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DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

333 W. Nye Lane, Room 138
Carson City, Nevada 89706

June 30, 2004

NOTICE OF DECISION

**Water Pollution Control
Permit Number Nev0050037
For The Rochester Mining Project**

The Nevada Division of Environmental Protection has decided to issue Water Pollution Control Permit NEV0050037 to Coeur Rochester, Inc. This permit authorizes the construction, operation, and closure of the approved facilities. The Division has been provided with sufficient information, in accordance with NAC 45A.350 through NAC 445A.447, to assure the Division that the groundwater quality will not be degraded by this operation and that public safety and health will be protected.

This permit will become effective July 15, 2004. The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to Nevada Revised Statute (NRS) 445A.605 and Nevada Administrative Code (NAC) 445A.407. All requests for appeals must be filed by 5pm, July 12, 2004 on Form 3 with the State Environmental Commission, 333 West Nye Lane, Capitol Complex, Carson City, Nevada 89706. For more information, contact Bob Carlson at (775) 687-9401, toll free in Nevada at (800) 992-0900, extension 4670, or visit the Bureau's website at <http://ndep.nv.gov/bmrr/bmrr01.htm>.

Responses to comments received during the public notice period are presented below.

Response to Comments Received from Robert D. Williams, United States Department of the Interior, Fish and Wildlife Service on May 25, 2004

U.S. Fish and Wildlife Service Comment: *The information package that we reviewed indicates that solutions from this mine have been released, resulting in a contaminated groundwater plume. This plume may have the potential to impact downgradient springs, and thereby expose aquatic species such as endemic springsnails as well as terrestrial species such as migratory birds to elevated concentrations of various contaminants. We appreciate the inclusion of springs in Sage Hen Flat, American Canyon, and South American Canyon in the list of sites to be monitored. However, the monitoring requirements do not indicate how many springs in the three named areas will be monitored. Multiple springs appear to be present in some of these areas, based upon our review of U.S. Geological survey topographic maps. We recommend that all springs in these areas be monitored.*

NDEP Response: Part I.D.10 of the renewed permit does include the requirement to monitor springs located in the Sage Hen Flat, American Canyon and South American Canyon areas for Profile I constituents on a quarterly basis. As noted, NDEP has not specified an exact number of springs to be monitored at the locations within the individual areas. However, the areas to be sampled must be representative of the quality of the springs in those areas. Thus, it is believed the monitoring required by the Water Pollution Control Permit will produce the recommended information.

Response to Comments Received from Christie Whiteside, Great Basin Mine Watch on June 15, 2004

GBMW Comment: *Seepage from the Stage I heap leach pad continues to degrade the alluvial aquifer, and the shallow bedrock aquifer. We realize that the NDEP has initiated a remediation process to require Coeur to address the ongoing contamination coming from the Stage I pad; however, the NDEP should take additional measures to ensure the complete remediation of the contamination plume and to prevent continued degradation of waters of the state. The current degradation is in violation of NAC 445A.421 defining limitations on degradation of water. Specifically with respect to the ongoing WAD cyanide contamination in excess of the 0.2 mg/l standard, Coeur is in direct violation of NAC 445A.421(2).*

NDEP Response: As noted, corrective action has been initiated to address the source and contamination originating from the Stage I pad. Numerous studies have been completed characterizing the Stage I area seepage in attempt to mitigate the potential impacts. The prior permit renewal limited the introduction of fluid to the Stage I pad, and the facility was removed from active leach service in 1998. The NDEP issued formal enforcement in April 2003 in response to the discovery of process constituents exceedances in well WI-16, requiring additional evaluation and information regarding the potential source, and further requiring the development and implementation of a corrective action plan. As a result of the information provided, specific permit requirements, including actions that must be taken by Coeur Rochester Inc. (CRI) to ensure the complete remediation of the waters of the state, including monitoring, pumpback and elimination of the source, have been incorporated as required conditions of the renewed permit.

GBMW Comment: Contamination of the shallow bedrock aquifer was discovered when MW-16 showed rising levels of chloride and WAD cyanide. Since that time, analytical results from MW-30, which is also a shallow bedrock well, have shown MCL exceedences for mercury and nitrate and increasing levels of chloride, sodium, zinc and WAD cyanide. This is evidence that the contamination plume is not as confined as originally believed. The NDEP should thoroughly investigate the origin of the groundwater plume and whether or not the contamination is coming from one or several sources. The chemistry within a heap leach pad can be highly variable between different locations within the same pad. It is possible that the contamination is coming from different points. It is also possible that it is the same source, and that the native soils are attenuating contaminants at different rates as process fluid seeps through them. The NDEP must require Coeur to thoroughly investigate the source of all seepage, and to take measures to stop it.

NDEP Response: Source identification and abatement are a critical component of an effective remedial program, and the NDEP concurs that it is possible to have multiple contaminate sources. Information provided by CRI indicates that the source of contamination that has occurred at WI-17 and that more recently discovered in WI-16, both originated from the Stage I leach pad. As indicated in the Water Pollution Control Permit application, "The results of these studies indicate that the source of the leak is beneath the northern part of the Stage I leach pad, and the seepage emanates from the Stage I boot sleeve and from the subdrainage perforated pipe connecting the Stage I heap leach pad to Catch Basin East (CBE) and Catch Basin West (CBW)".

In regards to the Stage I seepage, it should be noted that in accordance with Part I.B.4 of the permit, results of actions taken with the engineering alternatives assessment (CRI letter dated 5/10/04, Step1) to eliminate the leakage from stage I must be submitted. Coeur will be required to meet the requirements of Nevada Administrative Code (NAC) 445A.430 by inhibiting meteoric waters from migrating through the spent ore. This may ultimately include additional cover on the Stage I heap.

In regards to the analytical results at MW-30, the NDEP also initially questioned if the observed monitoring trend was a result of the known Stage I source and required additional investigation. Joe Frank, principal hydrogeologist of HydroGeo, Inc. (HGI) responded to NDEP concluding, "that the source of contaminants in water at MW-30 and CBN is the result of historic seepage events from the Barren, Storage, and Pregnant Ponds. The contaminant source affecting these two sites appears to be different than the Stage I heap leach pad based on differences in water chemistry." Recommendations were made by HGI, including "a thorough inspection of the Storage Pond liner should be performed to determine if there are any defects." The NDEP and CRI have agreed that CRI will submit for review, an Engineering Design Report for re-establishment of the required containment pursuant to NAC 445A.435 for the Storage Pond, a.k.a. North Barren Pond. The leak detection system design and construction is being confirmed in it's ability to adequately collect, transport and remove all fluids at a rate that will prevent head transference to the secondary liner. The South Barren and

Pregnant ponds are not in use, and any future service is limited pursuant to Part I.G.6. of the renewed permit.

GBMW Comment: One of the remediation measures that the NDEP required of Coeur was the construction of additional monitoring wells, MW-30 and MW-31, to delineate the extent of the plume. MW-31 was dry when it was drilled, and a new well was never drilled to replace it. Only two out of the five wells drilled were viable, and three were dry. The NDEP has not required Coeur to drill additional wells. Additionally, the delineation of the contaminant plume boundaries relies on the observation that drill cutting from the dry wells did not contain WAD cyanide. Various other contaminants act as indicators of contamination. Chloride is often the earliest observed constituent indicating that process fluid is reaching groundwater. The NDEP should require Coeur to replace the dry wells with viable monitoring wells as a schedule of compliance item in the current permit. Now that MW-30 is showing rising constituent concentrations, it is imperative that the NDEP do everything possible to delineate the extent of the contaminant plume or plumes by requiring adequate monitoring of the shallow bedrock aquifer.

The NDEP should require Coeur to construct additional monitoring wells within the deeper bedrock aquifer to monitor whether or not the Stage I heap is degrading it. Overall, water quality monitoring of all aquifers is inadequate to determine the extent of the plume and to aid in the development of a fully comprehensive remediation plan.

In light of the recently discovered contamination in the shallow bedrock aquifer, the possibility of communication between the alluvial aquifer and the shallow and deep bedrock aquifers should be more thoroughly investigated. The May 2003 Plan of Corrective Action and Modifications to the Fluid Management System for the Rochester Mine states that ground water flow and point source analysis showed that the source of contamination in MW-17 may be the same as that for the valley fill sediment. The November 2003 Plan of Corrective Action Phase V Final Report states that because pumping of MW-16 has not affected the water level in the surrounding valley fill wells, and cites this as evidence that there is “no hydraulic communication between these two water-bearing zones in the area.” The pumping rate of MW-16 may not be high enough for any effects to surrounding wells to be realized at this time. These conflicting reports at the very least make a case for continued investigation as to whether or not there is communication between the two aquifers. While it is certainly convenient if it can be stated that there is no communication between two water-bearing zones, the evidence often contradicts the predictions made by agencies and consultants in project planning, regulatory actions, and remediation plans.

NDEP Response: The administrative order (Finding of Alleged Violation and Order) issued to CRI stated that, “By May 12, 2003 [CRI shall] submit to NDEP for approval a written plan of corrective action which will characterize the magnitude, depth, and lateral extent of the contaminant plume, identify and curtail the source of the contamination, propose remedial efforts to capture and contain the released solution, and implement a respective monitoring program.” The plan was required to include specific work tasks and proposed completion dates. The order also required that CRI submit a modified

fluid management plan that would prevent/reduce further release of process solution from the contaminant source into waters of the state.

The NDEP and CRI agreed to a Plan of Corrective Action (HGI, May 2003) in partial fulfillment of the Order. The corrective action plan (CAP) was based on a five phase approach, designed to delineate the lateral and vertical extent of the contaminant plume and determine the best remedial action to contain and curtail the contamination. The action phases of the plan included:

- Phase I: Preliminary Contaminant Plume Delineation Contaminant Solution Analysis Point Source Analysis
- Phase II: Installation and Testing of New Monitoring Wells
- Phase III: Contaminant Fate and Transport Modeling and Remedial Action Recommendations
- Phase IV: Initiation of the Remedial Actions
- Phase V: Final Corrective Action Report

A series of reports were completed by CRI and HGI to comply with the approved corrective action plan and the administrative order. As part of the CAP, CRI installed and tested 5 new monitoring wells (MW-30, 31, 32, 33 and 34) to delineate the extent of the contaminant plume. The location of the new monitoring wells was based on extensive pre-existing information for the hydrogeology of the area, denoting a rather limited groundwater flow regime. The CAP was completed in November 2003, and the Phase V Report (HGI, Nov 2003) provides a complete summary of the work completed.

The NDEP is, and will continue to require monitoring to delineate the extent of discovered contamination. It should be noted that the renewed permit does require the submittal of a new monitoring well design and the rationale for its location and depth to provide additional definition of the contaminant boundary. Based in part on recent modeling results (HGI 2003), the new monitoring well (identified as MW-35) must be capable of determining the extent of the most north-western limit of the contaminant plume. Pursuant to Part I.B.1 of the renewed permit, the new monitoring well is to be installed by October 15, 2004. Furthermore, the renewed permit requires continued monitoring and reporting on a quarterly basis for Profile I constituents, including WAD cyanide and chloride, for numerous wells including MW-35.

Lastly, in accordance with the permit Schedule of Compliance, CRI must also submit updated Fate and Transport Model input parameters and results using all information obtained to date by January 15, 2007. Thus, it is NDEP's determination that an effective remedial plan has been established via permit requirements to address, monitor and mitigate the discovered contamination.

***GBMW Comment:** The First Quarter 2004 Water Pollution control Permit Monitoring Report shows that constituent concentration is rising in MW-30 for WAD cyanide, chloride, sodium and zinc, and that water quality sampled from that well exceeds MCLs for mercury and nitrate. In accordance with NAC 445A.441, regarding the monitoring*

procedure upon variation in parameter being monitored, the NDEP should require Coeur to conduct evaluations to determine the source and pathway of the contamination, and to develop an appropriate remediation program to address it. The final permit should contain schedule of compliance items to address these issues.

NDEP Response: Comment noted. Please reference prior NDEP response regarding the source of contamination at CBN and MW-30, as well as the Schedule of Compliance items included in Part I.B of the renewed permit.

GBMW Comment: *The Stage I Heap was covered with six inches of topsoil and revegetated in the fall of 2000. Six inches of cover is insufficient to minimize the infiltration of meteoric water through the heap. According to the document, "Technical Memorandum Addressing NDEP's 10/17/04 Data Request (Items 6 & 7), dated February 11, 2004," since the cover was placed in 2000, "little to no effect of the cover on infiltration is realized during the two periods of evaluation." The NDEP should require Coeur to place a more substantial cover on Stage I, and to revegetate again. This is one of the least substantial covers that we have seen placed on a heap. Given the size of the Stage I heap facility, and the fact that it continues to degrade waters of the state in violation of NAC 445A.421, the NDEP must be much more proactive than it has been or continues to be to require Coeur to remediate the degradation and stabilize the Stage I heap leach pad. The NDEP should require Coeur to submit a heap closure plan dealing with the final stabilization of spent ore, long-term remediation of water quality and fluid management. The NDEP should require Coeur to demonstrate that the spent ore on the Stage I heap does not have the potential to continue to degrade waters of the state, and that the chemical stabilization of the spent ore is complete. If chemical stabilization cannot be demonstrated, the NDEP should require that Coeur demonstrate that meteoric waters will not be able to infiltrate through the heap and continue to degrade waters of the state. To date, the NDEP and Coeur have failed to meet the requirements of NAC 445A.430 regarding the stabilization of spent ore and the inhibition of infiltration of meteoric waters.*

NDEP Response: The record indicates that a number of actions have been taken, and continue to be taken by NDEP and CRI to address the Stage I concerns. In accordance with the Part I.B.4 of the permit, CRI is being required to meet the requirements of Nevada Administrative Code 445A.430 by inhibiting meteoric waters from migrating through the spent ore. This may ultimately include additional cover on the Stage I heap.

With respect to a Final Permanent Closure Plan, a plan (dated March 2004) was submitted to the Closure Branch of the Bureau of Mining Regulation and Reclamation (BMRR) for review. This plan is required to address the final stabilization of spent ore, long-term remediation of water quality and any resulting fluid management.

GBMW Comment: *With regards to the placement of Potentially Acid Generating (PAG) waste as backfill, the NDEP required as a schedule of compliance item in the draft permit that Coeur submit or reference an approved design and closure plan for review and approval by August 16th, 2004. This should not be a schedule of compliance item,*

but should be required before the final permit is issued. The NDEP should not grant approval for portions of a project that have the potential to degrade waters of the state until it can be shown by the operator that the potential does not exist or has been minimized. The NDEP should require Coeur to take measure to prevent the placement of any PAG backfill material below the pre-mining water table. All PAG should be thoroughly encapsulated to prevent its contact with waters of the state.

NDEP Response: Maxim Technologies Inc. developed a non-ore management plan, dated August 1, 2000. This plan indicates that the best management option for the non-ore is selective handling, isolation, and water management. Maxim's evaluation determined that the non-ore material poses an insignificant risk. Based in part on the low potential of the non-ore to generate acid or release metals, the current management practice had been determined as reasonable. However, because CRI indicated in the renewal application that "Design and closure alternatives for the PAG portion of the Rock Disposal System are currently underway", NDEP concluded that these alternatives should be reviewed to ascertain consistency with the prior recommendations. Hence, the schedule of compliance item in the renewed permit. With respect to the pre-mining water table, any PAG backfill material will be placed only above the pre-mining water table.

GBMW Comment: *There is concern that Coeur may be in violation of the Clean Water Act for the continued degradation of springs downgradient of the process components.*

NDEP Response: As noted in the prior responses, a significant amount of information has been submitted to better delineate the extent of potential contamination and to determine potential sources. It is NDEP's determination, and the record indicates, that an appropriate approach to addressing these mutual concerns has, and continues to be taken, not only to terminate the source but also to mitigate the contamination. In regards to the downgradient springs, the renewed permit requires quarterly monitoring of water at the springs, and the BMRR will require remedial action if those monitoring results indicate the water quality is degraded due to process constituents.