

STATE OF NEVADA

Department of Conservation and Natural Resources

Division of Environmental Protection

Bureau of Mining Regulation and Reclamation

**Water Pollution Control Permit**

Permittee: **The Plum Mining Company, LLC**  
**Billie the Kid Project**  
**P.O. Box 1118**  
**Virginia City, NV 89440**

Permit Number: **NEV2000109 (Minor Mod 2011)**

Pursuant to Nevada Revised Statutes (NRS) 445A.300 through 445A.730, inclusive, and regulations promulgated thereunder by the State Environmental Commission and implemented by the Division of Environmental Protection (the Division), this permit authorizes the Permittee to construct, operate, and close the **Billie the Kid Project**, in accordance with the limitations, requirements and other conditions set forth in this permit. The Permittee is authorized to process up to **1,000,000** tons of ore per year.

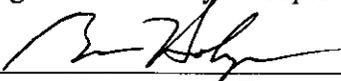
The facility is located on public and private land in Storey and Lyon Counties in Sections 5, 6, 7, and 8 of Township 16 North, Range 21 East, Mount Diablo Baseline and Meridian (MDB&M), approximately two (2) miles west of the town of Gold Hill.

The Permittee must comply with all terms and conditions of this permit and all applicable statutes and regulations.

This permit is based on the assumption that the information submitted in the application of August 25, 2000, as modified by subsequent approved amendments, is accurate and that the facility has been constructed and is being operated as specified in the application. The Permittee must inform the Division of any deviation from or changes in the information in the application, which may affect the Permittee's ability to comply with applicable regulations or permit conditions.

This permit is effective as of September 1, 2011, and shall remain in effect until November 11, 2014, unless modified, suspended, or revoked.

Signed this 1<sup>st</sup> day of September 2011.

  
\_\_\_\_\_  
Bruce Holmgren, P.E.  
Chief, Bureau of Mining Regulation and Reclamation

I. Specific Facility Conditions and Limitations

A. In accordance with operating plans and facility design reviewed and approved by the Division the Permittee shall:

1. Construct, operate, and close the facility in accordance with those design plans;
2. Contain within the fluid management system all process fluids including all meteoric waters which enter the system as a result of the 25-year, 24-hour storm event; and
3. Not release or discharge any process or non-process contaminants from the fluid management system.

B. Schedule of Compliance:

1. Thirty (30) days prior to the introduction of process solution to any process component covered by this Permit, the Permittee shall notify the Division of the intent to do so in accordance with Nevada Administrative Code (NAC) 445A.426. If the Division elects to exercise its option to conduct a pre-operational inspection prior to the end of the 30 day notice period, all items noted by the inspectors as requiring additional work shall be addressed to the satisfaction of the Division prior to initiation of operations.
2. Within 30 days of the completion of construction or modification of any component or facility authorized by this Permit, the Permittee shall submit to the Division, in accordance with NAC 445A.427, as-built drawings and a QA/QC report and updated operating plans, as described in NAC 445A.398.2 through NAC 445A.398.6.
3. Within 30 days of the effective date of this Permit, and prior to introduction of process solution to any process component covered by this Permit, the Permittee shall install monitoring well GWMW-1 and submit the initial sample analysis, conducted by a certified Nevada laboratory, to the Division for review.
4. Within 30 days of the effective date of this Permit, and prior to introduction of process solution to any process component covered by this Permit, the Permittee shall submit updated facility monitoring and sampling procedures and protocols to the Division for review and comment.

C. The fluid management system covered by this permit consists of the following process components:

1. Heap leach pad Phases I through V, including pregnant solution channel and associated pad and channel leak detection systems;
2. Three double-lined process ponds and associated leak detection systems;
3. One double-lined overflow pond and associated leak detection system;
4. One single-lined overflow (stormwater) pond;

5. Cyanide tank and associated containment;
6. Merrill-Crowe plant and associated containment including all tanks, basins, sumps, pumps, and piping necessary to interconnect the components; and
7. Crushers, conveyors, mill, and agglomeration facility including all lined containment areas on which they are located and all piping necessary to interconnect the components.

D. Monitoring Requirements

<b><u>Identification</u></b>	<b><u>Parameter</u></b>	<b><u>Frequency</u></b>
1. Water Supply wells (WS-1, WS-2, and WS-3)	Profile I <sup>2</sup> ; water elevation and well collar elevation in feet above mean sea level (feet amsl)	Semi-annually (1 <sup>st</sup> and 3 <sup>rd</sup> qtrs)
2. Groundwater monitoring wells (GWMW, GWMW-1, GWMW-2)	Profile I <sup>2</sup> ; water elevation and well collar elevation (feet amsl)	Quarterly (once commissioned)
3. Leach pad leak detection sumps (LDS-1 thru 5 [30 gal capacity each])	Average daily accumulation (gpd)	Weekly <sup>1</sup> (once commissioned)
4. Pregnant solution channel leak detection sump (PSCLDS [23 gal capacity])	Average daily accumulation (gpd)	Weekly <sup>1</sup>
5. Surface water (AR-1) at down-gradient end of culvert	Profile I <sup>2</sup>	Quarterly (when flowing)
6. <u>Mined Materials</u> Waste Rock (WR) Overburden (O);  Leach Pad Ore (LO)	MWMP-Profile I <sup>2</sup> and ANP/AGP <sup>4</sup> ;  ANP/AGP <sup>4</sup>	Quarterly (during active operations)  Quarterly (during active operations)
7. Pregnant (heap), Pregnant (mill), intermediate, and barren leach solutions (PHLS, PMLS, ILS, BLS)	Flowrate (gpm); Profile II <sup>3</sup>	Semi-annually (1 <sup>st</sup> and 3 <sup>rd</sup> qtrs – once commissioned)

<b><u>Identification</u></b>	<b><u>Parameter</u></b>	<b><u>Frequency</u></b>
8. Pregnant, barren, intermediate, and double-lined overflow pond leak detection sumps (PLD – sump capacity 287 gal, BLD – sump capacity 9 gal, ILD – sump capacity 9 gal, OLD – sump capacity 9 gal)	Average daily accumulation (gpd)	Weekly <sup>1</sup> (once commissioned)
9. Single-lined overflow pond (SLOP)	Profile II <sup>3</sup>	Quarterly (when fluid is present)
10. Solution Conveyance Secondary Containment Pipes (CMP42, HDPE24)	Presence of fluid; Average daily flow (gpm)	Daily Weekly (when fluid is present)

The Permittee may request a reduction in the number of elements and frequency of analyses after four (4) quarters of complete monitoring based on justification other than cost. Such reductions may be considered formal modifications to the permit.

**Footnotes:**

(1) The sump must be inspected and evacuated on a more frequent basis than weekly if the fluid level is above the top of the sump or the invert of any pipe which discharges into the sump, whichever level is lower, or if the potential exists to exceed the sump capacity. Records are required documenting volume, date and time of extraction to show that sumps are maintained in this condition.

(2) Profile I:

Alkalinity (as CaCO <sub>3</sub> )	Cadmium	Magnesium	Selenium
Bicarbonate	Calcium	Manganese	Silver
Total	Chloride	Mercury	Sodium
Aluminum	Chromium	Nickel	Sulfate
Antimony	Copper	Nitrate + Nitrite (Total as N)	Thallium
Arsenic	Fluoride	Nitrogen (Total as N)	Total Dissolved Solids
Barium	Iron	pH (± 0.1 std units)	WAD Cyanide
Beryllium	Lead	Potassium	Zinc

(3) Profile II includes Profile I plus the following:

Bismuth	Gallium	Phosphorus (Total)	Tin
Boron	Lithium	Scandium	Titanium
Cobalt	Molybdenum	Strontium	Vanadium

(4) When static testing characterization of mined materials shows the potential for acid generation as set forth in the Division's guidance document "Waste Rock and Overburden Evaluation" (dated September 14, 1990), the Permittee shall notify the Division in writing and initiate kinetic testing within ten (10) days.

If the kinetic test results indicate acid generation conditions exist, the Permittee shall submit in writing, within thirty (30) days, the methods proposed for providing containment of these materials and the anticipated impact this acid generation potential may have on final stabilization of all components affected as defined in NAC 445A.359.

E. Quarterly and annual monitoring reports and spill reporting shall be in accordance with Part II.B.

F. All sampling and analytical accuracy shall be in accordance with Part II.E.

G. Permit Limitations

1. The total amount of ore that can be placed on leach pad cells 1-5 shall not exceed 2.40 million tons and the heap height(s) shall not exceed 105 feet measured vertically from the top of the synthetic liner for any point on the pad. Design lift heights, bench widths and setbacks shall be maintained.
2. The presence of process solution in the single-lined overflow pond or the weir connecting the pregnant pond with the intermediate pond shall not exceed twenty (20) consecutive days for any single event. Process fluid in this pond or in the channel must be evacuated to a process component(s) acceptable to the Division.
3. The average daily accumulation of flow shall not exceed 20 gallons per day averaged over the quarter in the leak detection sumps identified in Part I.D.3.
4. The average daily accumulation of flow shall not exceed 10 gallons per day averaged over the year in the leak detection sumps identified in Part I.D.3.
5. The average daily accumulation of flow shall not exceed 45 gallons per day averaged over the quarter in the leak detection sumps identified in Part I.D.4.
6. The average daily accumulation of flow shall not exceed 15 gallons per day averaged over the year in the leak detection sumps identified in Part I.D.4.
7. The average daily accumulation of flow shall not exceed 150 gallons per day averaged over the quarter in the leak detection sumps identified in Part I.D.8.

8. The average daily accumulation of flow shall not exceed 50 gallons per day averaged over the year in the leak detection sumps identified in Part I.D.8.
9. The cumulative solution application rate to the heap leach pad shall not exceed the permitted 1320 gallons per minute (gpm). Additionally, the solution application rate *per unit area* should not exceed 0.005 gpm/ft<sup>2</sup>.
10. The heap leach pad, as measured vertically from the top of the synthetic liner for any point on the pad, constructed in excess of a maximum permitted elevation of 105 feet over minimum 60-mil (cell 1) or 80-mil (cells 2-5) thickness HDPE synthetic liner.
11. The failure to meet a schedule of compliance date.

Exceedances of these limitations may be permit violations and shall be reported as specified in Part II.B.4.

- H. The facility shall maintain an automated device or a calibrated rain gauge, which shall be monitored daily, to record daily precipitation. A written record of all daily accumulations of precipitation shall be maintained on site.
  - I. The Permittee shall inspect all control devices, systems and facilities weekly. Drainage and containment systems shall also be inspected during, when possible, and after major storm events. These inspections are performed to detect evidence of:
    1. Deterioration, malfunction, or improper operation of control systems;
    2. Sudden changes in the level of the contents of any monitoring device;
    3. The presence of liquids in leak detection systems; and
    4. Severe erosion or other signs of deterioration in dikes, diversions, or other containment devices.
  - J. Prior to initiating permanent closure activities at the facility or any process component within the facility, the Permittee must have an approved final permanent closure plan.
  - K. The Permittee shall remit an annual review and services fee in accordance with NAC 445A.232 starting July 1 after the effective date of this permit and every year thereafter until the permit is terminated or the facility has received final closure certification from the Division.
  - L. The Permittee shall not dispose of or treat Petroleum-Contaminated Soil (PCS) on the mine site without first obtaining from the Division approval of a PCS Management Plan.
- II. General Facility Conditions and Limitations
- A. General Requirements
    1. The Permittee shall achieve compliance with the conditions, limitations, and requirements of the permit upon commencement of each relevant activity.

The Administrator may, upon the request of the Permittee and after public notice (if required), revise or modify a Schedule of Compliance in an issued permit if he determines good and valid cause (such as an act of God, a labor strike, materials shortage or other event over which Permittee has little or no control) exists for such revision.

2. The Permittee shall at all times maintain in good working order and operate as efficiently as possible, all devices, facilities, or systems installed or used by the Permittee to achieve compliance with the terms and conditions of this permit.
3. Whenever the Permittee becomes aware that he failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Administrator, the Permittee shall promptly submit such facts or correct information. Any inaccuracies found in this information may be grounds for revocation or modification of this permit and appropriate enforcement action.

#### B. Reporting Requirements

1. The Permittee shall submit quarterly reports which are due to the Division on or before the 28<sup>th</sup> day of the month following the quarter and must contain the following:
  - a. Analytical results of the solution collected from monitoring locations identified in Parts I.D.1, I.D.2, I.D.5, I.D.7, and I.D.9 reported on NDEP Form 0090/0190 (as appropriate) or equivalent;
  - b. Monitoring results from the leak detection sumps and pipes identified in Parts I.D.3, I.D.4, I.D.8 and I.D.10, reported on NDEP Form 0590 or equivalent;
  - c. Water level measurements taken for water supply and monitor wells identified in Parts I.D.1 and I.D.2;
  - d. Analytical results of the MWMP-Profile I and ANP/AGP testing for the materials identified in Part I.D.6, reported on NDEP Form 0190 or equivalent;
  - e. A record of spills and releases, and the remedial actions taken in accordance with the approved Emergency Response Plan on NDEP Form 0490 or equivalent; and
  - f. For any kinetic test initiated, continued, or terminated with Division approval, during the quarter in accordance with Part I.D.6, a brief report of the test status and an evaluation of the results to date, which shall include all analytical data generated from the date testing was initiated through the reporting quarter.

Facilities which have not initiated mining or construction, must submit a quarterly report identifying the status of mining or construction. Subsequent

to any noncompliance or any facility expansion which provides increased capacity, the Division may require an accelerated monitoring frequency.

2. The Permittee shall submit an annual report by February 28<sup>th</sup> of each year, for the preceding calendar year, which contains the following:
  - a. A synopsis of spills and releases on NDEP Form 0390 or equivalent;
  - b. A brief summary of site operations, including the number of tons of ore milled or placed on heaps (as applicable) during the year, construction and expansion activities and major problems with the fluid management system;
  - c. A table of total monthly precipitation amounts reported for the five-year history previous to the date of submittal;
  - d. An updated version of the facility monitoring and sampling procedures and protocols;
  - e. An updated evaluation of the closure plan using specific characterization data for each process component with respect to achieving stabilization; and
  - f. Graphs of leak detection flow rates, pH, total dissolved solids (TDS), sulfate as SO<sub>4</sub>, chloride, nitrate + nitrite (Total as N), WAD cyanide, fluoride, zinc, and arsenic concentration (as applicable), versus time for all fluid sampling points. These graphs shall display a five-year history previous to the date of submittal. Additional constituents may be required by the Division if deemed necessary.
3. Release Reporting Requirements: The following applies to facilities with an approved Emergency Response Plan. If a site does not have an approved Emergency Response Plan, then all releases must be reported as per NAC 445A.347 or NAC 445A.3473, as appropriate.
  - a. A release of any quantity of hazardous substance, as defined at NAC 445A.3454, to surface water, or that threatens a vulnerable resource, as defined at NAC 445A.3459, must be reported to the Division as soon as practicable after knowledge of the release, and after the Permittee notifies any emergency response agencies, if required, and initiates any action required to prevent or abate any imminent danger to the environment or the health or safety of persons. An oral report shall be made by telephone to 888-331-6337 for in-State callers or (775) 687-9485 for out-of-State callers, and a written report shall be provided within ten (10) days in accordance with Part II.B.4.b.
  - b. A release of a hazardous substance in a quantity equal to or greater than that which is required to be reported to the National Response Center pursuant to 40 C.F.R. Part 302 must be reported as required by NAC 445A.3473 and Part II.B.3.a.

- c. A release of a non-petroleum hazardous substance not subject to Parts II.B.3.a. or II.B.3.b., released to soil or other surfaces of land, and the quantity is equal to or exceeds 500 gallons or 4,000 pounds, or that is discovered in or on groundwater in any quantity, shall be reported to the Division no later than 5 P.M. of the first working day after knowledge of the release. An oral report shall be made by telephone to 888-331-6337 for in-State callers or (775) 687-9485 for out-of-State callers, and a written report shall be provided within ten (10) days in accordance with Part II.B.4.b. Smaller releases, greater than 25 gallons or 200 pounds and less than 500 gallons or 4,000 pounds, released to soil or other surfaces of land, or discovered in at least three cubic yards of soil, shall be reported quarterly on NDEP Form 0390 or equivalent.
  - d. Petroleum Products and Ethylene Glycol: If a release is subject to Parts II.B.3.a. or II.B.3.b., report as specified in Part II.B.3.a. Otherwise, if a release of any quantity is discovered on or in groundwater, or if the quantity is equal to or greater than 100 gallons released to soil or other surfaces of land, report as specified in Part II.B.3.c. Smaller releases, greater than 25 gallons but less than 100 gallons, released to soil or other surfaces of land, or if discovered in at least three cubic yards of soil, shall be reported quarterly on NDEP Form 0390 or equivalent.
4. The Permittee shall report to the Administrator any noncompliance with the permit.
- a. Each such event shall be reported orally by telephone to (775) 687-9400, not later than 5 P.M. of the next regular work day from the time the Permittee has knowledge of the circumstances. This report shall include the following:
    - i. Name, address, and telephone number of the owner or operator;
    - ii. Name, address, and telephone number of the facility;
    - iii. Date, time, and type of incident, condition, or circumstance;
    - iv. If reportable hazardous substances were released, identify material and report total gallons and quantity of contaminant;
    - v. Human and animal mortality or injury;
    - vi. An assessment of actual or potential hazard to human health and the environment outside the facility; and
    - vii. If applicable, the estimated quantity of material that will be disposed and the disposal location.
  - b. A written summary shall be provided within ten (10) days of the time the Permittee makes the oral report. The written summary shall contain:
    - i. A description of the incident and its cause;

- ii. The periods of the incident (including exact dates and times);
  - iii. If reportable hazardous substances were released, the steps taken and planned to complete, as soon as reasonably practicable, an assessment of the extent and magnitude of the contamination pursuant to NAC 445A.2269;
  - iv. Whether the cause and its consequences have been corrected, and if not, the anticipated time each is expected to continue; and
  - v. The steps taken or planned to reduce, eliminate, and prevent recurrence of the event.
- c. The Permittee shall take all available and reasonable actions, including more frequent and enhanced monitoring to:
- i. Determine the effect and extent of each incident;
  - ii. Minimize any potential impact to the waters of the State arising from each incident;
  - iii. Minimize the effect of each incident upon domestic animals and all wildlife; and
  - iv. Minimize the endangerment of the public health and safety which arises from each incident.
- d. If required by the Division, the Permittee shall submit, as soon as reasonably practicable, a final written report summarizing any related actions, assessments, or evaluations not included in the report required in Part II.B.4.b., and including any other information necessary to determine and minimize the potential for degradation of waters of the State and the impact to human health and the environment. Submittal of the final report does not relieve the Permittee from any additional actions, assessments, or evaluations that may be required by the Division.

#### C. Administrative Requirements

1. A valid permit must be maintained until permanent closure is complete. Therefore, unless permanent closure has been completed, the Permittee shall apply for permit renewal not later than one-hundred twenty (120) days before the permit expires.
2. Except as required by NAC 445A.419 for a permit transfer, the Permittee shall submit current permit contact information described in paragraphs (a) through (c) of subsection 2 of NAC 445A.394 within thirty (30) days after any change in previously submitted information.
3. All reports and other information requested by the Administrator shall be signed and certified as required by NAC 445A.231.
4. When ordered consistent with Nevada Statutes, the Permittee shall furnish any relevant information in order to determine whether cause exists for modifying,

revoking and reissuing, or permanently revoking this permit, or to determine compliance with this permit.

5. The Permittee shall maintain a copy of, and all modifications to, the current permit at the permitted facilities at all times.
6. The Permittee is required to retain during operation, closure and post-closure monitoring, all records of monitoring activities and analytical results, including all original strip chart recordings for continuous monitoring instrumentation, and all calibration and maintenance records. This period of retention must be extended during the course of any unresolved litigation.
7. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not thereby be affected.
8. The Permittee is authorized to manage fluids and solid wastes in accordance with the conditions of this permit. Issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of Federal, State or local law or regulations. Compliance with the terms of this permit does not constitute a defense to any order issued or any action brought under the Water Pollution Control Statutes for releases or discharges from facilities or units not regulated by this permit. NRS 445A.675 provides that any person who violates a permit condition is subject to administrative or judicial action provided in NRS 445A.690 through 445A.705.

D. Division's Authority

The Permittee shall allow authorized representatives of the Division, at reasonable times, and upon the presentation of credentials to:

1. Enter the Permittee's premises where a regulated activity is conducted or where records are kept per the conditions of this permit;
2. Have access to and copy any record that must be kept per the conditions of this permit;
3. Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated by this permit; and
4. Sample or monitor for any substance or parameter at any location for the purposes of assuring permit and regulatory compliance.

E. Sampling and Analysis Requirements

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

2. For each measurement or sample taken pursuant to the conditions of this permit, the Permittee shall record the following information:
  - a. The exact place, date, and time of the inspection, observation, measurement, or sampling; and
  - b. The person(s) who inspected, observed, measured, or sampled.
3. Samples must be taken, preserved, and labeled according to Division approved methods.
4. Standard environmental monitoring chain of custody procedures must be followed.
5. Samples shall be analyzed by a laboratory certified by the State of Nevada. The Permittee must identify the certified laboratory used to perform the analyses, laboratory reference number, sample date and laboratory test date in quarterly reports.
6. The accuracy of analytical results, unless otherwise specified, shall be expressed in mg/L and reliable to at least two (2) significant digits. The analytical methods used must have a lower level of detection equal to or less than one-half the reference value for Profile I constituents. Profile II constituents that have established reference values shall be quantified using an analytical method with a lower level of detection equal to or less than the reference value.

F. Permit Modification Requirements

1. Any material modification must be reported by submission of a new application, or, if such changes will not violate the limitations specified in the permit, by notice to the permit issuing authority of such changes. Any change which materially modifies, as defined in NAC 445A.365, the permitted facility must comply with NAC 445A.392, NAC 445A.4155, NAC 445A.416, and NAC 445A.417.
2. Prior to the commencement of mining activities at any site within the State which is owned or operated by the Permittee but not identified and characterized in the application, the Permittee shall submit to the Division a report which identifies the locations of the proposed mine areas and waste disposal sites, and characterizes the potential of mined materials to release pollutants. Prior to development of these areas the Division shall determine if any of these new sources will be classified as process components and require engineered containment as well as permit modification.
3. The Permittee must notify the Division in writing at least thirty (30) days before the introduction of process solutions into a new process component or into an existing process component which has been materially modified, or of the intent to commence active operation of that process component.

4. The Permittee must obtain a written determination from the Administrator of any planned material modification(s) as to whether it is considered a permit modification.
5. The Permittee must give advance notice to the Administrator of any planned changes or activities which are not material modifications in the permitted facility that may result in noncompliance with permit requirements.

Prepared by: Paul Eckert  
Date: September 2011  
Revision: Minor Mod 2011