FACT SHEET
(Pursuant to Nevada Administrative Code [NAC] 445A.401)

Permittee Name: **KG Mining (Bald Mountain) Inc.**

Project Name: **Bald Mountain Mine**

Permit Number: **NEV0050045**
Review Type/Year/Revision: **Renewal 2024, Fact Sheet Revision 00**

A. Location and General Description

Location: The Bald Mountain Mine (BMM) is located on private land and public land administered by the U.S. Bureau of Land Management, Bristlecone Field Office in White Pine County along the western slope of Big Bald Mountain in Sections 11-15 and 22-25, Township 24 North (T24N), Range 56 East (R56E), and Sections 5-9, 14-23, 26-30, and 32, T24N, R57E, Mount Diablo Baseline and Meridian, 35 miles northeast of the town of Eureka, Nevada.

General Description: The project consists primarily of No. 1, 2, 3, 4, 5, and 6 Heap Leach Pads, associated process ponds, process buildings, open pit mines, and waste rock dumps. Total mineral processing is limited by the Permit to **6,000,000 tons** of ore per year. Facilities are required to be designed, constructed, operated, and closed without any discharge or release in excess of those standards established in regulation except for meteorological events that exceed the design storm event.

B. Synopsis

General

The region is typical of Nevada Basin and Range topography. Process facilities are located at the base of Big Bald Mountain, on the alluvial fan at the south edge of Huntington Valley. The stratigraphy is typically characterized by 0.5 to 3 feet of topsoil covering silty-clay to clayey-silt subsoil often interspersed with medium to large cobbles. Below the subsoil lies a deep layer of sediments resting on bedrock. The primary aquifer lies in the sediments with a potentiometric surface elevation about 500 feet below ground surface at the No. 2 well.

The operating heap leach facilities are located within Sections 25 and 26, T24N, R56E. Land elevations across this area range from approximately 6,500 to 6,730 feet above mean sea level (ft amsl). Geotechnical borings drilled to a depth of up to 100 feet, show that alluvial materials underlying the current site of the BMM heap leach and Process facilities generally consist of silty gravel, silty sand, clayey sand, and clayey gravel with minor silty clay to clayey silt units. Remolded permeability tests performed on shallow near surface soils suggest that the permeability of these soils is relatively low. Shallow groundwater was not penetrated in any of the geotechnical borings drilled through the site area confirming that groundwater occurs at depths greater than 100 feet.

History

In 1869, G.H. Foreman located the first mining claim in the Bald Mountain Mine area.

In 1976 Placer Dome U.S. acquired an option for claims within the Bald Mountain Mining District thus initiating exploration for precious metals. A pilot-scale heap leach project at BMM began in 1983 and was upgraded to a commercial heap leach facility in 1985. Large scale activities at BMM have been expanded periodically since the implementation of commercial process facilities. In 1993, the Little Bald Mountain claims were acquired by Placer Dome U.S. from Northern Dynasty Mines.

In 2006, Barrick Gold Corp acquired holdings from Placer Dome U.S. which resulted in ownership and operations conducted by Barrick, Bald Mountain Mine, a wholly owned subsidiary of Barrick Gold Corporation. Yankee, Alligator Ridge, Little Bald Mountain (LBM), Mooney, Casino/Winrock, Bald Mountain areas were included in the sale.

Kinross Gold acquired the holdings through a Barrick asset sale which closed on 11 January 2016. Kinross Gold purchased 100 percent of the mine which includes a large land package divided into three zones. The mine is owned and operated by KG Mining (Bald Mountain Mine) Inc., a Kinross company (the current Permittee).

Mining

Bald Mountain's expansion plans include the continuance of mining in the Top Pit, LBM Pit, and the development of the Redbird Facilities. The Red Bird Mine (RBM), LJ-Ridge, and Rat Pits, as well as the Numbers Pit Complex (1, 2/3, and 1/5 pits) will also remain part of NEV0050045.

In 1995, seasonal formation of a shallow lake in the 1/5 Pit was first noted. Initial water quality samples showed elevated levels of arsenic (0.154 milligrams per liter [mg/L]), lead (0.031 mg/L), nitrate (27.8 mg/L), and thallium (0.005 mg/L). Subsequent samples taken from 1998 to 2004 showed continued elevated levels of arsenic only (0.11 mg/L in last sample taken in 2004). The surface elevation of the lake varies seasonally and, as of the third quarter of 2019, has yet to produce persistent surface water for two consecutive years.

Due to the formation of this pit lake, the Permittee was required by a Schedule of Compliance (SOC) item to demonstrate that the pit lake meets the applicable requirements under NAC 445A.429 (refer to correspondence dated 15 April 2002, "Modified 1/5 Pit Ponded Water Action Plan"). In response, Permittee submitted the *Bald Mountain Mine 1/5 Pit Lake Hydrologic Investigation* (SRK, November 2004) and the *Preliminary Screening-Level Risk Assessment for the 1/5 Pit Lake Water, Bald Mountain Mine* (SRK, May 2005). The 2004 study included conceptual water balance calculations and screening level sensitivity analyses to establish key inflow and outflow parameters for the pit, data from two boreholes (one upgradient, one downgradient) to determine if perched aquifers were present adjacent to the pit, and a fate and transport assessment to determine the potential for pit lake waters to reach groundwater. The study concluded that the pit lake was created by a combination of meteoric and perched groundwater but that the lake created no significant potential to degrade waters of the State. The 2005 study evaluated

the potential impact of the pit lake waters on terrestrial, avian, or human life. The study concluded that none of the chemical constituents in the 1/5 Pit water pose a threat to humans or to the types of wildlife likely to visit that region of the State.

In addition, the Permittee submitted an updated pit lake study and ecological risk assessment for the 1/5 Pit, *KG-BMM Pit 1/5 Seasonal Pit lake Evalustaion* (McGinley and Associates, October 2018). The 2018 study confirms the ecological risk is extremely low and arsenic levels are stabilizing to background well data levels.

Access to the 1/5 pit is limited due to instability of the highwall and the associated dangers to personnel when attempting to obtain pit lake water samples. With this safety issue in mind, and recognizing the low level of constituents in the last rounds of analysis (2004) and the conclusions of the 2004 SRK and 2018 McGinley and Associates studies that the lake does not create the potential to degrade waters of the State, only annual inspection (3rd quarter) of the pit is required at this time. If water is present, the Permittee is required to obtain a sample for analysis of Profile I parameters and record the surface elevation in ft amsl, refer to the Permit for details.

The waste rock generated from these pits is routinely sampled and characterized according to Permit requirements. Based on analytical results, there is a low potential for acid generation except for the RBM waste. However, analyses of leachate from the Meteoric Water Mobility Procedure (MWMP) have shown slightly alkaline solutions. Analysis of leachate from the MWMP of waste from the Top Pit indicate significant concentrations of arsenic (up to 0.54 mg/L), mercury (up to 0.036 mg/L), manganese (up to 0.234 mg/L), and thallium (up to 0.011 mg/L). Analysis of leachate from the MWMP of waste from the Sage Flats Pit indicate significant concentrations of arsenic (up to 0.094 mg/L), mercury (up to 0.102 mg/L), and thallium (up to 0.018 mg/L). Therefore, proper management techniques per the Waste Rock Management Plan, such as isolation, containment, blending, or other mitigative measures, are required to preclude potential concerns.

Historically, sodium cyanide was added at the crushing plant to the crushed ore via the conveyor belt prior to stockpiling. As a result of this activity, cyanide was detected to a depth of 70 feet beneath the stockpile area, prompting the termination of cyanide application at this location. Mitigation of the affected area was required via the 1998 Permit SOC to preclude potential degradation of the waters of the State. Mitigative efforts occurred over time and included drilling, sampling and analysis, determination of soil attenuation properties, and contouring. Removal of affected soil to Leach Pad 2 beneath and adjacent to the old cyanide mix tank and agglomerator building was also completed. Analyses to confirm complete removal of affected soil were required by the Division and the final report substantiating this finding was submitted in February 2000.

Fresh water for mine use is obtained from production wells BMM-1 and BMM-2. Water produced by these wells is temporarily stored in Fresh Water Pond #1 until needed. The pond consists of a prepared subbase with an 80-mil high density polyethylene (HDPE) bladder placed thereon. The fluid capacity of the bladder is approximately 1.3 million gallons (gal).

A minor modification was approved by the Division in August 2016 to construct a new open pit at the Bald Mountain Mine by the name of the Redbird Pit. The minor modification proposed to remove an estimated 36,100,000 tons of materials from the Redbird Pit. Of that material it is estimated that 3,200,000 tons will be ore and 32,900,000 tons will be waste rock. Mining will be by traditional blast, load and haul mining methods. The ore from the Redbird Pit will be placed on the currently permitted No. 2 Process Area Heap Leach Pad Phases 2-5. Waste rock from the Redbird Pit will be placed as backfill into the existing RBM pit and the proposed Redbird pit. The RBM and Redbird Pits are not expected to have pit floor elevations below the water table. The RBM pit base elevation is 6,700 ft amsl, while the water table elevation is 6,300 ft amsl. The Redbird pit depth will be 760 ft with a pit base elevation of 6,620 ft amsl and the water table elevation is 6,230 ft amsl.

In addition to disposal of waste rock in the RBM pit, the Permittee proposed and opted to construct a rock disposal area (RDA) associated with the Redbird Pit. The Redbird RDA would have a capacity of 45,000,000 tons, a height of 255 ft and will cover 289 acres. The estimated average groundwater elevation below the Redbird RDA is 6050 ft amsl while the estimated base elevation of the RDA sits at 6,725 ft amsl. The Permittee is planning to only place waste rock generated from Redbird as backfill into the existing RBM pit and as of December 2019 does not plan to construct the Redbird RDA. If the Redbird RDA is needed in the future, the Permittee's approach to address potentially acid generating (PAG) material will be similar to the plans described below. This being the case, Permit modifications and fees may apply.

The waste rock material from the proposed Redbird Pit is estimated to be 47.7% PAG material with an average net neutralizing potential (NNP) of 124 kg/t. The ore from the Pit is estimated to be 25% PAG material. Due to the waste rock from Redbird potentially containing 47.7% PAG material, the Permittee plans to implement Measure 2.d. "Enhance cover design", as described in Section 4.4 Mitigation Plan of the Revised Waste Rock Management Plan (2 May 2016). Cover designs at Bald Mountain typically consist of a minimum of 2 feet of cover material (alluvium) and a minimum of 6 inches of growth media (top soil); however, the final cover design for the RBM Pit backfill will be determined by utilizing existing data, information from historic cover designs, as well as soil sample results. Permit Limitation Part I.G.18 was added to the Permit with the processing of the June 2016 minor modification to provide a threshold for PAG material quantity and NNP that triggers submittal for Division review and approval of an enhanced cover design.

The Permittee plans to separately place all growth media and alluvium material (non-PAG material) generated from Redbird Pit near the northwest crest of the RBM Pit to utilize as cover once mining and back filling have ended. The Permittee's models indicate that there should be an excess of alluvium, as well as sufficient top soil to meet the needs of the cover design. To ensure the proper segregation of suitable cover material, the Permittee plans to conduct confirmatory sampling of these materials during mining. Prior to the placement and construction of the enhanced cover, the Permittee will submit the final cover design to the NDEP for review and approval.

With the 2018 renewal application, the Permittee proposed a mining expansion of the LBM pit. The pit expansion is expected to generate approximately 2,000,000 tons ore and 21,000,000 tons waste. The waste will be placed in two RDAs, LBM RDA 1 and LBM RDA 2. The proposed pit will be 380 feet deeper than the existing LBM Pit. The proposed pit floor will be approximately 390 feet above the existing water table. The material characterization in the *Final-Revised Waste Rock Management Plan Bald Mountain Mine, Version 2, January 2019* indicated the waste rock will consists of Laketown Dolomite and Pogonip Group with an expected average NNP of 803 tons $CaCO_3$ per 1,000 tons of material. Current mine plans do not disturb the former LBM heap leach pad (NEV0050017) which was terminated in 2004.

Process Area 1

The pre-regulation (NAC 445A.350-447) No. 1 Process Area was originally permitted to include approximately 2.8 million square feet (sq ft) of leach pad, three pregnant solution ponds, one barren solution pond, one settling pond, and a process building. The No. 1 Process Area is closed and is currently in the reclamation process.

Each pond of the No. 1 Process Area consisted of a 60-mil HDPE liner, a leak detection system, and a 6-inch thick compacted soil secondary layer. Pond secondary soil layers consisted of 6 to 12 inches of native silts/clays compacted to achieve a permeability of 1 x 10^{-5} centimeters per second (cm/sec). The Process No. 1 facilities were constructed prior to adoption of NAC 445A.350-447. According to the Permittee, standard quality assurance and quality control (QA/QC) practices for liner installation were employed, but the QA/QC program was not documented in a manner consistent with the current regulations. Each pond was built with a dedicated leak detection sump filled with clean gravel and a capacity of approximately 374 gal considering the void ratio of the gravel. Any leakage from the liner gravity-flows between the liner and the secondary soil layer to the sump where it is evacuated via the leak detection port. As part of the Process 1 facility closure, Pregnant Pond 1 and Barren Pond 1 were backfilled and redesigned to be evapotranspiration (ET) cells.

Excess draindown which exits the ET cells is allowed to infiltrate into an adjacent leach field. As of October 2011, flow rates to the leach field range from 0 to 3 gal per minute (gpm), varying seasonally. Analysis of samples of the fluid show exceedances of the NDEP Profile I reference values for arsenic (up to 0.431 mg/L), antimony (up to 0.091 mg/L), manganese (up to 0.085 mg/L), mercury (up to 0.015 mg/L), selenium (up to 0.096 mg/L), nitrate + nitrite (up to 194 mg/L), sulfate (up to 848 mg/L), and TDS (up to 2,300 mg/L). The leach pad piping system is designed such that all fluid is released under fill without surface accumulations. In addition, the location of the leach field is within an area where groundwater is more than 300 ft below ground surface. Modeling of the system has shown that the leach field does not have the potential to degrade waters of the State.

The No. 1 Process Area leach pad consists of an 80-mil HDPE liner, segregation berms, pad leak detection system, and at least 6 inches of material with an in-situ permeability that does not exceed 1 x 10^{-5} cm/s underlying the liner. The Process 1 heap leach pad has been

closed and is now in the reclamation process. In 2008, two piezometers were installed to monitor hydraulic head within the heap leach pad. Monitoring of the water level in each piezometer has now been added to the monitoring requirements of the Permit.

In September 2018, mine personnel observed a seep along the western edge of the closed HLP, approximately 1,200 feet from the ET cells. The seep discharged initially at a rate of approximately 0.12 gallons per minute (gpm) to an area that is outside of the limits of HLP containment and later decreased to approximately 0.07 gpm. The Permittee submitted the required spill reports, and in October 2018, submitted an Engineering Design Change (EDC) to mitigate the seep. The EDC consisted of an interceptor trench to capture and route the seepage back into the lined, contained portion of the HLP. The EDC was approved by the Division on 23 October 2018.

Installation of a monitoring well was proposed by the Division in conversations with previous and current operators of the Bald Mountain Mine. These discussions centered on the original approved Final Plan for Permanent Closure (FPPC) for Process 1 in which the purpose of the infiltration field was more for use in upset/overflow conditions from the Summer and Winter ponds. For approximately the last 10 years, the e-cells have not been functioning as designed and Process 1 heap leach pad draindown has been discharging on a regular basis to the infiltration field.

In September 2019, the Permittee submitted an EDC for the installation of a monitoring well downgraident of the infiltration field. The proposed well design assumes a static groundwater depth of approximately 480 feet below ground surface, with a completion depth of 560 feet below ground surface. The screened interval is proposed to be from approximately 460 to 550 feet below ground surface and will be across the measured water level at the time of construction. The Division approved the EDC in October 2019, as the Permittee completed the installation in early November 2019. The Division is awaiting the submittal of the well as-built (record of construction) report.

Process Area 2

The No. 2 Process Area was originally permitted to include the leach pad, a barren pond, a settling pond, pregnant ponds 4, 5, 6, and 7, and a process building. All ponds still exist but their function has changed in some cases (presently the Pregnant Pond 4 is used as a secondary overflow pond, Barren Pond 2 as the Primary Overflow Pond, Settling Pond 2 as Pregnant Sump 1).

The Phase I Pad of the No. 2 Process Area was constructed similar to the No. 1 Process Area Pad. In general, the liner system consists of an 80-mil HDPE liner, leak detection system, and compacted subbase (maximum permeability $1x10^{-5}$ cm/sec). The primary differences in design/construction between the No. 2 Process Pad relative to the No. 1 Process Pad include more pad segregation berms, leak detection directly beneath solution channels, and more detection ports and collection lines per unit area. Phases subsequent to Phase I of the No. 2 Process, which includes the 1998 and 1999 phased expansions totaling 2,140,000 sq ft, consist of 80-mil HDPE liners segregation berms, pad leak collection lines, leak detection ports, and one foot of compacted material which meets

maximum permeability requirements of 1 x 10^{-6} cm/sec. Leak detection ports CC1 and PD1 detect leakage in the downgradient portion of the leach pad and solution channel where hydraulic heads could be significant.

As initially designed, the Barren Pond 2 (POF1), Pregnant Sump 2 (PS1), and Pregnant Pond 2 (PP4) originally consisted of a 60-mil HDPE liner and a leak collection/detection system above a 6-inch compacted soil secondary layer (pre-regulation). A formal quality control program was not in place during construction of the ponds. Therefore, the Division does not have adequate documentation indicating the permeabilities of the underlying soil layers and whether they meet current regulatory criteria. Each pond leak detection system reports to a common external sump (inside the process building) which originates from the 7-ounce per square yard geotextile fabric installed between the synthetic liner and soil layer. Per the previous Permit SOC, leak detection system/port PP4 was evaluated to determine if the collection, transport and removal of fluids was at a rate that prevented head transference to the soil layer. The evaluation and recommendations were completed in October 1998. The leak detection ports, possibly due to this type of pond design/construction (i.e. geotextile conveyance), had never shown fluid. The evaluation led to the installation of additional leak detection systems and new HDPE liners. Barren Pond 2 is now used as the Primary Overflow Pond, the Pregnant Sump remains, and the Pregnant Pond 4 is now used as Secondary Overflow Pond. Each of these ponds is considered to be single-lined and may not impound process solution beyond the 20-day Permit limit with the exception of Pregnant Pond 4 which is discussed in detail below.

The No. 5, 6, and 7 pregnant ponds of Process Area 2 consist of primary and secondary HDPE synthetic liners with geonet between the liners that allows any leakage through the primary liner to report to the leak detection sump for evacuation. Pregnant Pond 5 had been installed with a floating HDPE cover, however this cover has now been removed. The result is that the upper 1.4 million gal of capacity (out of a total of 6.71 million gal) is effectively on single liner and may only be used for temporary storage. Any solution accumulation above 6,557 ft amsl is restricted by the Permit to 20 days for each such event.

Both process areas are designed to contain 25-year, 24-hour storm event flows and withstand the 100-year, 24-hour storm event. Emergency catchment dams are in place for both the No. 1 and 2 process areas in case the design storm event is exceeded. The No. 1 and No. 2 process buildings' secondary containment, consisting of concrete slabs with stem walls sealed at the joints with water stops, meets or exceeds the 110 percent regulatory requirement.

Heap Leach Pad 3 was constructed in three phases. Correspondence from November 1997 from the Permittee withdrew Phase III of Pad 3; thus, based on engineer's calculations, there is no need for the storm pond. Pregnant Pond 6 serves Leach Pad 3. All pregnant solution is ultimately transferred to the No. 2 Process Area.

Heap Leach Pad 4 was constructed in 2006, thereby connecting Leach Pads 2 and 3 into one facility (Leach Pad 2-4). The liner system for Leach Pad 4 is identical to that of Leach Pads 2 and 3, consisting of a 12-inch compacted subbase (maximum permeability 1x10^{-6} cm/sec), overlain by 80-mil HDPE geomembrane, and covered by a layer of drain material

for liner protection. The total area of the Leach Pad 2-4 is approximately 7.7 million square ft.

In July 2011, the Permittee submitted a minor modification proposing to construct Leach Pad 5 directly south and conjoined to Leach Pad 2-4. This expansion would join with Leach Pad 2-4 into a single facility (Leach Pad 2-5), adding 1.6 million square ft to the total area. The liner system for the Leach Pad 5 expansion is identical to that of Leach Pads 2 and 3, consisting of a 12-inch compacted subbase (maximum permeability $1x10^{-6}$ cm/sec), overlain by 80-mil HDPE geomembrane, and covered by a layer of drain material for liner protection. The total height of any leach pad section is limited by the Permit to 250 feet measured vertically from the surface of the synthetic liner. The minor modification was approved by the Division in November 2011.

As part of this proposal, Pregnant Pond 4 was upgraded to a double-lined and leak detected configuration according to the EDC submitted in April 2006 and approved by the Division in May of the same year. In addition, a new Pregnant Pond 8 was proposed for construction as part of the minor modification to provide additional operational flexibility.

In May 2016, the Permittee submitted an EDC to make changes to the approved minor modification. Many of these changes were in response to the requirements of the National Environmental Policy Act (NEPA) Permit through the Bureau of Land Management (BLM) to account for a wildlife corridor adjacent to the expansion and other design and operational modifications. These modifications include the following: substitution of 80-mil smooth HDPE liner with 80-mil textured HDPE liner on Pad 5, reduction in foot print area of Pad 5 to 1.3 million sq ft, realignment of the haul road and drainage ditch adjacent to Pad 5, addition of geosynthetic clay layer (GCL) to replace a portion of the compacted clay layer in some of the interior areas of Pad 5, enlargement of Overflow Pond 2 for conversion to Pregnant Pond 4 with the installation of a double lining system with leak detection and replacement of the existing leak detection sump and associated monitoring port, and removal of Pregnant Pond 8 from the Permit. The EDC was approved by the Division in June 2016.

With the 2024 Renewal application, the Permittee proposed an expansion of the No. 2 Process to include an expansion of the leach pad and two new Pregnant Ponds, 8 and 9. Leach Pad 6 was proposed to be west of and conjoined to Pad 2-5, constructed in two phases, and add a total of 6.8 million square feet to the total Pad area (3.3 million in Phase 1, 3.5 million in Phase 2). The liner system for the Leach Pad 6 expansion is a hybrid that consists of a 12-inch compacted subbase (maximum permeability of $1x10^{-6}$ cm/sec) in some sections, and a geosynthetic clay liner in some sections, the whole overlain by 80-mil HDPE geomembrane and covered by a layer of drain material for liner protection. The underdrain collection system on Pad 6 is designed to drain into the new ponds, but also to tie into the existing underdrain system in Pad 2-5 to direct some of the drainage away from Pond The total height of Pad 6 is limited by Permit to a maximum height of 300ft measured from the vertically from the surface of the synthetic liner, though the first phase is limited by geometry to a maximum height of 225ft, measured vertically from the surface of the synthetic liner.

The proposed pregnant ponds are intended to manage the solution from the expanded Pad 6, as well as some of the solution from Pad 2-5 that will be diverted to Pregnant Pond 8, bypassing Pregnant Pond 6. Both ponds are double-lined, the linings consisting of a bed of prepared native soil and engineered compacted fill, an 80-mil HDPE primary liner, and a 60-mil HDPE secondary liner. An HDPE geonet is sandwiched between the liners to allow any leakage to drain into the appropriate channels. Pregnant Pond 8 includes a tank shelf for a steel tank that is the primary collection point for the pregnant solution for Pad 6. The tank shelf has an independent lining system that is identical to that of Pregnant Pond 8. Both Pregnant Pond 8 and the Tank Shelf are designed with leak detection sumps of 2000-gallon and 311-gallon capacity, respectively. Pregnant Pond 9 is designed as a complement to Pregnant Pond 8, with the two being connected by a spillway at the completion of construction and includes a leak detection sump with 2000-gallon capacity. The design for the full Pad 6 pond system includes proposed storage for operating inventory and solution storage for a solution application rate of 10,400gpm in anticipation of future expansion, despite the current Permit limitation of a 4000gpm application rate. All together the proposed fluid management system expansion would be sufficient to contain the operating fluid, drain-down, and meteoric fluid of the 100-year 24-hour storm event given a solution application rate of 10,400gpm.

The Permittee submitted an EDC in October 2011 proposing to construct a bypass system at Pregnant Pond 6 to allow the pond to be emptied and repaired. The bypass consists of 1) a pipe diversion from the southern Leach Pad 3 solution pipe redirecting solution to the northern portion of Leach Pad 3; and 2) a temporary dam and solution sump at the eastern corner of the pond allowing solution collected there to be pumped onto Leach Pad 2. The pond, sump, and dam areas are lined with 60-mil HDPE secondary and 80-mil HDPE primary geomembrane liners, with geonet in between to convey fluid to the sump. Repair of the pond includes construction of a new leak detection sump with a fluid capacity of approximately 1,050 gal, and with a 12-inch diameter polyvinyl chloride (PVC) riser pipe for inspection and evacuation. The cutoff sump leak detection sump has a fluid capacity of approximately 85 gal and also includes a 12-inch diameter PVC riser pipe for inspection and evacuation. The EDC was approved by the Division in October 2011.

In May of 2024, the Permittee submitted an EDC to re-line Pregnant Pond 7 and Pregnant Sump 1, including the construction of a new bypass channel to better move flow from Leach Pad 2 to Pregnant Pond 4 or Pregnant Sump1. No changes were made to the pond geometry of volume, and the EDC was approved by the Division later the same month.

In July of 2023, the Permittee submitted an EDC to replace the primary liner in Pregnant Pond 6. To facilitate this, a cutoff sump was construction at the downgradient edge of Leach Pad 3. The cutoff sump was left in place after the repairs were completed, to facilitate future repairs as needed. The cutoff sump is double lined, contains leak detection, and has an overflow spillway connection to Pregnant Pond 6 to prevent overflow conditions. The EDC was approved by the Division in August of 2023.

In December of 2018, the Permittee submitted an EDC to install a pH adjustment skid in the Northwest of Pregnant Pond 6, which measures 10ft in diameter by 20 ft high. The tank was placed on a Pad with a single-lined, 80-mil double-sided HDPE liner with protective

over liner sloping toward Pregnant Pond 6. The containment is sufficient to contain 110% of the volume of the tank, with overflow draining into the pond. The EDC was approved by the division later the same month.

In March 2012, the Permittee submitted a non-fee proposal for the addition of a temporary solution transfer pipeline between Pregnant Pond 5 and Pregnant Pond 7. The purpose of the pipeline was to completely drain of Pregnant Pond 7 to allow removal of accumulated sediments. The system consisted of a 6-inch diameter HDPE pipeline spanning approximately 800 feet from Pregnant Pond 7 to Pregnant Pond 5. The pipeline was above ground and was subject to daily inspections which confirmed that no leakage occurred during operation. The proposal was approved by the Division later the same month with a limit of a total of 10 days of operation. In June 2012, the Permittee requested a two-week extension of the time limit for operation due to the failure of the original pump installed in the system. The Division approved the request later the same month. Operation of the system was completed by the end of June 2012 and the system subsequently disassembled. No spills or leaks occurred during the use of the system.

In April 2012, the Permittee submitted an EDC proposing the modification of the Pregnant Pond 6 overflow spillway to increase the flow capacity. The EDC was approved by the Division later the same month.

Appurtenances such as distribution piping and collection systems containing process solutions are either welded steel, HDPE, or PVC. However, only welded steel pipe and HDPE are used outside containment.

An EDC was approved by the Division in October 2007 to upgrade the solution conveyance system along the perimeter of the Heap Leach Facility 2-3. Locations of the new pipelines are the Leach Pad 2 North Channel, Leach Pad 2 Southwest Channel, Leach Pad 3 West Channel, and the Leach Pad Channel 3 Outlet Area.

The EDC design incorporated combinations of one to six individual 6- and 12-inch diameter perforated corrugated polyethylene pipes (CPEP) and runs of 24-inch diameter corrugated culvert placed within drain rock fill to enhance solution flow in the existing 80-mil HDPE-lined and leak detected solution collection channels, on a 12-inch subbase with maximum permeability of 1×10^{-6} cm/sec. The carrying capacity of the pipelines was calculated assuming a maximum barren solution application rate to the heap leach pad of 7,000 gpm, although the maximum operational application rate is limited by the Permit to 4,000 gpm. The existing channel design accommodates an additional flow capacity in excess of 10,500 gpm. The approved design also requires the channel berm height be a minimum 1-foot higher in elevation than the elevation of the top of the highest adjacent pipeline. All berms were surveyed and raised as necessary, the subgrade and berm material prepared to meet the approved design specifications, including 95 percent maximum dry density verified by American Society for Testing and Materials (ASTM) Method D1557 (Modified Proctor), and the 80-mil HDPE liner extended as necessary to meet the minimum elevation difference requirement.

In September 2012, the Permittee submitted a non-fee proposal to add temporary booster pumps to assist in solution delivery to the heap leach pad and to provide adequate pumping

capacity during large storm events. Located in the west and northwest portions of the heap, the two pumps were skid-mounted units, temporarily plumbed into the existing solution delivery pipe network. The proposal was approved by the Division in the same month, with operation permitted until upgrades of the piping system were completed in 2013. However, the Permittee submitted an EDC in April of 2013, proposing to make the booster pump arrangement permanent. The EDC was approved by the Division later that same month.

Process Building at Process 2

Gold-bearing pregnant solution in the process ponds is pumped to the Adsorption, Desorption, and Recovery (ADR) plant for initial gold recovery. Gold is recovered from the pregnant solution in a single train carbon column circuit consisting of five carbon columns operating at a flow rate between approximately 2,000 and 4,000 gpm. Activated carbon is advanced between the columns countercurrent to the pregnant solution flow. The loaded carbon from the last column is removed and stripped for gold recovery. Barren process solution from the columns is pumped to the plant barren solution tank where it is reconstituted with calcium or sodium cyanide and pH stabilized. Barren tank solution is pumped to the heap for reapplication.

The plant floor is designed to provide more than 110-percent containment capacity for the process solution held within the carbon circuit. This is accomplished through a combination of constructed floor sumps, concrete containment berms, and the overflow drainage system and includes waterstops between abutting slabs/stemwalls and epoxy coating of the surface. Process solution or reagent spills within the plant will be collected in the overflow drainage system that provides a gravity flow pathway directly into the process solution ponds located adjacent to the plant.

Up to 26,000 gal of 30 percent calcium and/or sodium cyanide solution, 7,000 gal of caustic soda solution, and 7,000 gal of anti-scalant solution are stored at the ADR plant. A concrete off-loading platform for reagent delivery to the ADR plant is designed to drain into the plant containment network. The plant is powered by a 24.9 kilovolt transmission line, with a standby generator for emergency conditions.

In April 2018, the Permittee submitted a Final Closure Report (FCR) titled ‘Final Disposition - Refinery Component Process 2 Area’ for the removal and disposal, as applicable, of refinery components. The Division approved the FCR in June 2018.

In May 2018, the Division approved an EDC for a new process building with new equipment, two additional carbon trains with six carbon columns per train, and the removal of the old desorption and refinery equipment. As of December 2019, the Permittee has installed the carbon ashing unit for carbon fines and no refinery is constructed on site.

Petroleum-Contaminated Soil (PCS) Management Plan

A PCS Management Plan was approved as an EDC in August 2010, authorizing on-site disposal of PCS on the following RDA’s: North-1 RDA, and East Sage RDA. Prior to

management under the plan, hazardous waste determinations must be performed to demonstrate that the PCS is not hazardous waste. Hazardous waste must be managed and disposed of in accordance with applicable regulations. On-site disposal of PCS is also contingent on the results of periodic screening analyses, which must show that the PCS does not exceed screening levels for various organic constituents established via risk assessment. Otherwise, the PCS must be properly disposed of off-site. PCS may be stored on a temporary holding pad (former bioremediation pad) while screening analyses are performed, or it may be provisionally placed at one of the approved disposal locations provided that it will be removed and properly disposed of elsewhere if it exceeds screening levels during subsequent screening analyses. The plan also provides for limited bioremediation of PCS to reduce constituent concentrations. However, this may not take place until the Division approves the design, construction, and commissioning of a treatment pad, for which an appropriate Permit modification proposal, along with corresponding fees, must be submitted by the Permittee. Various time limits and other stipulations in the plan apply to temporary storage, provisional placement, and treatment of the PCS.

In February 2012, the Permittee submitted an EDC proposing to add a fourth PCS disposal area on private land and to modify the screening criteria for surface disposal based on site specific data. The EDC was approved by the Division in June 2012.

Vehicle Wash Bay

The truck wash facility was constructed in 2011 as part of Bald Mountain's expansion project. The truck wash consists of both light vehicle and mine equipment wash bays. Light vehicles and mine equipment are regularly washed as part of a maintenance program to ensure proper equipment functionality. Sediments and other material washed from light vehicles and mine equipment are collected in three sediment ponds which are equipped with an oil skimming system to remove oils from the surface of the ponds. The sediment ponds are constructed of concrete with sealed joints to prevent water loss. Water collected in the sediment ponds is recycled back into the wash bays as needed. Water loss from the ponds only occurs due to evaporation and fresh water is added to the system only when water levels in the ponds becomes significantly low. Sediment collected in the ponds is removed from the system and managed per Bald Mountain's PCS Management Plan.

C. Receiving Water Characteristics

Paleozoic carbonate rocks identified in wells and borings below an elevation of 5,950 ft amsl are believed to form a portion of the Regional Groundwater System within the carbonate-rock province of the Great Basin. South of the BMM site, the direction of regional groundwater flow is believed to be northeast to southwest from Ruby Valley toward Newark Valley.

Groundwater chemistry information available for the BMM production wells (Bald Mountain 1 [BMM-1] and Bald Mountain 2 [BMM-2]) is sent to the Division on a quarterly basis as part of the current Water Pollution Control Permit (WPCP) reporting requirements.

This information provides an indication of water quality for the local groundwater system. With the exception of arsenic, baseline water quality analyses demonstrate water quality is generally good and is predominantly calcium or calcium/sodium carbonate water. Water level elevation data from these wells suggests that groundwater in the local system occurs at elevations ranging from 5,900 to 6,000 ft amsl. Using the land surface elevations and the water-level elevation data from the BMM production wells, the projected depth of the upper portion of the local groundwater system is believed to occur at depths greater than 500 feet beneath the site of the current heap leach facilities. Groundwater flow through the local system is believed to be from recharge areas along the slopes of the Ruby Mountains towards the playas.

Surface water is limited due to low precipitation and high evaporation. Spring runoff contributes to the flow in ephemeral drainages and provides water that infiltrates through faults and fractures to the bedrock system or isolated perched water confined by clay lenses. Some of this flow is then expressed at the surface as isolated springs, which is confirmed through mapping of the potentiometric surface (Mine Mappers 2007). Flow rates from springs in the area were measured by Simon Hydro-Search (1994) and supplemented by Tetra Tech (2008). Most drainage channels are dry for the majority of the year, except during spring runoff and significant storm events. Flow rates in the drainages within and near the Mine site have not been measured because of the ephemeral nature of the drainages.

Springs in and near the BMM property are typically found near the uppermost reaches of canyons or in the bottoms of canyons that are above 6,200 ft amsl. Local springs include upper and lower Mill Spring, South Water Canyon Spring, Cherry Spring, and Bourne Tunnel Spring. Most springs are dry by summer; however, the Cracker Johnson #1 and #2 springs, which lie north of the area, and the Water Canyon Spring typically flow until late summer or early fall. Flow in these springs averages between one and six gpm. Surface water is also occasionally present in the 1/5 Pit lake which may ultimately be back-filled. Based on April 15, 2002 analytical results, the quality of this pit lake meets Division Profile I reference values, except for arsenic at 0.11 mg/L where the Profile I reference value for arsenic is 0.010 mg/L.

D. Procedures for Public Comment

The Notice of the Division's intent to issue a Permit authorizing the facility to construct, operate and close, subject to the conditions within the Permit, is being published on the Division website: https://ndep.nv.gov/posts/category/land. The Notice is being mailed to interested persons on the Bureau of Mining Regulation and Reclamation mailing list. Anyone wishing to comment on the proposed Permit can do so in writing within a period of 30 days following the date the public notice is posted to the Division website. The comment period can be extended at the discretion of the Administrator. All written comments received during the comment period will be retained and considered in the final determination.

A public hearing on the proposed determination can be requested by the applicant, any affected State or intrastate agency, or any interested agency, person or group of persons.

The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.403 through NAC 445A.406.

E. Proposed Determination

The Division has made the tentative determination to issue the renewed Permit.

F. Proposed Limitations, Schedule of Compliance, Monitoring, Special Conditions

See Section I of the Permit.

G. Rationale for Permit Requirements

The facility is located in an area where annual evaporation is greater than annual precipitation. Therefore, it must operate under a standard of performance which authorizes no discharge(s) except for those accumulations resulting from a storm event beyond that required by design for containment.

Groundwater is not near the surface and, in terms of quality, analytical results indicate that groundwater meets the drinking water standards. The primary emphasis for identification of escaping process solutions is placed on periodic inspection of the process components leak detection systems and visual inspections. Monitoring requirements can be found in the Permit.

H. Federal Migratory Bird Treaty Act

Under the Federal Migratory Bird Treaty Act, 16 U.S. Code 701-718, it is unlawful to kill migratory birds without license or permit, and no permits are issued to take migratory birds using toxic ponds. The Federal list of migratory birds (50 Code of Federal Regulations 10, 15 April 1985) includes nearly every bird species found in the State of Nevada. The U.S. Fish and Wildlife Service (the Service) is authorized to enforce the prevention of migratory bird mortalities at ponds and tailings impoundments. Compliance with State permits may not be adequate to ensure protection of migratory birds for compliance with provisions of Federal statutes to protect wildlife.

Open waters attract migratory waterfowl and other avian species. High mortality rates of birds have resulted from contact with toxic ponds at operations utilizing toxic substances. The Service is aware of two approaches that are available to prevent migratory bird mortality: 1) physical isolation of toxic water bodies through barriers (e.g., by covering with netting), and 2) chemical detoxification. These approaches may be facilitated by minimizing the extent of the toxic water. Methods which attempt to make uncovered ponds unattractive to wildlife are not always effective. Contact the U.S. Fish and Wildlife Service at 2800 Cottage Way, Room W-2606, Sacramento, California 95825, (916) 414-6464, for additional information.

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