

**DISCHARGE PERMIT MODIFICATION
MOLYCORP TAILINGS DISPOSAL FACILITY, DP-933**

I. INTRODUCTION

The New Mexico Environment Department (NMED) modifies Discharge Permit 933 issued to Molycorp, Inc. (Molycorp) on February 26, 1997 pursuant to the New Mexico Water Quality Act (WQA), NMSA 1978 §§ 74-6-1 through 74-6-17 (1993), and the New Mexico Water Quality Control Commission (WQCC) Regulations, 20 NMAC 6.2.

NMED's purpose in modifying Discharge Permit 933 (DP-933), and in imposing the requirements and conditions specified herein, is to control discharges of water contaminants from the Molycorp Tailings Disposal Facility into ground and surface water after cessation of operations in order to protect ground and surface water for actual and potential future use as domestic and agricultural water supply and other uses.

DP-933, approved in the Final Order dated February 26, 1997 for the Molycorp Tailings Disposal Facility and attached hereto, is briefly described as follows:

The Molycorp Tailing Impoundments (Tailing Impoundments) are located two miles north of Questa, New Mexico and the entire Molycorp Tailings Disposal Facility is located in Sections 2, 25, 26, 35, and 36, T29N, R12E, Sections 31, 32, and 33, T29N, R13E, and Section 6, T28N, R13E, Taos County. Tailings produced during the milling of molybdenum ore are transported from the mill to the Tailing Impoundments in two 44,600-foot long rubber-lined pipelines in a slurry at 38% by weight solids. Molycorp is currently permitted to discharge up to 20,000 tons per day (up to a maximum of 82 million tons) of tailings to the Tailing Impoundments. The Tailing Impoundments are unlined and were constructed in two deeply incised arroyos which run in a southwesterly direction towards the Red River. Mine water from the Molycorp Questa Mine is also discharged to the Tailing Impoundments via the tailings pipeline. The mine water includes water pumped from the underground mine, water diverted from the Red River, storm water from the mill area, and water pumped from the Molycorp supply wells. Prior to discharge, the mine water is pumped to the mill where it is treated with lime to a pH between 6 and 9 standard units.

A portion of the mine water and tailings water deposited on the Tailing Impoundments moves directly or indirectly into ground water. Molycorp operates a Seepage Interception System below Dams No. 1 and 4 to intercept some of the seepage from the Tailing Impoundments. Tailings seepage water, extracted contaminated ground water, and decant water from the tailings is collected and discharged to the Red River pursuant to the existing National Pollutant Discharge Elimination System (NPDES) permit (Permit No. NM0022306) limitations. Decant water is processed in an Ion Exchange (IX) plant, when necessary, to meet NPDES limitations.

The modification to DP-933 is briefly described as follows:

The Discharge Permit Modification, in accordance with Condition 2.k. of the Final Order, incorporates a revised closure plan that includes a schedule and plan for closing, covering, and revegetating the Tailing Impoundments; closure of associated facilities; a seepage interceptor plan; post-closure monitoring and maintenance; test plots and other additional studies; a contingency plan; and a financial assurance plan. Ground water below the Tailings Impoundments ranges from approximately 20 to more than 200 feet below ground surface and has a total dissolved solids concentration of approximately 190 milligrams per liter.

The Discharge Permit Modification consists of letters and documents submitted by Molycorp to NMED dated March 1996, November 21, 1996, January 1997, March 14, 1997, June 30, 1997, October 1997, October 22, 1997, November 4, 1997, December 1, 1997, February 1998, March 1998, April 1998, April 30, 1998, May 1, 1998, September 30, 1998, July 29, 1999, January 21, 2000, January 31, 2000, February 29, 2000, March 30, 2000, May 19, 2000, July, 2000, July 3, 2000, July 14, 2000, July 31, 2000 and September 11, 2000. The discharge shall be managed in accordance with the terms, requirements, and conditions of DP-933 and is subject to the conditions listed in section III of this modification.

Approval of this Discharge Permit Modification does not relieve Molycorp of its responsibility to comply with all conditions or requirements of the Final Order for DP-933, WQA, WQCC Regulations, and any other applicable federal, state and/or local laws and regulations. Unless this modification explicitly states so, approval of this Discharge Permit Modification does not terminate, remove or otherwise limit any condition or requirement in the Final Order and Discharge Permit issued on February 26, 1997.

II. DEFINITIONS

Whenever any terms defined in the WQA or the WQCC Regulations, 20 NMAC 6.2, are used in this Discharge Permit Modification, including any documents incorporated herein by reference, those definitions shall apply. In addition, whenever the terms listed below are used in this Discharge Permit Modification, including any documents incorporated herein by reference, the following definitions shall apply:

“Discharge” means any spilling, leaking, pumping, pouring emitting, emptying, or dumping into water or in a location and manner where there is a reasonable probability that the discharged substance will directly or indirectly reach surface or subsurface water.

“DP-933” means Discharge Permit 933 issued by the NMED.

“Final Order” means that Final Order from the Secretary of NMED approving DP-933 dated

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February 26, 1997.

“Molycorp” means Molycorp Inc., a corporation organized under the laws of Delaware and doing business in New Mexico that is a wholly-owned subsidiary of Unocal, and any successors or assigns.

“Molycorp Questa Mine” means the molybdenum mine and milling facility owned and operated by Molycorp located near the Village of Questa in Taos County, New Mexico and all surrounding property over which Molycorp has an ownership interest or a leasehold interest.

“Molycorp Tailings Disposal Facility” means all facilities associated with transport and disposal of mill tailings from the Molycorp Questa Mine facility, including the mill, tailings pipeline and associated sumps, and tailing impoundments.

“Tailing Impoundments” means the tailing impoundments owned and operated by Molycorp located near the Village of Questa in Taos County, New Mexico.

“WQA” means the New Mexico Water Quality Act, NMSA 1978, §§ 74-6-1 through 74-6-17, and any amendments thereto.

“WQCC Regulations” means 20 NMAC, Chapter 6, Parts 1 and 2, and any amendments thereto.

III. CONDITIONS

The following conditions shall be complied with by Molycorp and are enforceable by NMED.

CLOSURE PLAN

The components of the closure plan are as follows:

Surface Shaping Plan

1. Molycorp shall close the Tailing Impoundments in a manner that ensures positive drainage and eliminates ponding on the tailings surface and final cover surface. To facilitate closure, the tailing impoundment surfaces shall be constructed to drain from northeast to southwest. At closure, the tailing decant ponds shall be located at the western boundaries of five individual tailing impoundment zones identified in Figure 3-20 of the *Questa Tailings Facility Revised Closure Plan* (Robertson Geoconsultants Inc., April 1998). The ponds shall be breached and drained by constructing spillways to the western diversion channel as soon as practicable after final tailings elevations have been reached

at each tailings impoundment zone. Molycorp shall notify NMED at least 180 days prior to reaching final tailings elevations, and shall provide a detailed schedule for completion of surface shaping, final cover placement, drainage, and revegetation activities. The surface of the Tailing Impoundments shall be sloped towards the ponds and each tailings impoundment zone shall include rip rap-lined drainage swales. The Pope Lake embankment shall be breached to allow free flow of water along the western diversion channel.

2. Molycorp shall submit a life-of-mine operational plan for tailings placement within 180 days of the effective date of this Discharge Permit Modification. The plan shall be submitted for NMED approval and shall define the tailings impoundment design and sequence of tailings placement so that positive drainage is achieved and regrading is minimized in the event of early facility closure, e.g., closure of the facility before the designed final tailings elevations are reached. The plan shall include submittal of design drawings to NMED prior to each future raising of tailing dams.
3. Molycorp shall submit engineered design drawings of the tailings, a survey report and associated topographic maps, and an evaluation of tailings settlement to NMED for approval prior to placement of a final cover on each tailings impoundment zone. The contour intervals of the topographic maps shall be no greater than two feet and shall document positive drainage on the tailing surfaces. The tailings settlement evaluation shall describe settlement characteristics of the tailings and monitoring methods utilized.

Cover Placement Plan

4. Molycorp shall cover the Tailing Impoundments with a minimum of 36 inches of alluvium as part of facility closure. The alluvium shall serve as a water storage and release cover to minimize infiltration of precipitation into underlying tailings and subsequent discharge of tailings leachate into ground water and surface water. The cover shall provide for physical stabilization, chemical stabilization, and revegetation. Final cover placement shall begin as soon as surface shaping activities are complete for each tailings impoundment zone and shall be completed as soon as practicable.
5. Molycorp shall submit a construction quality assurance (CQA) plan to NMED for approval at least 180 days prior to placement of any cover material over any tailings impoundment zone for final closure. A final CQA report shall be submitted to NMED within 60 days of project completion. The CQA report shall include, at a minimum, as-built drawings, a final topographic map with no greater than two-foot contour intervals, a summary of work conducted, soil testing results, laboratory analytical reports, identification of the location and extent of borrow areas, and construction photographs.

Drainage Plan

6. Molycorp shall implement a drainage plan that provides for permanent stable diversion of flows around the Tailing Impoundments, drainage of water from the surface of the Tailing Impoundments, and prevention of erosion of the cover. To achieve long-term diversion of flows, the east and west diversion ditches adjacent to the Tailing Impoundments shall be left as permanent drainage channels following site closure. The western diversion ditch shall be extended at least 50 yards to prevent flow and subsequent erosion on Dam No. 4.
7. The drainage plan implemented by Molycorp shall include discharge of surface runoff to riprap-lined swales on the Tailing Impoundment surfaces. The swales shall drain via engineered outlet structures to the riprap-lined drainage channels described in Condition 1. Detailed engineering designs for outlet structures and riprap-lined channels and swales shall be submitted for NMED approval at least 180 days prior to construction. As-built drawings and final design specifications shall be included with the CQA report described in Condition 5.

Revegetation Plan

8. Molycorp shall revegetate the Tailing Impoundments as part of site closure to: 1) maximize the ability of the water storage cover to reduce infiltration into underlying tailings, and 2) provide protection from wind and water erosion. The plan shall include establishment of four plant community types over specified areas of the covered tailings, as described in the *Questa Tailings Facility Revised Closure Plan* (Robertson GeoConsultants Inc., April 1998). The revegetation plan shall incorporate the findings of studies conducted pursuant to Conditions 35 through 44, as appropriate to protect water quality. Molycorp shall submit to NMED any submittals approved by MMD associated with the Revegetation Test Plot Study. Revegetation activities to protect water quality shall be completed as soon as practicable following placement of the final cover at each tailing impoundment zone.

Building and Cleanup Plan

9. Molycorp shall submit a plan for NMED approval 180 days prior to the removal of the administrative/change house building and the IX Water Treatment Plant. Prior to removal, the IX Water Treatment Plant shall be operated and maintained until use of the plant for treatment of surface water and/or ground water is no longer required by NMED. The plan shall include a soil sampling plan for the area surrounding the buildings, a sampling plan for the structures, and a contingency plan to address potentially

contaminated soils and other materials. Contaminated soil shall be abated in accordance with 20 NMAC 6.2 Subpart IV.

10. Molycorp shall remove the tailing pipelines and close the associated sumps as soon as they are no longer needed for site operations. Any residual tailings shall be removed from the sumps prior to closure. Molycorp shall submit a plan for NMED approval outlining specific closure procedures for the upper and lower sumps, and any other structures designed to contain tailings at least 180 days prior to scheduled removal activities. Ground water monitoring wells LS-1, LS-2, LS-3, US-1, US-2, and US-3 for the upper and lower sump areas shall be abandoned in accordance with NMED Guidelines for Monitor Well Construction and Abandonment (attached). Prior to pipeline removal Molycorp shall triple rinse the pipelines to ensure removal of all potential contaminants contained in the pipeline. During pipeline removal, Molycorp shall inspect the entire pipeline area for any evidence of past spills. Molycorp shall document all areas where there is evidence of spills and shall propose corrective actions to NMED pursuant to the provisions of 20 NMAC 6.2.1203. Corrective actions shall include evaluation of cleanup alternatives.

Seepage Interceptor and Abatement Plan

11. Following cessation of operations, Molycorp shall address ground water contamination in accordance with the WQCC Regulations at 20 NMAC Chapter 6, Part 2, Subpart 4 and the standards set forth therein in order to abate ongoing ground water contamination. Abatement of ground water contamination shall include, at a minimum, continued operation of the Seepage Interceptor System until ground water standards are met as defined by 20 NMAC 6.2.4103.
12. Molycorp shall conduct a detailed evaluation of alternatives to the Seepage Interception System for post-closure seepage interception. The evaluation shall include the design and performance of biobarriers, cutoff walls, interceptor drains and other alternatives and shall describe the feasibility of using these options as components of the Seepage Interceptor System at closure. This evaluation shall address the feasibility of implementation, long-term effectiveness, operation and maintenance requirements, and time frame to achieve water quality standards. A report presenting the results of this evaluation and a proposal for potential upgrades to the Seepage Interceptor System design shall be submitted for NMED approval within two years of approval of this Discharge Permit Modification.

Post-Closure Monitoring and Reporting, and Other Requirements

13. Molycorp shall perform post-closure monitoring for a minimum period of thirty (30) years following completion of final closure construction activities, including cover placement, at all tailing impoundment zones. After five years of monitoring, NMED, in its sole discretion, may amend the monitoring frequency, location, and analytical parameters or other measurements set forth in Conditions 14 through 23 for good cause shown in a written request. Molycorp shall plug and abandon all wells installed as a result of facility operations according to the NMED Guidelines for Monitor Well Construction and Abandonment (attached), upon notification from NMED that post-closure monitoring may cease. Molycorp shall conduct the following monitoring, reporting, and other requirements listed below in accordance with the WQCC Regulations, 20 NMAC 6.2.3107.

Sampling and Field Measurements

14. Ground Water Monitoring Wells. Molycorp shall conduct post-closure monitoring of all existing ground water monitor wells and all monitoring wells installed after issuance of this Discharge Permit Modification. Molycorp shall record the depth to the water table to the nearest hundredth of a foot (0.01 ft) in all existing monitoring wells, and all monitoring wells installed after the issuance of this Discharge Permit Modification, on a quarterly basis. Monitoring wells located down gradient of any Seepage Interceptor System extraction wells or seepage barriers shall be sampled quarterly and include the following well designations: MW-A, MW-B, MW-C, MW-1, MW-2, MW-3, MW-6, MW-7, MW-9, MW-12, and EW-2. Other site monitoring wells shall be sampled biannually and include the following well designations: MW-4, MW-10, MW-11, MW-13, MW-14, and MW-CH. Samples shall be analyzed for the parameters listed in Condition 23 below. Analytical results and depth to ground water measurements shall be reported as required in Condition 25 below.
15. Ground Water Supply Wells. Molycorp shall monitor ground water quality in any private supply well within a reasonable proximity to the Molycorp Tailings Disposal Facility when the well owner or NMED requests an analysis. Molycorp is solely responsible for obtaining access to private wells and shall make a good faith effort to obtain access to private wells for which NMED requests analysis. Samples shall be collected once per quarter and analyzed for the water parameters listed in Condition 23 below. Analytical results shall be reported as required in Condition 25 below.
16. Seeps. Molycorp shall monitor water quality in the East and West Seeps below Dam No. 1, and in any other discrete seeps below the tailings dams at the time of site closure. Samples shall be collected from each seep once per quarter and shall be analyzed for the water parameters listed in Condition 23 below. Active seep locations shall be recorded

on a map and seep flow rates shall be measured, to the extent practicable, in gallons per minute (gpm) from each flowing seep once per month. Seep locations, analytical results, and seep flow rates shall be reported as required in Condition 25 below.

17. Springs. Molycorp shall conduct quarterly post-closure monitoring of the following spring locations after site closure: 1) Questa Springs Surface Discharge; 2) Questa Springs Old Discharge Pipe; and 3) First Spring below Pope Creek. The following additional monitoring locations shall be sampled on an annual basis during baseline flow conditions: 4) Hatchery Cold Water Supply; 5) South Side Spring; 6) Spring near the Concrete Collection Box; and 7) Hatchery Warm Water Supply. At the time of sample collection, spring flow rates shall be measured in gallons per minute (gpm) at each sampling location. Samples shall be analyzed for the parameters listed in Condition 23 below. Analytical results and flow rates shall be reported as required in Condition 25 below.
18. Seepage Interception System. Molycorp shall continue to monitor the Seepage Interception System components following facility closure. Points to be monitored include extraction wells EW-1, EW-2, EW-3, EW-4, EW-5A, EW-5B, EW-5C, and EW-5D; the seepage barriers; Outfalls 001 and 002; and any new components to the Seepage Extraction System installed after issuance of this Discharge Permit Modification. The extraction wells, seepage barriers, and Outfalls 001 and 002 shall be sampled biannually for a minimum of 30 years following site closure. Molycorp shall record the depth to the water table to the nearest hundredth of a foot (0.01 ft) in all extraction wells on a quarterly basis. The total cumulative flow rate of intercepted and extracted seepage water shall also be monitored and recorded. Samples shall be analyzed for the parameters listed in Condition 23 below. Analytical results and flow rates shall be reported as required below in Condition 25.
19. Piezometers. Molycorp shall record the depth to water to the nearest hundredth of a foot (0.01 ft) in all piezometers existing at the time of site closure. Monitoring and reporting frequency shall be quarterly. A potentiometric map depicting tailings draindown shall be submitted annually. Any changes to the piezometer network shall be reported to NMED. Molycorp shall install additional piezometers if required by NMED to ensure that the monitoring network is adequate.
20. Revegetation. Molycorp shall perform post-closure monitoring of tailings revegetation to ensure that the revegetation is protective of water quality. Post-closure revegetation monitoring shall be performed, at a minimum, pursuant to time frames and monitoring requirements approved by MMD to meet NMMA requirements. Molycorp shall provide a summary of revegetation monitoring results, including photographic documentation, in annual reports to NMED. At such time as MMD's revegetation monitoring requirements

under the NMMA have been met, revegetation monitoring shall continue under the authority of NMED pursuant to this discharge permit.

20. Erosion. Molycorp shall perform inspections for evidence of erosion at all covered Tailing Impoundments, dams, drainage channels and diversion ditches. The inspections shall be conducted monthly for the first year following final cover placement at any tailings impoundment zone, and quarterly thereafter. Reclaimed tailings surfaces shall additionally be inspected for evidence of erosion after storm events of one inch or greater in any one day period. The results of the inspections shall be reported quarterly and shall include recommendations for maintenance.
21. Meteorological Data. Molycorp shall conduct post-closure monitoring of meteorological conditions at the Tailings Impoundments. Meteorological conditions that shall be recorded include air temperature, relative humidity, wind speed, wind direction, precipitation, and net radiation. A summary of meteorological data collected shall be reported annually.

Analysis

22. Molycorp shall analyze samples of ground water and surface water for the parameters listed below. Samples of ground water from supply wells shall be analyzed for both total and dissolved concentrations of the analytes listed below. Samples collected from ground water monitoring wells, the Seepage Interception System, seeps, and springs shall be analyzed for dissolved concentrations of the analytes listed below.
 - a. Field parameters (analysis to be performed in the field): temperature, pH, and electrical conductivity.
 - b. General chemistry parameters: calcium, magnesium, sodium, potassium, carbonate, bicarbonate, sulfate, chloride, nitrate, fluoride, and total dissolved solids.
 - c. Metals parameters: aluminum, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury (total concentration only), molybdenum, nickel, selenium, silver, vanadium, and zinc.

Methodology

24. Unless otherwise approved in writing by NMED, Molycorp shall conduct sampling and analysis in accordance with the most recent edition of the following documents:

- a. American Public Health Association, *Standard Methods for the Examination of Water and Wastewater*.
- b. U.S. Environmental Protection Agency, *Methods for Chemical Analysis of Water and Waste*.
- c. U.S. Geological Survey, *Techniques for Water Resource Investigations of the U.S. Geological Survey*.
- d. American Society for Testing and Materials, *Annual Book of ASTM Standards, Part 31, Water*.
- e. U.S. Geological Survey, et al., *National Handbook of Recommended Methods for Water Data Acquisition*.
- f. Surface water monitoring must also be conducted according to test procedures approved under Title 40 of Federal Regulations Part 136.

Reporting

25. Molycorp shall submit quarterly monitoring reports containing information collected during the preceding calendar quarter on or before March 31, June 30, September 30, and December 31 of each year. Monitoring reports shall include results of all monitoring tasks described in Conditions 14 through 23 above and shall include copies of all raw data.
26. Molycorp shall prepare a potentiometric map annually that includes data from all monitoring wells, extraction wells, piezometers, and springs. The potentiometric map shall be submitted with the monitoring report submitted by September 30.
27. Molycorp shall include in the quarterly monitoring reports a description of any work completed during the preceding quarter towards final closure of the Tailing Impoundments. This requirement includes but is not limited to: 1) status of closure activities for each tailing impoundment zone and 2) any maintenance and repair work conducted for any closure component.

Post-Closure Maintenance

28. Molycorp shall perform quarterly inspections and annual evaluations of the Seepage

Interception System and perform maintenance as necessary. Maintenance may include, but is not limited to the following: 1) purging of extraction wells; 2) upgrading or replacement of seepage barriers; and 3) servicing or replacement of components of the extraction system. The inspection results and any maintenance performed by Molycorp on Seepage Interception System components shall be reported biannually as part of monitoring reports required in Condition 27.

29. Molycorp shall perform maintenance on the final cover and any associated drainage and diversion structures, as necessary, to ensure protection of water quality. Based on monitoring of erosion and revegetation described in Conditions 20 and 21, Molycorp shall provide recommendations for maintenance work in quarterly monitoring reports, including a schedule for completion of the work.

Implementation of the Closure Plan

30. Molycorp shall implement the closure plan within 180 days of facility closure or within one year of cessation of tailings deposition at the Tailing Impoundments, whichever occurs first. For purposes of this Discharge Permit Modification, facility closure includes cessation of all permitted discharges from the tailings pipeline to the Tailing Impoundments, cessation of normal operations at the Molycorp Questa Mine, bankruptcy of Molycorp, or abandonment of the Tailing Impoundments. Molycorp may request an extension and delay all or portions of the closure plan if the request includes an adequate operational and interim closure plan for the stand-by period. An extension shall only be granted, for good cause shown, if Molycorp demonstrates that the delay will not cause ground water or surface water quality to be further degraded. The extension shall not be longer than the remaining term of the existing discharge permit. Upon initiation of the discharge permit renewal process, stand-by requirements and proposed time frames for implementation of the closure plan shall be re-evaluated by NMED.

Contingency Plan

31. If Molycorp discovers a significant increase in the extent or magnitude of ground or surface water contamination upon cessation of operations or during post-closure monitoring, or a significant increase in discharge volume from any seep or existing discharge point, Molycorp shall notify NMED within 5 days of discovery of the increase. If NMED discovers such an increase, it will notify Molycorp. Within 60 days of discovery or receipt of notification, whichever is earlier, Molycorp shall submit to NMED for approval an abatement plan including an implementation schedule to address source control and abatement of the contamination in accordance with 20 NMAC 6.2.4101 to 4115. Upon NMED approval, Molycorp shall implement the abatement plan in accordance with the implementation schedule. The approved abatement plan and schedule shall be incorporated herein by reference and deemed an enforceable part of DP-933.
32. Molycorp shall submit a contingency plan for NMED approval within 90 days of the effective date of this Discharge Permit Modification to address failure of any component of the revised closure plan, including but not limited to failure of collection, containment or treatment systems, failure of covers or revegetation, failure of surface run-on and run-off controls, or failures in slope stability, that may result in an exceedance of water quality standards or otherwise threaten public health or the environment. The contingency plan shall provide criteria for determination of closure component failures, including cover erosion criteria.

33. If information collected after closure of the Tailing Impoundments indicates that the comprehensive cover performance evaluation described in Condition 35 did not accurately predict actual cover performance, and if NMED determines the cover is not protective of ground water quality, Molycorp shall propose and implement a remedy which may include redesign of the final cover over the tailings.
34. If NMED or Molycorp identifies any other failure of the Discharge Permit Modification or system not specifically noted above, NMED may require Molycorp to develop for NMED approval contingency plans and schedules to address such a failure.

Additional Studies

35. Molycorp shall submit a work plan for a comprehensive cover performance evaluation within 90 days of the effective date of this Discharge Permit Modification for NMED approval. The purpose of the comprehensive cover performance evaluation is to reevaluate the thickness of the alluvial cover proposed to be placed on the Tailing Impoundments for site closure. The comprehensive cover performance evaluation shall be submitted within three years of the effective date of this Discharge Plan Modification, and thereafter updated one year prior to each renewal of DP-933, and shall incorporate the results of the studies defined in Conditions 36 through 41. The evaluation shall include, at a minimum, a prediction of post-closure impacts of tailings seepage to ground water quality based on a calibrated soil atmosphere model, calibrated ground water flow model(s), and geochemical modeling. Molycorp shall solicit input from interested participants on the cover performance evaluation work plan and all supporting studies defined in Conditions 36 through 41. Molycorp shall provide funding for an independent third party review selected by NMED in consultation with MMD for the cover performance evaluation. Based on the results of the comprehensive cover performance evaluation and each update of the evaluation, NMED will reevaluate the cover design required in Condition 4 and modify the cover design if it is demonstrated that a different cover design will be necessary to meet ground water quality standards after closure.
36. Within one year after the effective date of this Discharge Permit Modification, Molycorp shall submit for approval by NMED a work plan and implementation schedule to verify and improve the understanding of the local and regional hydrogeology at the Tailing Impoundments and in the surrounding vicinity. The work plan shall consider the data needs for the cover performance evaluation described in Condition 35. The work plan shall address, at a minimum, collection of additional field data and refinement of the regional and local ground water flow models within three years after approval of this Discharge Permit Modification.

37. Molycorp shall reevaluate the tailings geochemistry three years after the effective date of this Discharge Permit Modification. A work plan, including a schedule for completion of the study and a final report, shall be submitted for NMED approval. The work plan shall consider the data needs for the cover performance evaluation described in Condition 35. The evaluation shall include a summary of tailings sample monitoring results, temporal and spatial changes in the tailings geochemistry, and a comparison of the tailings geochemistry to current and future ore body geochemistry. The final report shall include a proposal for geochemical modeling based on the completion of the tailings geochemistry evaluation, the study described in Condition 36, and all available data.
38. Molycorp shall complete a Surface Erosion and Stability Study in accordance with the *Work Plan for Surface Erosion and Stability Analysis, Tailings Dam Facility* (Robertson GeoConsultants Inc., January 31, 2000), the addendum to the work plan, dated March 30, 2000, and the *Surface Erosion and Stability Analysis, Questa Tailings Facility, New Mexico* (Robertson GeoConsultants Inc., July 2000). The results of the study shall be submitted to NMED for approval and shall document how physical stabilization of the Tailing Impoundments shall be achieved as part of site closure.
39. Molycorp shall conduct a Revegetation Test Plot Study in accordance with the *Work Plan for Revegetation Test Plot Program – Tailings Facility* (Robertson GeoConsultants Inc., February 29, 2000), as amended by MMD. Any amendments to the Revegetation Test Plot Study must ensure that revegetation is protective of water quality. Molycorp shall submit annual reports to NMED presenting the results of the revegetation study, including recommendations for improvements to the study. Molycorp shall submit to NMED any submittals approved by MMD associated with the Revegetation Test Plot Study. The Revegetation Test Plot Study shall continue until test plots demonstrate that revegetation will be protective of water quality upon closure of the Molycorp Tailings Disposal Facility.
40. Molycorp shall conduct a Storage Cover Test Plot Study to evaluate net infiltration through the proposed water storage cover. The study shall be performed in accordance with *Workplan for Storage Cover Test Plot Study, Questa Tailings Facility*, dated January 31, 2000, and Molycorp's response to NMED comments dated May 19, 2000.
41. Molycorp shall complete a Borrow Materials Investigation in accordance with the *Work Plan for Borrow Materials Investigation – Tailings Facility* (Robertson GeoConsultants Inc., January 31, 2000) and the *Borrow Materials Investigation – Tailings* (Robertson GeoConsultants Inc., July 31, 2000). The investigation results shall be submitted for NMED approval and shall document how proposed cover materials will meet the requirements of Condition 4.

42. Molycorp shall conduct a comprehensive study of historic tailings spills and potential associated impacts to water quality. Molycorp shall submit a work plan for completion of the study to NMED for approval within 90 days of the effective date of this Discharge Permit Modification. The study shall address documentation and delineation of any areas containing spilled tailings, including the Red River, characterization of the delineated areas, and abatement of these areas in accordance with 20 NMAC 6.2 Subpart IV.
43. Molycorp shall submit to NMED the results of any ongoing or future studies performed under the jurisdiction of other agencies to determine or address potential impacts to wildlife following closure of the Tailings Impoundments.
44. If the results of the studies described above in Conditions 34 through 42 indicate that additional or alternative closure actions are necessary to protect ground water and surface water in accordance with applicable water quality standards, Molycorp shall petition to amend or modify DP-933 to ensure protection of ground water and surface water.

FINANCIAL ASSURANCE

45. Within 30 days of the effective date of this Discharge Permit Modification, Molycorp shall submit a draft of its proposed revised financial assurance instrument(s) in the amount of \$23,027,393 for the cost of a third party to implement the revised closure plan described in Conditions 1 through 34. The proposed financial assurance instrument(s) must be worded as in the appropriate forms provided by NMED, and shall incorporate the provisions of Condition 46 below. Within 30 days of NMED approval of the revised financial assurance instrument(s), Molycorp shall take all necessary actions to replace the existing financial assurance instrument with the revised financial assurance instrument. Upon successful implementation of the revised financial assurance, the NMED Secretary will release Molycorp from the earlier financial assurance.
46. General Financial Assurance Requirements are as follows:
 - a. The financial assurance shall be executed in an amount equal to the NMED approved closure cost estimate. The closure cost estimate shall include direct costs associated with third party implementation of the closure plan, contingency costs in the amount of 15 percent of the direct costs, and NMED oversight and administration costs, including indirect costs. NMED's indirect cost rate is set by NMED at a fixed rate each fiscal year, and will be provided to Molycorp.
 - b. Except as provided below, NMED shall be named as the sole beneficiary in the

financial assurance instrument(s). Molycorp may select a joint financial assurance instrument(s) to meet the requirements of NMED and the New Mexico Energy, Minerals and Natural Resources Department (EMNRD). If a joint instrument(s) is selected, both NMED and EMNRD shall be named as joint beneficiaries and the joint instrument(s) shall meet the requirements of both agencies.

- c. Within 30 days of execution and implementation of the financial assurance instrument(s), Molycorp shall establish a Standby Trust, which names NMED (or NMED and EMNRD for joint financial assurance) as the beneficiary. The Standby Trust Agreement shall be worded as in the form provided by NMED. The Standby Trust shall be maintained until the financial assurance is released. All amounts forfeited under DP-933 shall be deposited directly into the Standby Trust.
- d. The financial assurance instrument(s) shall remain in effect throughout the term of DP-933 and until released by NMED. The financial assurance shall remain in place at all times, including lapses in discharge permit coverage, late discharge permit renewal or temporary shutdown of facilities covered under DP-933.
- e. The financial assurance shall include a method for adjustments due to inflation, new technologies, and NMED approved revisions to the closure plan based on continued investigations.
- f. No more than once every 12 months Molycorp may request that NMED review remaining closure measures. The request for closure review shall describe the closure measures completed and shall contain a cost estimate for remaining closure measures. If NMED approves the description of completed closure measures and the cost estimate remaining closure measures, NMED will adjust the amount of financial assurance to reflect the revised cost estimate.
- g. The financial assurance shall be evaluated, and if necessary, revised to comply with WQCC financial assurance regulations, if and when such regulations are promulgated and become effective.
- h. The financial assurance shall include a provision, which requires the financial assurance provider to provide at least 120 days written notice to NMED and Molycorp prior to cancellation or non-renewal of the financial assurance. Molycorp shall obtain an NMED-approved alternate financial assurance mechanism within 60 days of such notice. If Molycorp fails to obtain alternate financial assurance within 60 days, the current financial assurance shall become immediately payable to the Standby Trust.

- i. If NMED determines that implementation of the closure plan is required and that Molycorp is unable or unwilling or will otherwise fail to conduct or complete the closure requirements of this Discharge Permit Modification, then NMED may proceed with forfeiture of all or part of the financial assurance. Prior to beginning a forfeiture proceeding, NMED will provide written notice, by certified mail return receipt requested, to Molycorp and to the surety informing them of the determination to forfeit all or a portion of the financial assurance. The written notice will state the reasons for the forfeiture and the amount to be forfeited. The amount shall be based on the total cost of performing closure, including post-closure monitoring and maintenance, in accordance with this Discharge Permit Modification and all applicable laws and regulations. NMED will also advise Molycorp and the surety of the conditions under which forfeiture may be avoided. Such conditions may include, without limitation, an agreement by Molycorp, by a surety, or by another person, to perform closure, including post-closure monitoring and maintenance, in accordance with this Discharge Permit Modification and all applicable laws and regulations, and a demonstration that such person has the financial ability and technical qualifications to do so. All financial assurance forfeited shall become immediately payable to the Standby Trust. Forfeited funds shall be used to complete performance of closure. If forfeited amount is insufficient, Molycorp shall be liable for the remaining costs. If the amount forfeited is more than necessary, the excess amount shall be refunded to the person from whom it was collected.
- j. The financial assurance shall be released or modified when NMED determines that closure measures covered by the financial assurance have been completed according to the closure plan requirements of this Discharge Permit Modification.
- k. Attached as Exhibit A to this Discharge Permit Modification is an itemized summary of the financial assurance amounts. The itemization shall not be construed so as to limit the amount of financial assurance that may be expended on a particular activity.

IV. GENERAL PERMIT REQUIREMENTS

In addition to any other requirements provided by law, this Discharge Permit Modification is subject to the General Requirements set forth in the Final Order dated February 26, 1997 attached to this modification. Refer to the attached Final Order for specific information on the following General Requirements:

Record Keeping
Inspection and Entry

Molycorp Tailings Disposal Facility, DP-933

November 29, 2000

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Duty to Provide Information
Spills, Leaks and Other Unauthorized Discharges
Retention of Records
Enforcement
Modification and/or Amendments

Unless otherwise specified in this Discharge Permit Modification, all conditions of this modification may be removed or terminated through modification of the Permit pursuant to WQCC Regulations and the WQA.

V. COMPLIANCE WITH OTHER LAWS

Nothing in this Discharge Plan Modification shall be construed in any way as relieving Molycorp of its obligation to comply with all applicable federal, state, and local laws, regulations, permits or orders.

VI. RIGHT TO APPEAL

Pursuant to the section 74-6-5.N of the WQA, Molycorp may file a petition for a hearing before the WQCC on this Discharge Permit Modification. Such petition must be made in writing to the WQCC within 30 days after Molycorp receives notice of the Discharge Permit Modification. Unless a timely petition for a hearing is made, the decision of NMED shall be final.

VII. TERM

Pursuant to the section 74-6-5.H of the WQA, and 20 NMAC 6.2.3109.H, this Discharge Permit Modification expires on February 26, 2002; the same day as expiration of DP-933. To renew the Discharge Permit, Molycorp must submit an application for renewal at least 180 days before the expiration date.

Issued this 29th day of November, 2000

JAMES NAJIMA
Director Environmental Protection Division
New Mexico Environment Department

**DISCHARGE PERMIT
MOLYCORP QUESTA MINE, DP-1055**

I. INTRODUCTION

The New Mexico Environment Department (NMED) issues this Discharge Permit (DP-1055) to Molycorp, Inc. (Molycorp) pursuant to the New Mexico Water Quality Act (WQA), NMSA 1978 §§ 74-6-1 through 74-6-17, and the New Mexico Water Quality Control Commission (WQCC) Regulations, 20 NMAC Chapter 6, Part 2 (Nov. 15, 1996).

NMED's purpose in writing this Discharge Permit, and in imposing the requirements and conditions specified herein, is to control discharges of water contaminants from the Molycorp Questa Mine into ground and surface water, so as to protect ground and surface water for actual and potential future use as domestic and agricultural water supply and other uses; and to abate pollution of ground and surface water.

Activities Which Produce the Discharge: Molycorp has conducted molybdenum mining and concentrating operations at the Molycorp Questa Mine since 1918, when Molycorp commenced small-scale mining including underground mining. Molycorp conducted open pit mining operations from 1965 to 1983. Beginning in 1983, and continuing to the present time, Molycorp has conducted underground mining at the Molycorp Questa Mine site. Waste rock from the pit excavation, as well as from the underground mine, has been deposited in various locations, including drainages, adjacent to the open pit. Molycorp has placed the Questa Mine on standby on several instances in reaction to the depressed price of molybdenum. Beginning in 1992 when Molycorp placed the mine on standby, pumping of ground water from the underground workings was halted, and the water filled the underground workings to an elevation of 7,600 feet. Molycorp resumed pumping of ground water from the underground workings in August of 1994. Molycorp's underground mining activities have produced a subsidence zone in Goathill Gulch. Molycorp's concentrating operations produced tailings, some of which were deposited in an on-site surface impoundment known as the historical tailings impoundment.

The Molycorp Questa Mine waste rock, open pit, and subsidence zone all contain pyrite which, when oxidized, generates sulfuric acid. This acid then leaches contaminants from the rock, including heavy metals and sulfate, forming what is known as acid rock drainage or acid rock leachate. This leachate may move directly or indirectly into ground water.

Location of the Discharge: The Molycorp Questa Mine is located approximately 5 miles east of the town of Questa in Sections 1, 2, 3, 4, 11, 12 (projected) T28N, R13E, Sections 25, 26, 33, 34, 35, 36 (projected) T29N, R13E, Section 6 (projected) T28N, R14E, and Section 31, T29N, R14E, Taos County. The Questa Mine includes approximately 328 million tons of waste rock deposited near and adjacent to an open pit. Waste rock dumps are located in Capulin Canyon, Goathill Gulch, Spring Gulch, Blind Gulch, Old Sulphur Gulch, adjacent to the Red River in the Sugar Shack South and Middle waste rock dumps and near the surface facilities of the

underground mine in the Sugar Shack West waste rock dump. The historical tailings impoundment is located in the mill site area. The subsidence zone is located above the underground mine in Goathill Gulch. A surface-flow leachate collection system is located in Capulin Canyon. Storm water impoundments are located in Capulin Canyon, Goathill Gulch, in the area of the surface facilities for the underground mine, at the toe of the Sugar Shack South, Middle, and Old Sulphur Gulch waste rock dumps, at the mill site, in the open pit, and possibly in other locations. The location of these features is depicted in **Figure 1**.

Quantity, Quality and Flow Characteristics of the Discharge: Leachate from the Capulin Canyon, Sugar Shack South and Sugar Shack West waste rock piles, and from the open pit, and storm water runoff from the facility is discharged so it moves directly into ground water. Leachate from the Goathill Gulch, Spring Gulch, Blind Gulch, Old Sulphur Gulch and Middle waste rock dumps, and from the historical tailings impoundment, is or may be discharged so that it moves directly or indirectly into ground water. At least some of the leachate **exceeds health-based water quality standards** under the WQCC Regulations at 20 NMAC 6.2.3103.A for the constituents **cadmium, chromium, fluoride, and lead**; at least some of the **leachate exceeds other domestic water supply standards** under 20 NMAC 6.2.3103.B for the constituents **copper, iron, manganese, sulfate, total dissolved solids, zinc, and is below the acceptable pH range**; and at least some of the leachate exceeds water standards for **irrigation** use under 20 NMAC 6.2.3103.C for the constituents **aluminum, cobalt, and nickel**. Additionally, at least **some of the leachate exceeds the maximum contaminant level for beryllium**, a primary drinking water standard set by the U.S. Environmental Protection Agency under the federal Safe Drinking Water Act.

The Capulin Canyon waste rock dump currently discharges between 25 and 75 gallons per minute of leachate continuously. The Sugar Shack South and Sugar Shack West waste rock dumps may discharge leachate in a quantity sufficient to cause ground water to exceed standards for the contaminants listed above. The amount of leachate generated by the Goathill Gulch, Spring Gulch, Blind Gulch, Old Sulphur Gulch and Middle waste rock dumps, the historical tailings impoundment, and storm water impoundments will be determined during studies to be conducted under this Permit. The open pit collects precipitation and storm water runoff and directs it to ground water in the underground mine.

Characteristics of Ground Water: Ground water depth at the site varies from approximately 15 to greater than 200 feet. Ground water total dissolved solids concentration varies from approximately 390 milligrams per liter to greater than 1000 milligrams per liter. Ground water background concentrations may exceed water quality standards under the WQCC Regulations for some constituents in some areas of the mine, although NMED has not yet made any background determinations.

II. DEFINITIONS

Whenever any terms defined in the WQA or the WQCC Regulations are used in this Discharge Permit, including the Attachments hereto and any documents incorporated herein by reference, those definitions shall apply. In addition, whenever the terms listed below are used in this Discharge Permit, including the Attachments hereto and any documents incorporated herein by reference, the following definitions shall apply:

“Discharge” means any spilling, leaking, pumping, pouring, emitting, emptying, or dumping into water or in a location and manner where there is a reasonable probability that the discharged substance will directly or indirectly reach surface or subsurface water.

“Discharge Permit” means, unless otherwise specified, this Discharge Permit DP-1055 including the Attachments hereto and any documents incorporated herein by reference.

“Molycorp” means Molycorp, Inc., a corporation organized under the laws of the State of Delaware and doing business in New Mexico that is a wholly-owned subsidiary of Unocal, and any successors or assigns.

“Molycorp Questa Mine” means the molybdenum mine and milling facility owned and operated by Molycorp located near the Village of Questa in Taos County, New Mexico and all surrounding property over which Molycorp has an ownership interest or a leasehold interest.

“NMED” means the New Mexico Environment Department, a department of the executive branch and a constituent agency of the WQCC, and any successor agencies.

“WQA” means the New Mexico Water Quality Act, NMSA 1978 §§ 74-6-1 through 74-6-17, and any amendments thereto.

“WQCC” means the New Mexico Water Quality Control Commission.

“WQCC Regulations” means 20 NMAC, Chapter 6, Parts 1 and 2, and any amendments thereto.

“Water contaminant” means any substance that could alter if discharged or spilled the physical, chemical, biological, or radiological qualities of water, within the meaning of 20 NMAC 6.2.1101.XX. “Water contaminant” does not mean source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954.

III. FINDINGS

In issuing this discharge permit, NMED makes the following findings:

1. Molycorp is discharging leachate from the waste rock piles, the open pit, the historical tailings impoundment, and the storm water impoundments at its Questa Mine so that such leachate may move directly or indirectly into ground water within the meaning of 20 NMAC 6.2.3104.
2. Molycorp is discharging leachate from its Questa Mine so that such leachate may move into ground water of the State of New Mexico which has an existing concentration of 10,000 milligrams per liter or less of total dissolved solids within the meaning of 20 NMAC 6.2.3101.A.
3. Molycorp's discharge of leachate from its Questa Mine may be causing water quality standards to be exceeded in ground water within the meaning of 20 NMAC 6.2.3103.
4. Molycorp's discharge of leachate from its Questa Mine may result in a hazard to public health within the meaning of 20 NMAC 6.2.3105.H and 6.2.1101.W.

NMED may modify these findings based on new data or other information, including the background study to be conducted pursuant to Condition 24 below.

IV. CONDITIONS

Molycorp is permitted to discharge water contaminants subject to the following conditions.

MONITORING, REPORTING, AND OTHER REQUIREMENTS

1. Molycorp shall comply with the following monitoring, reporting, and other requirements listed below in accordance with the WQCC Regulations at 20 NMAC 6.2.3107. Molycorp may request a reduction in monitoring frequency, locations, and analytical parameters for NMED approval after two years of quarterly monitoring, or in the event that sampling stations are destroyed or become inaccessible.

Sampling and Field Measurements

2. Ground Water Monitoring Wells. Molycorp shall monitor ground water quality in all existing monitoring wells, and all monitoring wells installed after the issuance of this Discharge Permit. Samples shall be collected from each well once per quarter and analyzed for the water parameters listed in Condition 10 below. Molycorp shall record the depth to the water table to the nearest hundredth of a foot (0.01 ft) in all existing monitoring wells, and all monitoring wells installed after the issuance of this Discharge Permit, quarterly. Analytical results and depth to ground water measurements shall be reported as required in Condition 13 below. Existing monitoring wells designations are: MMW-2, MMW-3, MMW-7, MMW-

8A, MMW-8B, MMW-10A, MMW-10B, MMW-10C, MMW-11, MMW-11A, MMW-13, MMW-17A, MMW-17B, MMW-18A, MMW-18B, MMW-19A, MMW-19B, MMW-21, MMW-22, MMW-23A, MMW-23B, MMW-24, MMW-25A, MMW-25B, MMW-26A, MMW-27A, MMW-P-1, MMW-P-2, MMW-P-3, MMW-P-4A, MMW-P-4B, MMW-P-5A, MMW-P-5B, and MMW-P-5C. Monitoring well locations are depicted on Figure 1 of the report *1999 Hydrogeologic Investigation, Questa Mine, Taos County, New Mexico* (Souder Miller & Associates, March 17, 2000).

3. Ground Water Supply Wells. Molycorp shall monitor ground water quality in the domestic supply well located on property at mile marker 5 on the North side of New Mexico State Highway 38 and any other private supply well within reasonable proximity to the Molycorp Questa Mine when an analysis is requested by the well owner or by NMED. Samples shall be collected once per quarter, dependent on granting of access by the well owner, and analyzed for the water parameters listed in Condition 10 below. Analytical results shall be reported as required in Condition 13 below.
4. River. Molycorp shall monitor surface water quality in the Red River by collecting samples at 9 sampling locations along the Red River from above the Town of Red River to below the Fish Hatchery. Samples shall be collected once per quarter and analyzed for the water parameters listed in Condition 11 below. At the time of sample collection, surface water flow rates shall be measured in cubic feet per second (cfs) at the 9 sampling locations. Analytical results and surface water flow rates shall be reported as required in Condition 13 below. The 9 surface water sampling locations, stations 7, 10, 10a, 11, 11c, 12, 13, 14, and 16, are shown in Figure 1.
5. Seeps. Molycorp shall monitor water quality in all discrete seeps known to Molycorp at the Molycorp Questa Mine and all seeps flowing into the Red River from the Molycorp Questa Mine. Samples shall be collected from each seep once per quarter and shall be analyzed for the water parameters listed in Condition 10 below. Active seep locations shall be recorded on a map and seep flow rates shall be measured if practicable, or estimated, in gallons per minute (gpm) from each flowing seep once per month. The seep location map, analytical results and seep flow rates shall be reported as required in Condition 13 below.
6. Storm Water. Molycorp shall monitor water quality of storm water runoff from the waste rock piles by collecting at least two samples of runoff from each waste rock pile during storms representing the range of flow and snow melt conditions. Additionally, Molycorp shall monitor water quality in all storm water impounded for more than one day by collecting at least one sample from each such impoundment. Samples shall be analyzed for the water parameters listed in Condition 10 below. The volume of runoff shall be qualitatively described, and the amount of water in each impoundment shall be estimated at the time of

sample collection. Analytical results and volume measurements shall be reported as required in Condition 13 below.

7. Underground Mine Water. Molycorp shall monitor the quality of the water pumped from the underground mine. One sample shall be collected once per quarter from the underground reservoir at the decline and analyzed for the water parameters listed in Condition 10 below. The volume of water pumped from the underground mine shall be continuously measured using a totalizing flow meter and monthly meter readings shall be recorded. Analytical results and monthly meter readings shall be reported as required in Condition 13 below.
8. Boreholes. Molycorp shall monitor the existing boreholes in the waste rock piles, and all boreholes installed in the waste rock piles after the issuance of this Discharge Permit. Borehole monitoring shall be conducted a minimum of once per month or more often as proposed by Molycorp and approved by NMED, to determine variability due to diurnal effects, low and high temperature and barometric pressure events, precipitation, snowmelt, and seasonal variations. Each borehole will be sampled from ports located at multiple depths within the borehole and as described in the draft *Questa Waste Rock Investigation - Waste Pile Instrumentation As-Built Report* (SRK, September 1999) for temperature, oxygen, carbon dioxide, relative humidity, and barometric pressure. During each sampling event, Molycorp shall determine whether water is present in the borehole and, if present, the depth to water shall be measured and recorded. A water sample shall then be collected and analyzed for the water parameters listed in Condition 10 below. During each sampling event, snow depth at each borehole collar shall be measured and meteorological data shall be collected as required by Condition 9 below. Analytical results and field measurements shall be reported as required in Condition 13 below. Locations of existing boreholes are shown in Figure 3.
9. Meteorological Data. Molycorp shall monitor meteorological conditions through installation of primary and secondary meteorological stations as described in the draft *Work Plan for Waste Rock Water Balance Study, Questa Mine Site, New Mexico* (Robertson GeoConsultants Inc., February 2000). Measurements shall be recorded on data acquisition stations for precipitation, wind direction, wind speed, net radiation, air temperature, and relative humidity. Measurements shall also be taken contemporaneous with borehole measurements as required by Condition 8 above. Field measurements shall be reported as required in Condition 13 below.

Analysis

10. Leachate, Stormwater, and Ground Water. Molycorp shall analyze samples of leachate, stormwater and ground water for the parameters listed below. Samples of stormwater and ground water from supply wells shall be analyzed for both total and dissolved concentrations

of the analytes listed below. Samples of leachate and samples of ground water from monitoring wells shall be analyzed for dissolved concentrations of the analytes listed below.

- a. Field parameters (analysis to be performed in the field): temperature, pH, electrical conductivity, dissolved oxygen (DO), and reduction-oxidation potential.
 - b. General chemistry parameters: calcium, magnesium, sodium, potassium, carbonate, bicarbonate, sulfate, chloride, nitrate, fluoride, and total dissolved solids.
 - c. Metals parameters: aluminum, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury (total concentration only), molybdenum, nickel, selenium, silver, and zinc.
 - d. Other parameters: any other parameters as identified during ongoing investigations of potential source areas and as required by NMED.
11. Surface Water. Molycorp shall analyze samples of surface water for the parameters listed below. Samples of surface water shall be analyzed for both total and dissolved concentrations of the analytes listed below.
- a. Field parameters (analysis to be performed in the field): temperature, pH, and electrical conductivity.
 - b. General chemistry parameters: bio-chemical oxygen demand (BOD), chemical oxygen demand (COD), calcium, magnesium, sodium, potassium, carbonate, bicarbonate, sulfate, chloride, nitrate, fluoride, and total dissolved solids.
 - c. Metals parameters: aluminum, arsenic, barium, beryllium, cadmium, chromium, copper, iron, lead, manganese, mercury (total concentration only), molybdenum, nickel, selenium, silver, and zinc.
 - d. Other parameters: any other parameters as identified during ongoing investigations of potential source areas and as required by NMED.

Methodology

12. Unless otherwise approved in writing by NMED, Molycorp shall conduct sampling and analysis in accordance with the most recent edition of following documents:
- a. American Public Health Association, *Standard Methods for the Examination of Water and Wastewater*.

- b. U.S. Environmental Protection Agency, *Methods for Chemical Analysis of Water and Waste*.
- c. U.S. Geological Survey, *Techniques for Water Resource Investigations of the U.S. Geological Survey*.
- d. American Society for Testing and Materials, *Annual Book of ASTM Standards*, Part 31. Water.
- e. U.S. Geological Survey, et al., *National Handbook of Recommended Methods for Water Data Acquisition*.
- f. Surface water monitoring must also be conducted according to test procedures approved under Title 40 Code of Federal Regulations Part 136.

Reporting

- 13. Molycorp shall submit quarterly monitoring reports, containing information collected the preceding calendar quarter, on or before January 31, April 30, July 31 and October 31 of each year. Monitoring reports shall include results of all monitoring tasks described in Conditions 2 through 9 above and shall include copies of all raw data.
- 14. Molycorp shall prepare potentiometric surface maps for the alluvial and bedrock aquifers proximal to the Red River quarterly, and for all aquifers underlying the Molycorp Questa Mine annually, and shall submit the maps with the monitoring reports described in Condition 13 above. Molycorp may request a reduction in frequency for NMED approval after two years of quarterly preparation of potentiometric surface maps.
- 15. Molycorp shall include in the quarterly monitoring reports described in Condition 13 above a description of any work completed pursuant to this Discharge Permit during the preceding quarter. This requirement includes but is not limited to: a) completion of monitoring wells or boreholes including lithologic and construction logs and the northing, easting and top-of-casing elevation for each well as surveyed to the existing mine grid to the nearest hundredth of a foot (0.01 ft); b) emplacement of liners in impoundments including as-built construction diagrams; and c) maintenance, repair, and replacement of equipment used in the discharge system.

OPERATIONAL PLAN

16. Molycorp shall implement the following operational plan, including investigations, in accordance with the WQCC Regulations at 20 NMAC § 6.2.3106.C and 3107 to ensure compliance with 20 NMAC Chapter 6, Parts 1 and 2.

Investigation

17. Molycorp shall conduct an investigation of the Molycorp Questa Mine to collect additional information necessary to ensure that operations and closure will meet the requirements of 20 NMAC § 6.2.1101.TT, 3103, and 3107.A.11 and 20 NMAC § 6.1. The investigation shall be conducted in accordance with *draft NMED Ground Water Pollution Prevention Section Discharge Plan Closure Guidance for Mining Sites* (May 30, 1996) attached as **Attachment 1**. Results of the investigation will be included in the analysis of closure alternatives required by Condition 32 and the closure plan required by Condition 31. This investigation, which was begun prior to the issuance of this Discharge Permit, shall include without limitation the following components, each of which is subject to NMED review and oversight.
- a. Waste rock characterization with respect to, at a minimum, physical, geochemical and in-situ characteristics of waste rock dumps as described in Condition 8.
 - b. Geophysical surveys (seismic and electrical resistivity) to define the alluvium-bedrock interface and other geologic properties such as fracture orientations.
 - c. Water balance for waste rock dumps to evaluate impacts of saturated or unsaturated flow of leachate on underlying ground water.
 - d. Comprehensive hydrologic balance of the Red River watershed.
 - e. Vegetation test plots to investigate cover/revegetation alternatives.
 - f. Surface erosion and stability analysis of waste rock dumps.
 - g. Borrow materials and rooting zone investigation to evaluate cover/revegetation alternatives.
 - h. Open pit and subsidence area investigation to determine current and future physical and geochemical conditions and evaluate closure alternatives.
 - i. Projected water quality impacts due to re-flooding of underground mine workings.

18. Molycorp shall submit a site-wide comprehensive hydrologic report to NMED for review. The report shall be submitted within one hundred and twenty (120) days after the date of the issuance of this Discharge Permit. The report shall include: a) a description of all historical and current potential sources of ground water contamination on or resulting from the Molycorp Questa Mine, including but not limited to the waste rock dumps, subsidence zones, open pit, mill site, historic tailings impoundment at the mill site, pipeline spills, contaminated surface water sediments, maintenance areas, landfills, and chemical storage areas; b) a description of ground water quality for all aquifers underlying the Molycorp Questa Mine including delineation of the extent of water contaminants in excess of ground water numerical standards; c) a description of ground water gradients, elevations, flow directions and hydraulic properties for all aquifers underlying the Molycorp Questa Mine; d) a definition of the capture zone caused by dewatering of the underground mine; e) an identification of all stream reaches within and adjacent to the Molycorp Questa Mine where ground water is discharging to the Red River; f) an identification of all historical and current ground water discharge locations (i.e. seeps and springs) including the potential for springs to discharge into the Capulin Canyon waste rock dumps; g) to the extent feasible, an identification of all geologic faults and fractures that impact the flow of ground water beneath and adjacent to the Molycorp Questa Mine; and h) maps depicting any seasonal variations in ground water gradients and elevations, flow directions, discharge volumes, and gaining/losing stretches of the river. Based on the information provided in this report, NMED may require inclusion of additional monitoring points and additional monitoring parameters.

19. Molycorp shall install additional monitoring wells during the 2000 field season in order to monitor ground water quality up and down gradient of the storm water collection system in the mill site area, and down gradient of the old tailings impoundment in the mill site area. Additional wells may be required to fulfill the requirements of Condition 17 and 18 above. Monitoring well locations and construction design shall be pre-approved by NMED. Monitoring wells shall be constructed in accordance with *NMED Ground Water Pollution Prevention Section Monitoring Well Construction and Abandonment Guidelines* (June 6, 2000) attached hereto as **Attachment 2**. Lithologic and construction logs and survey information shall be reported as required in Condition 15 above. Once installed, wells shall be monitored as required in Condition 2 above.

Mine Dewatering

20. Molycorp shall continue to maintain its mine dewatering system so that it maximizes capture of leachate from the mine workings and the open pit and ensures underground mine water, pit water, and contaminated ground water in fractured bedrock are collected in a manner that prevents, to the maximum extent practicable, any additional contamination of ground water

and its subsequent impacts on surface water. Collected water must be disposed of in accordance with Discharge Plan 933.

Capulin Canyon Leachate Collection and Disposal System

21. Molycorp shall upgrade and maintain the Capulin Canyon leachate collection and disposal system in a manner that prevents the contamination of ground water and its subsequent impacts on surface water, as provided below. Within sixty (60) days after the date of the issuance of this Discharge Permit, Molycorp shall submit to NMED for approval a plan including an implementation schedule for upgrading the Capulin Canyon leachate collection and disposal system. Upon NMED approval, Molycorp shall implement the plan in accordance with the implementation schedule. The approved plan and schedule shall be incorporated herein by reference and deemed an enforceable part of this Discharge Permit. The leachate collection and disposal system shall be designed to contain the flow caused by a 100-year 24-hour storm event, or an alternative design approved by NMED. Each impoundment shall be sized to contain the maximum projected seepage flow while maintaining a minimum free board of 2 feet and shall be lined to conform to *NMED Ground Water Pollution Prevention Section Guidelines for Liner Material and Site Preparation for Synthetically-Lined Lagoons* (December 11, 1995) attached hereto as **Attachment 3**. The upgraded system shall ensure that leachate from the Capulin Canyon waste rock dump and contaminated water that exceeds the standards set forth in 20 NMAC 6.2.3103 from both the alluvial and fractured bedrock are captured and collected in a manner that prevents the contamination of ground and surface water. The plan shall also provide for the development of a new method for the disposal of the collected leachate. The new disposal method shall be other than the current practice of discharging leachate into Goathill Gulch and allowing it to percolate through the subsidence zone into the underground mine. NMED will not approve the current disposal method.

Storm Water Storage and Disposal

22. Molycorp shall upgrade and maintain its storm water treatment system so that storm water from the Molycorp Questa Mine is being stored and disposed of in a manner that prevents the contamination of ground water and its subsequent impacts on surface water, as provided below. Within sixty (60) days after the date of the issuance of this Discharge Permit, Molycorp shall submit to NMED for approval a plan including an implementation schedule for upgrading the storm water storage and disposal system. Upon NMED approval, Molycorp shall implement the plan in accordance with the implementation schedule. The approved plan and schedule shall be incorporated herein by reference and deemed an enforceable part of this Discharge Permit. The plan shall document the construction and capacity of each existing structural control and will propose upgrades such that storm water retention impoundments are designed to contain the flow caused by a 100-year 24-hour storm

event, or an alternative design approved by NMED. Each impoundment shall be sized to contain the maximum projected flow while maintaining a minimum free board of 2 feet and shall be lined to conform to *NMED Guidelines for Liner Materials and Site Preparation for Synthetically-Lined Lagoons* (Attachment 3), or an alternative design approved by NMED. The plan shall also provide for the development of a new method for the disposal of the collected storm water and shall be other than the current practice of allowing infiltration into the waste rock, alluvium, or fractured bedrock. NMED will not approve the current disposal method.

ABATEMENT PLAN

23. Molycorp shall abate pollution of surface water and ground water in accordance with the WQCC Regulations at 20 NMAC 6.2 Subpart IV and the standards set forth therein in order to abate ongoing contamination prior to and concurrent with the implementation of the closure plan. Specifically, in the event that ground water contaminated as a result of the Molycorp Questa Mine exceeds the standards set forth in 20 NMAC 6.2.4103.B or the NMED-approved background concentrations determined pursuant to Condition 24 below, Molycorp shall abate groundwater pollution to the standards set forth in 20 NMAC 6.2.4103.B or to NMED-approved background concentrations determined pursuant to Condition 24 below, whichever is greater. In the event that ground water contaminated as a result of the Molycorp Questa Mine is discharging to the Red River, Molycorp's contamination shall be abated so that its discharge will not cause the Standards for Interstate and Intrastate Surface Waters in 20 NMAC 6.1 to be violated. In the event that mine-related stream deposits are found to be a source of surface-water pollution, the surface-water pollution shall be abated to conform to the Standards for Interstate and Intrastate Surface Waters in 20 NMAC 6.1. However, nothing herein shall in any way affect Molycorp's obligation to comply with the total maximum daily load (TMDL) requirements under section 303(d) of the federal Clean Water Act, 33 U.S.C. § 1313(d).

Background Study

24. Molycorp shall fund a background study to be performed by the United States Geological Survey (USGS) to determine background concentrations of water contaminants in ground water. A six (6)-person review committee composed of two technical representatives of NMED, two technical representatives of Molycorp and two technical representatives of Amigos Bravos shall be established within thirty (30) days after the date of the issuance of this Discharge Permit. The committee will review and provide written comments on all draft work plans and draft reports prepared by the background study contractor. Any member of the committee may provide individual comments. USGS shall be instructed to respond to all comments. Any dispute among the committee will be resolved by the Secretary of NMED. Ex parte communications, in any way regarding the background study, between USGS and

NMED, or Molycorp, or Amigos Bravos, or their representatives or agents, shall be prohibited. The background study shall be completed according to a schedule to be agreed upon by the parties. NMED will evaluate the background study and other available information and will determine the background concentrations of specific constituents. Upon NMED's determination, this Discharge Permit will be modified to incorporate the background determination. The procedures of 20 NMAC 6.2 Subpart III shall apply to such modification.

Abatement Plan

25. In accordance with 20 NMAC 6.2.1203.A.9 or 3109.E and 6.2 Subpart IV, Molycorp shall within sixty (60) days of receipt of written notice from NMED that an abatement plan is required, submit an abatement plan proposal to NMED for approval. Abatement shall be implemented in accordance with 20 NMAC 6.2 Subpart IV, as summarized below.
- a. Stage 1. Within sixty (60) days of receipt of written notice from NMED that an abatement plan is required, Molycorp shall submit a stage 1 abatement plan to NMED for approval. The stage 1 abatement plan shall be prepared in accordance with 20 NMAC 6.2.4106.C and may incorporate results of studies required in Conditions 17-19. The stage 1 abatement plan shall include at a minimum the following information:
 - i. a description of the Molycorp Questa Mine site in accordance with 20 NMAC 6.2.4106.C.1;
 - ii. a site investigation workplan in accordance with 20 NMAC 6.2.4106.C.2;
 - iii. a monitoring program in accordance with 20 NMAC 6.2.4106.C.3;
 - iv. a quality assurance plan in accordance with 20 NMAC 6.2.4106.C.4;
 - v. a site health and safety plan in accordance with 20 NMAC 6.2.4106.C.5;
 - vi. a schedule for all stage 1 abatement plan activities in accordance with 20 NMAC 6.2.4106.C.6; and
 - vii. any additional information that NMED may require in accordance with 20 NMAC 6.2.4106.C.7.
 - b. Upon NMED approval, Molycorp shall implement the stage 1 abatement plan. The approved stage 1 abatement plan shall be incorporated herein by reference and deemed an enforceable part of this Discharge Permit. According to the schedule set forth in the

approved stage 1 abatement plan, Molycorp shall submit a detailed site investigation report to NMED for approval.

- c. Stage 2. Within sixty (60) days after the date that NMED approves the site investigation report, if NMED determines that it is necessary, Molycorp shall submit a stage 2 abatement plan to NMED for approval. The stage 2 abatement plan shall be prepared in accordance with 20 NMAC 6.2.4106.E, and shall include at a minimum the following information:
- i. a brief description of the current situation at the mine in accordance with 20 NMAC 6.2.4106.E.1;
 - ii. a development and assessment of abatement options in accordance with 20 NMAC 6.2.4106.E.2;
 - iii. a description, justification and design, if necessary, of the preferred abatement option in accordance with 20 NMAC 6.2.4106.E.3;
 - iv. any necessary modification of the approved monitoring program in accordance with 20 NMAC 6.2.4106.E.4;
 - v. a description of any necessary maintenance activities in accordance with 20 NMAC 6.2.4106.E.5;
 - vi. a schedule for the abatement activities in accordance with 20 NMAC 6.2.4106.E.6;
 - vii. a public notification proposal in accordance with 20 NMAC 6.2.4106.E.7, 6.2.4108B, and 6.2.4108.C; and
 - viii. any additional information that NMED may require in accordance with 20 NMAC 6.2.4106.E.8.
- d. Upon NMED approval, Molycorp shall implement the stage 2 abatement plan. The approved stage 2 abatement plan shall be incorporated herein by reference and deemed an enforceable part of this Discharge Permit.

CONTINGENCY PLAN

26. In accordance with 20 NMAC 6.2.1203, Molycorp shall report and remedy any discharge not approved in this Discharge Permit. This requirement includes, but is not limited to, immediate corrective action to contain and remove or mitigate the condition, oral notification

of NMED within 24 hours after discovery of the condition, written notification of NMED within one week after discovery of the condition, submittal of a corrective action report within fifteen (15) days after discovery of the condition, and submittal of an abatement plan in accordance with Condition 25 above and 20 NMAC 6.2 Subpart IV.

27. If Molycorp discovers a significant increase in the extent or magnitude of ground or surface water contamination, or a significant increase in discharge volume from any seep or existing discharge point, Molycorp shall notify NMED within five (5) days of discovery of the increase. If NMED discovers such an increase, it will notify Molycorp. Within sixty (60) days of discovery or receipt of notification, whichever is earlier, Molycorp shall submit to NMED for approval an abatement plan including an implementation schedule to address source control and abatement of the contamination, as appropriate, in accordance with Condition 25 above and 20 NMAC 6.2 Subpart IV. After the stage 1 investigation, NMED will determine whether stage 2 abatement is necessary to attain the abatement standards and requirements set forth in 20 NMAC 6.2.4101 and 4103. Upon NMED approval, Molycorp shall implement the abatement plan in accordance with the implementation schedule. The approved abatement plan and schedule shall be incorporated herein by reference and deemed an enforceable part of this Discharge Permit.
28. As part of the revised closure plan submittal, Molycorp shall submit to NMED for approval a revised contingency plan to address failure of any component of the revised closure plan including but not limited to failure of collection, containment or treatment systems, failure of covers or revegetation, failure of surface run-on and run-off controls, or failures in slope stability, that may result in an exceedance of water quality standards or otherwise threaten public health or the environment.
29. If NMED or Molycorp identify any other failures of the discharge plan or system not specifically noted above, NMED may request Molycorp to develop for NMED approval contingency plans and schedules to cope with the failures.

CLOSURE PLAN

Preliminary Closure Plan

30. The preliminary closure plan for the Molycorp Questa Mine shall remain in effect until the revised closure plan is approved by NMED. Molycorp shall immediately begin implementation of the preliminary closure plan if the permitted facility closes for any reason, including bankruptcy or abandonment, prior to approval of the revised closure plan. The preliminary closure plan was used to calculate closure costs for the interim financial assurance instrument, as set forth in NMED's "Molycorp Questa Mine Closure Cost Estimate Cost Summary" attached as **Attachment 4**. The components of the preliminary closure plan

are as follows:

- a. Regrading of all waste rock dumps to slopes of no steeper than 3:1 (horizontal:vertical), unless underlying slopes exceed 3:1. In the event underlying slopes exceed 3:1, waste rock may instead be regraded to slopes of no steeper than 2:1, to the maximum extent practicable. Regrading shall include the construction of surface water diversion ditches every 100 to 200 vertical feet on the waste rock dump faces. Relocation in combination with regrading may be necessary to meet slope requirements. Regrading and any relocation shall include run-on control and positive drainage of all waste rock.
- b. Covering all waste rock dumps that NMED determines to have the potential to generate acidic leachate with a minimum of 3 feet of non-acid generating growth medium, to the maximum extent practicable. Cover material will be amended with lime as necessary to serve as a neutralizing agent.
- c. Revegetation of all covered waste rock to ensure long-term stability of the cover and to reduce infiltration to the maximum extent practicable.
- d. Continued maintenance of the mine dewatering system so that it maximizes capture of leachate from the mine workings and the open pit and ensures underground mine water, pit water, and contaminated ground water in fractured bedrock are collected in a manner that prevents, to the maximum extent practicable, any additional contamination of ground water and its subsequent impacts on surface water.
- e. Collection, treatment, and disposal of waste rock leachate, impacted ground water, water pumped from the underground mine, and collected storm water, if such leachate or water exceeds the standards set forth in 20 NMAC 6.2.3103 or the NMED-approved background concentrations determined pursuant to Condition 24 above, whichever is greater, or contains a toxic pollutant as defined in 20 NMAC 6.2.1101. Such collection system shall include without limitation seepage capture systems constructed at the toe of the Sulphur Gulch, Middle, Sugar Shack South, Sugar Shack West, Goathill, and Capulin Canyon (if not yet constructed as required by Condition 21) waste rock dumps.
- f. Construction and maintenance of a water treatment plant for the long-term treatment of water. The water treatment plant shall have an operating capacity of no less than 394 gallons per minute. Water treatment shall be by lime neutralization and shall be discharged in accordance with law including all applicable state and federal permits. By-product treatment sludge shall be stored on-site in lined impoundments constructed to the specifications described in Condition 21 above and shall be closed on site in the lined impoundments.

- g. After implementation of the closure plan is complete, dewatering, collection, treatment, and disposal of leachate and water shall continue until all ground water standards and/or NMED-approved background concentrations for ground water are achieved and maintained at all monitoring locations or places of withdrawal for two (2) years.
- h. Post-closure monitoring of leachate, ground water, and surface water shall continue for a minimum of thirty (30) years after all ground water standards and/or NMED-approved background concentrations, whichever is greater, have been achieved and maintained for two (2) years. If any ground water standard and/or approved background concentration, whichever is greater, is exceeded during the post-closure monitoring period, dewatering, collection, and treatment shall resume in accordance with Condition 30 d, e, f, and g above, and post-closure monitoring shall resume for a minimum of thirty (30) years thereafter. Molycorp may request a reduction in monitoring frequency, location, and analytical parameters for NMED approval after two years of quarterly monitoring.

Revised Closure Plan

- 31. Molycorp shall submit to NMED for approval a revised closure plan including an implementation schedule by January 31, 2001 that is based on existing information and information available from the 2000 field season. The revised closure plan shall include a revised contingency plan in accordance with Condition 28 above. The revised closure plan shall be accompanied by a request for modification of this Discharge Permit to incorporate the plan into DP-1055. The procedures of 20 NMAC 6.2 Subpart III shall apply to such request.
- 32. Molycorp shall conduct an analysis of closure alternatives for each waste unit to be closed, and submit such analysis to NMED for approval in support of the revised closure plan. A work plan including an implementation schedule for the analysis of alternatives has been included in the draft *Work Plan for Mine Rock and Site Investigation and Testing Program, Questa Mine Site, New Mexico* (SRK, April 2000) which has been submitted to NMED for approval. Evaluation shall include a range of options for each alternative, for example partial to full waste rock regrading. Alternatives to be evaluated shall include, but not be limited to: a) waste rock relocation, regrading, cover placement, and revegetation; b) stormwater collection; c) leachate collection; d) contaminated ground water collection; e) subsidence zone reclamation; f) open pit reclamation; g) water treatment; h) any other alternative which is proposed as a result of ongoing investigations; and i) appropriate combinations of the foregoing. Results of the analysis of alternatives shall be described in detail and summarized in a matrix format. Alternatives shall be evaluated based on the following criteria, at a minimum: a) percentage reduction in infiltration, concentration, volume, and mobility of water contaminants; b) effectiveness in attaining ground water and surface water quality standards; c) technical feasibility; d) stability and durability; and e) cost considerations

including implementation of remedy, long-term maintenance and monitoring, and long-term financial assurance requirements.

Financial Assurance

33. Within thirty (30) days after the date of issuance of this Discharge Permit, Molycorp shall submit an executed copy of its proposed interim financial assurance instrument(s) in the amount of \$129,000,000 for the cost of a third party to implement the preliminary closure plan as defined in Condition 30. The instrument shall provide that if at any time after closure, Molycorp is unable, unwilling, or otherwise fails to properly operate and maintain its water treatment and seepage capture system, then \$36,000,000 shall be placed in a trust fund to provide sufficient funding for long-term water treatment including treatment plant and seepage capture system construction, operation and maintenance, chemical additives, and monitoring. The proposed financial assurance instrument(s) must be worded as in the form attached hereto as **Attachment 5**, and must incorporate the provisions of Condition 35 below.
34. Within thirty (30) days of NMED approval of a revised closure plan, or upon a determination that the existing financial assurance is inadequate, Molycorp shall propose a revised closure cost estimate and financial assurance instrument(s) which incorporates the provisions of Condition 35 below. As required by Condition 33 above, the revised cost estimate and financial assurance instrument(s) must include an amount and provide for a proposed trust fund to cover the costs of long-term water treatment including treatment plant and seepage capture system operation and maintenance, chemical additives, and monitoring. Within thirty (30) days of NMED approval of the revised financial assurance instrument(s), Molycorp shall implement the financial assurance.
35. General Financial Assurance Requirements are as follows:
 - a. The financial assurance shall be executed in an amount equal to the approved closure cost estimate. The closure cost estimate must include direct costs associated with third party implementation of the closure plan, contingency costs in the amount of 15 percent of the direct costs, and NMED oversight and administration costs, including indirect costs. NMED's indirect cost rate is set by NMED at a fixed rate each fiscal year, and will be provided to Molycorp.
 - b. Except as provided below, NMED must be named as the sole beneficiary in the financial assurance instrument(s). Molycorp may select a joint financial assurance instrument(s) to meet the requirements of both NMED and the New Mexico Energy, Minerals and Natural Resources Department (EMNRD). If a joint instrument(s) is selected, both NMED and EMNRD must be named as sole beneficiaries and the joint instrument(s) must meet the

requirements of both agencies.

- c. Within thirty (30) days of implementation of the financial assurance instrument(s), Molycorp shall establish a Standby Trust, which names NMED (or NMED and EMNRD for joint financial assurance) as the beneficiary. The Standby Trust Agreement shall be worded as in the form provided by NMED. The Standby Trust shall be maintained until the financial assurance is released. All amounts forfeited under this Discharge Permit shall be deposited directly into the Standby Trust.
- d. The financial assurance instrument(s) shall remain in effect throughout the term of this Discharge Permit until released by NMED. The financial assurance shall remain in place during lapses in Discharge Permit coverage, including late Discharge Permit renewal or temporary shutdown of facilities covered under the Discharge Permit.
- e. The financial assurance must include a method for adjustments due to inflation, new technologies, or NMED approved revisions to the closure plan based on continued investigations.
- f. No more than once every twelve months Molycorp may request that NMED review remaining closure measures. The request for closure review shall describe the closure measures completed and shall contain a cost estimate for remaining closure measures. If NMED approves the description of completed closure measures and the cost estimate for remaining closure measures, NMED will adjust the amount of financial assurance to reflect the revised cost estimate.
- g. The financial assurance shall be evaluated, compared, and if necessary, revised to comply with WQCC financial assurance regulations, if and when such regulations are promulgated and become effective, and from time to time as the regulations allow.
- h. The financial assurance shall include a provision which requires the financial assurance provider to provide at least 120 days written notice to NMED and Molycorp prior to cancellation or non-renewal of the financial assurance. Molycorp must obtain an NMED-approved alternate financial assurance mechanism within sixty (60) days of such notice. If Molycorp fails to obtain alternate financial assurance within sixty (60) days, the current financial assurance shall become immediately payable to the Standby Trust, which names NMED (or NMED and EMNRD jointly) as beneficiary.
- i. If NMED determines that implementation of the preliminary closure plan under Condition 30, or of the final closure plan under a revised permit, is required and that Molycorp is unable or unwilling or will otherwise fail to conduct or complete the closure requirements of this Discharge Permit, then NMED may proceed with forfeiture of all or

part of the financial assurance. Prior to beginning a forfeiture proceeding, NMED will provide written notice, by certified mail return receipt requested, to Molycorp and to the surety informing them of the determination to forfeit all or a portion of the financial assurance. The written notice will state the reasons for the forfeiture and the amount to be forfeited. The amount shall be based on the total cost of performing closure, including post-closure monitoring and maintenance, in accordance with this Discharge Permit and applicable State law and regulations. NMED will also advise Molycorp and the surety of the conditions under which forfeiture may be avoided. Such conditions may include, without limitation, an agreement by Molycorp, by a surety, or by another person, to perform closure, including post-closure monitoring and maintenance, in accordance with this Discharge Permit and applicable State law and regulations, and a demonstration that such person has the financial ability and technical qualifications to do so. All financial assurance forfeited shall become immediately payable to the Standby Trust, which names NMED (or NMED and EMNRD jointly) as beneficiary. Forfeited funds shall be used to complete performance of closure. If the forfeited amount is insufficient, Molycorp shall be liable for the remaining costs. If the amount forfeited is more than necessary, the excess amount shall be refunded to the person from whom it was collected.

- j. The financial assurance shall be released or modified when NMED determines that closure measures covered by the financial assurance have been completed according to the closure plan requirements of this Discharge Permit.

GENERAL TERMS AND CONDITIONS

Record Keeping

36. Molycorp shall maintain at its facility a written record of all data and information on monitoring of groundwater, surface water, wastewater, borehole gas, and meteorological conditions conducted pursuant to this Discharge Permit, including the following:
 - a. The date, exact time, and exact location of each sample collection or field measurement;
 - b. The name and job title of the person who performed each sample collection or field measurement;
 - c. The date of the analysis of each sample;
 - d. The name and address of the laboratory and the name and job title of the person that performed the analysis of each sample;
 - e. The analytical technique or method used to analyze each sample or take each field

measurement;

- f. The results of each analysis or field measurement, including the raw data; and
 - g. A description of the quality assurance and quality control procedures used.
37. Such data and information shall also be maintained on all split and duplicate samples, spike and blank samples, and repeat samples.
38. Molycorp shall maintain a written record of any spills, seeps, or leaks of leachate, effluent, or process fluids not authorized by this Discharge Permit.
39. Molycorp shall maintain a written record of the operation, maintenance, and repair of all facilities and equipment used to treat, store, or dispose of wastewater; to measure flow rates, to monitor water quality, or to collect other data required by this Discharge Permit. This record shall include repair, replacement, or calibration of any monitoring equipment and repair or replacement of equipment used in Molycorp's waste or wastewater treatment and disposal system.
40. Notwithstanding any company record retention policy to the contrary, until such time as NMED determines that all closure measures have been completed in accordance with the requirements of this Discharge Permit, Molycorp shall retain copies of all data, records, reports, and other documents generated pursuant to this Discharge Permit, including those listed in Conditions 36 through 39 above. Such record retention period may be increased by NMED at any time upon written notice to Molycorp.
41. All such data, records, reports, and other documents, including those listed in Conditions 36 through 39 above, shall be provided to NMED upon request.

Inspection and Entry

42. In accordance with the WQA, § 74-6-9.B and E, and the WQCC Regulations at 20 NMAC 6.2.3107.D, Molycorp shall allow any authorized representative of NMED, upon the presentation of credentials, to enter any property or premises owned or controlled by Molycorp during regular business hours or at other reasonable times for the following purposes:
- a. To inspect and copy any data, records, reports, or other documents generated pursuant to this Discharge Permit or pursuant to State or federal water quality regulations, including those listed in Conditions 36 through 39 above.

- b. To inspect any equipment, device, monitoring system, well, collection system, pipeline or other conveyance system, treatment works, or other system or facility required by this Discharge Permit or by State or federal water quality regulations.
 - c. To sample or monitor any leachate, water contaminant, effluent, or receiving groundwater or surface water at any location before, after, or during discharge.
 - d. To sample or monitor any well or other collection system.
43. Nothing in this Discharge Permit shall be construed as limiting in any way the inspection and entry authority of NMED under the WQA, the WQCC Regulations, or any other applicable law or regulation.

Duty to Provide Information

44. In accordance with the WQA, §§ 74-6-5.I(4) and 74-6-9.B and the WQCC Regulations at 20 NMAC 6.2.3107.D, within a reasonable time after a request from NMED, which time may be specified by NMED, Molycorp shall provide NMED with any relevant information to determine whether cause exists for modifying, terminating, or renewing this Discharge Permit, or to determine whether Molycorp is in compliance with this Discharge Permit.
45. Nothing in this Discharge Permit shall be construed as limiting in any way the information gathering authority of NMED under the WQA, the WQCC Regulations, or any other applicable law or regulation.

Unauthorized Discharges

46. This Discharge Permit authorizes only those discharges specified herein. Any discharge into groundwater not authorized by this Discharge Permit or by Discharge Permit DP-933 is a violation of the WQCC Regulations at 20 NMAC 6.2.3104. Molycorp must report any such discharge to NMED, and it must take corrective action to contain and remove or mitigate the damage caused by the discharge, as required by 20 NMAC 6.2.1203.

Modifications

47. Pursuant to 20 NMAC 6.2.3107.C, Molycorp shall notify NMED of any changes to its wastewater collection or disposal system, including any changes in the wastewater flow rate or the volume of wastewater storage, or of any other changes to its mining operations or processes that would result in any significant change in the discharge of water contaminants. Molycorp shall obtain NMED approval, as a modification to this Discharge Permit pursuant to 20 NMAC 6.2.3109.E, F, or G, prior to any increase in the quantity of leachate discharged,

or any increase in the concentration of water contaminants discharged, above those levels approved in this Discharge Permit.

Transfer

48. Pursuant to 20 NMAC 6.2.3111, prior to the transfer of any ownership, control, or possession of the Molycorp Questa Mine or any portion thereof, Molycorp shall notify the proposed transferee in writing of the existence of this Discharge Permit and include a copy of this Permit with the notice. Molycorp shall deliver or send by certified mail to NMED a copy of the notification and proof that such notification has been received by the proposed transferee.

Enforcement

49. Any violation of the requirements and conditions of this Discharge Permit, including any failure or refusal to allow NMED to enter and inspect records or facilities, or any refusal or failure to provide NMED with records or information, may subject Molycorp to an enforcement action. Pursuant to the WQA § 74-6-10.A and B, such action may include a compliance order requiring compliance immediately or in a specified time, assessing a civil penalty, suspending or terminating the Discharge Permit, or any combination of the foregoing; or an action in district court seeking injunctive relief, civil penalties, or both. Pursuant to the WQA §§ 74-6-10.C and 74-6-10.1, civil penalties of up to \$15,000 per day of noncompliance may be assessed for each violation of the WQA § 74-6-5, the WQCC regulations, or this Discharge Permit, and civil penalties of up to \$10,000 per day of noncompliance may be assessed for each violation of any other provision of the WQA, or any regulation, standard, or order adopted pursuant to such other provision. For certain violations specified in the WQA § 74-6-10.2, criminal penalties may also apply.

In any action to enforce this Discharge Permit, Molycorp waives any objection to the admissibility as evidence of any data generated pursuant to this Discharge Permit. Molycorp does not waive any argument as to the weight such evidence should be given.

Compliance with Other Law

50. Nothing in this Discharge Permit shall be construed in any way as relieving Molycorp of its obligation to comply with all applicable federal, State, and local laws, regulations, permits, or orders. Molycorp does not waive any rights under such applicable federal, State, and local laws, regulations, permits, or orders except as expressly provided in this Discharge Permit.

Right to Appeal

51. Pursuant to the WQA § 74-6-5.N, Molycorp may file a petition for a hearing before the WQCC on this Discharge Permit. Such petition must be made in writing to the WQCC within thirty (30) days after Molycorp receives this final Discharge Permit. Unless a timely petition for a hearing is made, the decision of NMED shall be final.

Term

52. Pursuant to the WQA § 74-6-5.H, and 20 NMAC 6.2.3109.H, the term of this Discharge Permit is five (5) years, and the Permit will automatically terminate five (5) years from the date it is issued. To renew this Permit, Molycorp must submit an application for renewal at least 180 days before the termination date.

ISSUED this _____ day of _____, 2000.

PETER MAGGIORE
Secretary
New Mexico Environment Department