

Constantine Performance Standards
for Exploration Operations on the Palmer Project
(As adopted from 43 CFR 3809.420)

The following performance standards applied to Constantine's notice or plan of operations:

(a) General performance standards

- (1) *Technology and practices.* Constantine must use equipment, devices, and practices that will meet the performance standards of this subpart.
- (2) *Sequence of operations.* Constantine 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, Constantine 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. Constantine* must take mitigation measures specified by BLM to protect public lands.
- (5) *Concurrent reclamation.* Constantine must initiate and complete reclamation at the earliest economically and technically feasible time on those portions of the disturbed area that Constantine will not disturb further.
- (6) *Compliance with other laws.* Constantine must conduct all operations in a manner that complies with all pertinent Federal and state laws.

(b) Specific Standards

- (1) *Access routes.* Access route 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, Constantine may be required to consult with the Authorized Officer concerning the most appropriate location of the access route prior to commencing operations. Constantine is entitled to access to 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 Constantine 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 Constantine 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, Constantine 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 have 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 re-vegetation of disturbed areas, where reasonably practicable; and
 - (E) Rehabilitation of fisheries and wildlife habitat.
 - (ii) 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.* Constantine 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.* Constantine 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.*).
- (6) *Solid wastes.* Constantine 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.* Constantine 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) Constantine shall not knowingly disturb, alter, injure, or destroy any scientifically important paleontological remains or any historical or archaeological site, structure, building or object on Federal lands.
 - (ii) Constantine 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 within 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, Constantine 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 operations, any monuments, corners, or accessories are destroyed, obliterated, or damaged by such operations, Constantine 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.* Constantine 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.* Constantine must incorporate identification, handling, and placement of potentially acid-forming, toxic or other deleterious materials into Constantine 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) Constantine 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 Constantine cannot prevent the formation of acid, toxic, or other deleterious drainage, Constantine must minimize uncontrolled migration of leachate; and
- (iii) Constantine must capture and treat acid drainage, or other undesirable effluent, to the applicable standard if source controls and migration controls do not prove effective. Constantine 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 Constantine may rely on them only after all reasonable source and migration control methods have been employed.

(12) *Leaching operations and impoundments.*

- (i) Constantine 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) Constantine must construct a low-permeability liner or containment system that will minimize the release of leaching solutions to the environment. Constantine 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) Constantine 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. Constantine design must also include allowances for snowmelt events and drain down from heaps during power outages in the design.
- (iv) Constantine 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) Constantine 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, Constantine 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, Constantine must provide adequate maintenance, monitoring, security, and financial guarantee, and BLM may require Constantine to detoxify process solutions.

(13) *Maintenance and public safety*. During all operations, Constantine shall maintain all 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.

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