



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
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RECORD OF DECISION (ROD) GLAMIS MARIGOLD MINING COMPANY/MARIGOLD MINE MILLENNIUM EXPANSION PROJECT

INTRODUCTION

Glamis Marigold Mining Company (GMMC) submitted to the Bureau of Land Management (BLM), Winnemucca Field Office (WFO) an amended Plan of Operations (POO) in April 2002, to expand existing mining operations and develop the proposed Millennium Expansion Project as required under the “Surface Management Regulations” 43 Code of Federal Regulations (CFR) 3809.

The proposed Millennium Expansion Project consists of expansion of existing Marigold Mine facilities, development of new facilities, and modifications to the closure and reclamation plan for the existing and proposed heap leach pads. The Millennium Expansion Project was described as a “reasonably foreseeable future action” in the previous “Marigold Mine Expansion Project” final environmental impact statement, (FEIS 2001).

The Millennium Expansion would disturb approximately 667 acres of private land and 807 acres of BLM-administered public land, for a total of 1,474 acres. New facilities would include construction of pits, overburden disposal facilities, heap leach pad facilities, roads, and ancillary facilities. A number of pits proposed would be completely or partially backfilled. The project would extend the mine operations an estimated additional six years.

DECISION

Based on the Final Supplemental Environmental Impact Statement (FSEIS), the decision of the BLM WFO Field Manager, is to authorize the GMMC Millennium mine expansion project pursuant to the “Agency Preferred Alternative” (Alternative 2), consisting of the proposed action and the expanded Red Rock Pit Stabilization. The “Agency Preferred Alternative” includes all practicable means to avoid or minimize environmental impacts.

Based on the FSEIS, implementation of the amended POO including additional stipulations and mitigating measures described below, will not cause undue or unnecessary degradation of the public lands. The decision also recognizes that GMMC, has met concurrence requirements pursuant to the Surface Occupancy Regulations 43 CFR 3715 under subpart 3715.3-4. This decision is consistent with the Sonoma-Gerlach Management Framework Plan (MFP), and complies with requirements of the Council of Environmental Quality Regulations under 40 CFR 1500-1508.

ALTERNATIVES INCLUDING THE PROPOSED ACTION

The analysis in the FSEIS for the Marigold Mine Millennium Expansion Project included the Proposed Action, No Action Alternative (Alternative 3), Trout Creek Diversion Realignment (Alternative 1) and the Expanded Red Rock Pit Stabilization, the “Agency Preferred Alternative,” (Alternative 2). In addition, other alternatives were considered in the FSEIS, but were eliminated from detailed analysis. A full description of the alternatives can be found in the FSEIS (chapter 2).

MANAGEMENT CONSIDERATIONS

The rationale for the above decision is to authorize GMMC to make legitimate use of the public lands in an environmentally sound manner without causing undue or unnecessary degradation. The modified POO approved by this ROD provides for the continuation and expansion of mining and ore processing in an area where mining has been identified as an appropriate land use as stated in the Winnemucca Field Office MFP. Approval of the POO will allow GMMC to utilize and expand its existing work force, equipment and infrastructure to expand the Marigold Mine. The mitigation measures specified in this ROD, will minimize potential adverse environmental impacts identified in the FSEIS. The monitoring requirements specified in this ROD will assist BLM and others to identify, avoid, and/or mitigate, if necessary, any unforeseen adverse environmental impacts that may occur. The stipulations, monitoring, and mitigation measures committed to by GMMC in this ROD will provide additional environmental protection during and after implementation of the Agency Preferred Alternative.

STIPULATIONS

- 1) The operation will be monitored under the Inspection and Enforcement procedures according to 43 CFR 3809 Regulations, 3809 Surface Management Manual (7/85), BLM Nevada Handbook H-3809-1, and the Nevada Cyanide Management Plan (8/91). This will entail quarterly mine plan compliance inspections by BLM during operation and more frequent inspections during construction of proposed facilities.
- 2) Facilities will be built to the standards outlined in the POO and standards identified in the amended water pollution control permit and reclamation permit approved by the Nevada Division of Environmental Protection (NDEP). GMMC will follow the Plan in regard to other activities associated with the project.

- 3) The reclamation cost estimate for the Marigold Mine is being revised to incorporate the Millennium Expansion Project. Work shall not begin until the BLM Nevada State Office issues a decision record, accepting the reclamation bonding instruments. In accordance with the Memorandum Of Understanding between BLM and NDEP (7/02), the instruments, or portions thereof, shall not be released until the BLM Winnemucca Field Office and the Bureau of Mining Regulation and Reclamation of the NDEP, determine that adequate reclamation/closure has been successfully completed.
- 4) Unless otherwise agreed upon by the BLM WFO, all changes to the operation from the current POO, shall require GMMC to submit an amendment to the current plan of operation or submit a new POO for review under 43 CFR 3809 Regulations.
- 5) This measure replaces stipulation #8 of the ROD signed on September 19, 2001. GMMC will, by April 15th of each year, submit to the WFO an as-built map of the mine site that includes the entire plan of operations area. The map is to illustrate existing, un-reclaimed mining and exploration disturbance and reclaimed disturbance as of December 31st of each year. The boundaries of active and reclaimed features are to be clearly illustrated and the names of the features are to be provided. The map is not to include planned and approved disturbance which has not occurred. The map will provide the section lines of the public land survey system including identification of township and range and the section numbers. The map will have a horizontal scale of one inch equals one thousand feet and topographic contour lines at an interval of twenty feet. The map will be to scale and will be generated so that it is both accurate and scalable. The map will be approved by signature of either the Mine Manager or the Environmental Coordinator.
- 6) GMMC shall notify the BLM WFO in the event of a temporary cessation of operations. If such cessation occurs, the notification shall include a map that conforms to requirements identified in stipulation #5, showing the current disturbance, reclaimed areas, and areas where temporary stabilization measures have been completed.
- 7) No work is authorized under this POO until GMMC, has complied with other applicable state, federal, and local regulations and have obtained the necessary permits.
- 8) GMMC shall submit to the BLM, WFO copies of any closure plans (along with preliminary plans and drafts) when submitted to NDEP.
- 9) Reclamation and closure activities at the project shall comply with the “Nevada Bureau of Land Management’s Reclamation/Closure Policy for Water Management for Hardrock Mining Activities,” IM NV-2000-66 (8/00), including any future revisions.
- 10) All previously described stipulations, mitigation measures, and monitoring requirements are hereby incorporated into this decision as applicable, unless specifically modified by this decision.
- 11) GMMC shall comply with the “Surface Occupancy Regulations” 43 CFR 3715 subpart

3715.3-5, Sections 3715.2, 3715.2-1, and 3715.5.

MITIGATION MEASURES AND MONITORING

This ROD expressly incorporates and requires implementation of Environmental Protection Measures and Monitoring as identified in the FSEIS, Section 2.2.16, pages 2-39 to 2-42, plus the following mitigation and monitoring requirements.

WATER RESOURCES

- A) GMMC shall monitor waste rock dumps for surface seepage until successful reclamation has been achieved as determined by the BLM and NDEP. GMMC shall construct and maintain berms down gradient from the waste rock dumps to prevent migration of any run off or seepage into creeks, drainages, or onto adjacent land during active operations.
- B) GMMC shall backfill the Terry Zone Pit to a minimum elevation of 4,520 feet using Edna Mountain Formation and/or Havallah Formation oxide rock in order to prevent the development of a pit lake or surface water pond.
- C) GMMC shall continue to monitor groundwater levels at wells depicted on Figure 3-13 of the FSEIS to determine the final post mining water table elevation. Monitoring of the wells will continue until the well locations have been mined. After cessation of mining within the Terry Zone, well 1572R shall be reconstructed at the approximate original location. Completion details will be determined at the time of construction, and will be based upon the monitoring data. Replacement of the MIL 2001 wells (3) will be based upon a review of the available data at the time that they are mined through. The Red Rock Wells (2) shall be relocated to an area that continues to monitor ground water conditions along Trout Creek and that proves advantageous to monitoring future mineral development areas. Locations of all replacement wells will require BLM review and concurrence prior to construction.

This monitoring requirement will be re-evaluated at final reclamation/closure. Monitoring shall be conducted quarterly and submitted annually to the BLM WFO by February 28th of each calendar year.

- D) Within 90 days from receipt of the Record of Decision, GMMC will design and submit a water quality investigation for BLM review and concurrence to evaluate sources of elevated constituents, including at a minimum iron and manganese, along Trout Creek and evaluate remedies. Based on the results of the investigation, monitoring or remedial actions may be required.

- E) In the event water quality problems are identified in surface, groundwater, or in any pit lake(s), GMMC shall immediately initiate steps to evaluate the potential source of contamination and develop and implement monitoring and mitigation measures acceptable to BLM and the NDEP.

WATERSHED AND DRAINAGE

- A) Prior to initiating surface disturbing activities to construct stream diversions or permanent storm water control structures, GMMC shall submit an engineered design report to BLM for review and concurrence.

Based on these reports the BLM and NDEP would determine the appropriate reclamation bond amount, taking into consideration long-term monitoring costs, channel maintenance expense, and sufficient funding for the complete reconstruction of the channel diversions in the event of failure.

- B) GMMC shall monitor long term storm water diversions for structural stability. Monitoring results would be forwarded to BLM WFO annually, by May of each calendar year.

SOILS

- A) Sufficient growth medium will be stockpiled during operations and redistributed over re-contoured areas during reclamation and to achieve requirements of soils mitigation measure “B” listed below. Such stockpiles will be clearly segregated and posted with signs to ensure availability for reclamation efforts. GMMC shall stabilize growth medium stockpiles and deter establishment of invader plant species by seeding the stockpiles with a BLM approved seed mixture.
- B) The growth media cover on the heap leach pads and the growth medium panels for the ET Basins are to be a minimum of two feet thick to insure the establishment of a viable and effective stand of vegetation, to protect against long term wind and water erosion and to further reduce the infiltration of precipitation into the spent ore. The thickness of the growth medium placed on the waste rock dumps is to be six inches as proposed by GMMC. Prior to placement, GMMC is to provide to BLM for review and concurrence the following:
 - 1) a description of the procedure that will be followed during placement of heap leach pads, ET Basins and waste rock covers to assure that the minimum thickness goals are achieved; and
 - 2) an evaluation of the growth medium parameters listed in the FSEIS in Section 3.5.2 on pages 3-69 and 3-70.

As part of its routine mine planning and material routing decisions, GMMC is directed to place near surface, soil-like Millennium waste rock into a position where it will lie directly under the final growth media cover to be placed on the Millennium waste rock dumps. This is to be done to the extent that it does not significantly escalate mining costs or interfere with logical and safe mine planning.

Seeding of the covers is to be performed only during the months of September through March and the seed is to be covered with a drag or other mechanical device. Three growing seasons after seeding the cover NDEP, BLM and GMMC will jointly evaluate the success of plant germination, distribution, variety and growth. Reseeding actions or other actions needed to improve the plant cover will be undertaken by GMMC in accordance with the results of this evaluation.

HAZARDOUS MATERIALS

GMMC shall comply with applicable Federal and State laws dealing with the storage and disposal of chemicals, petroleum, petroleum products, RCRA Subtitle C hazardous wastes, and RCRA Subtitle D solid wastes. Under no circumstances will chemicals, petroleum, petroleum products, or RCRA Subtitle C hazardous wastes be disposed in solid waste disposal areas within the project area without the written approval of the NDEP.

The Marigold Mine Millennium Expansion Project would be subject to the Emergency Response Plan per Appendix 2 in the POO.

RANGE

Livestock will not be allowed to graze re-vegetated areas within the mine until re-vegetation release criteria has been achieved and approved by the NDEP and BLM. Livestock will not be allowed to graze on heap leach pads or ET basins. These areas will be fenced in accordance with the Terrestrial Wildlife mitigation measure C.

TERRESTRIAL WILDLIFE

Reclamation of waste rock storage areas and heap leach pads will incorporate the following measures which are intended to enhance the post mining wildlife habitat values of these sites.

- A) Individual boulders, rock piles, and areas resembling rock slides will be installed to provide diversity of habitat and perching, feeding, and loafing areas for resident raptors, small mammals, including habitat for rock chucks and/or marmots and reptile species inhabiting these sites. The location, distribution, size and density of these areas will be determined with consultation from the BLM.

- B) During reclamation, surfaces of both side slopes and tops of overburden areas and heap leach pads, will be graded to incorporate a series of swales and irregularities in the contour.
- C) During reclamation/closure of ET basins and heap leach pads, GMMC shall retain existing chain link fencing, where practical or install chain link fencing around ET basins and shall install a BLM approved rangeland fence around all heap leach pads, to deter livestock grazing and access by the public.

AIR RESOURCES

- A) Fugitive dust from all disturbed areas and unpaved roads during the mine-life, will be controlled using water sprays, chemical stabilization or other dust controls approved by NDEP.
- B) BLM encourages GMMC to consider participating in the State of Nevada Mining Operations Voluntary Mercury Air Emission Reduction Program.

GEOCHEMISTRY

- A) GMMC shall monitor and implement design and construction features for waste rock dumps and mine pits to mitigate potential adverse impacts per the “Glamis Gold, Inc., GMMC Marigold Mining Company, Sulfide Waste Management Plan” (Revised March 23, 2000).

GEOLOGY

- A) Antler Pit South Wall Stability - When mining in the south half of the Antler Pit reaches a bench elevation of 5500 feet, GMMC shall have a State of Nevada registered professional geotechnical engineer perform a slope stability analysis of the south pit wall. That analysis shall include mapping rock structural discontinuities such as faults and joints, with conclusions that consider that information, relevant hydrologic information, and the results of any rock sample tests that the engineer may deem necessary. The static and dynamic factor of safety of the existing pit slope and the expected safety factors for the planned final slope are to be estimated as part of this report. The most likely mode of slope failure and an estimate of the extent of additional ground disturbances south of the existing rim of the pit in the event of such a projected failure are to be included in the report.

The report should address any impacts the pit is having or is projected to have on local surface water and describe persistent sources and amounts of water inflow, if any. The geotechnical analysis will be updated when the south half of the pit reaches the 5300 foot bench elevation. Copies of these reports will be provided to the WFO. The need for remedial action(s) to protect adjacent lands and water resources and the nature of any such actions will be determined based upon these reports.

- B) GMMC shall employ best available technologies and follow best management practices to protect adjacent property and proximal waters of the state from surface/storm runoff from the proposed Millennium Expansion Project facilities. The sections 16 and 30 Heap leach pad facilities shall be designed and constructed to meet requirements of the NDEP and shall include spill/runoff protective berms and employ a monitoring system to detect possible releases to the local groundwater.

The proposed Section 16 Heap Leach Pad facility shall be moved toward the north a minimum distance of 200 feet away from adjacent lands not controlled by GMMC.

Within 180 days of approval of this ROD, GMMC will provide the BLM WFO, with revised maps showing the new location of the section 16 Heap Leach Pad Facility.

The Section 30 Heap Leach Pad Facility shall be designed to include a minimum 100-foot distance from the toe of the active heap leach pad to the adjoining property line in order to achieve sufficient distance for a 3H:1V re-contoured slope.

- C) Pit Reclamation - Following the completion of mining, pits shall be left in a condition which excludes access and mitigates safety hazards posed by pit walls. In addition, GMMC shall reclaim all pit access roads. Berms will be constructed around the perimeter of the open pits approximately 100 feet back from the highwall edge. The berms will be posted with warning signs. The signs would be fabricated of metal warning visitors of potential unstable ground conditions and hazards.

Following the completion of mining pits GMMC shall have the Nevada Division of Minerals assess the open pits for hazards. Open pits shall be left in a condition which minimizes the potential for, and quantity of, water which may enter the pit through surface water run-on and precipitation.

In addition, the bottom of any pit left open shall be composed of a layer of loose oxide rubble, by ripping or backfilling and seeding with the BLM approved seed mix, to minimize the potential for formation of standing water in the bottom of the pit.

Pit reclamation for the Antler Pit would include any remedial actions as determined by the geotechnical engineer report as required under Geology section A.

VISUAL

The surfaces of all waste rock dumps and heap leach pads shall be re-contoured and a sufficient number of large boulders of rock shall be placed on the tops of these facilities in order to eliminate flat surfaces. Edges of waste rock dump embankments will be rounded to reduce angular appearances, soften edges to blend with surrounding topography.

VEGETATION

- A) GMMC shall develop and monitor concurrent reclamation for re-vegetation success through coordination with the BLM, WFO. Re-vegetation success standards are to be determined by the “Nevada Final Guidelines for Successful Re-vegetation” (IM No. NV-99-013).
- B) GMMC will use BLM approved seed mixes, including shrubs that take advantage of slope and aspect, growth medium depth and landscaped features of post-mining reclamation.

These mixes shall be evaluated to determine successful species establishment and modified, based on species performance to meet site-specific goals.

- C) Native species important to Native Americans shall be incorporated in concurrent reclamation and used in the final reclamation seed mix where suitable. GMMC shall not use Forage kochia (Kochia prostrate) in any seed mix.
- D) Disturbed and reclaimed areas shall be monitored to determine if undesirable species are becoming established.

If noxious weeds become a problem, a control plan shall be developed and approved by the BLM.

The operator shall be responsible for controlling all noxious weeds and other undesirable invading plant species in disturbed areas until re-vegetation activities have been determined successful and signed off by the BLM authorized officer. The operator shall obtain approval from the authorized officer prior to any and all application of herbicide. All seed shall be tested for noxious, poisonous, or prohibited plant species and the test results submitted to and approved by the BLM, unless certified weed free seed is procured.

CULTURAL

- A) GMMC shall comply with requirements of the Surface Management Regulations 43 CFR 3809.420(b)(8) pertaining to cultural and paleontological resources. Project workers shall be instructed in cultural resource protection laws and associated responsibilities. If any new cultural resource sites not previously identified in the cultural resource inventories are encountered during facility construction and or operational activities, work shall stop at the particular location and GMMC shall notify the BLM, WFO. Work at the location will be deferred until the BLM Winnemucca Field Office directs GMMC on how to proceed.

- B) GMMC shall notify the authorized officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony (as defined at 43 CFR 10.2). In the event that a discovery is found, GMMC shall stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

LAND USE AND ACCESS

- A) Specific to their mining and exploration operations, GMMC shall be responsible for road maintenance of all access and haul roads within the plan boundary, except for portions of the Buffalo Valley Road maintained by Humboldt County and roads constructed by Newmont Mining Corporation.

Prior to initiating new surface disturbance to the primary access road corridor, GMMC shall submit an amendment application to the existing Rights-of-Way and obtain the necessary amendment approvals.

- B) GMMC shall obtain necessary Rights-of Way from the BLM for any roads left open on public lands after reclamation operations have been finalized.

TRUST FUND

A trust fund will be established in accordance with CFR 3809.552(c) to maintain fencing around the ET basins and heap leach pads and to perform other post-reclamation tasks, including monitoring that may be identified. The timing, amount and details of this fund will be determined in the future through 3809 actions. The trust fund agreement and funding are to be in place prior to the release of the conventional reclamation financial guarantee covering any of the heap leach pads or ET Basins.

APPEAL PROCEDURES

If you do not agree and are adversely affected by this decision, in accordance with 43 CFR 3809.804, you may have the BLM State Director in Nevada review this decision. If you request a State Director review, the request must be received in the BLM Nevada State Office, 1340 Financial Blvd. 89502, P.O. Box 12000, Reno, Nevada 89520-0006, no later than 30 calendar days after you receive this decision. A copy of the request must also be sent to the BLM, Winnemucca Field Office, 5100 East Winnemucca Blvd., Winnemucca, NV 89445.

The request must be in accordance with the provisions provided in 43 CFR 3809.805. If a State Director review is requested, this decision will remain in effect while the State Director review is pending, unless a stay is granted by the State Director.

If the Nevada State Director does not make a decision on whether to accept your request for review of this decision within 21 days of receipt of the request, you should consider the request declined and you may appeal this decision to the Interior Board of Land Appeals (IBLA). You then have 30 days in which to file your notice of appeal with the IBLA (see procedures below).

If you wish to bypass the State Director review, this decision may be appealed directly to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4 and the enclosed Form 1842-1. If an appeal is taken, your notice of appeal must be filed in this office (BLM, Winnemucca Field Office, 5100 East Winnemucca Blvd., Winnemucca, NV 89445) within 30 days from receipt of this decision. The appellant has the burden of showing that the decision appealed from is in error.

If you wish to file a petition pursuant to regulations 43 CFR 4.21 for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of this notice of appeal and petition for a stay must also be submitted to each party named in the decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

1. The relative harm to the parties if the stay is granted or denied;
2. The likelihood of the appellant's success on the merits;
3. The likelihood of immediate and irreparable harm if the stay is not granted; and
4. Whether the public interest favors granting the stay.

Winnemucca Field Manager

Date

cc: NDEP

Cindi Dragon, NSO

Gerald M. Smith, NV060

Rory Lamp, NDOW

DSEIS & FSEIS Commenter(s)