

SUMMARY AND RESPONSE TO PUBLIC COMMENTS

Permit No: Aquifer Protection Permit (APP) Application # 101679

Facility Name: Phelps Dodge Sierrita Inc. Mine

Applicant: Phelps Dodge Sierrita, Inc.

Permit Action: Final permit decision and response to comments received on the draft permit during the following public comment period:
1) June 23, 2006 through July 29, 2006; and
2) public hearing held on July 27, 2006, at the Canoa Hills Social Center, 3660 South Camino del Sol, Green Valley, Arizona.

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Date: June 29, 2007

A. INTRODUCTION

Public Notice, Public Meetings and Public Hearing Comments

There have been two public comment periods and two public hearings for the Phelps Dodge Sierrita Incorporated Mine draft aquifer protection permit (APP). The first public comment period started on July 7, 2005 and ended August 6, 2005. The first public hearing was held on August 17, 2005. The public comments received during the first public comment period and first public hearing were considered by the Arizona Department of Environmental Quality (ADEQ), and a revised draft permit was issued to address those comments. The revised draft permit, public noticed on June 23, 2006, was the ADEQ's response to the public comments received during the first public comment period and first public hearing.

The second public notice period, for the revised draft permit, began on June 23, 2006, and ended July 29, 2006. The comments received during the second public comment period, and the public hearing held on July 27, 2006, are the subject of this responsiveness summary. The revised draft permit has been further revised based on the comments from the second public comment period and second public hearing, and a final permit decision has been made by the Director.

The comments received during the second public comment period and second public hearing are summarized below. The comments are followed by ADEQ's response. Comments are grouped according to topic.

Definitions

The following terms used in this document are defined below:

Alert Level (AL) means a numeric value, expressing a concentration of a pollutant or a physical or chemical property of a pollutant, that is established in an individual permit and serves as an early warning indicating a potential violation of an Aquifer Water Quality Standard at the applicable point of compliance or a permit condition (A.A.C. R18-9(101)(2)).

Aquifer Water Quality Standard means a numeric standard established under A.A.C. R18-11-406 for aquifers that are classified for drinking water protected use.

Aquifer Quality Limit (AQL) means the maximum concentration of a given pollutant allowed by permit conditions at a given point of compliance. The AQL is the same as the Aquifer Water Quality Standard (AWQS), unless the concentration of a pollutant exceeds the Aquifer Water Quality Standard at the point of compliance at the time of permit issuance, in which case it is the ambient concentration. The AQL does not apply to pollutants for which there is no numeric AWQS.

A.A.C. means Arizona Administrative Code

A.R.S. means Arizona Revised Statutes

BADCT means the best available demonstrated control technology, process, operating method, or other alternative to achieve the greatest degree of discharge reduction determined for a facility by the Director under A.R.S. § 49-243 (A.A.C. R18-9-101(7)).

Capture Zone means the areal zone, both vertical and horizontal, in which the passive containment of A.R.S. § 49-243(G) will be maintained, to the extent that pollutant migration is not allowed.

Discharge means the addition of a pollutant from a facility either directly to an aquifer or to the land surface or the vadose zone in such a manner that there is a reasonable probability that the pollutant will reach an aquifer.

Discharge Impact Area (DIA) means the potential areal extent of pollution migration, as projected on the land surface, as the result of a discharge from the facility (A.R.S. § 49-201(13)).

Maximum Contaminant Level (MCL) means the primary drinking water maximum contaminant levels established by the administrator, United States Environmental Protection Agency.

Hazardous Pollutant or Substance (A.R.S. § 49-201(18)) means:

- (a) Any substance designated pursuant to §§ 311(b)(2)(A) and 307(a) of the clean water act.
- (b) Any element, compound, mixture, solution or substance designated pursuant to § 102 of CERCLA.
- (c) Any hazardous waste having the characteristics identified under or listed pursuant to § 49-922.
- (d) Any hazardous air pollutant listed under § 112 of the federal clean air act (42 United States Code § 7412).
- (e) Any imminently hazardous chemical substance or mixture with respect to which the administrator has taken action pursuant to § 7 of the federal toxic substances control act (15 United States Code § 2606).
- (f) Any substance which the director, by rule, either designates as a hazardous substance following the designation of the substance by the administrator under the authority described in (a) through (e), or designates as a hazardous substance on the basis of a determination that such substance represents an imminent and substantial endangerment to public health.

Individual Aquifer Protection Permit means a permit issued under Arizona Administrative Code Article 2, Chapter 9, Title 18, authorized under the provisions of A.R.S. § 49-241 through § 49-244, and § 49-250. An individual permit is developed specific to the individual permitted facility, for facilities that do not qualify under the class requirements for a general aquifer protection permit.

Non-Hazardous Pollutant or Substance means a pollutant or substance that does not meet the definition of a Hazardous Pollutant or Substance.

Passive containment means natural or engineered topographical, geological or hydrological control measures that can operate without continuous maintenance, sufficient to capture the pollutants discharged and that is hydrologically isolated to the extent that it does not allow pollutant migration from the capture zone (A.R.S. § 49-243(G)(1)).

Point of compliance (POC) means the point at which compliance with aquifer water quality standards shall be determined. The point of compliance shall be a vertical plane downgradient of the facility that extends through the uppermost aquifers underlying the facility (A.R.S. § 49-244).

Pollutant means fluids, contaminants, toxic wastes, toxic pollutants, dredged spoil, solid waste, substances and chemicals, pesticides, herbicides, fertilizers and other agricultural chemicals, incinerator residue, sewage, garbage, sewage sludge, munitions, petroleum products, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and mining, industrial, municipal and agricultural wastes or any other liquid, solid, gaseous or hazardous substances (A.R.S. § 49-201(28)).

Pollutant Management Area (PMA) is the limit projected in the horizontal plane of the area on which pollutants are or will be placed (A.R.S. § 49-244(1)).

B. COMMENTS RECEIVED FROM COMMUNITY WATER COMPANY

This section includes comments received in a letter dated July 27, 2006, and is organized by category of comment.

CORRECTION OF FACT SHEET

The Fact Sheet was updated based upon the following information provided:

Comment #1

“The Fact Sheet indicates that sulfate contamination has led to a “reduction of production from well CW-7.” “Community Water has not used Well 7 since June 2005 due to high levels of sulfate.” (Salmon, Lewis & Weldon).

ADEQ Response

The Fact Sheet was modified to indicate that well CWC-7 has been shut down.

Comment #2

“ADEQ indicates that the use of the Esperanza wells is still in the proposal stage. Community Water and PDSI have completed negotiations and improvements necessary for the use of the Esperanza wells, which Community Water has been using since June 2005 under a temporary license.” (Salmon, Lewis & Weldon).

ADEQ Response

The Fact Sheet has been updated to reflect the completion of negotiations, and the use under a temporary license.

Comment #3

“The Fact Sheet indicates that a “permanent solution” is being studied by Community Water and PDSI. Now that it has signed the Consent Order and obtained favorable revisions to the APP, PDSI has indicated to Community Water that it will no longer negotiate for a permanent solution to groundwater contamination within Community Water’s service area.” (Salmon, Lewis & Weldon).

ADEQ Response

The sentence regarding the permanent solution has been removed. ADEQ believes Phelps Dodge should continue to work with Community Water Company, as a drinking water provider in the impact area of the Sierrita Mine, the Community Advisory Group established under the Mitigation Order, and ADEQ.

OFF-SITE SULFATE PLUME

Comment #4

“PDSI and its predecessors have studied the Upper Santa Cruz Aquifer and Sulfate Plume for nearly twenty years, but have done nothing to reduce sulfates entering the aquifer or to slow the spread of the plume.” (Salmon, Lewis & Weldon).

ADEQ Response

The characterization of the off-site sulfate plume, and the mitigation strategy to be utilized to address it, including, for the first time ever, enforceable deadlines, is included under the provisions of the Mitigation Order. The implementation of the APP, with associated and enforceable monitoring, reporting, BADCT provisions, and discharge limitations will drastically reduce or eliminate the potential for additional contamination from the continuing operation of the mine facilities.

Comment #5

“The adequacy of the drinking water supply in the Green Valley Area is highly uncertain due to contamination of the aquifer by PDSI’s mining operations.” (Salmon, Lewis & Weldon).

ADEQ Response

The mitigation strategy to be utilized to address the drinking water supply concerns caused by the Sierrita sulfate contamination is defined in the Mitigation Order. The Mitigation Order, among other things, requires Phelps Dodge to provide safe drinking water to well owners in the vicinity of Green Valley with sulfate concentrations no greater than 250 mg/L.

Comment #6

“Although Community Water was hopeful just one year ago that it could reach a permanent settlement with PDSI to address future impacts to Community Water’s wells, PDSI has now terminated those negotiations with ADEQ’s issuance of the revised permit” (Salmon, Lewis & Weldon).

ADEQ Response

Community Water and other affected parties may obtain information and contribute to the characterization workplan and mitigation plan through the Community Advisory Group established under the Mitigation Order. The provisions of the Mitigation Order include required mitigation of impacts to drinking water wells at levels above 250 mg/L.

COMMENTS ON MITIGATION ORDER

Comments were received relating to the provisions of the Mitigation Order on Consent, entered into by Phelps Dodge Sierrita, Inc. and ADEQ, effective June 14, 2006. The Mitigation Order is authorized under the Remedial Actions section of the Water Quality Control Statutes (A.R.S. § 49-286), which is intended to provide for the mitigation of

non-hazardous releases. The Mitigation Order is an executed enforceable document that requires Phelps Dodge to address the sulfate contamination in the groundwater in the vicinity of the Sierrita Mine. Since sulfate is a nonhazardous substance for which there is not an enforceable Aquifer Water Quality Standard (AWQS), it is beyond the authority of the Aquifer Protection Program to impose specific requirements in the APP to address sulfate contamination. However, ADEQ has authority to incorporate the requirements of the Mitigation Order as a condition of the APP in accordance with A.R.S. 49-243(M) and ADEQ has done so in the Phelps Dodge Sierrita APP.

Comment #7

“The Consent Order does not adequately protect the Santa Cruz Aquifer from further degradation by Sierrita Mine Pollutants.” (Salmon, Lewis & Weldon).

ADEQ Response

The purpose of the Mitigation Order under A.R.S. § 49-286, is to protect the drinking water resource that is or is about to be rendered unusable without treatment due to sulfate concentrations. The Mitigation Order requires Phelps Dodge to perform one or more of the following mitigation measures:

- (1) Provide an alternative water supply,
- (2) Mix or blend if economically practicable,
- (3) Economically and technically practicable treatment before ingesting the water, or
- (4) Other mutually agreeable mitigation measures as are necessary to achieve the purposes of A.R.S. § 49-286.

Therefore, the Mitigation Order will provide the level of protection anticipated by A.R.S. § 49-286 and will protect the drinking water supply in Green Valley and the vicinity.

Comment #8

“The APP should impose a deadline for completion of the Work Plan and impose conditions to protect drinking water sources in the interim.” (Salmon, Lewis & Weldon).

ADEQ Response

The Mitigation Order is an enforceable document, with specific requirements regarding completion and execution of the Work Plan. The APP includes a requirement for Phelps Dodge to meet the terms of the Mitigation Order, including a schedule for the completion of the Work Plan and Interim Measures to protect drinking water. The Mitigation Order includes penalties for any failure to follow schedules approved by ADEQ.

Comment #9

“The APP should require mitigation measures for any well impacted by sulfates before the Work Plan and Mitigation Plan are completed.” (Salmon, Lewis & Weldon).

ADEQ Response

The Work Plan required under the Mitigation Order, which was approved by the ADEQ on November 16, 2006, requires that the well inventory, first round of groundwater

sampling, and an evaluation of interim actions be performed prior to the completion of the aquifer characterization and the Mitigation Plan. Potential interim actions will be identified that can be employed before the Mitigation Plan is completed if: (1) the average sulfate concentration at the point of use in a drinking water supply exceeds 250 mg/L, or (2) if the data demonstrate that the average sulfate contamination at the point of use in a drinking water supply will exceed 250 mg/L before the Mitigation Plan is completed. The possible measures to be considered for an interim action will include water treatment, water system operational changes to increase blending, well modifications, and alternative drinking water supplies. Therefore, any well impacted by sulfates will be addressed by the Mitigation Order. Further, Phelps Dodge must be in compliance with the Mitigation Order to be in compliance with the APP in accordance with A.R.S. 49-243(M).

Comment #10

“The Community Advisory Group lacks the ability to adequately protect the aquifer and represent the best interests of Green Valley residents.” (Salmon, Lewis & Weldon).

ADEQ Response

The Community Advisory Group (CAG) established by the Mitigation Order is intended to be an advisory group, comprised of interested parties and citizens from the Green Valley area. ADEQ will take into account the comments and concerns of the CAG. The investigation and mitigation required by the Mitigation Order and the multitude of requirements in the APP are intended to protect the drinking water resource, and the interests of Green Valley residents.

GENERAL COMMENTS ON APP

Comment #11

“ADEQ should not issue a final APP until PDSI has submitted an acceptable mitigation plan.” (Salmon, Lewis & Weldon).

ADEQ Response

The characterization of the off-site sulfate plume, as well as the Mitigation Plan, are covered by the provisions of the Mitigation Order, which includes numerous requirements and stipulated penalties for violations. The mine currently is operating without an APP. ADEQ believes the interests of the community and the protection of the environment is served best if ADEQ issues the APP and continues to implement the Mitigation Order. The APP will ensure the minimization of further contamination of the aquifer by hazardous pollutants and the Mitigation Order will address sulfate pollution.

Comment #12

“PDSI has not characterized groundwater conditions in the area, fully characterized the extent of the plume, or defined the discharge impact area, as required by State law.” (Salmon, Lewis & Weldon).

ADEQ Response

The ADEQ estimated the discharge impact area as required by rule. Alert Levels and Aquifer Quality Limits have been established for existing wells based upon characterization of the groundwater at those wells, which are immediately downgradient of the pollutant management area. It is not necessary to characterize the extent of the off-site sulfate plume to issue the APP. The characterization and mitigation of the off-site sulfate plume will be performed under the Mitigation Order, and it is important to issue the APP as soon as possible, to place the operation of the APP-regulated facilities at the site under the enforceable provisions of the APP.

Comment #13

"PDSI's interceptor wells have not been actively managing the sulfate plume." (Salmon, Lewis & Weldon)

ADEQ Response

Prior to permit issuance, Phelps Dodge was not required to operate the interceptor wellfield under the existing Notice of Disposal for the site. The APP will require the operation of the interceptor wellfield, with nearby POC wells to confirm adequate performance, and prevent further degradation of the aquifer at the POC locations. Further, the effectiveness of the interceptor well field will be evaluated under the Mitigation Order. The Mitigation Order will provide for the effective operation of the interceptor wells, including necessary modifications to the design or operation of the wells.

Comment #14

The current requirement that PDSI evaluate the wellfield's performance in its biennial reports is insufficient." (Salmon, Lewis & Weldon)

ADEQ Response

The evaluation of the well field in the biennial report is in addition to the requirements of the Mitigation Order. See response to Comment #13.

Comment #15

"ADEQ should meet its obligations to respond to comments on the revised APP." (Salmon, Lewis & Weldon).

ADEQ Response

This responsiveness summary responds to comments received on the revised draft permit, public noticed on June 23, 2006. This revised draft permit was the ADEQ's response to the public comments received during the first public comment period, July 7, 2005 through August 6, 2005, and first public hearing, held on August 17, 2005.

NARRATIVE AQUIFER WATER QUALITY STANDARDS

Comment #16

“ADEQ should put narrative aquifer water quality standards back into the revised APP.”
(Salmon, Lewis & Weldon)

ADEQ Response

The narrative aquifer water quality standard in the first draft APP has been replaced with the more stringent requirements of the Mitigation Order. The Mitigation Order is a superior method to require characterization of the off-site sulfate plume, and the mitigation of drinking water impacts.

Comment #17

“By removing the narrative standard, ADEQ was forced to remove non-hazardous wells from the Revised APP.” (Salmon, Lewis & Weldon)

ADEQ Response

The monitoring of the off-site non-hazardous wells will be performed as a part of the Mitigation Order. Sulfate monitoring and mitigation will be addressed in the Work Plan for aquifer characterization and the Mitigation Plan requirements under the Mitigation Order. The customary monitoring point for non-hazardous constituents under the APP Program is at the same location as the hazardous POC wells. The hazardous point of compliance (well) locations are more relevant to the APP Program, as they are located closer to the permitted facilities.

Comment #18

“Furthermore, although PDSI must monitor sulfates on a quarterly basis at the remaining POC wells, no Alert Levels or Aquifer Quality Limits are established for sulfates. Thus PDSI is not required to take any action based on sulfate levels in the POC wells under the Revised APP.” (Salmon, Lewis & Weldon)

ADEQ Response

Alert levels and aquifer quality limits are currently being required only for constituents that have a numeric Aquifer Water Quality Standard. ADEQ will require PDSI to address sulfate in POC and all drinking water wells in the vicinity in the Mitigation Plan as required under the Mitigation Order.

RADIONUCLIDES

Comment #19

“The Revised APP does not adequately address radionuclides. EPA has indicated that gross alpha and radium levels exceed Aquifer Quality Limits and Maximum Contaminant Levels at nine of the proposed POC wells.” (Salmon, Lewis & Weldon)

ADEQ Response

The Aquifer Water Quality Standards that the ADEQ utilizes for radionuclides are for adjusted gross alpha and radium 226 +228. Occasional exceedances of AWQS for these

constituents have occurred. Two wells for which alert level(AL) and aquifer quality limit (AQL) calculations exceed the AWQS are well MH-15W (perimeter well) and well MH-21 (interior well). ADEQ intends to adopt the new uranium standard of 30 ppb as an AWQS. At that time, ALs and AQLs will be calculated for uranium, and the permit amended. The APP Program statute, A.R.S. § 49-243(B)(3), requires that no pollutants discharged will further degrade at the applicable point of compliance the quality of any aquifer that at the time of the issuance of the permit violates the aquifer quality standard for that pollutant. If the aquifer is further degraded at the MH-15W or MH-21 well locations, the provisions of the contingency plan (Section 2.6) are triggered. The other POC well locations have calculated ALs that trigger contingency actions to prevent exceedances of the aquifer water quality standards, which would be a permit violation.

Comment #20

“Community Water is disappointed, however, that ADEQ is only requiring biennial testing for radionuclides.” (Salmon, Lewis & Weldon)

ADEQ Response

The biennial testing for radionuclides is adequate due to the slow movement of groundwater in the area, and the limited short-term change in radionuclide concentrations. If ALs are exceeded, more frequent monitoring is triggered under the contingency plan, as well as corrective actions. An AQL exceedance is a permit violation.

Comment #21

“The APP also should require a contingency plan, with concrete deadlines and detailed mitigation measures, if radionuclides are found to threaten or impact drinking water supplies in the future.” (Salmon, Lewis & Weldon)

ADEQ Response

The permit contains contingency provisions for AL or AQL exceedances in Section 2.6. The provisions for investigation and corrective actions to be approved by ADEQ, with the additional ability of ADEQ to amend the permit, are a better method for resolving contingencies than a detailed plan. The inclusion of detailed contingency actions in the permit would require the ADEQ to anticipate every conceivable problem that could lead to an AL/AQL exceedance. In addition, the detailed plan would tie ADEQ’s hands to specific response actions, rather than allowing the flexibility needed to tailor ADEQ and Phelps Dodge actions to that needed to respond to specific situations. Once ADEQ approves a contingency plan, ADEQ will enforce it.

FINANCIAL CAPABILITY

Comment #22

“The Revised APP does not adequately describe how PDSI estimated closure and post-closure costs or demonstrated financial capability to carry out the terms and conditions of the permit.” (Salmon, Lewis & Weldon)

ADEQ Response

The closure and post-closure costs have been updated in the final permit, based upon a revised financial demonstration received on November 29, 2006. The revised closure and post-closure costs were increased to \$17,729,265 and \$705,341/year, respectively, from the costs of \$3,993,000 and \$280,000/year, respectively, that were identified in the public notice version draft APP. The costs indicated for the mine are for closure and post-closure activities related to the APP facilities only. These cost estimates are an integral part of the financial demonstration requirements of A.A.C. R18-9-A203, which are intended to demonstrate the financial capability to construct, operate, close, and ensure proper post-closure care of the permitted facilities. The Mitigation Order will be amended to include financial capability for carrying out the sulfate investigation, mitigation, and other aspects of the Mitigation Order.

C. COMMENTS RECEIVED DURING JULY 27, 2006 PUBLIC HEARING

This section responds to comments received at the public hearing not addressed in the ADEQ responses in Section B above. It is organized in chronological order from the transcript of the hearing.

Comment #23

Ms. Nancy Freeman expressed concerns about the radioactive chemicals and transmitters that are in the groundwater near the tailings impoundment.

ADEQ Response

The monitoring provisions of the APP require quarterly and biennial monitoring of selected constituents at the POCs along the Sierrita Tailings Impoundment Dam, including radiochemicals and metals. Violation of ALs and AQLs at these POCs requires Phelps Dodge to perform specific actions under the permit contingency plan. See response to Community Water comments # 19, #20 and #21.

Comment #24

Ms. Nancy Freeman is disappointed that monitoring of the off-site monitor wells MH-11, MH-12, MH-13, MH-25, and MH-26, that would give us a better picture of the movement of heavy metals and radioactive chemicals and transmitters such as gross alpha, are not included in the permit.

ADEQ Response

Arizona Revised Statutes § 49-244 authorizes ADEQ to require a permittee to monitor for hazardous constituents at the property boundary. The placement and monitoring of POC wells at the edge of the PMA, which approximates the property boundary in the vicinity of the Sierrita Tailing Impoundment, provides an opportunity for an earlier warning of exceedances of permit constituent parameters, than would be provided through the use of the off-site monitoring wells noted in Comment #24, which are located farther downgradient of the Tailings Impoundment.

Comment #25

"I am concerned about the testing for what is referred to as ambient water quality for P.O.C. wells. These wells are in areas that have already been contaminated to some extent, so that current water quality can be determined but not historical ambient water quality." (Ms. Nancy Freeman)

ADEQ Response

Arizona Revised Statutes (A.R.S.) § 49-243(B)(3) requires " That no pollutants discharged will further degrade at the applicable point of compliance the quality of any aquifer that at the time of the issuance of the permit violates the aquifer water quality standard for that pollutant."

This limitation, however, does not apply to the Mitigation Order. The Aquifer Characterization Report required under the Mitigation Order will include information about ambient or background concentrations of sulfate. Further, the Mitigation Order requires PDSI to mitigate sulfate at 250 mg/L regardless of the quality of the aquifer when the APP or the Mitigation Order is issued.

Comment #26

"I feel the permit violation section is very weak, only requiring more monitoring and study." (Ms. Nancy Freeman)

ADEQ Response

The permit violation sections of the permit require more than monitoring and study. All violations of the permit require investigation, reporting and, if necessary, corrective actions, as well as the potential for permit amendment and/or penalties for noncompliance with the AWQS and any permit condition. The maximum penalties for permit violations are \$25,000 per violation per day.

Comment #27

"In closing, I want to add for the record my continued concern for the lack of bonds for closures of all mines in Arizona. The corporation may have the funds now, but that does not mean they will be available in the future. "There are a lot of closure issues in regard to the pit, the leach piles and tailings impoundment, and I doubt the projected numbers are realistic." (Ms. Nancy Freeman)

ADEQ Response

Phelps Dodge has complied with the financial demonstration requirements of A.A.C. R18-9-A203, which are intended to demonstrate the financial capability to construct, operate, close, and ensure proper post-closure care of the permitted facilities. Financial capability is required to be maintained through the life of the permit, which is the life of the facility (operation, closure, and post-closure). The Director may suspend or revoke an APP for failure to maintain financial capability (A.A.C. R18-9-A213(A)(5)). The financial demonstration includes a written commitment in the name of ADEQ for the costs to operate, close, and post-closure monitoring of permitted facilities. As an

alternative to a bond, Phelps Dodge Corporation has provided a corporate guarantee to Phelps Dodge Sierrita, Inc, which is allowed under Arizona law.

The closure and post-closure costs for the APP regulated facilities have been updated in the final permit, based upon documentation received on November 17, 2006. The costs indicated are for closure and post-closure activities related to the APP facilities.

Comment #28

“We want to know why the closing cost estimates are so much lower than those of Chino and Tyrone Mines in New Mexico, where they had to post large bonds.” (Ms. June Wortman)

ADEQ Response

See response to Comment #27.

Comment #29

Ms. June Wortman comments on specific concerns relating to concerns stated at the public hearing conducting on August 17, 2005. Those concerns, not answered elsewhere in this responsiveness summary, are:

- We wanted the seepage from the mine tailings to be stopped now.
- We wanted the movement of the sulfate plume to be stopped now.
- We wanted the current existing contamination from the plume to be mitigated starting now.
- We also asked about the Citizens Advisory Group; where it needs to have ability to access current data, monitoring and compliance reports for the entire APP as well as the Mitigation Order locally.
- We want to know what ADEQ will do about enforcement and compliance with this order.

ADEQ Response

The ADEQ evaluated the concerns raised previously, and responded by modifying the original APP draft, and entering into the Mitigation Order with Phelps Dodge. The seepage from the mine tailing will be monitored at the APP POC wells along the property boundary in accordance with both the APP and the Mitigation Order, to confirm that additional degradation of the aquifer will not occur. The mitigation of existing off-site contamination will be done under the Mitigation Order, which includes a provision for a Community Advisory Group. Violations of the APP or the Mitigation Order may result in penalties of up to \$25,000 per day.

Comment #30

“The APP has been weakened by removal of regulations regarding the sulfate plume and having them placed in the Mitigation Order on Consent.” (Mr. Ed Hunt)

ADEQ Response

The Mitigation Order established an action level of 250 mg/L for sulfate, which is more protective than the first draft APP, which had established an AL of 450 mg/L for sulfate. It also includes a requirement for the input of a Community Advisory Group, a well inventory, and provision of drinking water at 250 mg/L. The Mitigation Order represents the first enforceable water quality limit for a non-hazardous constituent enforced by the Water Quality Division.

Comment #31

Mr. Ed Hunt asks if there are, or will be, metals outside the Phelps Dodge property boundaries, and why the interceptor wellfield has not been running full time.

ADEQ Response

The metals at the property boundary, along the edge of the pollutant management area in the vicinity of the Sierrita Tailings Impoundment Dam seldom reach detectable concentrations and do not exceed the Aquifer Water Quality Standards. The permit provisions will require the monitoring of the groundwater at these POC locations, to provide warning of, and require a response to, any exceedance of an AL in the concentrations of regulated metals.

Prior to permit issuance, Phelps Dodge was not required to operate the interceptor wellfield under the existing Notice of Disposal for the site, and they made the decision to turn it off without consultation with ADEQ. The APP will monitor the performance of the interceptor wellfield, with nearby POC wells to confirm adequate performance, and prevent further degradation of the aquifer at the POC locations. To satisfy the requirements of the Mitigation Order, the interceptor wellfield or comparable mitigation measures approved by ADEQ must be implemented by Phelps Dodge.

Comment #32

Mr. Arturo Gabaldon provided comments at the public hearing that were the same as those provided in a formal comment letter. Mr. Gabaldon specifically requested ADEQ not issue an APP until the Work Plan required under the Mitigation Order is approved.

ADEQ Response

See the comments and responses in Part B, Comments #1 through #22. The Work Plan required under the Mitigation Order was approved by the ADEQ on November 16, 2006, prior to the issuance of the APP.

Comment #33

Mr. George Kennedy has commented that monthly reports should be issued relating to the maintenance of the permitted facilities, and groundwater sampling should be conducted and reported monthly.

ADEQ Response

The APP does require inspection and maintenance activities to be performed daily, weekly, monthly, and annually, depending upon the nature of the inspection. The results

of the inspections are required to be documented in an on-site log book, to be available for ADEQ inspectors. If problems are noted during the inspections, such that the result could cause or contribute to an unauthorized discharge, investigation, reporting, and corrective measures are triggered under the APP. ADEQ will enforce these requirements.

Due to the slow movement of groundwater, the ADEQ considers the required frequency of groundwater monitoring and reporting to be adequate. The permit requires quarterly monitoring and reporting, with an expanded list of constituents to be sampled and reported biennially, along with an expanded biennial report. If an AL is violated in the groundwater for a constituent that has a numeric AWQS, the required sampling interval is increased to monthly, and additional investigation, reporting, and potential corrective measures are triggered. Monitoring and reporting for sulfate are governed by the Mitigation Order.

D. OTHER COMMENTS RECEIVED

This section responds to written comments received by mail and e-mail, not addressed in the ADEQ responses in Sections B and C above.

Comment #34

ADEQ received comments from Anne Shupert, Victor and Joan Romeo, and others to hold the public notice period open until after the Mitigation Order work plan is approved.

ADEQ Response

See response to Comment #11, in Part B.