



# United States Department of the Interior



## BUREAU OF LAND MANAGEMENT

Royal Gorge Field Office  
3028 East Main Street  
Cañon City, Colorado 81212

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COC 077472

MAR 01 2019

Zephyr Gold USA Ltd.  
Attn: David Felderhof  
1959 Upper Water St.  
Suite 1700  
Halifax, Nova Scotia B3J 3N2  
Canada

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Surface Management

Dear Mr. Felderhof,

Zephyr Gold USA Ltd. filed a Notice Modification (MD-4) to construct new roads, trenches and drill pads for use in exploration in T19S, R71W, sections 13 and 14 in Fremont County, CO. This submittal was originally received in this office on December 3, 2018.

Following receipt of the modification, multiple discussions took place between BLM and Environmental Alternatives, Inc. to obtain additional information and clarification of the proposed modification. Typically, BLM will review all submitted information within 15-calendar days in accordance with the surface management regulations at 43 CFR 3809.311(a), in order to determine if it meets the content requirements at 43 CFR 3809.301(b). Due to the government shutdown recently experienced, BLM was unable to meet this timeframe and, as stated in 43 CFR 3809.312, operations may have already been initiated.

Although operations may already be in progress, BLM is still requesting information that may assist in determining completeness of the notice and if your proposed operations will result in unnecessary or undue degradation as defined under 43 CFR 3809.5:

1. Please provide the following as it pertains to BLM managed lands:
  - a. Acreage of surface disturbance
  - b. Amount of bulk sample that will be removed
2. Please note that the cutting of timber is not a casual use activity. Timber resources cut, damaged, or destroyed in violation of an accepted notice or an approved Plan of Operations or without proper authorization is by definition unnecessary or undue degradation (UUD) under 43 CFR 3809.605 and subject to the penalties described in 43 CFR 3809.700.
3. The map included with the modification submittal shows in the key that black lines denote the Sentinel Trenches and Drill Pad and pink lines denote the proposed Sentinel

Road. If borings will be drilled along the Sentinel Road, please provide the amount and location. Also, please clarify if trenches will be excavated on BLM managed lands along the Sentinel Road, or if they will just be located on private. It is assumed that drilling and borehole abandonment processes will be conducted in accordance with previously provided approaches and in compliance with State of Colorado regulations.


4. Please provide clarification regarding the timeframe for exploration activities associated with this modification. Does the timeframe of 12/1/2018 – 12/01/2019 include final reclamation? If not, please provide timeframe for completion of the final reclamation.
5. Please clarify that the practices for mud pit construction in the roadway, management of drilling fluids and reclamation will be the same as what was proposed in MD-3.
6. MD-4 is proposing access roads (specifically the Sentinel Road) for drilling that may cross existing recreation trails on BLM. Because of this, specific details related to the timing of access, safety plan and management needs, and a reclamation plan specific to the trail will need to be provided to BLM, preferably prior to any disturbance.

DRMS has reviewed MD-4 for possible impacts to the current financial warranty of \$92,655 and determined that any changes associated with this modification do not require an increase to the current reclamation liability. BLM also plans to review the adequacy of the financial warranty with regards to this modification.

Based on review of data currently available, the proposed operation presents a low risk of impacting historic properties. There are also no lands or waters known to contain Federally proposed or listed threatened or endangered species or their proposed or designated critical habitat within the area of interest you have identified. Regulations outlined in 43 CFR 3809.420 (enclosure 1) provide further details on performance standards that apply to your Notice operation, which include those related to cultural resources and threatened or endangered species. Please submit the requested information at your earliest convenience.

If you have any questions, please contact Stephanie Carter at (719) 269-8551.

Sincerely,



Keith E. Berge  
Field Manager  
Royal Gorge Field Office

1 Enclosure

1 - 43 CFR 3809.420 regulations

cc: Angela Bellantoni, Ph.D., EAI  
Tim Cazier, CDRMS



## Excerpt of 43 Code of Federal Regulations

*A full set of regulations can be obtained online at <http://www.gpoaccess.gov/cfr/index.html>*

### **Sec. 3809.420 What performance standards apply to my notice or plan of operations?**

The following performance standards apply to your notice or plan of operations:

**(a) General performance standards.**

- (1) *Technology and practices.* You must use equipment, devices, and practices that will meet the performance standards of this subpart.
- (2) *Sequence of operations.* You must avoid unnecessary impacts and facilitate reclamation by following a reasonable and customary mineral exploration, development, mining and reclamation sequence.
- (3) *Land-use plans.* Consistent with the mining laws, your operations and post-mining land use must comply with the applicable BLM land-use plans and activity plans, and with coastal zone management plans under 16 U.S.C. 1451, as appropriate.
- (4) *Mitigation.* You must take mitigation measures specified by BLM to protect public lands.
- (5) *Concurrent reclamation.* You must initiate and complete reclamation at the earliest economically and technically feasible time on those portions of the disturbed area that you will not disturb further.
- (6) *Compliance with other laws.* You must conduct all operations in a manner that complies with all pertinent Federal and state laws.

**(b) Specific standards.**

- (1) *Access routes.* Access routes shall be planned for only the minimum width needed for operations and shall follow natural contours, where practicable to minimize cut and fill. When the construction of access routes involves slopes that require cuts on the inside edge in excess of 3 feet, the operator may be required to consult with the authorized officer concerning the most appropriate location of the access route prior to commencing operations. An operator is entitled to access to his operations consistent with provisions of the mining laws. Where a notice or a plan of operations is required, it shall specify the location of access routes for operations and other conditions necessary to prevent unnecessary or undue degradation. The authorized officer may require the operator to use existing roads to minimize the number of access routes, and, if practicable, to construct access roads within a designated transportation or utility corridor. When commercial hauling is involved and the use of an existing road is required, the authorized officer may require the operator to make appropriate arrangements for use and maintenance.
- (2) *Mining wastes.* All tailings, dumps, deleterious materials or substances, and other waste produced by the operations shall be disposed of so as to prevent unnecessary or undue degradation and in accordance with applicable Federal and state Laws.
- (3) *Reclamation.*
  - (i) At the earliest feasible time, the operator shall reclaim the area disturbed, except to the extent necessary to preserve evidence of mineralization, by taking reasonable measures to prevent or control on-site and off-site damage of the Federal lands.
  - (ii) Reclamation shall include, but shall not be limited to:
    - (A) Saving of topsoil for final application after reshaping of disturbed areas has been completed;
    - (B) Measures to control erosion, landslides, and water runoff;

- (C) Measures to isolate, remove, or control toxic materials;
- (D) Reshaping the area disturbed, application of the topsoil, and revegetation of disturbed areas, where reasonably practicable; and
- (E) Rehabilitation of fisheries and wildlife habitat.

(iii) When reclamation of the disturbed area has been completed, except to the extent necessary to preserve evidence of mineralization, the authorized officer shall be notified so that an inspection of the area can be made.

(4) *Air quality.* All operators shall comply with applicable Federal and state air quality standards, including the Clean Air Act (42 U.S.C. 1857 *et seq.*).

(5) *Water quality.* All operators shall comply with applicable Federal and state water quality standards, including the Federal Water Pollution Control Act, as amended (30 U.S.C. 1151 *et seq.*).

*Note: We have been informed by the Colorado Department of Public Health and Environment (CDPHE) that if construction is to disturb more than 1 acre (total, incl. roads, work areas and facilities) that you will need a pre-mining construction storm water permit. This is under the CDPHE, Water Quality Control Division, clean water facilities program, industrial permits unit.*

(6) *Solid wastes.* All operators shall comply with applicable Federal and state standards for the disposal and treatment of solid wastes, including regulations issued pursuant to the Solid Waste Disposal act as amended by the Resource Conservation and Recovery Act (42 U.S.C. 6901 *et seq.*). All garbage, refuse or waste shall either be removed from the affected lands or disposed of or treated to minimize, so far as is practicable, its impact on the lands.

(7) *Fisheries, wildlife and plant habitat.* The operator shall take such action as may be needed to prevent adverse impacts to threatened or endangered species, and their habitat which may be affected by operations.

(8) *Cultural and paleontological resources.*

(i) Operators shall not knowingly disturb, alter injure, or destroy any scientifically important paleontological remains or any historical or archaeological site, structures, building or object on Federal lands.

(ii) Operators shall immediately bring to the attention of the authorized officer any cultural and/or paleontological resources that might be altered or destroyed on Federal lands by his/her operations, and shall leave such discovery intact until told to proceed by the authorized officer. The authorized officer shall evaluate the discoveries brought to his/her attention, take action to protect or remove the resource, and allow operations to proceed with 10 working days after notification to the authorized officer of such discovery.

(iii) The Federal Government shall have the responsibility and bear the cost of investigations, and salvage of cultural and paleontology values discovered after a plan of operations has been approved, or where a plan is not involved.

(9) *Protection of survey monuments.* To the extent practicable, all operators shall protect all survey monuments, witness corners, reference monuments, bearing trees and line trees against unnecessary or undue destruction, obliteration or damage. If, in the course of operation, any monuments, corners, or accessories are destroyed, obliterated, or damaged by such operations, the operator shall immediately report the matter to the authorized officer. The authorized officer shall prescribe, in writing, the requirements for the restoration or reestablishment of monuments, corners, bearing and line trees.

(10) *Fire.* The operator shall comply with all applicable Federal and state fire laws and regulations, and shall take all reasonable measures to prevent and suppress fires in the area of operations.

(11) *Acid-forming, toxic, or other deleterious materials.* You must incorporate identification, handling, and placement of potential acid-forming, toxic or other deleterious materials into your operations, facility design, reclamation, and environmental monitoring programs to minimize the formation and impacts of acidic, alkaline, metal-bearing, or other deleterious leachate, including the following:

- (i) You must handle, place, or treat potentially acid-forming, toxic, or other deleterious materials in a manner that minimizes the likelihood of acid formation and toxic and other deleterious leachate generation (source control);
- (ii) If you cannot prevent the formation of acid, toxic, or other deleterious drainage, you must minimize uncontrolled migration of leachate; and
- (iii) You must capture and treat acid drainage, or other undesirable effluent, to the applicable standard if source controls and migration controls do not prove effective. You are responsible for any costs associated with water treatment or facility maintenance after project closure. Long-term, or post-mining, effluent capture and treatment are not acceptable substitutes for source and migration control, and you may rely on them only after all reasonable source and migration control methods have been employed.

(12) *Leaching operations and impoundments.*

- (i) You must design, construct, and operate all leach pads, tailings impoundments, ponds, and solution-holding facilities according to standard engineering practices to achieve and maintain stability and facilitate reclamation.
- (ii) You must construct a low-permeability liner or containment system that will minimize the release of leaching solutions to the environment. You must monitor to detect potential releases of contaminants from heaps, process ponds, tailings impoundments, and other structures and remediate environmental impacts if leakage occurs.
- (iii) You must design, construct, and operate cyanide or other leaching facilities and impoundments to contain precipitation from the local 100-year, 24-hour storm event in addition to the maximum process solution inventory. Your design must also include allowances for snowmelt events and drain down from heaps during power outages in the design.
- (iv) You must construct a secondary containment system around vats, tanks, or recovery circuits adequate to prevent the release of toxic solutions to the environment in the event of primary containment failure.
- (v) You must exclude access by the public, wildlife, or livestock to solution containment and transfer structures that contain lethal levels of cyanide or other solutions.
- (vi) During closure and at final reclamation, you must detoxify leaching solutions and heaps and manage tailings or other process waste to minimize impacts to the environment from contact with toxic materials or leachate. Acceptable practices to detoxify solutions and materials include natural degradation, rinsing, chemical treatment, or equally successful alternative methods. Upon completion of reclamation, all materials and discharges must meet applicable standards.
- (vii) In cases of temporary or seasonal closure, you must provide adequate maintenance, monitoring, security, and financial guarantee, and BLM may require you to detoxify process solutions.

(13) *Maintenance and public safety.* During all operations, the operator shall maintain his or her structures, equipment, and other facilities in a safe and orderly manner. Hazardous sites or conditions resulting from operations shall be marked by signs, fenced, or otherwise identified to alert the public in accordance with applicable Federal and state laws and regulations.