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

Permittee Name: **QLM Pamlico LLC**

Project Name: **Pamlico Mine Project**

Permit Number: **NEV2023104**
Review Type/Year/Revision: **New Permit 2023, Fact Sheet Revision 00**

A. Location and General Description

The Project area is located in Mineral County approximately 10 air-miles southeast of Hawthorne, Nevada on public land administered by the Bureau of Land Management (BLM), Carson City District, Stillwater Field Office. Permittee controlled claims encompassing the Project area are comprised of 116 unpatented lode claims. The approximate center of the proposed designed facilities is 4,257,660 North, 371,000 East, UTM, NAD83 datum.

The access route to the Project is by State Highway 95 east from Hawthorne 8.5 miles, then south 4.8 miles on Garfield Flat Road to Pamlico Canyon Road, then 2.6 miles SW on an unimproved gravel road to the project site.

General Description: The Permittee is putting the existing exploration decline into production. The Project includes an existing underground mine, an expansion to an existing Waste Rock Disposal Area, a Bulk Sample Stockpile, excavation and transport offsite of three legacy rock dump stockpiles, a Stormwater Diversion Channel, and ancillary facilities. No crushing or processing will take place on the site. The current facility was last operated for a brief period of time between 2009 and 2015 by a previous operator. The underground workings were secured and have been idle since 2015. The underground facility requires minor rehabilitation which will be carried out as a BLM Notice level operation. The overall site is less than 3 acres with storm diversion channels being one of the larger features. The Permit is to mine 18,000 tons of ore per year. However, the initial phase of mining includes a waste rock disposal design for the initial 1,000-ton bulk ore extraction. The second phase will require a larger waste rock facility to accommodate full scale mining. The facility is permitted under 445A.394 regulations.

B. Synopsis

Geology: Within the Pamlico District, the oldest exposed rocks of the Excelsior Formation are of probable Permian age. These are unconformably overlain by rocks of the complex and inter-fingering Luning and Gold Range Formations. The Dunlap formation unconformably overlies the Excelsior, Luning, and Gold Range Formations. Tertiary to Quaternary trachybasalt to latite and basalt flows outcrop in a distal circular outcrop pattern that results in a dome like appearance to the general geology of the district.

Local Structure: At the property scale, structure includes Tertiary NW striking, right lateral strike slip and right oblique slip faults related to the Walker Lane Deformation Belt with sub-parallel fracture cleavage and coeval sinusoidal, NS and NE striking first and second order extensional "in echelon" or "gash" faults. Large EW to NE trending right oblique (dextral) strike slip faults related to the Pancake Range Lineament transect the property with little if any apparent offset by, or of structures related to the Walker Lane and are probably coeval. Intense folding is evident everywhere in the carbonate sediments of the upper Luning Formation. It is likely that unrecognized overturned folds are present within the sedimentary package and potentially provide important controls for localization of mineralization in these sediments.

Mineralization and Alteration: At Pamlico, mineralization occurs in a structural environment along NW, N-NE trending structures related to the Walker Lane and N-NE to E-W trending structures related to the Pancake Range Lineament. Mineralized structures vary from nearly vertical to nearly horizontal dips. Thrust faults and/or strata-conformable breccias are mineralized proximal to these high angle structures. Alteration and mineralization are reported in rocks ranging in age from Permian to upper Tertiary age.

The bulk of historic production from the property originated from mineralized structures in brittle rhyolite of the Permian age Excelsior Formation with lesser amounts coming from the Gold Range and Luning Formations of Triassic age. Archbold, (1970) observes: "The upper limestone member of the Luning Formation is highly silicified up to 100 feet outward from faults in the central part of the district." This silicification coupled with historic production from structures in these limestone units clearly demonstrates ascending mineralizing fluids circulating in structures cutting both the Gold Range and underlying Excelsior Formations.

Alteration associated with mineralized structures manifests itself as zones of quartz veining and silica flooding ranging from one to ten meters wide in volcanic rocks and reported up to 30 meters wide in the sediments of the upper Luning Formation. Individual veins typically consist of a combination of crystalline and massive quartz commonly with frothy quartz with earthy, powdery iron and manganese oxides. Gold mineralization appears to be spatially associated with concentrations of iron and manganese oxides. The strong association of calcium with gold at Pamlico is thought to be related to the secondary development of caliche near surface over the altered vein zones as discussed below. While not genetically related to the gold mineralization, there is a high correlation of gold and calcium/caliche.

In volcanic rocks, mineralized structures are surrounded by envelopes of intense clay alteration and bleaching ranging from two to 20 meters thick. This clay alteration breaks down calcium bearing feldspar and softens the volcanic host rock, promoting weathering and development of a deeper soil profile and moisture reservoir all of which contribute to preferential formation of caliche caps over the tops of altered and mineralized structures.

History: The initial discovery was recorded in 1884. Later reports indicate that by 1886 the district was shipping ore to custom mills, most likely at the Aurora and Comstock (Virginia) Districts. A 20-stamp mill was constructed in 1888-1889 and operated through 1931. Like many districts of the time, production was shipped to custom mills in existing mining districts, the recovered metal often being inventoried as production from those districts rather than from the actual district of origin. The United States Geological Survey estimates production from the district between 1885 and 1900 to be roughly U.S. $1 million, or approximately 50,000 ounces of gold, from "several miles of workings" at gold prices averaging U.S. $20.67 per ounce. More recent production efforts are evidenced by the remains of a large twenty stamp mill that had capacity to treat 100 tons of ore per day. The mill was reportedly constructed around 1900 and was still "active later in the 1920's"

Modern Exploration: In 1993 Cactus West secured an option to acquire a 60% interest in Pamlico. Records indicate Cactus West collected 382 rock chip samples, conducted limited geologic mapping, did three small geophysical surveys restricted to Pamlico Ridge that consisted of ground magnetics, VLF-EM and IP-Resistivity surface mapping and drilled 15,545 feet in 50 shallow reverse circulation drill holes.

In 1999 American Bonanza acquired a lease on the Pamlico property and conducted additional geologic mapping, rock geochemical sampling of the surface and underground, limited soil geochemistry and 7,158 feet of reverse circulation drilling in 24 shallow drill holes. American Bonanza relinquished the property in 2007.

Between 2009 and 2013 the owners (The Bobby R. Merritt Separate Property Trust), as privately held Goldyke Mines, completed exploration and improvements on the property including drilling 29 air track rotary holes for 5,135 feet and installed a 616-foot-long decline, 10 feet high by 13 feet wide at a grade of minus 12 percent. The decline made it to the top of the targeted Bulk Sample Zone. In so doing the decline cut two previously unknown gold mineralized zones. Failing health forced the owners to stop work in July 2016.

Newrange Gold Corp (NRG) leased the property from Goldyke in 2016. NRG completed additional drilling and exploration on the property under a BLM Notice. In 2022, NRG dropped their interest in the Pamlico property. On 15 September 2022 QLM Pamlico LLC (QLM) entered into a lease purchase agreement for the property and immediately began permitting efforts to bring the property into production. QLM is the Permittee and project operator, and The Bobby R. Merritt Separate Property Trust is the owner.

Processing: No processing, including crushing or any physical separation activities will be conducted on site as part of this Project. Run of Mine (ROM) material will be brought to the surface and placed at the Waste Rock Disposal Area (WRDA) or at the Bulk Sample Stockpile (BSS). From there it will be loaded onto highway

trucks and trucked to an off-site Division approved Nevada, or out of state, processing facility.

Mining: The main access to the mine is via the Merritt Decline Portal, which has been completed to a distance of 616 feet. In the mining zone, narrow vein extraction techniques will be utilized. To access the targeted bulk sample, the Permittee will extend the decline another ±300 feet along the same existing orientation continuing at a minus 12 percent grade. All mining will be conducted above the water table and all workings in and above the mining zone are currently dry. No seepage or moisture of any kind has been observed in the Decline. Currently there are up to four known areas containing identified gold mineralization that are to be incorporated into the mine plan.

Waste rock will be placed at the WRDA. The WRDA may be used as a base for BSS as needed. Material will be transported by diesel powered, rubber tired, scoop-tram loader or a 10 to 15-ton underground dump truck, to the surface through the Merritt Decline to the 1,000-ton BSS then loaded onto highway trucks for transport to off-site processing facilities.

The Permittee's initial mining plan will extract mineralized material from the currently drilled Vein Zone that will be accessed at approximately 900 feet down the decline. Crosscuts will be installed under the target veins. From the cross cuts, stoping on the veins will occur upwards. Mining dimensions in the Stope Zone are expected to be an average of 4 to 6 feet wide, approximately 60 feet upwards and 80 feet along strike. The mining in the Decline will achieve mineralized material extraction while developing access to lower levels.

The Permittee intends to maximize efficiency through a disciplined approach involving the separation of mineralized material from waste rock during the mining stage, thus minimizing the accumulation of waste rock. In order to identify mineralized material suitable for bulk testing the blast holes will be sampled during drilling, then assayed to determine mineralized boundaries prior to blasting. A summary of the mining methodology is as follows:

- Decline access to the mineralized zones from surface.
- Cross cutting under the mineralized zones.
- Installation of muck and drill bays as necessary.
- Timbered raises for escape and stope access.
- Stope upward into mineralized zones.
- Cut & fill/resuing (a method where waste is removed before the ore in narrow vein stoping).

Commercial explosives are mixtures of chemical compounds in solid form and will be used to extract ore and waste material. The explosive storage area will meet all Mine Health and Safety Administration (MSHA) & (ATF) requirements. The explosive storage will consist of two portable magazines located in a powder magazine on the surface until underground Magazines can be constructed in the mine.

If required by MSHA, a Secondary Escape Raise from the mine may be installed. The raise collar will be added to the WPCP and BLM Notice of Intent when and if it is required by MSHA and the location is determined in the future.

The Project plans to mine up to 18,000 tons of mineralized material per year with an initial maximum rate of approximately 100 tons per day from the Merritt Decline. The mine is currently permitted with the BLM under a Notice of Intent. Under this notice only a 1,000-ton bulk sample can be collected. Assuming favorable results from the bulk sampling, the Permittee is in the process of completing a Plan of Operations and Environmental Assessment to expand the operations. The Permittee anticipates that the BLM National Environmental Policy Act (NEPA) process will take up to 18 months to complete. While the company is completing the BLM permitting process, mine operations will continue with underground exploration drilling to expand the known resource. The Project life is estimated at 5 years but may extend longer if additional mineralized material is discovered during the initial mining phase.

It is estimated at peak production (36,000 tons per year) that up to 4 truck trips per day, Monday through Friday, will be needed to ship the mineralized material to an offsite facility operated by the Permittee or toll milling facility. The Permittee will ensure the receiving facility has all the necessary permits to accept material from the Project and document the tons of material and shipping dates.

Waste Rock Management: During the initial operating phase the underground mine will generate an estimated total of 9,300 tons (6,000 cubic yards) of waste rock for the purpose of accessing the mineralized bulk sample. The WRDA location was selected to minimize disturbed acreage and haulage distance. Topsoil suitable for growth medium will be scalped from the WRDA footprint during construction and removed to stockpiles for use in final WRDA reclamation.

All areas identified for potential waste rock storage are above the groundwater level, are dry and are predicted to remain so throughout mining and the foreseeable future. No moisture has ever been observed in the working or in any of the exploration drilling at the site.

The waste rock slated for permanent underground storage will be hauled to the surface WRDA or temporarily stored in dry muck bays underground. Periodically waste rock will be hauled to underground drifts or stopes for final storage and backfill purposes.

Dewatering and Water Supply: No dewatering will be required for the Project. All activities will be conducted above the known groundwater table. The water supply is the Hawthorne and Mina municipal water supply systems which meet EPA drinking water standards. Water will be brought to the site via water truck as needed for mine operations. The Project will use blast hole drilling process and most of the drill water will be consumed in the cuttings and a de minimus amount will infiltrate into the ground surface of the workings. Water will also be used for

dust suppression. A public water system will not be provided as the site staffing is not expected to exceed 15 employees in total.

Bulk Sample Stockpile facility: Mineralized material transported from the decline will be temporarily stored at the BSS. Stockpiled material will be loaded by a loader onto highway trucks for transport to off-site processing facilities. Due to the benign characteristics of the mineralized material, no lining or containment structures are planned. However due to the high-grade nature of the material a liner may be placed on the ground prior to stockpiling to contain and keep the high-grade material from being diluted with waste rock.

Storm Water Diversion: The area of the watershed above the mine measures 78.1 acres. All drainage originating upgradient to the WRDA will be collected in a designed North Stormwater Diversion Channel and South Diversion Channel. Stormwater runoff collected in the diversion channels will be released into the natural alluvial fan west of the WRDA. The diversion channels will intercept stormwater drainage before it encounters any designed infrastructure areas and therefore will not require sampling and monitoring.

Rock Characterization: Static rock characterization testing conducted in September 2015 is the basis for the mineralized and waste rock characterization for the Project. The testing included Acid Base Accounting (ABA) and Meteoric Water Mobility Procedure (MWMP) testing. Based on the results of the ABA testing done on the Pamlico mineralized and waste rock, the materials all show net acid-neutralizing qualities with little potential for degradation of waters of the state. Only minor exceedances of Arsenic and Nitrates were identified in MWMP testing.

The rock characterization samples were collected from the following sites; portal access pad material; material removed from decline; mineralized rock; and Waste rock. All rock characterization samples were delivered to Sierra Environmental Monitoring, Inc. in Reno (Accreditation No. NV-0015) for testing. The samples collected from the decline and portal access pad were subjected to ABA and MWMP -Profile I. The historical waste dumps material was tested for ABA only.

Portal Access Pad: Four samples, PTS-1 through PTS-4, were collected from the pad material at the Pamlico tunnel site. The pad material consists of sand and small pebble gravels 4 to 6 inches thick over native bedrock. This material is consistent with the composition of the surrounding overburden. The sample of the pad material consisted of digging through pad material to bedrock, then collecting the sample from the exposed and excavated material.

- Paste pH was 8.73.
- Sulfur sulfide content was <0.01 wt. pct. and resulted in an AGP value of <0.3 tons (0.15) $CaCO_3$ equivalents per 1,000 tons of solids.
- ANP value was 16 $CaCO_3$/1,000 tons of solids.
- NNP value was 15.85 $CaCO_3$/1,000 tons.
- Ratio (ANP/AGP) was 106.7.

Decline Waste Sample: Composite Waste rock sample DC-2 represents an 80-foot composite from ten 8-foot advancement round samples collect between 116 ft. and 188 ft. of the decline.

- Paste pH was 8.24.
- Sulfur sulfide content was <0.01 wt. pct. and resulted in an AGP value of <0.3 tons (0.15) $CaCO_3$ equivalents per 1,000 tons of solids.
- ANP value was 8 $CaCO_3$/1,000 tons of solids.
- NNP value was 7.85 $CaCO_3$/1,000 tons.
- Ratio (ANP/AGP) was 53.3.

Mineralized Rock: The mineralized sample is a composite of advancement round samples D-608 and D-616, representing 16 feet of continuous mineralized material. The sample was collected as a continuous channel sample along the decline rib.

- Paste pH was 8.53.
- Sulfur sulfide content was <0.01 wt. pct. and resulted in an AGP value of <0.3 tons (0.15) $CaCO_3$ equivalents per 1,000 tons of solids.
- ANP value was 12 $CaCO_3$/1,000 tons.
- NNP value was 11.85 $CaCO_3$/1,000 tons.
- Ratio (ANP/AGP) was 80.0.

Historical Waste Dump: (Site 3, Site 4, and Site 5) Samples were collected from 3 historical dumps above the Merritt Decline Area.

- Paste pH's were 8.95 for Site 3, 8.66 for Site 4 and 8.27 for Site 5, respectively.
- Sulfur sulfide contents were <0.01, 0.02, and 0.06 wt. pct., respectively, and resulted in AGP values of <0.3 (0.15), 0.6 and 1.9 tons $CaCO_3$ equivalents per 1,000 tons of solids.
- ANP values were 12, 14 and 4 $CaCO_3$/1,000 tons, respectively.
- NNP values were 11.85, 13.4 and 2.1 $CaCO_3$/1,000 tons, respectively.
- Ratios (ANP/AGP) were 80.0, 23.3 and 2.1, respectively.

Based on the results of the ABA testing done on the Pamlico mineralized and waste rock, the materials all show net acid-neutralizing qualities with little potential for degradation of waters of the state.

MWMP extractions were conducted on the portal access pad material, and mineralized rock and waste rock samples taken from the decline to assess potential for constituent mobility from the solids by contact with synthetic meteoric water (deionized water). MWMP extracts were analyzed for NDEP Profile I constituents. The historical waste rock samples were not subjected to MWMP testing.

The MWMP extract analyses for the portal access pad material sample (PTS 1 through PTS 4) showed an Arsenic concentration that exceeded drinking water Maximum Contaminant Levels (MCL's). The mineralized rock sample (D-608, D-616) extract had an Arsenic concentration exceeding drinking water MCL's, and the waste rock sample DC-2 showed Arsenic, Nitrite + Nitrate, and Total Nitrogen

as N concentrations that exceeded drinking water MCL's. The pH's for all the extracts were within drinking water reference values (pH 6.5-8.5).

Ancillary Facilities:

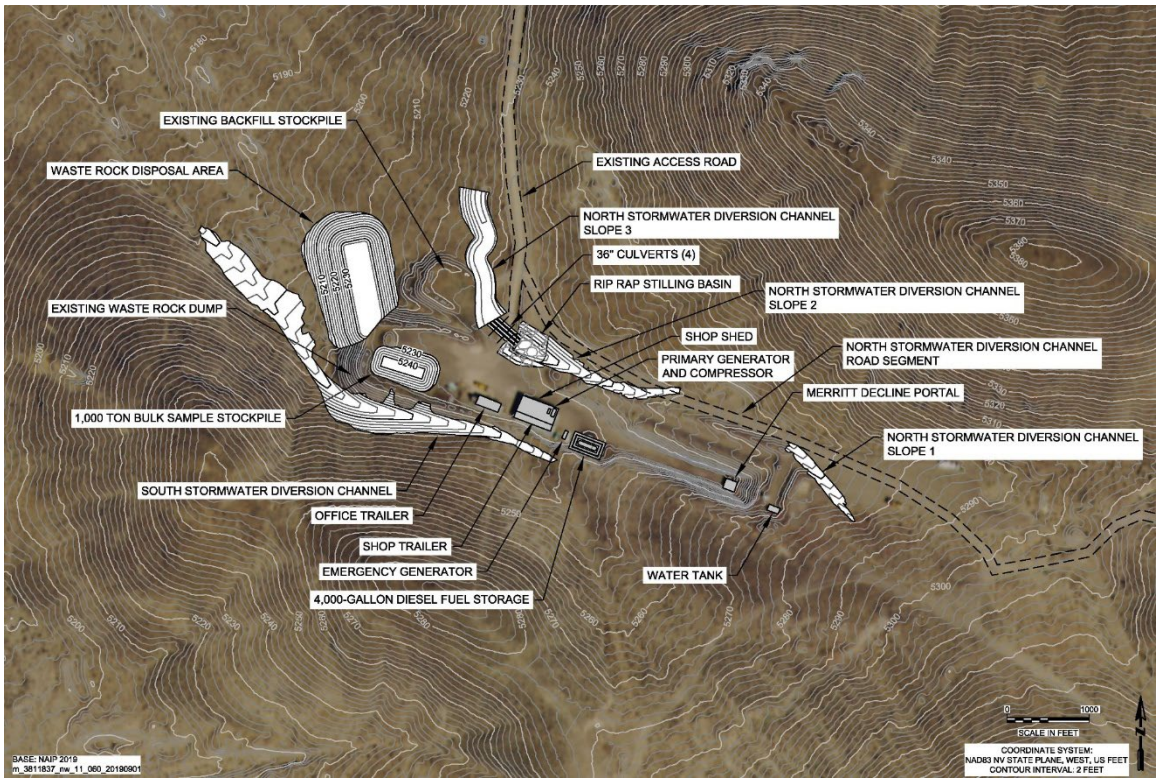
Electric Power: Power to the mine will be sourced from the on-site generator.

Office Trailer Maintenance Shop: A small Maintenance shop and office trailer will be maintained on the site. Primary generator and compressor are located inside. A backup generator and compressor are located outside.

Fuel Storage: A fuel storage area will be constructed between the existing Maintenance trailer and the Portal access. The facility will be lined with 60 mil HDPE. Fluid containment will be accomplished with constructed HDPE lined berms sufficient to contain 110 percent of the volume of the planned 4000-gallon diesel fuel tank.

PCS Plan: Any project petroleum contaminated soil will be properly containerized and transported offsite for proper disposal.

General Facilities Arrangement



The facilities shown in white are new facilities that will be added as part of the first phase to extract a 1,000-ton bulk sample of mineralized material.

C. Receiving Water Characteristics

The Nevada Department of Water Resources (NDWR) database was queried to identify drinking water wells within 5-miles downgradient of the site. The search identified zero municipal and domestic wells within a 5-mile radius of the Project.

Records in the NDWR database indicate the presence of a well located approximately 1.0 mile to the northeast of the Project at an approximate elevation of 5,760 feet amsl. The well was completed in 1986 under Application #47996 but the permit has subsequently been cancelled. The well was drilled and cased to 915 feet below ground surface (bgs). The static water level at the well was 650 feet bgs. This well location was taken from the official map to accompany an application to appropriate water for mining and milling purposes by previous mine operators in the area.

There is a "steel cased well" on the Pamlico property approximately 1,500 ft. north of the portal site with a collar elevation of 5,180 feet. It is reported by the locals to be 900 feet bgs with the water table at 800 feet bgs. This could not be confirmed at this time.

Historical accounts state that, circa 1919, process water for the district was piped from Cottonwood Creek in the Wassuk Range, some 10 miles west of Pamlico, indicating that groundwater was too deep for the miners to access it at the time. The Portal site is situated at an elevation of 5,234 ft., the end of the decline is at an elevation of 5,150 ft. and the lower limit of the bulk sample target is at 5,120 ft. The base of the existing waste pile at the portal site is at an elevation of 5,210 feet. The depth to groundwater at the known wells in the area of the local water table indicate groundwater is far below the depth of the bulk sample target elevation. No exploration drilling to date by Goldyke or NRG has encountered water on the property. The deepest drill hole completed during exploration activities extended to ±340 feet bgs (±5,000 feet amsl).

Due to the lack of accessibility no groundwater sample has been collected for chemistry analysis. The groundwater table is expected to be far below the deepest extent of underground development activities.

Annual yearly precipitation is 4.04 inches. There are no streams or springs within one mile of the Project. There are no features that could be considered surface water within a one-mile radius of the project site. All surface waterways within one mile of the Project area are ephemeral and flow only during precipitation events.

The subsurface geology has been logged by geologists during exploration drilling at the Project. The lithologies identified by the geologists consists of alluvium, andesite clastic/tuffaceous sediment and debris flows, rhyolite porphyritic tuff, latite tuff and rhyolitic crystal tuff with moderate to strong iron-oxides, descending from the surface to depth.

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 determination to issue the new Permit.

F. Proposed Limitations, Schedule of Compliance, Monitoring, and 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.

Specific monitoring requirements can be found in the Water Pollution Control 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.

Prepared by: Shawn Gooch, P.E.
Date: 14 August 2023

Revision 00: New Permit effective 01 September 2023.