DISTRICT COURT, CITY AND COUNTY OF DENVER, STATE OF COLORADO

Case No. 94 CV 5459 Courtroom 7

JOINT MOTION FOR ENTRY OF CONSENT DECREE AND ORDER

SUNNYSIDE GOLD CORPORATION,

Plaintiff,

v.

COLORADO WATER QUALITY CONTROL DIVISION OF THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT,

Defendant.

The parties, through their respective counsel, hereby move the Court for entry of the proposed Consent Decree and Order filed herewith, and in support of this joint motion state as follows:

1. This action was brought by plaintiff seeking declaratory judgment regarding the applicability of certain water quality permit requirements in the final closure and reclamation of the Sunnyside Mine near Silverton, Colorado in San Juan County.

2. The parties have been engaged in extensive settlement discussions for many months. A proposed Consent Decree was lodged with the Court on February 29, 1996, subject to a public comment period to be initiated by the Water Quality Control Division.

3. Public notice of the propose Consent Decree and of the draft permits which are a part of that decree was published on March 5, 1996, and the public comment period extended for

thirty (30) days. Comments from interested members of the public as well as from the United States Environmental Protection Agency were received during the comment period, and a response to those comments, prepared by the Water Quality Control Division, is attached to this joint motion.

4. Other than several corrections of typographical mistakes, the changes to the February 29, 1996 proposed Consent Decree are as follows:

a. Page 12, paragraph 7(c). The third sentence of this paragraph was changed to reflect comments from EPA.

b. Page 15, paragraph 9(c). This paragraph was modified to clarify the circumstances and process under which SGC may reduce or eliminate treatment of Cement Creek flows at the American Tunnel Treatment Plant.

c. Page 17, paragraph 10(a)(iv). The language was clarified to reflect the location of the monitoring point.

d. Page 20, paragraph 13. This paragraph was modified to impose time limits on the submission of Work Plans for additional work project proposals.

e. Page 24, paragraph 22. This paragraph was changed in response to comments from EPA.

f. Page 25, paragraph 24(b). This paragraph was changed in response to comments from EPA and includes an agreement to continue whole effluent toxicity (WET) tests until after treatment of Cement Creek flows begins.

g. Page 26, paragraph 25(a). This paragraph was changed in response to

comments from EPA clarifying when the Division may draw on the letter of credit.

h. Appendix A, pages 4.a and 5.a. In response to comments from EPA, paragraph reference numbers were inserted.

i. Appendix B, page 1.b. Paragraph B-2(1) was changed to reflect that the projected target pH of the mine water would be 9.0 - 10.0.

5. With these changes which have been agreed to by the parties, the Consent Decree and Order is ready for entry by the Court. Entry of this Consent Decree and Order resolves all outstanding issues between the parties and eliminates the need for the five (5) day trial now scheduled to commence July 8, 1996. The settlement includes, at paragraph 37, a provision by which this Court would retain jurisdiction to resolve any disputes between the parties which may arise in the implementation of this agreement.

6. The parties request that the Court enter this Consent Decree at the earliest date possible so that implementation of the construction provisions can commence in June, 1996. Should the Court have questions, the parties, through counsel, are prepared to appear jointly before the Court on short notice to explain any provisions.

WHEREFORE, plaintiff and defendant, through their respective counsel, hereby move the Court for entry of the proposed Consent Decree and Order filed herewith.

Respectfully submitted this 6th day of May, 1996.

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RESPONSES TO COMMENTS OF THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY ON THE CONSENT DECREE AND ASSOCIATED PERMITS

The following are the responses of the Colorado Water Quality Control Division (WQCD) to the comments of the United States Environmental Protection Agency (EPA) on the WQCD's proposed Consent Decree with Sunnyside Gold Corporation (SGC) and associated permits. The responses are arranged and numbered in the same manner as EPA's comments.

COVER LETTER

Comment: In its letter, EPA states that the permits must function as stand alone documents regardless of the existence of the Consent Decree.

Response: The WQCD agrees. The permits were reviewed to find any terms or conditions that through reference were dependent upon the contents of the Consent Decree. Where such permit conditions were found, they were revised to more explicitly describe the intended permit requirements. However, there is one exception to this that should be noted. Each draft permit included a termination clause which referred directly back to the Consent Decree. While this clause was modified to additionally require compliance with State permit regulations, it was determined that it would not be practical to include the Consent Decree's conditions related to permit termination within the permits themselves. Also, the termination clauses do not affect the enforceability of the permits. For these reasons, the termination clauses' references to the consent decree were retained.

CONSENT DECREE

1. *Comment: Page 12, Paragraph 8: Although Section VIII states the "A List" projects must be completed prior to a permit termination request, it would be clearer to state that in this section. Suggested change/addition: "After completion of the "A List" projects, SGC may request a Permit Termination Assessment. Within sixty days of a request by SGC, the Division will complete a Permit Termination Assessment pursuant to Section VIII of the Consent Decree."*

   Response: The WQCD believes that the suggested change would confuse, rather that clarify the Consent Decree, and declines to make the suggested change to the Consent Decree. Paragraph 8 clearly states that a Permit Termination Assessment must be performed pursuant to paragraph 14 of Section VIII. This paragraph lists seven criteria which must be met for a Successful Permit Termination Assessment, one of which is completion of "A" list projects. To list, in paragraph 8, only one of these

seven criteria as a prerequisite for a Permit Termination Assessment would be confusing and may appear to alter the intent of the Consent Decree.

2. *Comment: Page 13, Paragraph 8.c. and Page 24, Paragraphs 22: EPA's position is that permits are required for discharges of groundwater tributary to surface water. Therefore, EPA's preference would be to remove all references to this issue from the Consent Decree. We understand that due to the nature of this case that may not be possible. Therefore, we would suggest the sentences on page 13, paragraph 8.c. and page 24, paragraphs 22 be removed and replaced with language as follows: "The Division agrees, based on the facts of this case, that in the event of a Successful Permit Termination Assessment pursuant to paragraph 14, no future CPDS [sic] point source permits will be required of SGC for seeps or springs which emerge or increase in the Upper Animas River or Cement Creek drainages following installation and closure of bulkhead seals in the American or Terry Tunnels."*

Response: Seeps and springs are the central issue in this case, and therefore it would be impossible to delete references to them. SGC brought this declaratory judgment suit because it disagrees with the WQCD's position that seeps and springs which may emerge following installation of bulkhead seals in the mines's portals are enforceable against SGC as violations of the Colorado Water Quality Control Act as the discharge of pollutants to state waters form a point source without a permit. The WQCD does not concede this issue by entering into the Consent Decree. EPA's proposed language adds the words "the Division agrees, based on the facts of this case." This is not a substantive change and is already clear in the language of the Consent Decree. The Parties agree to make the requested change.

3. *Comment: Page 13, Paragraph 9.a., Page 19, Paragraph 11 and Appendix B: The summary of work provides a brief discussion of the plugging of the Terry Tunnel. It does not mention the need to add buffering amendments to the fluid behind the bulkhead during the flooding of the workings. It was our understanding that this action was agreed upon as a means of raising the pH to reduce dissolved metal loading in the workings. This is a critical element of the mine plugging proposal and should be mentioned in the summary.*

Response: EPA incorrectly states that the summary of work does not mention the need to add buffering amendments to the fluid behind the bulkhead during the flooding of the workings. The summary of work, subparagraph b, mitigation projects, clearly states that SGC will complete all of the "A" list projects as set forth in Appendix B, one of which is the injection of alkaline water referred to here. The schedule established in section VII on pages 19-20 establishes when this mitigation project will be done.

Comment: Prior to commencing injection of the alkaline water into the mine pool, approvals from the Underground Injection Control Program by a rule authorization or

a permit may be needed.

Response: SGC has submitted to EPA a letter requesting a determination if it is subject to a UIC permit, and if so, if it fits under the general permit.

Comment: The target pH in the workings (or pH range) should also be mentioned.

Response: The specifics of the mitigation projects, including the mine pool mitigation project (with target pH ranges for the injection water and Mine pool), are appropriately discussed in the Work Plans for the projects attached to the permit for mitigation projects (Appendix C). See also response to Appendix B comment 1.

4. *Comment: Pages 13 and 14, Paragraph 9.a.: For the determination of equilibrium - what is meant by the "rate of rise has leveled off"? EPA suggests adding another appendix to the Consent Decree which describes the process for determining if equilibrium has been met. Does the notice by SGC that equilibrium has been reached need to provide supporting data and describe how SGC reached that conclusion? The text is a little unclear concerning what exactly is required to be provided. Is it appropriate to reference the Mined Land Reclamation (MLR) Permit and technical revisions?*

Response: The WQCD's entering into this Consent Decree is partly in response to the approval by the Mined Land Reclamation Board of SGC's proposal to install bulkhead seals in the Sunnyside Mine portals. Mine pool equilibrium is defined in SGC Mined Land Reclamation permit, as stated in the Consent Decree. The WQCD is providing EPA that portion of SGC's Mined Land Reclamation permit. That determination is within the jurisdiction of the Division of Minerals and Geology, not the WQCD. Therefore, neither adding another appendix to the Consent Decree describing when equilibrium has been met nor referencing the MLR permit (other than the existing references to it on pages 4-5), as suggested by EPA, would be appropriate.

Comment: What does "maintenance" of the portion of the American Tunnel downstream of the SGC property mean? This term should be defined so it is clear what action(s) will trigger the release of SGC from its permit for the American Tunnel.

Response: EPA states that the term "maintenance" is unclear in the sentence "Should maintenance of the portion of the American Tunnel downstream of the SGC property line seal and treatment of the American Tunnel discharge be undertaken by the property owner or other parties, then SGC will be released from any continued CDPS permit obligation at the American Tunnel." This sentence is taken from the summary of work, which work is described in greater detail in other parts of the Consent Decree. This sentence follows another that clarifies that this sentence is relevant only

if there are continuing discharges from the American Tunnel. The critical issue is that SGC not be released from its permits if discharge continues unless another party or parties has assumed treatment of American Tunnel discharge water. Because the clause beginning with the word "maintenance" is conjunctive with the clause beginning with the word "treatment," so that both maintenance and treatment are required, a definition of the word "maintenance" has little or no import. This requirement is also set forth in paragraph 14a, establishing one of the criteria for a Successful Permit Termination Assessment as follows: "Hydrologic controls and seals eliminating flows from the lower American Tunnel portal have been completed, or CDPS Permit No. CO-0027529, for water treatment at the American Tunnel, will have been accepted by another party or parties."

5. *Comment: Page 15, Paragraph 9.b. and Page 21, Paragraph 13: Work plans for each of the mitigation projects covered by the draft permit C0-0044768, and listed in Appendix B, should be reviewed and approved through the permit process.*

Response: Work Plans for the "A" and "B" list projects are attached to the permit and have been reviewed and approved as part of it. Any Work Plans for additional remediation projects will be reviewed and approved by the WQCD through the permit process.

Comment: A specific time frame for receiving additional workplans should be established in the Consent Decree and mine remediation plan permit. We suggest wording similar to: "If SGC notifies the Division that they intend to perform additional remediation projects, then SGC will submit work plans within sixty (60) days of the notification or within a reasonable timeframe based on the accessibility of the site for planning and the complexity of the project."

Response: The parties agree to change the first two sentences of paragraph 13 (page 21) to read as follows:

> In the event that the Permit Termination criteria of paragraph 14 below are not met following completion of all the mitigation projects on both the "A" and "B" Lists, within sixty days after the Division notifies SGC of such a determination, SGC will notify the Division whether or not it intends to propose additional remediation projects which are anticipated to have a positive impact on the water quality of the Animas River. If SGC determines that it will propose additional such projects, it will submit proposed Work Plans to the Division within sixty days of the notification or within a reasonable timeframe based on the accessibility of the site for planning and the complexity of the project.

6. *Comment: Page 15, Paragraph 9.c. and Page 22, Paragraph 14.g.: We are pleased with the commitment to treat Cement Creek in order to mitigate short-term impacts and to allow a "buffer" until the mine remediation projects have adequate time to improve water quality. However, we have some concerns regarding a lack of specificity concerning Cement Creek treatment in the Consent Decree. We have three main issues regarding Cement Creek treatment:*

1) quantity of flow to be treated during which months;

Response: As stated in paragraph 9 (page 15) of the Consent Decree, the stream diversion bringing Cement Creek into the treatment facility will be regulated in volume so as to use the full capacity of the American Tunnel treatment facility. Essentially all of the stream flow in the low flow months will be treated and the equivalent stream flow lost to the treatment system due to mine sealing will be treated during high flow.

Comment: 2) what will trigger the cessation of treatment of Cement Creek;

Response: Cement Creek will be treated during the time period that mitigation projects are being completed by SGC. Following the completion of all "A" list mitigation projects, SGC may reduce or eliminate the treatment of Cement Creek at the American Tunnel treatment plant. SGC will notify the Division ten business days prior to making changes in the quantity of flows of Cement Creek being treated relative to their treatment plant capacity. In its notification to the Division SGC will provide its analysis that water quality will be maintained at the reference point (A72) with the decreased treatment of Cement Creek flows. The parties to the Consent Decree have agreed to modify the language of paragraph 9c to reflect this.

Comment: 3) how long will SGC have to maintain a zinc concentration at the reference point or below the 12-month moving average in order to be released from treating Cement Creek;

Response: The Consent Decree requires specified actions on the part of SGC should water quality deteriorate at the Reference Point. SGC may decrease or eliminate treatment at Cement Creek following proper notification to the Division as discussed, provided that the required mitigation projects have been completed.

Comment: 4) the response to exceedances of the monthly zinc average.

Response: Page 4a of Appendix A details the responses SGC will take in the event that the monthly zinc average is exceeded. This section has been modified to clarify the time frames required for submission of Work Plans for additional work projects and construction of those projects if the A and B list projects already have been completed. See response to Consent Decree comment 5.

7. *Comment: Page 16, Paragraph 10 and Appendix A, Attachment 1: Monitoring detection limits set within the Consent Decree are fine. However, additional reference should be made to monitoring methods approved in 40 CFR Part 136.*

Response: As required by the Colorado Discharge Permit System Regulations, 6.1.0 (5 CCR 1002-2), the permits included in Appendix C contain the reference to analytical methods approved in 40 CFR Part 136. The Consent Decree contains actual detection limits which are extremely low and more specific that the methods contained in 40 CFR part 136. The WQCD believes that these limits provide an appropriate level of data quality control.

Comment: Furthermore, diel (24-hour) fluctuations in flow and concentrations observed in the stakeholders sampling efforts make it difficult to compare data taken at different times of day within the Animas Basin. Therefore, we recommend that Appendix A, attachment 1 have time of day references and that all future sampling be taken within similar time frames, particularly during runoff periods.

Response: The reference data set is made up of individual observations taken over a number of years without regard to diel fluctuations. The Division does not agree that there should be strict time-of-day limitations on data collection efforts within the Consent Decree. Comparison of a highly controlled data set with one that did not have those controls would introduce confounding and confusing factors for the analysis. There also maybe access and safety concerns for sampling during some seasons and times of day.

8. *Comment: Page 17, Paragraph 10.a. (iii): The Consent Decree requires monthly sampling of the American Tunnel Treatment Facility Effluent. Is this the same location as outfall 004A specified in the permit? If so, it should so indicate.*

Response: Yes, the monthly sampling of the American Tunnel Treatment Facility Effluent is the same location as outfall 004 specified in the permit. The Consent Decree has been clarified.

9. *Comment: Pages 17 and 18, Paragraph 10.b.: The sampling at the four mines identified in this section must include flow measurements in order to determine if the plugging has resulted in loading changes.*

Response: A commitment to carry out flow monitoring is included in each of the Work Plans for the four mentioned mines.

Comment: The monitoring requirements of the MLR Permit should also be mentioned.

Response: The Consent Decree already states in paragraph 10 that "[t]he monitoring

requirements of this Consent Decree are separate and in addition to any monitoring requirements of SGC's CDPS permits and MLR permit." Copies of the monitoring requirements in the DMG permit will be submitted to EPA for informational purposes.

Comment: Because this information is not part of the Consent Decree or the permits, we suggest that SGC be required to identify springs and seeps in the vicinity of these locations and sample them if the flow increases measurably.

Response: The DMG reclamation permit contains requirements for monitoring springs and seeps in the vicinity of the SGC mine workings. Both flow and water quality measurements are required. The WQCD will consider supplementing these monitoring efforts as part of its continuing commitment to assessing and improving water quality in the Upper Animas River Basin.

10. *Comment: Page 23, Paragraph 19: The permit number should be CO-0027529 for the American Tunnel.*

Response: The WQCD agrees and the correction has been made.

11. *Comment: Page 24, Paragraph 22: Permit release language should apply to SGC only.*

Response: The Consent Decree has been clarified so that the release language applies only to SGC and its parent company.

12. *Comment: Page 24, Paragraph 24.a.: It is our understanding that the permits can only be terminated according to the criteria specified in the Permit Termination Assessment (paragraphs 12, 13, 14, and 15). Reference to this process should be contained in paragraph 24.a. This paragraph should be reworded to state that, "The Division agrees, based on the facts of this case, that in the event of a Successful Permit Termination Assessment pursuant to paragraph 14, no future CPDS [sic] point source permits will be required of SGC for seeps or springs which emerge or increase in the Upper Animas River or Cement Creek drainages following installation and closure of bulkhead seals in the American or Terry Tunnels."*

Response: See responses to comments 2 and 11.

13. *Comment: Page 26: The conditions when the State can draw on the surety and the purposes for which the State can use the surety funds are very restrictive. It is our understanding that the funds can only be used if Sunnyside is bankrupt and discontinues treatment of water necessary to maintain water quality. We recommend that the State have access to the surety if SGC fails to perform as required in the Consent Decree, no matter what the reason for the failure to perform or if SGC*

prematurely terminates the Consent Decree. Additionally, we would recommend that Echo Bay agree to be a guarantor for full performance of the Consent Decree.

Response: EPA's understanding is correct, and the WQCD declines to change the intent of the Consent Decree.

Comment: Furthermore, use of the term bankrupt is ambiguous. What does become bankrupt mean? Does this mean SGC has filed for bankruptcy, does it mean that SGC has been adjudicated bankrupt by a court, or does it just mean SGC is out of money?

Response: The parties agree to change the language in the Consent Decree from "becomes bankrupt" to "files for bankruptcy or becomes bankrupt."

Comment: Finally, the State is restricted to use the surety funds only to enter and operate the treatment facility at the American Tunnel. We recommend that the surety be available to allow the State to complete any work SGC is required to perform under the Consent Decree. For instance, if SGC were to go bankrupt before they complete the A list projects, the surety should be available to complete these projects, if the State so chooses.

Response: The WQCD declines to change the intent of the Consent Decree.

APPENDIX A TO CONSENT DECREE

1. *Comment: Page 4.a., Paragraph 1: The response to exceedances of the monthly zinc average at the reference point needs further definition. SGC should automatically be required to investigate possible causes of elevated zinc values rather than waiting until after a meeting with the State. How long does SGC have to lower the zinc levels if a problem occurs? Subsequent to the investigation period which should last a maximum of sixty (60) days, SGC should be required to submit an investigation report and a mitigation plan to the State.*

   Response: This matter has been clarified on page 4a of appendix A to the Consent Decree. The initial action if any is deemed necessary, will be for SGC to investigate possible causes of the elevated zinc values. If the cause cannot be explained by known activities not related to mine closure taking place in the affected basin, SGC will respond by increasing the treatment of Cement Creek if such treatment has been decreased or eliminated following completion of the mitigation projects or by implementing one or more of the B list projects. Since the B list projects will have already been approved and permitted construction of the B list projects could begin at any time weather conditions allow. If the B list projects already have been completed SGC may add additional mitigation projects to address deteriorating water quality at

the reference point. If SGC notifies the WQCD that they intend to perform additional remediation projects, then SGC will submit work plans within 60 days of the notification or within a reasonable time frame based on the accessibility of a site for planning and the complexity of the project. The project will be constructed during the first full construction season which is available after submission and approval of the Work Plan.

2. *Comment: Pages 4.a. and 5.a.: The copy of Appendix A we received had several blanks referencing the paragraphs in the Consent Decree. These blanks need to be completed.*

Response: These blanks have been completed, with paragraph numbers 13, 14, and 8, respectively.

APPENDIX B TO CONSENT DECREE

1. *Page 1.b, Part B-2(1), Sunnyside Mine Pool; The plan calls for raising the pH in the Sunnyside Mine to a range of 8 to 9. We are concerned that the range of pH may not be high enough to handle the zinc and copper concentrations. A pH range of 10 to 11 would appear to be a more realistic range to assure adequate precipitation of metals within the mine pool. There is no indication as to how the pH for the injection or the pH in the mine pool will be monitored and adjusted. Either there should be a requirement for monitoring the mine pool in sufficient locations to assure that the pH is in the target range or the concentration at the point of injection should be specified. The concentration at injection should be sufficiently high to achieve the ultimate range of pH throughout the mine pool at equilibrium.*

Response: The alkaline injection project will target a pH of 9.0 to 10.0 in the mine pool. The injection pH will be periodically adjusted based on benchscale testing to achieve a target injection pH level of 12.0. In addition, to extend the period during which alkaline injection is possible, the point of injection has been relocated to the pipe through the bulkhead seal within the Terry Tunnel.

2. *Comment: Pages 1.b, 2.b and 3.b: The plans for mine waste dumps and tailings removals do not mention removal of the contaminated material underlying the waste rock or tailings. Experience at the Eagle Mine and Chalk Creek indicates that a significant amount of contaminated soil will be under the piles. This should be removed and new soil should be placed in the excavation prior to any attempt at revegetation. If this does not happen, the revegetation effort will be subject to failure and the groundwater and surface water leaving this area will show a significant increase in metals. These projects should be undertaken with specific soil sampling plans and removal criteria to assure that the highest level of metals contaminated material is removed. Criteria for soil cover after removal of the material should also*

be stipulated.

Response: The WQCD recognizes the potential relevance of this concern at several of the sites in the Consent Decree. This issue has been addressed in the project Work Plans. Generally, as complete of removal of mine waste and contaminated material as is practicable will be achieved. Soil amendments will be added to topsoil materials and mine waste will be covered with 14 to 16 inches of soil material. Where mine waste is removed, revegetation is required to be done in accordance with the relevant provisions of the Rules of the Mined Land Reclamation Board.

PERMITS

1. *Comment: For all Permits DMRs need to be sent to EPA's new address:*

U.S. Environmental Protection Agency (8ENF-T)
Office of Enforcement, Compliance and Environmental Justice
Technical Enforcement Program
999 18th Street, Suite 500
Denver, CO 80202-2466

Response: Permits will be sent to EPA's new address.

Permit for Mitigation Projects CO-0044768

2. *Comment: The draft permit for the Sunnyside Gold Corporation (SGC) Mine Remediation Projects lacks specific conditions for environmental control. The draft permit only requires full implementation of the Mine Remediation Plan (MRP), however criteria have not been established for the contents of an MRP. As written, the permit does not contain necessary technology based controls, as required by Federal regulations.*

At a minimum, the draft permit for SGC must include specific requirements for all MRPs. We feel that these requirements should be similar to the those for the storm water management plans (SWMPs) for inactive mines as drafted by CDPHE for the draft General Permit for Stormwater Discharge Associated with Metal Mining Operations and Mine-Waste Remediation (Permit Number COR-040000, Parts I.C.1 - I.C.6). A particular emphasis should be placed erosion control during and after (revegetation) the remediation project.

Additional SWMP requirements related to plan preparation, implementation, retention, submittal, review and approval by CDPHE, plan changes, non-stormwater discharges, inspections SWMP availability, and procedures for covering additional

projects must also be added to the permit. For those projects where adits are present, requirements related to adit closure or treatment should be added to the permit to address flow other than storm water.

The MRPs will need to be modified to be in compliance with these permit conditions. Review and approval of the work plans should be through the permit process rather than the consent decree.

Response: The Mine Remediation permit has been revised to incorporate criteria which are very similar to the requirements of the above-referenced sections of the General Permit for Stormwater.

The Mine Remediation permit has been written as an individual permit instead of a general permit, and must be amended to include any additional MRP's or modify MRPs. Also, this Mine Remediation Permit was intended to cover more than just stormwater discharges. Because of these differences, the suggested changes were determined by the Division to be inappropriate.

In those cases were adits are present, the receiving streams have been classified such that there is no need for treatment of adit flows, provided the activities of the permittee do not increase the loading of pollutants from such discharges. In all cases, the permittee has submitted MRP's that either will not affect adit discharges, or will reduce or eliminate pollutant the loading of pollutants being discharged.

American Tunnel Permit CO-0027529

3. *Comment: After reviewing data from the existing facility, EPA believes that there is a reasonable potential for toxicity at this site under present conditions. EPA understands that once treatment of Cement Creek begins and the tunnel discharges lessen, there is likely to be an overall reduction in toxicity of Cement Creek below the facility. However, until it can be shown that there has been a substantial reduction in toxicity of Cement Creek downstream of the tunnel discharge (over present conditions) Whole Effluent Toxicity (WET) monitoring and limits should apply to the Discharge.*

Response: Cement Creek is not classified for aquatic life use. Therefore, it would be inappropriate to perform instream WET testing for Cement Creek. The first downstream segment classified for aquatic life is the Animas River. While the Division is concerned about controlling the toxic effects of the American Tunnel upon the Animas River, it would also be inappropriate to perform any instream WET testing there, due to the large number of other pollutant sources that may also be contributing toxicity.

Instead, the Division has relied upon calculations involving flows and pollutant

concentrations to show that treatment of Cement Creek will reduce significant pollutant concentrations at the mouth of Cement Creek. Since toxicity is most often demonstrated, and may be defined by the presence of a concentration vs toxicity relationship, where an increase in concentration results in an increase in toxicity, it can be argued that a reduction in pollutant concentrations at the mouth of Cement Creek is likely to also produce a reduction in toxicity.

However, in order to maintain consistency with other permits, the permit will require continued WET monitoring and limits until the treatment of Cement Creek begins. This will be accomplished through the addition of a separate outfall for WET testing.

Terry Tunnel Permit CO-0036056

4. *Comment: The Terry Tunnel discharge permit should contain a schedule for termination of the discharge. Emergency discharges and those related to maintenance should be addressed through standard language contained in the permit.*

Response: The Terry Tunnel discharge permit was revised to require elimination of the discharge by 12/31/96.

SUMMARY OF RESPONSES TO COMMENTS RECEIVED BY THE COLORADO WATER QUALITY CONTROL DIVISION REGARDING THE CONSENT DECREE AND ASSOCIATED CDPS PERMITS IN *SUNNYSIDE GOLD CORPORATION v. COLORADO WATER QUALITY CONTROL DIVISION*

The Water Quality Control Division (WQCD) thanks the individuals and organizations that took the time and effort to read and respond to the Consent Decree (CD) and associated permits in the Sunnyside Gold Corporation (SGC) case. The Division and SGC have spent over a year negotiating this CD, and know how complicated it and its appendices are to read and comprehend. The WQCD received many good and thoughtful comments. Although many comments were supportive, many questions and concerns were raised. The following is a summary of questions and comments received by the WQCD, and its responses to those, organized by paragraph and appendix of the CD. Some comments caused the Division to negotiate changes in the documents. Many comments were on issues that the WQCD examined carefully during its deliberations and negotiations, and an explanation is provided of how the issue is addressed.

A letter of support was received from the United States Environmental Protection Agency, and its individual comments are addressed in a separate document. The Animas River Stakeholders, sent a comment letter "support[ing] this innovative agreement as a step toward preventing further degradation and possible improvement of stream water quality in the basin." The letter stated that "[t]he nature of this agreement is consistent with the process and intent of the goals of the Animas River Stakeholders Group which hopes to improve water quality and aquatic life throughout the Animas watershed." Letters of support were received from groups dedicated to protecting the environment and from mining associations.

Paragraph 3. A commentor questions the consistency of the CD's requirement that the water quality be maintained with the policy of the Colorado Water Quality Act (State Act) to protect, maintain, and improve water quality. The commentor confuses the overriding policy of the Act with the obligations that the federal and state statutes impose on individual dischargers. SGC currently is regulated under CDPS permits that contain the limitations on its discharge that the state has the authority under the law to impose. Under the CD, the water quality in the Animas River will, at a minimum, be maintained near its current level, and may be improved.

Paragraph 4g. A commentor requests that all Mined Land Reclamation Board rules, including those regarding water, be incorporated. These sites are not subject to permits by the Division of Minerals and Geology (DMG), and thus are not subject to those rules. The CD incorporates certain of DMG's reclamation rules because standards for those aspects of the mitigation projects were needed. Water quality is addressed in the CD pursuant to the State Act and its implementing regulations.

Paragraph 6. A commentor questions the use of A-72 as the only reference point. The location at A-72 as the reference point was selected because of the substantial amount of

baseline water quality information that exists for that location. This is the only point in the basin where enough information is available to do a statistical comparison between pre-closure and post-closure water quality. The reference point also needed to located at a point far enough downstream to capture manifestations of possible seeps and springs as well as of mitigation projects.

A commentor asks the meaning of the sentence: "The Reference Point will not be a permit compliance point." The reference point was selected for the reasons stated in the above paragraph. A point of compliance, defined as "a vertical surface that is located at some specified distance hydrologically downgradient of the activity being monitored for compliance," is a point where an entity is responsible for the discharge under its permit. SGC, for instance, has a point of compliance at its treatment facility discharge, prior to that discharge entering the stream. It is not responsible under its permits for the instream water quality in the Animas River, where various sources contribute. The CD and SGC's discharge permits are separate documents with different enforcement mechanisms. The Reference Point is the point where it will be determined if the CD has been successful. During the duration of the CD, and afterward if it is not successful, SGC will remain responsible for the discharges under its permits.

Paragraph 9a. A commentor questions the function, placement, expected outcomes of, and decision-making regarding the additional hydraulic seals downstream of the property line in the American Tunnel, and what will happen if the property owner doesn't agree to them. The purpose of these seals would be to eliminate flows from the American Tunnel, and they would have to be approved by the Mined Land Reclamation Board. If they are not implemented or are not successful, and discharges from the tunnel continue, a permit for those discharges would be required.

Paragraph 9b. A commentor questions the future CERCLA liability of SGC. The WQCD has no authority over CERCLA liability, and so it is not addressed.

Paragraph 9c. A commentor asks whether Cement Creek flows above the treatment plant approximate those from the American Tunnel. Although in certain times of year, in very low flow conditions, the Cement Creek flows are less, most of the year they are greater than can be treated by the American Tunnel treatment facility. Therefore, Cement Creek water, previously untreated, will add less loading to the system as the mine pool builds toward equilibrium.

Paragraph 10. A commentor states that the amount and timing of the monitoring appears to be insufficient to determine the results of mitigation and mine closure efforts, and that it appears SGC will reap the benefits from other projects undertaken to clean up the basin. The amount of monitoring to be conducted by SGC was negotiated for purposes of the agreement. The WQCD believes that the monitoring which has been committed to in the CD will provide the appropriate level of information to determine the effectiveness of mitigation projects and any impacts associated with mine closure efforts. It is true that the

agreement as written does allow SGC to benefit from water quality improvements resulting from projects conducted by others.

A commentor asks why there is no proposed monitoring for the Eureka Tailings mitigation project. The WQCD determined that instream monitoring at the mouths of the major tributaries in the Upper Animas Basin was the most valuable source of information. Therefore, mitigation sites which drain directly into major tributaries will not be monitored in all cases, especially where the loading from the site is small relative to the loading normally carried by the receiving stream. Mitigation measures will be taken to prevent impacts during the construction phase of these mitigation projects to avoid impacts on aquatic life. These are specifically addressed in the permit for mitigation projects.

Paragraph 13. A commentor questions SGC's discretion whether to do additional remediation projects that will have a positive impact on water quality if completion of the remediation projects on the "A" and "B" lists do not result in a Successful Permit Termination, and the use of the term "positive impact," when the commentor would like a requirement that the water quality improved from its current status. The parties agreed to change the first two sentences of paragraph 13 (page 21) to read as follows:

> In the event that the Permit Termination criteria of paragraph 14 below are not met following completion of all the mitigation projects on both the "A" and "B" Lists, within sixty days after the Division notifies SGC of such a determination, SGC will notify the Division whether or not it intends to propose additional remediation projects which are anticipated to have a positive impact on the water quality of the Animas River. If SGC determines that it will propose additional such projects, it will submit proposed Work Plans to the Division within sixty days of the notification or within a reasonable timeframe based on the accessibility of the site for planning and the complexity of the project.

Under this paragraph, the WQCD has approval authority of proposed Work Plans. It should also be noted that if the projects do not result in maintenance of water quality (i.e., a Successful Permit Termination Assessment), SGC will not be released from its obligations under its CDPS permits.

Paragraph 14. A commentor questions that a Permit Termination Assessment can take place five years after the Mine tunnels are sealed. The commentor offers neither an alternative nor basis for the belief that this timeframe is inadequate. The CD is a negotiated settlement within the WQCD's administrative discretion. Although different timeframes could be argued, a timeframe had to be set. Those sorts of arguments could prevent mitigation activities such as those envisioned in this CD from ever occurring.

A commentor states that the ability of SGC to transfer the permit unnecessarily waives SGC's obligations. The commentor misunderstands the CD and the law. Under the

CD, SGC must at a minimum complete all of the "A" list projects. The State entered into the CD with the belief that completion of the "A" list projects would compensate for any increased loading caused by sealing of the American and Terry tunnels. Any transferee of the permit would be under the same permit obligations as is SGC. The WQCD is confused as to the commentor's concern over the entity holding the permit.

The commentor states that a "transfer of the permit should not be able to be construed as limiting the requirement that the flows from the American tunnel are completely eliminated over the long-term." Nowhere in the CD does this "requirement" exist. The CD is clear that if flow from the tunnel remains, a permit will be required (paragraphs 8, 20 and 24).

Paragraph 14g. A commentor asks why it is a requirement of the CD that treatment of Cement Creek cease prior to a successful termination of the permits and CD. The basic principal contained within the CD is that water quality at monitoring station A-72 must be maintained or improved with no continued treatment activities on the part of Sunnyside Gold Corporation. Also, in order for SGC to inactivate its mine/land reclamation permit, the treatment facility located near the portal of the American Tunnel must be removed and the site restored to its pre-mining conditions.

Paragraph 16a. A commentor questions the definition of the term "feasible" as it relates to the feasibility of additional mitigation projects. The WQCD reminds the commentor that if a Successful Permit Termination Assessment is not achieved, SGC will not be released from its permit obligations, but that it will have performed important mitigation work.

Paragraph 18. A commentor questions SGC's commitment to treatment for 2.5 years in the event of a premature termination and asks what then happens to contaminated flow. This thirty-month treatment requirement is for Cement Creek (not American Tunnel discharge), which currently receives no treatment and for which SGC is not legally responsible in the absence of this CD. In this case, SGC will continue to be bound by its CDPS permit for any continued flow from the American Tunnel. The diversion of Cement Creek flows into the treatment plant should capture the seeps and springs most likely to flow after mine closure. The Commentor asks about compliance at the mitigation sites in the event of a premature termination, and about seeps and springs that may develop after tunnel sealing in the event of premature termination. A premature termination is not permitted under the CD unless all projects on the "A" list are complete. This is the list of projects which the WQCD believes will compensate for increased loading that will result from sealing of the tunnels and discontinued treatment. SGC will not be released from its permits by the WQCD in the event of a premature termination, and the Parties will return to their pre-CD litigation positions.

Paragraph 19. A commentor states that if there is a premature termination, the existing discharge permits should not only remain in effect but be renewed. Under the Act

and regulations, this is how it would work.

Paragraph 24. One commentor noted that the basic concept embodied in the CD of allowing SGC to remediate inactive mine sites throughout the Upper Animas Basin in return for terminating its permits for the Terry and American Tunnel discharges after sealing the Sunnyside Mine, is fundamentally flawed, because all of the inactive mine sites in the basin should already have permits which require the mine owners to perform such remediation work. While it is true that point source discharges including storm water occur at historically inactive mines, they are so numerous, scattered and variable, in terms of their water quality impacts and ownership patterns, that the Division has not been capable of pursuing a comprehensive strategy of issuing permits to such mines. Recently, through the development of the watershed approach to water quality management, it has become possible for the Division, in cooperation with the others, to conduct monitoring studies aimed at developing attainable water quality goals and targeting the most significant sources of mine drainage in watershed impacted by past mining activities. Such cooperative monitoring efforts in the Upper Animas Basin over the past 5 years provided the informational base which made this CD possible.

The Division believes that a combination of approaches for addressing the impacts from inactive mines is appropriate and necessary. Each approach to improving water quality, whether it be a cooperative and voluntary effort conducted by remediating agencies, point source permitting by the WQCD, CERCLA cleanups and removal actions, or hybrid approaches such as contained in this CD, depends upon adequate watershed monitoring and assessment to enable limited resources to be well targeted. Watershed scale monitoring makes it possible to establish realistic water quality goals and standards, then to translate the goals into total maximum daily loads (or other specific limitations) so that proper resource allocation decisions can be made. The Division's Permitting strategy will be to address sites which are discharging significant (i.e. non-de minimus) pollutant loadings relative to the TMDL for the basin and where other approaches are not available for controlling the problem.

Paragraph 24b. A commentor asks what BAT standards are. BAT limitations are technology based effluent limitations and standards based on effluent limitations and standards promulgated under Section 301 of the Clear Water Act or new source performance standards promulgated under Section 306 of the Clean Water Act. Some case by case effluent limitations are determined under Section 402 (a)(1) of the Clean Water Act. Specific effluent limitations have been promulgated for mining-related industrial categories including ore mining. The BAT limit for zinc in the ore mining industrial category is .75 milligrams per liter.

Paragraph 25. A commentor asks if the State will be able to track the letter of credit expiration date, notice of alternate letter of credit and the 10-day period so the State can draw a draft of the letter of credit if necessary? The WQCD is currently developing specific procedures which will address this concern.

A commentor asks if the financial assurance will be used to cover all remediation projects. The CD specifies that the financial assurance is to be used for treatment plant operation in the case that SGC files for bankruptcy or becomes bankrupt and discontinues treatment. If SGC does not meet all requirements set forth in the CD, it will not be released from its enforceable permit obligations.

Paragraph 36. A commentor asks if there will be public notice of amendments to the CD. Any amendments to the CD must be approved by Court order, and as such will be public documents. Amendments to the permits will be governed by the Act and regulations, which require amendments to be public noticed. The WQCD envisions that significant amendments to the CD would be public noticed.

Appendix A. A commentor questions zinc as the only parameter used in a Permit Termination Assessment. The WQCD believes that the utilization of zinc provides an accurate comparison of the water quality at the reference point over time and that a whole host of other pollutants will be adequately controlled zinc is controlled.

Appendix B. A commentor questions the Sunnyside Mine pool mitigation project and the amounts of neutralizing agents that will be added to offset the acids which will liberate from dissolved salts. The pH of mine water currently draining from the Sunnyside Mine workings is near neutral. However, there are some acidic fracture zones within the mine workings. While it is true that the alkaline injection into the mine pool is experimental, the Parties agree that it may prove to be very beneficial. Monitoring of seeps and springs is required by DMG pursuant to the Mine Land Reclamation Permit held by SGC. The WQCD will consider supplementing water quality monitoring activities which are currently specified in the CD and in the CDPS permits and DMG permits applicable to SGC.

A commentor asks what criteria will be used to measure the success of mitigation projects. Per paragraphs 4g and 8a of the CD, the mitigation projects must meet section 3.1.5 (materials handling), 3.1.9 (topsoiling), 3.1.10 (revegetation), and 3.1.11 (buildings and structures) of the rules of the Mined Land Reclamation Board, 2 CCR 407-1, as they exist at the time the CD is entered by the Court, and the Work Plans approved by the WQCD included in the Mine Remediation Permit.

A commentor asks why SGC is only evaluating water flows and designing a treatment system rather than completing a water treatment system at the Koehler Longfellow site. Uncertainty about the possibility of terminating an NPDES permit at the site resulted in SGC being unwilling to construct and operate a treatment facility.

A commentor asks why the CD only requires a bulkhead at the Columbus Mine Portal when the permit requires both a bulkhead and mine waste relocation. The CD is in addition to any permits and their requirements. It does not replace those.

A commentor expressed concern about the relative insensitivity of the proposed

monitoring evaluation scheme to detect a change in the zinc concentration in the Animas River below Mineral Creek between the pre- and post-project periods. This comment or recommended that the three flow classes (low, medium and high) be eliminated so that all of the pre- and post-project concentration values could be evaluated as a single data set. This was based on the premise that larger sample size obtained by ignoring flow effects, would have greater power to detect a difference between the pre- and post-project data sets than can be achieved by recognizing flow as a factor and splitting the data into three small subsets. This commentor further noted that while the CD focuses upon the low flow period as being most critical, zinc concentrations are even more toxic at higher flows. Even though the concentrations of zinc at high flows are less than at low flows, they are more toxic. This is because hardness (which mitigates toxicity) decreases as flows increase.

While this recommendation has merit from a statistical (and toxicological) point of view, the parties are unable to accept this recommendation. This comment highlights one of the most difficult and contentious issues the parties encountered during the lengthy negotiations on the proposed CD. The WQCD and SGC differed over the appropriate manner in which to address the flow factor in the monitoring evaluation analysis contained in Appendix A. The parties' disagreement over this issue eventually threatened the possibility of achieving a settlement of the lawsuit. Ultimately, the WQCD agreed to accept SGC's approach for evaluating the post project period utilizing 3 separate flow classes and the parties together identified a statistical approach for evaluating water quality changes during the actual project performance period. The WQCD viewed the benefits of the overall agreement as outweighing the value of greater statistical precision in determining whether a successful termination of the agreement had been accomplished by SGC.

Analysis of the zinc data at the A-72 reference location shows a relationship between zinc concentrations and stream flow. Zinc levels are higher at low flow and lower at high flow. Because the zinc concentration is correlated with stream flow, there was a concern that a change in concentration due to mine closure activities would be partially masked by differences in concentration due to flow. Stated differently, part of the variability in zinc concentration could be due to stream flow, but the variability of interest would be that due to mine closure activities. Accordingly, the WQCD proposed to use a statistical procedure (analysis of variance where the flow factor is blocked or regression analysis) that would remove the effect of flow so that the effects of mine closure on water quality at A-72 would be evaluated. This approach retained all of the zinc/flow observations as a single data set and provide a larger number of samples as recommended by this commentor.

Using this approach, the WQCD felt, based on its analysis of the A-72 data, that a 10 percent shift in the mean zinc concentration at A-72, could reasonably be detected between the pre- and post-project data. Choice of a ten percent difference was based on the fact that it was practical to achieve using the statistical procedures proposed by the WQCD and the WQCD's belief that less than a 10% change in water quality would not be significant.

SGC, on the other hand, proposed that the data set should be broken into three

distinct and separate flow class data sets. They asserted that the three flow classes were distinct populations and that the reference data set is not random. The implication of the SGC approach is that 1) only differences greater than 10 percent between the pre- and post-project data sets can be detected, or 2) a much larger number of samples are required to achieve the same level of precision across all three flow states.

In the ensuing negotiations, SGC agreed to increase the number of post-mine closure water quality samples, and the WQCD suggested incorporating zinc data collected before October 1991 (samples that lacked concurrent flow estimates). These measures increased the sensitivity of the analysis in the low flow condition, but not at the intermediate or high flows. This approach allows the State to detect a change in the mean zinc concentration of about 14 percent at low flow, 23 percent at moderate flows and 21% at high flows. As noted by this commentor, the WQCD assumed the low flow period was most critical. The WQCD focused on the low flow period because an increase in zinc concentration attributable to mine closure activities would be most noticeable at this time when groundwater seepage and mine drainage are the dominant sources of zinc. The WQCD did not consider the differences in toxicity during the three flow periods. Discussions between the parties following receipt of the public comments on the proposed agreement did not yield mutually satisfactory alternative approaches and, therefore, no changes have been made in the pre- and post-project monitoring evaluation procedures set forth in Appendix A.