.21
16	6	222	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.01	0.00	3.21
16	7	223	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
16	8	224	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
16	9	225	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
16	10	226	0.05	0.02	0.00	4.13	0.00	0.00	0.00	0.00	0.06	0.06	0.00	3.21
16	11	227	0.15	0.06	0.00	4.13	0.00	0.00	0.00	0.00	0.21	0.21	0.00	3.21
16	12	228	0.22	0.09	0.00	4.13	0.00	0.00	0.00	0.00	0.30	0.30	0.00	3.21
17	1	229	0.17	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.24	0.24	0.00	3.21
17	2	230	0.29	0.11	0.00	4.13	0.00	0.00	0.00	0.00	0.40	0.40	0.00	3.21
17	3	231	0.15	0.06	0.00	4.13	0.00	0.00	0.00	0.00	0.21	0.21	0.00	3.21
17	4	232	0.09	0.03	0.00	4.13	0.00	0.00	0.00	0.00	0.12	0.12	0.00	3.21
17	5	233	0.02	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.03	0.03	0.00	3.21
17	6	234	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.01	0.00	3.21
17	7	235	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
17	8	236	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
17	9	237	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
17	10	238	0.05	0.02	0.00	4.13	0.00	0.00	0.00	0.00	0.06	0.06	0.00	3.21
17	11	239	0.15	0.06	0.00	4.13	0.00	0.00	0.00	0.00	0.21	0.21	0.00	3.21
17	12	240	0.22	0.09	0.00	4.13	0.00	0.00	0.00	0.00	0.30	0.30	0.00	3.21

Phase	Year	Month	Total Months	Date	Quarry Area (Breccia & Greywacke)	Quarry Area (Breccia & Greywacke)	Quarry Area (Limestone)	Quarry Area (Limestone)	Quarry Area -Un Mined	Quarry Area -Un Mined	Pit Invert Level	Groundwater Inflow (Zerod out, included in pit water balance)	Undrained Backfill (No Surface Outlet)
					sq ft	cu ft	sq ft	cu ft	sq ft	cu ft	ft amsl	cu ft	sq ft
NA	18	1	241	1/1/2038	6,100,000	948,344	1,600,000	248,746	0	0	925	0	0
NA	18	2	242	2/1/2038	6,100,000	1,573,375	1,600,000	412,689	0	0	925	0	0
NA	18	3	243	3/1/2038	6,100,000	816,578	1,600,000	214,184	0	0	925	0	0
NA	18	4	244	4/1/2038	6,100,000	472,607	1,600,000	123,963	0	0	925	0	0
NA	18	5	245	5/1/2038	6,100,000	130,515	1,600,000	34,233	0	0	925	0	0
NA	18	6	246	6/1/2038	6,100,000	21,909	1,600,000	5,747	0	0	925	0	0
NA	18	7	247	7/1/2038	6,100,000	939	1,600,000	246	0	0	925	0	0
NA	18	8	248	8/1/2038	6,100,000	3,443	1,600,000	903	0	0	925	0	0
NA	18	9	249	9/1/2038	6,100,000	16,901	1,600,000	4,433	0	0	925	0	0
NA	18	10	250	10/1/2038	6,100,000	250,388	1,600,000	65,676	0	0	925	0	0
NA	18	11	251	11/1/2038	6,100,000	821,272	1,600,000	215,416	0	0	925	0	0
NA	18	12	252	12/1/2038	6,100,000	1,196,228	1,600,000	313,765	0	0	925	0	0
NA	19	1	253	1/1/2039	6,100,000	948,344	1,600,000	248,746	0	0	925	0	0
NA	19	2	254	2/1/2039	6,100,000	1,573,375	1,600,000	412,689	0	0	925	0	0
NA	19	3	255	3/1/2039	6,100,000	816,578	1,600,000	214,184	0	0	925	0	0
NA	19	4	256	4/1/2039	6,100,000	472,607	1,600,000	123,963	0	0	925	0	0
NA	19	5	257	5/1/2039	6,100,000	130,515	1,600,000	34,233	0	0	925	0	0
NA	19	6	258	6/1/2039	6,100,000	21,909	1,600,000	5,747	0	0	925	0	0
NA	19	7	259	7/1/2039	6,100,000	939	1,600,000	246	0	0	925	0	0
NA	19	8	260	8/1/2039	6,100,000	3,443	1,600,000	903	0	0	925	0	0
NA	19	9	261	9/1/2039	6,100,000	16,901	1,600,000	4,433	0	0	925	0	0
NA	19	10	262	10/1/2039	6,100,000	250,388	1,600,000	65,676	0	0	925	0	0
NA	19	11	263	11/1/2039	6,100,000	821,272	1,600,000	215,416	0	0	925	0	0
NA	19	12	264	12/1/2039	6,100,000	1,196,228	1,600,000	313,765	0	0	925	0	0
NA	20	1	265	1/1/2040	6,100,000	948,344	1,600,000	248,746	0	0	925	0	0
NA	20	2	266	2/1/2040	6,100,000	1,573,375	1,600,000	412,689	0	0	925	0	0
NA	20	3	267	3/1/2040	6,100,000	816,578	1,600,000	214,184	0	0	925	0	0
NA	20	4	268	4/1/2040	6,100,000	472,607	1,600,000	123,963	0	0	925	0	0
NA	20	5	269	5/1/2040	6,100,000	130,515	1,600,000	34,233	0	0	925	0	0
NA	20	6	270	6/1/2040	6,100,000	21,909	1,600,000	5,747	0	0	925	0	0
NA	20	7	271	7/1/2040	6,100,000	939	1,600,000	246	0	0	925	0	0
NA	20	8	272	8/1/2040	6,100,000	3,443	1,600,000	903	0	0	925	0	0
NA	20	9	273	9/1/2040	6,100,000	16,901	1,600,000	4,433	0	0	925	0	0
NA	20	10	274	10/1/2040	6,100,000	250,388	1,600,000	65,676	0	0	925	0	0
NA	20	11	275	11/1/2040	6,100,000	821,272	1,600,000	215,416	0	0	925	0	0
NA	20	12	276	12/1/2040	6,100,000	1,196,228	1,600,000	313,765	0	0	925	0	0
NA	21	1	277	1/1/2041	6,100,000	948,344	1,600,000	248,746	0	0	925	0	0
NA	21	2	278	2/1/2041	6,100,000	1,573,375	1,600,000	412,689	0	0	925	0	0
NA	21	3	279	3/1/2041	6,100,000	816,578	1,600,000	214,184	0	0	925	0	0
NA	21	4	280	4/1/2041	6,100,000	472,607	1,600,000	123,963	0	0	925	0	0
NA	21	5	281	5/1/2041	6,100,000	130,515	1,600,000	34,233	0	0	925	0	0
NA	21	6	282	6/1/2041	6,100,000	21,909	1,600,000	5,747	0	0	925	0	0
NA	21	7	283	7/1/2041	6,100,000	939	1,600,000	246	0	0	925	0	0
NA	21	8	284	8/1/2041	6,100,000	3,443	1,600,000	903	0	0	925	0	0
NA	21	9	285	9/1/2041	6,100,000	16,901	1,600,000	4,433	0	0	925	0	0
NA	21	10	286	10/1/2041	6,100,000	250,388	1,600,000	65,676	0	0	925	0	0
NA	21	11	287	11/1/2041	6,100,000	821,272	1,600,000	215,416	0	0	925	0	0
NA	21	12	288	12/1/2041	6,100,000	1,196,228	1,600,000	313,765	0	0	925	0	0

Year	Month	Total Months	Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Water Entering Pit Lake	Pit Lake Outflow	Cumulative Water in Pit	Cumulative Volume Occupied by Water in Backfill	Cumulative Backfill Volume	Pit Water Level at End of Year	Pit Water Open Area at End of Year	Area for Surface Water Runoff for Next Year	First Cut Water Accumulation in Pit Lake	Available Water Storage in Pit
			cu ft	sq ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	cu ft	ft	sq ft	sq ft	cu ft	cu ft
18	1	241	0	0	0		1,197,090	1,197,090	0		45,664,627	925			1,197,090	0
18	2	242	0	0	0		1,986,064	1,986,064	0		45,664,627	925			1,986,064	0
18	3	243	0	0	0		1,030,762	1,030,762	0		45,664,627	925			1,030,762	0
18	4	244	0	0	0		596,570	596,570	0		45,664,627	925			596,570	0
18	5	245	0	0	0		164,748	164,748	0		45,664,627	925			164,748	0
18	6	246	0	0	0		27,656	27,656	0		45,664,627	925			27,656	0
18	7	247	0	0	0		1,185	1,185	0		45,664,627	925			1,185	0
18	8	248	0	0	0		4,346	4,346	0		45,664,627	925			4,346	0
18	9	249	0	0	0		21,334	21,334	0		45,664,627	925			21,334	0
18	10	250	0	0	0		316,063	316,063	0		45,664,627	925			316,063	0
18	11	251	0	0	0		1,036,688	1,036,688	0		45,664,627	925			1,036,688	0
18	12	252	0	0	0		1,509,993	1,509,993	0		45,664,627	925			1,509,993	0
19	1	253	0	0	0		1,197,090	1,197,090	0		45,664,627	925			1,197,090	0
19	2	254	0	0	0		1,986,064	1,986,064	0		45,664,627	925			1,986,064	0
19	3	255	0	0	0		1,030,762	1,030,762	0		45,664,627	925			1,030,762	0
19	4	256	0	0	0		596,570	596,570	0		45,664,627	925			596,570	0
19	5	257	0	0	0		164,748	164,748	0		45,664,627	925			164,748	0
19	6	258	0	0	0		27,656	27,656	0		45,664,627	925			27,656	0
19	7	259	0	0	0		1,185	1,185	0		45,664,627	925			1,185	0
19	8	260	0	0	0		4,346	4,346	0		45,664,627	925			4,346	0
19	9	261	0	0	0		21,334	21,334	0		45,664,627	925			21,334	0
19	10	262	0	0	0		316,063	316,063	0		45,664,627	925			316,063	0
19	11	263	0	0	0		1,036,688	1,036,688	0		45,664,627	925			1,036,688	0
19	12	264	0	0	0		1,509,993	1,509,993	0		45,664,627	925			1,509,993	0
20	1	265	0	0	0		1,197,090	1,197,090	0		45,664,627	925			1,197,090	0
20	2	266	0	0	0		1,986,064	1,986,064	0		45,664,627	925			1,986,064	0
20	3	267	0	0	0		1,030,762	1,030,762	0		45,664,627	925			1,030,762	0
20	4	268	0	0	0		596,570	596,570	0		45,664,627	925			596,570	0
20	5	269	0	0	0		164,748	164,748	0		45,664,627	925			164,748	0
20	6	270	0	0	0		27,656	27,656	0		45,664,627	925			27,656	0
20	7	271	0	0	0		1,185	1,185	0		45,664,627	925			1,185	0
20	8	272	0	0	0		4,346	4,346	0		45,664,627	925			4,346	0
20	9	273	0	0	0		21,334	21,334	0		45,664,627	925			21,334	0
20	10	274	0	0	0		316,063	316,063	0		45,664,627	925			316,063	0
20	11	275	0	0	0		1,036,688	1,036,688	0		45,664,627	925			1,036,688	0
20	12	276	0	0	0		1,509,993	1,509,993	0		45,664,627	925			1,509,993	0
21	1	277	0	0	0		1,197,090	1,197,090	0		45,664,627	925			1,197,090	0
21	2	278	0	0	0		1,986,064	1,986,064	0		45,664,627	925			1,986,064	0
21	3	279	0	0	0		1,030,762	1,030,762	0		45,664,627	925			1,030,762	0
21	4	280	0	0	0		596,570	596,570	0		45,664,627	925			596,570	0
21	5	281	0	0	0		164,748	164,748	0		45,664,627	925			164,748	0
21	6	282	0	0	0		27,656	27,656	0		45,664,627	925			27,656	0
21	7	283	0	0	0		1,185	1,185	0		45,664,627	925			1,185	0
21	8	284	0	0	0		4,346	4,346	0		45,664,627	925			4,346	0
21	9	285	0	0	0		21,334	21,334	0		45,664,627	925			21,334	0
21	10	286	0	0	0		316,063	316,063	0		45,664,627	925			316,063	0
21	11	287	0	0	0		1,036,688	1,036,688	0		45,664,627	925			1,036,688	0
21	12	288	0	0	0		1,509,993	1,509,993	0		45,664,627	925			1,509,993	0

Year	Month	Total Months	Quarry Area (Breccia & Greywacke)	Quarry Area (Limestone)	Quarry Area - Un Mined	Groundwater Inflow (Zerod out, included in pit water balance)		Undrained Backfill (No Surface Outlet)	Drained Backfill (With Surface Outlet)	Pit Lake Precip	Total Pit Inflow	Pit Lake Outflow	Cumulative Constituent in Pit	Pit Water & Outflow Concentration
			lb/month	lb/month	lb/month	ug/L	lb/month	lb/month	lb/month	lb/month	lb/month	lb/month	lb	ug/L
18	1	241	0.17	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.24	0.24	0.00	3.21
18	2	242	0.29	0.11	0.00	4.13	0.00	0.00	0.00	0.00	0.40	0.40	0.00	3.21
18	3	243	0.15	0.06	0.00	4.13	0.00	0.00	0.00	0.00	0.21	0.21	0.00	3.21
18	4	244	0.09	0.03	0.00	4.13	0.00	0.00	0.00	0.00	0.12	0.12	0.00	3.21
18	5	245	0.02	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.03	0.03	0.00	3.21
18	6	246	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.01	0.00	3.21
18	7	247	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
18	8	248	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
18	9	249	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
18	10	250	0.05	0.02	0.00	4.13	0.00	0.00	0.00	0.00	0.06	0.06	0.00	3.21
18	11	251	0.15	0.06	0.00	4.13	0.00	0.00	0.00	0.00	0.21	0.21	0.00	3.21
18	12	252	0.22	0.09	0.00	4.13	0.00	0.00	0.00	0.00	0.30	0.30	0.00	3.21
19	1	253	0.17	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.24	0.24	0.00	3.21
19	2	254	0.29	0.11	0.00	4.13	0.00	0.00	0.00	0.00	0.40	0.40	0.00	3.21
19	3	255	0.15	0.06	0.00	4.13	0.00	0.00	0.00	0.00	0.21	0.21	0.00	3.21
19	4	256	0.09	0.03	0.00	4.13	0.00	0.00	0.00	0.00	0.12	0.12	0.00	3.21
19	5	257	0.02	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.03	0.03	0.00	3.21
19	6	258	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.01	0.00	3.21
19	7	259	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
19	8	260	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
19	9	261	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
19	10	262	0.05	0.02	0.00	4.13	0.00	0.00	0.00	0.00	0.06	0.06	0.00	3.21
19	11	263	0.15	0.06	0.00	4.13	0.00	0.00	0.00	0.00	0.21	0.21	0.00	3.21
19	12	264	0.22	0.09	0.00	4.13	0.00	0.00	0.00	0.00	0.30	0.30	0.00	3.21
20	1	265	0.17	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.24	0.24	0.00	3.21
20	2	266	0.29	0.11	0.00	4.13	0.00	0.00	0.00	0.00	0.40	0.40	0.00	3.21
20	3	267	0.15	0.06	0.00	4.13	0.00	0.00	0.00	0.00	0.21	0.21	0.00	3.21
20	4	268	0.09	0.03	0.00	4.13	0.00	0.00	0.00	0.00	0.12	0.12	0.00	3.21
20	5	269	0.02	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.03	0.03	0.00	3.21
20	6	270	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.01	0.00	3.21
20	7	271	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
20	8	272	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
20	9	273	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
20	10	274	0.05	0.02	0.00	4.13	0.00	0.00	0.00	0.00	0.06	0.06	0.00	3.21
20	11	275	0.15	0.06	0.00	4.13	0.00	0.00	0.00	0.00	0.21	0.21	0.00	3.21
20	12	276	0.22	0.09	0.00	4.13	0.00	0.00	0.00	0.00	0.30	0.30	0.00	3.21
21	1	277	0.17	0.07	0.00	4.13	0.00	0.00	0.00	0.00	0.24	0.24	0.00	3.21
21	2	278	0.29	0.11	0.00	4.13	0.00	0.00	0.00	0.00	0.40	0.40	0.00	3.21
21	3	279	0.15	0.06	0.00	4.13	0.00	0.00	0.00	0.00	0.21	0.21	0.00	3.21
21	4	280	0.09	0.03	0.00	4.13	0.00	0.00	0.00	0.00	0.12	0.12	0.00	3.21
21	5	281	0.02	0.01	0.00	4.13	0.00	0.00	0.00	0.00	0.03	0.03	0.00	3.21
21	6	282	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.01	0.01	0.00	3.21
21	7	283	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
21	8	284	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
21	9	285	0.00	0.00	0.00	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21
21	10	286	0.05	0.02	0.00	4.13	0.00	0.00	0.00	0.00	0.06	0.06	0.00	3.21
21	11	287	0.15	0.06	0.00	4.13	0.00	0.00	0.00	0.00	0.21	0.21	0.00	3.21
21	12	288	0.22	0.09	0.00	4.13	0.00	0.00	0.00	0.00	0.30	0.30	0.00	3.21