

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

Permittee Name: **Alan Chambers**

Project Name: **Ace in the Hole Project**

Permit Number: **NEV2018101**

Review Type/Year/Revision: **Renewal 2023, Fact Sheet Revision 00**

A. Location and General Description

Location: The Ace in the Hole Project (Facility) is located on private land in Mineral County within the southeast portion of the northeast quarter of Section 7, Township 6 North (T6N), Range 35 East (R35E), Mount Diablo Baseline and Meridian (MDB&M) within the town of Mina, Nevada. The mine sites are located on public land (BLM) in Mineral County within the northeast portion of the southeast quarter of Section 36, T7N, R33E; and the northwest portion of the southwest quarter of Section 31, T7N, R34E; and Section 32, T6N, R34E, MDB&M, approximately 7.5 miles (by air) west-northwest and 6.8 Miles (by air) west-southwest of the town of Mina, Nevada respectively.

To access the milling facility, proceed on US-95 south from Hawthorne approximately 34 miles to the town of Mina, Nevada. Once within the town of Mina, turn west onto 4th street from US-95 and travel approximately 0.2 miles to the intersection of 4th and B street. Continue traveling west on 4th street to the mill site.

To access the west-northwest mine site, proceed on US-95 south of Hawthorn approximately 34 miles to the town of Mina, Nevada. Once within the town of Mina, turn west (right) onto 11th street and travel approximately 0.1 miles to the intersection of 11th and A street. Turn south (left) on A Street and proceed south for approximately 0.1 miles to the intersection of A Street and 12th Street. Turn west (right) on 12th Street and continue traveling until the road turns to dirt and subsequently into Garfield Flat Road. Travel on Garfield Flat Road for approximately 3.7 miles to the three-way junction and continue straight on Garfield Flat Road for approximately 3.8 miles. At the end of the 3.8 miles turn northwest (right) onto an unnamed dirt road. Travel on the unnamed dirt road for approximately 1 mile to the three way junction and veer to the northwest (right). Continue traveling approximately 0.9 miles to a four-way intersection and turn right. Travel down the dirt road in a northerly direction for approximately 0.4 miles to a three way junction. Veer left at the junction and travel approximately 1.7 miles in a northerly direction to the mine site.

To access the west-southwest mine site, proceed on US-95 south of Hawthorn approximately 34 miles to the town of Mina, Nevada. Once within the town of Mina, turn west (right) onto 11th street and travel approximately 0.1 miles to the intersection of 11th and A street. Turn south (left) on A Street and proceed south for approximately 0.1 miles to the intersection of A Street and 12th Street. Turn west (right) on 12th Street and continue traveling until the road turns to dirt and subsequently into Garfield Flat Road. Travel on

Garfield Flat Road for approximately 5.8 miles and turn southwest (left) onto an unnamed dirt road. Travel on the unnamed dirt road for approximately 3 miles, well veering left to the mine site.

General Description: The Ace in the Hole Project (Project) is an exploration and lode mining and crushing and physical separation beneficiation facility, pursuant to Nevada Administrative Code 445A.414, with a maximum processing rate of 1,000 tons per year. Exploration activities at the mine site will consist of drilling in the area of the pit to delineate deeper ore materials that may be mined in the future. Once drilled, the Permittee will be required to abandon the borehole in accordance with Nevada Administrative Code 534.4371. Mining will consist of drilling and blasting from an open-pit with ore material being loaded into a dump truck by an excavator and loader. Ore will be transported to the milling facility which will consist of a feed hopper, jaw crusher, roller crusher, impact mill, sluice box, sand screw, concentrator table, a series of steel settling ponds, a synthetically lined tailings disposal, and a synthetically lined overflow pond. The facility is 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 25-year, 24-hour storm event.

B. Synopsis

Mining and Processing: Gold bearing material is mined from an open pit located in Section 36 of T7N, R33E, MDB&M, approximately 7.5 miles west-northwest of the town of Mina, Nevada. Ore will be mined from an open pit utilizing drilling and blasting. The open pit will be approximately 400 feet long by 200 feet wide and is anticipated to be approximately 50 to 100 feet deep. Waste rock developed during mining will be stored to the side of the pit and will be used for pit backfill during reclamation. Ore bearing material will loaded into a dump truck by an excavator or loader and will be transferred to the milling site. Ore material will be processed at a rate of approximately 10 tons per day with a Permit limitation of 1,000 tons per year.

Ore material is stored on-site near the feed hopper and appropriate stormwater diversions are utilized to ensure that meteoric run-on and run-off from the ore material is minimized. The ore is loaded into the feed hopper where the material travels to a jaw crusher. The jaw crusher feeds the roller crusher that further reduces the size of the material. The roller crusher feeds a hopper that subsequently feeds the impact mill where water is added for dust suppression and the material is crushed down to minus 20-mesh. The material then travels onto a sluice box and over a screen where any plus 20-mesh size material is returned to the impact mill for further size reduction. Once the material has been crushed down to minus 20-mesh, it will travel through the screen and into a sand screw where the denser particles settle out and onto a concentrating table. The reject material will then travel to Settling Pond #1. All crushing components will be fed through the use of conveyor belts.

In May of 2021, the Division approved a Minor Modification for the incorporation of an additional trommel or shaker screen to process approximately 1,000 ton bulk sample of gravels from the DF#5 mining claim to test for gold values. The sands will be slurried into the grinding circuit sluice box where the tailings will be discharged to Settling Pond #1.

Oversized and washed gravels will be used onsite for roads, landscaping, or other uses. If the bulk test is promising the Permittee will need to apply for a separate water pollution control permit for the second mine location.

A recirculation system is utilized to reclaim clarified water from the Settling Ponds (discussed below) and to minimize the pond inventory. Water is recirculated from either of the settling ponds and reintroduced to the impact mill or at the concentrating table at an approximate flow rate of 20 gallons per minute.

Ponds: The mill facility utilizes two steel rectangular settling ponds (Settling Pond #1 and Settling Pond #2), one Tailing Disposal Pond, and one Tailings Overflow Pond. The two settling ponds are constructed of ¼-inch steel and measure approximately 10 feet wide by 20 feet long by 8 feet deep and have a capacity of approximately 9,000 gallons with 2-feet of freeboard. The two steel settling ponds will be connected by a pipeline that is bolted and sealed to each of the tanks. The tailings that settle out in the settling ponds will be excavated as needed and allowed to dry on a 60-mil high density polyethylene (HDPE) liner that is graded to drain any fugitive solution back into the settling ponds.

The Tailings Disposal Pond and Tailings Overflow Pond will be constructed by the excavation of native soil and will be lined with a single layer of 60-mil HDPE liner. The pond will measure approximately 60 feet long by 25 feet wide at the surface and will be approximately 10 feet deep. This will provide a storage capacity of approximately 28,000 gallons for each pond. Tailings material will be removed from the settling ponds as needed and will be allowed to dry prior to disposal in the Tailings Disposal Pond.

The Tailings Overflow Pond will be hydraulically linked to the settling ponds so that in the event the settling ponds are overwhelmed, tailings can flow through the overflow pipeline and be managed at the overflow pond. The overflow pipeline will travel beneath a roadway and will be placed within a length of corrugated steel pipe or an HDPE pipe under the roadway to protect the pipeline. The Tailings Disposal Pond is also hydraulically linked to the settling ponds to further minimize the chance of overtopping.

Once the tailings have dried, they will be placed within the Tailings Disposal Pond that will be the final location of their disposal. The Tailings Overflow Pond is designed to be an event pond, but will be utilized for tailings storage once the Tailings Disposal Ponds capacity is consumed.

All ponds will be required to maintain a 2-foot freeboard at all times to allow for the ability to contain a 25-year, 24-hour storm event and withstand a 100 year 24-hour storm or any upset from the processing circuit. Pond inventory will be minimized during winter months to ensure there is sufficient capacity for storm events. All ponds will have an approximate 2-foot tall berm constructed around their perimeter to divert any surface flows of stormwater, although none are anticipated.

As discussed above, a recirculation system will be employed that will recirculate clarified water to the crushing circuit.

Reclamation and Closure: Once the tailings ponds have reached their capacity, the tailings will be capped with a synthetic liner or will be covered with dirt, compacted (utilizing random wheel compaction), and graded to minimize meteoric water infiltration. Once

mining is complete, the mine site will be re-contoured and/or backfilled with waste material to match the existing topography. All disturbed areas will be re-seeded in accordance with Bureau of Land Management requirements.

Material Characterization: A Meteoric Water Mobility Procedure (MWMP) was performed on a sample of ore material and demonstrated Division Profile I exceedances of aluminum, iron, arsenic, and pH. Aluminum displayed a concentration of 0.52 milligrams per liter (mg/L) (Reference Value [R.V.] 0.20 mg/L), iron a concentration of 0.67 mg/L (R.V. 0.60 mg/L), arsenic a concentration of 0.052 mg/L (R.V. 0.010 mg/L), and a pH of 9.05 (R.V. 6.5 – 8.5). Due to these exceedances, the Division required that lined ponds be utilized for the processing circuit.

Supernatant water from the settling ponds will be sampled quarterly and analyzed for Profile I constituents. Static testing of the tailings material will be required initially and then annually to ensure that the tailings do not have the potential to generate acid. Waste rock material will be analyzed semi-annually for Profile I constituent release by utilizing an MWMP procedure and for acid generation potential utilizing static testing.

In the event that a different material is encountered during mining, the Permittee will sample the material and have it analyzed utilizing an MWMP for Profile I constituents and by performing static testing. Depending upon the results of the analysis, the Division may require the Permittee to modify the Permit to ensure that waters of the State are protected.

C. Receiving Water Characteristics

Water utilized in the crushing circuit will be from the town of Mina municipal supply, which meets all Division Profile I reference values. There is no predicted water usage at the mine site.

The milling facility lies within the eastern part of the Soda Spring V. groundwater basin (Nevada Division of Water Resources [NDWR] groundwater basin 121.A) within the Central Hydrographic Region. Depth to groundwater in the area of the milling facility is approximately 140 feet below the ground surface from NDWR Well Log #26711. NDWR Well #10839, located approximately 0.5 miles northeast of the mill site, was sampled in 2009 and displayed elevated arsenic (0.02 mg/L) and iron (0.68 mg/L) concentrations above Division Profile I reference values.

The mine site lies within the Garfield Flat groundwater basin (NDWR groundwater basin 120) within the Central Hydrographic Region. Depth to groundwater and water quality in the area of the mine site is unknown and there are no wells within the vicinity of the site. However, a historic mine shaft on site remains dry and is estimated to be approximately 200 feet deep.

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.

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 1340 Financial Boulevard, Suite 234, Reno, Nevada 89502-7147, (775) 861-6300, for additional information.

Prepared by: Keith Johnson
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Revision 00: Renewed Permit (2023), Boilerplate Update