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ENVIRONMENTAL PROTECTION AGENCY  
REGION IX US EPA - REGION IX  
75 HAWTHORNE STREET HEARING CLERK  
SAN FRANCISCO, CALIFORNIA 94105

IN RE: )  
) DOCKET NO. EPCRA-09-2011-0004  
)  
BARRICK CORTEZ, INC.; )  
) CONSENT AGREEMENT AND  
BARRICK GOLD U.S., INC.; ) FINAL ORDER  
)  
HOMESTAKE MINING COMPANY )  
OF CALIFORNIA, )  
)  
RESPONDENTS )  
\_\_\_\_\_ )

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I. CONSENT AGREEMENT

The United States Environmental Protection Agency, Region IX (“EPA Region IX”) and Barrick Cortez, Inc. (“BCI”), Barrick Gold U.S., Inc. (“BGI”), and Homestake Mining Company of California (“Homestake”) (collectively “Respondents”) agree to settle this case initiated under the Emergency Planning and Community Right-to-Know Act (“EPCRA” or the “Act”), 42 U.S.C. §§ 11001 et seq., and consent to the entry of this Consent Agreement and Final Order (“CAFO”).

A. AUTHORITY AND PARTIES

1. EPA initiated this civil administrative proceeding for the assessment of a civil administrative penalty pursuant to Section 325(c) of the Emergency Planning and Community Right-To-Know Act (the “Act” or “EPCRA”), 42 U.S.C. § 11045(c), and the Consolidated Rules of Practice Governing the Administrative Assessment of Civil

Penalties and the Revocation/Termination or Suspension of Permits, 40 C.F.R. Part 22, by issuing a Complaint and Notice of Opportunity for Hearing (the “Complaint”) against Respondent BCI on September 29, 2011.

2. EPA filed a First Amended Complaint and Notice of Opportunity for Hearing (the “First Amended Complaint”) against Respondent BCI on January 4, 2012. Respondent BCI filed its Answer and Request for Hearing on January 27, 2012.
3. EPA filed a Motion for Leave to File Second Amended Complaint (“Motion”) accompanied by a Second Amended Complaint and Notice of Opportunity for Hearing (“Second Amended Complaint”) against Respondents on January 25, 2013.
4. The Second Amended Complaint alleges that Respondents violated Section 313, 42 U.S.C. § 11023, of the Act and implementing regulations at 40 C.F.R. Part 372.
5. EPA Region IX and Respondents have agreed to resolve and fully settle this civil administrative proceeding arising under the Act by executing this CAFO.

#### B. RESPONDENTS’ ADMISSIONS

6. In accordance with 40 C.F.R. § 22.18(b)(2) and for the purpose of this proceeding only, Respondents each (i) admit that EPA has jurisdiction over the subject matter of this CAFO and over Respondents; (ii) neither admit nor deny the specific factual allegations contained in the Second Amended Complaint; (iii) consent to any and all conditions specified in this CAFO and to the assessment of the civil administrative penalty under Section I.E of this CAFO; (iv) waive any right to contest the allegations contained in the Second Amended Complaint; and (v) waive the right to appeal the proposed final order contained in this CAFO.

### C. SUPPLEMENTAL ENVIRONMENTAL PROJECT

7. Within one hundred and eighty (180) calendar days of the effective date of this CAFO, Respondent BCI shall complete a bench-scale test for estimating the coincidental manufacturing of metal compounds in the oxide mill at the BCI gold mining facility near Crescent Valley, Nevada (the "SEP"), as outlined in this Section and the Appendix of this CAFO. EPA and Respondent BCI intend that the SEP secure significant environmental or public health protection and improvements.
8. Respondent BCI shall incur a minimum of THREE HUNDRED AND FORTY THOUSAND DOLLARS (\$340,000) for the SEP. If the actual cost of the SEP is less than \$340,000, Respondent BCI shall pay to EPA the difference between \$340,000 and the actual cost. However, if Respondent spends at least 90% of the amount required to be spent on the SEP and the SEP is satisfactorily completed within the meaning of this CAFO, payment of the difference to EPA is not required.
9. Within thirty (30) calendar days of the effective date of this CAFO, Respondent BCI shall submit the following:
  - a. A draft Quality Assurance Project Plan ("QAPP") for the bench-scale model that includes:
    - i. performance criteria for each step of the bench-scale model; and
    - ii. provisions for additional data collection throughout the implementation of the bench-scale model (e.g., decanted fluid volumes, absolute changes to total slurry volume) to assist in interpreting the results.
  - b. A draft QAPP for the analysis of samples from the bench-scale model that includes:

- i. specification of analytical duplicates at a rate to properly measure analytical consistency;
- ii. specification of matrix spike samples, laboratory control samples, and blanks at a rate to properly measure the overall quality of the analysis;
- iii. planned sample sizes;
- iv. target reporting limits;
- v. references to EPA-approved methods (or standard operating procedures where no method is available);
- vi. performance criteria for all quality control analyses (e.g., the residual standard deviation between two analytical duplicates shall be less than 25 percent); and
- vii. a description of how quality control analyses will be documented in the final laboratory report.

Both QAPPs shall include information on the type, quantity, and quality of data to be collected, and how the data will be assessed and reported. EPA shall submit any comments on the draft QAPPs to Respondent BCI within seven (7) calendar days of its receipt. Respondent BCI shall submit the revised QAPPs to EPA within seven (7) calendar days of its receipt of EPA comments. EPA must approve the final QAPPs before their implementation. Respondent BCI shall comply with the final QAPPs in performing the SEP.

10. Within sixty (60) calendar days of the effective date of this CAFO and every sixty (60) calendar days thereafter until all of the tasks listed in the Appendix are performed, Respondent BCI shall submit to EPA a report which shall describe the status of the SEP

from the time of the immediate prior report, and shall include:

- a. a brief description of the work undertaken during the reporting period;
- b. compliance with the schedules and milestones set forth in the Appendix;
- c. copies of all documents regarding the work provided by the contractor/consultant performing the work; and
- d. a summary of costs incurred since the previous report.

11. If Respondent BCI fails to meet, or has reason to believe that it will fail to meet, any requirement of Section I.C of this CAFO, including the Appendix, Respondent BCI shall notify EPA of such failure and its likely duration, in writing, within ten (10) business days of the day Respondent BCI first becomes aware of the failure, with an explanation of the failure's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such failure. If the cause of a failure cannot be fully explained at the time the report is due, Respondent BCI shall so state in the status report. Respondent BCI shall investigate the cause of the failure and shall then submit an amendment to the status report, including a full explanation of the cause of the failure, within thirty (30) calendar days of the day Respondent BCI become aware of the cause of the failure. During this thirty (30) day period, Respondent BCI shall not be deemed to be in violation of this CAFO. Failure by Respondent BCI to comply with the notice requirements of this Paragraph shall render this Paragraph void and of no effect as to the particular incident involved and constitute a waiver of the Respondent BCI's right to request an extension and/or amendment of its obligation under this CAFO based on such incident. Nothing in this Paragraph relieves Respondent BCI of its obligation to provide the notice required by Section I.H of this CAFO (Force Majeure).

12. Not later than thirty (30) calendar days after the completion of the SEP, Respondent BCI shall submit a SEP Completion Report. The SEP Completion Report shall contain:
  - a. a detailed description of the SEP as implemented;
  - b. an itemized list of all SEP costs and supporting documentation verifying Respondent BCI's expenditures for the SEP. This documentation shall include, but is not limited to, copies of receipts, invoices, purchase orders and/or contracts.
13. Within thirty (30) calendar days after receiving a SEP Completion Report, EPA shall notify Respondent BCI regarding its determination of whether Respondent BCI has satisfactorily completed the SEP. Any such notice shall be sent to:

Regional General Counsel  
Barrick Gold Corporation  
460 West 50 North, Suite 500  
Salt Lake City, Utah 84101  
Phone: (801) 990-3900  
Fax: (801) 990-3830

Steven G. Barringer  
Holland & Hart LLP  
975 F Street, N.W., Suite 900  
Washington, D.C. 20004  
Phone: (202) 393-6500  
Fax: (866) 711-8049  
Email: [sgbarringer@hollandandhart.com](mailto:sgbarringer@hollandandhart.com)

For purposes of this Paragraph, "satisfactory completion" or "satisfactorily completed" means that Respondent BCI: (a) completed the bench-scale test within 180 calendar days of the effective date of this CAFO in compliance with this Section and the Appendix; and (b) complied with all reporting requirements set forth in this Section of this CAFO. If EPA finds that Respondent BCI has not satisfactorily completed the SEP, Respondent BCI shall have ten (10) business days following receipt of EPA's written notice of

unsatisfactory completion to correct any deficiencies identified in EPA's determination. Respondent BCI's corrections must be documented in writing and submitted to the persons identified in Paragraph 17. If Respondent BCI cannot correct the deficiencies indicated within the ten (10) business day period, stipulated penalties may be assessed under Section I.F of this CAFO.

14. Within ten (10) business days of EPA's receipt of Respondent BCI's corrections, EPA shall notify BCI whether the SEP has been satisfactorily completed.
15. Each submission required under this Section which purports to document compliance with the terms of the CAFO shall be signed by a responsible official, as designated below, and shall bear the certification language set forth in Paragraph 16 below. A responsible official for the purposes of this provision means:

for a corporation, a president, secretary, treasurer or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$35 million (in 1987 dollars when the Consumer Price Index was 345.3), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

for a partnership or sole proprietorship, a general partner or the proprietor, respectively.

For the purposes of this CAFO, EPA and Respondents agree that the Director of Environment, Barrick Gold of North America, Inc. is a responsible official.

16. Each submission required under this Section shall be signed by a responsible official of one or more of Respondents and shall include the following certification:

I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that this document and its attachments were prepared under my direction in a manner designed to ensure that qualified and knowledgeable personnel properly gather

and present the information contained therein. I further certify, based on my personal knowledge or on my inquiry of those individuals immediately responsible for obtaining the information, that to the best of my knowledge the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowingly and willfully submitting a material false statement.

17. Each submission required under this Section shall be sent to:

Russell Frazer (CED-4)  
Communities and Ecosystems Division  
U.S. Environmental Protection Agency, Region IX  
75 Hawthorne Street  
San Francisco, CA 94105  
Phone: (415) 947-4220  
Fax: (415) 947-3583  
Email: [frazer.russell@epa.gov](mailto:frazer.russell@epa.gov)

David H. Kim (ORC-3)  
Office of Regional Counsel  
U.S. Environmental Protection Agency, Region IX  
75 Hawthorne Street  
San Francisco, CA 94105  
Phone: (415) 972-3882  
Email: [kim.david@epa.gov](mailto:kim.david@epa.gov)

18. There shall be no restrictions on EPA's use of any data yielded by the SEP or procedures or protocols developed to implement the SEP.
19. In executing this CAFO, Respondent BCI certifies that, as of the date of executing the CAFO:
- a. Respondent BCI is not required to perform or develop the SEP by any federal, state, international or local law or regulation and is not required to perform or develop the SEP by agreement, grant, or as injunctive relief awarded in any other action in any forum;
  - b. Respondent BCI has not received, and is not presently negotiating to receive,



- credit in any other enforcement action for the SEP; and
- c. the SEP is not a project that Respondent BCI was planning or intending to perform or implement other than in settlement of the claims resolved in this CAFO.
20. Any public statement, oral or written, in print, film, or other media, made by Respondent BCI making reference to the SEP under this CAFO shall include the following language: “This project was undertaken in connection with the settlement of an enforcement action taken by the United States Environmental Protection Agency under the Emergency Planning and Community Right-to-Know Act.”
21. Respondent BCI may use contractors or consultants in implementing the SEP, but Respondent BCI remains entirely responsible for the satisfactory completion of the SEP.

D. EPCRA § 313 AUDIT

22. Respondents shall perform and complete an audit (the “Audit”) of EPCRA § 313 reporting for the following facilities (“Facility” in the singular; collectively the “Facilities”):
- a. Cortez Gold Mine  
P.O. Box 1250  
Crescent Valley, NV 89821
  - b. Bald Mountain Gold Mine  
P.O. Box 2706  
Elko, NV 89803
  - c. Ruby Hill Gold Mine  
P.O. Box 676  
Eureka, NV 89316
  - d. Barrick Goldstrike Mine  
P.O. Box 29  
Elko, NV 89803

- e. Turquoise Ridge Mine  
2055 Getchell Mine Road  
Golconda, NV 89414
  - f. Storm Mine  
293 Spruce Road  
Elko, NV 89801
  - g. Golden Sunlight Mine  
453 Montana Highway 2 East  
Whitehall, MT 59759
23. Within five (5) calendar days of the effective date of this CAFO, Respondents shall submit to EPA a protocol for the Audit (the “Audit Protocol”).
24. Within five (5) calendar days of its receipt of the Audit Protocol, EPA shall complete its review of the Audit Protocol.
25. The Audit shall be performed by an outside contractor pursuant to the methodology outlined in the Audit Protocol.
26. The Audit shall cover all potential EPCRA § 313 statutory and regulatory obligations of the Facilities for reporting years 2007 through present, except the Cortez Gold Mine where the Audit shall cover reporting years 2005-2011.
27. Within sixty (60) calendar days of EPA’s acceptance of the Final SEP Report described in Section I.C of this CAFO or by October 1, 2013, whichever occurs earlier, and every sixty (60) calendar days thereafter, Respondents shall submit to EPA a report (the “Audit Report”) describing the results of the Audit for one or more of the Facilities identified in Paragraph 22. These Audit Reports shall include:
- a. a certification that Respondents conducted a complete audit of the Facility in accordance with the Audit Protocol;
  - b. a list of EPCRA § 313 chemicals evaluated as part of the Audit;

- c. a description of reporting threshold determinations made for each of the EPCRA § 313 chemicals identified on the list required by subpart (b) of this paragraph;
- d. a table listing EPCRA § 313 chemicals for which any release estimate calculated through the Audit differs from the estimate reported on the EPCRA § 313 report (“Form R”) originally submitted. This table shall include the following:
  - i. The release estimates calculated on the EPCRA § 313 report (“Form R”) originally submitted.
  - ii. The release estimates calculated through the Audit.
  - iii. Whether the release estimate calculated through the Audit is equal to or greater than the following:
    - 1. For non PBT- chemicals (chemicals with reporting thresholds of 25,000 pounds for manufacturing and processing and 10,000 pounds for otherwise use), the level of significance specified in EPA’s *Enforcement Response Policy for Section 313 of the Emergency Planning and Community Right-to-Know Act (including the Interim Data Quality Amendment to the EPCRA Section 313 Enforcement Response Policy)*.
    - 2. For PBT chemicals (chemicals with lower reporting thresholds specified in 40 CFR § 372.28), the level of significance is a difference equal to or greater than a 25% increase of the reported amount.
  - iv. Identify the chemicals for which a new or corrected Form R will be submitted; and

- e. drafts of the new or corrected Form Rs that will be submitted as a result of the Audit. A new or corrected Form R will be submitted for each chemical in which the Audit shows: (A) one or more reporting threshold has been exceeded for a chemical for which no Form R was originally submitted; or (B) one or more release estimate calculated through the Audit is significant, as defined at subsection d.iii, above.
28. Within thirty (30) calendar days of its receipt of an Audit Report, EPA shall provide Respondents with written notice accepting the report or identifying deficiencies in the report that must be corrected before EPA can accept the report. For purposes of this section “deficiencies” are defined as elements of the Audit that are inconsistent with the accepted Audit Protocol and the requirements of this Section. EPA’s written notice will identify and explain the deficiency and provide guidance on how the deficiency could be corrected.
  29. If EPA identifies deficiencies in the Audit Report, Respondents shall have thirty (30) calendar days following receipt of EPA’s written notice to correct the deficiencies specifically identified in EPA’s written notice.
  30. If Respondents disagree with a deficiency identified by EPA, they will notify EPA of the disagreement within fifteen (15) calendar days following receipt of EPA’s written notice. The parties will have fifteen (15) calendar days to reach agreement on whether the Audit Report submitted complies with the Audit Protocol. If no agreement is reached within that time period, the dispute shall be submitted to the Director of Communities and Ecosystems Division of EPA Region IX (the “Division Director”) to determine whether the Audit complies with the Audit Protocol and the requirements of this Section. The

Division Director and Respondents shall then have thirty (30) calendar days to resolve the dispute. If an agreement is reached between the Division Director and Respondents, the resolution shall be reduced to writing and signed by the Division Director and Respondents. If the Division Director and Respondents are unable to reach agreement within the 30-day period, the Division Director shall provide a written statement of his/her decision to Respondents, which shall be binding upon Respondents.

31. Upon receipt of Respondents' corrections, EPA shall provide written notice whether EPA accepts the Audit Report(s) within ten (10) business days.
32. Within fifteen (15) calendar days of Respondents' notification of EPA's acceptance of an Audit Report, Respondents shall file the new or corrected Form Rs or withdraw Form Rs for the Facility using EPA's reporting portal at [www.epa.gov/tri/reporting\\_materials/trimeweb/index.html](http://www.epa.gov/tri/reporting_materials/trimeweb/index.html).
33. If Respondents fail to meet, or have reason to believe that they probably will fail to meet, any requirement of this Section or the Audit Protocol, Respondents shall notify EPA of such failure and its likely duration, in writing, within ten (10) business days of the day Respondents first became aware of the failure, with an explanation of the failure's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such failure. If the cause of a failure cannot be fully explained at the time the report is due, Respondents shall so state in the report. Respondents shall investigate the cause of the failure and shall then submit an amendment to the report, including a full explanation of the cause of the failure, within thirty (30) calendar days of the day Respondents become aware of the cause of the failure. During this thirty (30) day period, Respondents shall not be deemed to be in violation of this CAFO. Failure by Respondents to comply with

the notice requirements of this Paragraph shall render this Paragraph void and of no effect as to the particular incident involved and constitute a waiver of the Respondents' right to request an extension and/or modification of their obligation under this CAFO based on such incident. Nothing in this Paragraph relieves Respondents of their obligation to provide the notice required by Section I.H of this CAFO (Force Majeure).

34. Not later than sixty (60) calendar days after completion of the Audit, Respondents shall submit the Final Audit Report. The Final Audit Report shall contain the following information:
  - a. certification that the Audit Protocol has been fully implemented and the Audit fully carried out pursuant to all of the provisions of this CAFO and of the Audit Protocol; and
  - b. a list of all Form Rs to be filed or corrected as a result of the Audit, and the corresponding stipulated penalties to be paid as required by Paragraph 36.
35. Each report submitted by Respondents under this Section shall comply with the requirements of Paragraphs 15, 16 and 17.
36. Respondents shall pay a stipulated penalty of TEN THOUSAND DOLLARS (\$10,000) for each new or corrected Form R filed for the Facilities, except that penalties for Bald Mountain Mine and Ruby Hill Mine for Reporting years 2007 and 2008, and for Cortez Mine for Reporting Years 2005-2007 shall be fully addressed by the payments specified in Section I.E of this CAFO. However, under no circumstance shall the total amount of stipulated penalties paid for new or corrected Form Rs for the Facilities exceed TWO HUNDRED AND FIFTY THOUSAND DOLLARS (\$250,000) in aggregate. Respondents shall pay the stipulated penalty within thirty (30) days of receipt of EPA's

written demand. Payment of the stipulated penalty under this Paragraph resolves all civil liability for each new or corrected Form R for the Facilities identified in the Final Audit Report and corrected (including filed or withdrawn) pursuant to the Audit.

37. Respondents shall bear all costs associated with the Audit.

E. CIVIL ADMINISTRATIVE PENALTY

38. Respondent BCI, BGI, and Homestake hereby consent to the assessment of a civil penalty in the amount of TWO HUNDRED AND SEVENTY-EIGHT THOUSAND DOLLARS (\$278,000) as full, final, and complete settlement of the civil claims alleged in the Second Amended Complaint.
39. Respondents shall pay the penalty specified in Paragraph 38 of this CAFO within thirty (30) calendar days of the effective date of this CAFO. The civil penalty shall be paid by remitting a certified or cashier's check, including the name and docket number of this case, for the amount, payable to "Treasurer, United States of America," (or be paid by one of the other methods listed below) and sent as follows:

Regular Mail:

U.S. Environmental Protection Agency  
Fines and Penalties  
Cincinnati Finance Center  
PO Box 979077  
St. Louis, MO 63197-9000

Wire Transfers:

Wire transfers must be sent directly to the Federal Reserve Bank in New York City with the following information:  
Federal Reserve Bank of New York  
ABA = 021030004  
Account = 68010727  
SWIFT address = FRNYUS33  
33 Liberty Street  
New York, NY 10045  
Field Tag 4200 of the Fedwire message should read "D 68010727  
Environmental Protection Agency"

Overnight Mail:

U.S. Bank  
1005 Convention Plaza  
Mail Station SL-MO-C2GL  
ATTN Box 979077  
St. Louis, MO 63101

ACH (also known as REX or remittance express):

Automated Clearinghouse (ACH) for receiving U.S. currency  
PNC Bank  
808 17<sup>th</sup> Street, NW  
Washington, DC 20074  
ABA = 051036706  
Transaction Code 22 – checking  
Environmental Protection Agency  
Account 31006  
CTX Format

On Line Payment:

This payment option can be accessed from the information below:  
[www.pay.gov](http://www.pay.gov)  
Enter “sfo1.1” in the search field  
Open form and complete required fields

If clarification regarding a particular method of payment remittance is needed, contact the EPA’s Cincinnati Finance Center at (513) 487-2091.

The payment by check shall be accompanied by a transmittal letter identifying the case name, the case docket number, and a copy of this CAFO. Concurrent with delivery of the payment, Respondents shall send a copy of the check and transmittal letter to the following addresses:

Regional Hearing Clerk  
Office of Regional Counsel (ORC-1)  
U.S. Environmental Protection Agency, Region IX  
75 Hawthorne Street  
San Francisco, CA 94105

Russell Frazer (CED-4)  
Communities and Ecosystems Division  
U.S. Environmental Protection Agency, Region IX



75 Hawthorne Street  
San Francisco, CA 94105  
Phone: (415) 947-4220  
Fax: (415) 947-3583  
Email: [frazer.russell@epa.gov](mailto:frazer.russell@epa.gov)

David H. Kim  
Office of Regional Counsel (ORC-3)  
U.S. Environmental Protection Agency, Region IX  
75 Hawthorne Street  
San Francisco, CA 94105  
Phone: (415) 972-3882  
Fax: (415) 947-3570  
Email: [kim.david@epa.gov](mailto:kim.david@epa.gov)

40. Payment of the above civil administrative penalty shall not be used by Respondents or any other person as a tax deduction from Respondents' federal, state, or local taxes.
41. If Respondents fail to pay the civil administrative penalty within 30 calendar days of the effective date of this CAFO, then Respondents shall pay to EPA the stipulated penalty specified below in Paragraph 43. In addition, failure to pay the civil administrative penalty may lead to any or all of the following actions:
  - a. The debt being referred to a credit reporting agency, a collection agency, or to the Department of Justice for filing of a collection action in the appropriate United States District Court. 40 C.F.R. §§ 13.13, 13.14, and 13.33. In any such collection action, the validity, amount, and appropriateness of the assessed penalty and of this CAFO shall not be subject to review.
  - b. The debt being collected by administrative offset (i.e., the withholding of money payable by the United States to, or held by the United States for, a person to satisfy the debt the person owes the Government), which includes, but is not limited to, referral to the Internal Revenue Service for offset against income tax

refunds. 40 C.F.R. Part 13, Subparts C and H.

- c. Action being taken pursuant to 40 C.F.R. § 13.17.
- d. In accordance with the Debt Collection Act of 1982 and 40 C.F.R. Part 13, interest, penalties charges, and administrative costs will be assessed against the outstanding amount that Respondents owe to EPA for Respondents' failure to pay the civil administrative penalty within the deadline specified in Paragraph 39. Interest will be assessed at an annual rate that is equal to the rate of current value of funds to the United States Treasury (i.e., the Treasury tax and loan account rate) as prescribed and published by the Secretary of the Treasury in the Federal Register and the Treasury Fiscal Requirements Manual Bulletins. 40 C.F.R. § 13.11(a)(1). Penalty charges will be assessed monthly at a rate of 6% per annum. 40 C.F.R. § 13.11(c). Administrative costs for handling and collecting Respondents' overdue debt will be based on either actual or average cost incurred, and will include both direct and indirect costs. 40 C.F.R. § 13.11(b). In addition, if this matter is referred to another department or agency (e.g., the Department of Justice, the Internal Revenue Service), that department or agency may assess its own administrative costs, in addition to EPA's administrative costs, for handling and collecting Respondents' overdue debt.

#### F. STIPULATED PENALTIES

- 42. If Respondent BCI has not satisfactorily completed the SEP within 210 calendar days of the effective date of this CAFO, EPA may elect to terminate the SEP if it determines that Respondent BCI is not making a good faith effort to satisfactorily complete the SEP. In addition, if at any time the EPA determines that Respondent BCI has abandoned the SEP,

EPA may terminate the SEP. EPA shall provide written notice of SEP termination to Respondent BCI. If EPA terminates the SEP, Respondent BCI shall be liable for a lump sum stipulated penalty of FOUR HUNDRED AND EIGHT THOUSAND DOLLARS (\$408,000) , less any amount that Respondent BCI has paid for stipulated penalties related to the SEP under Paragraph 43. If Respondent BCI pays a termination penalty under this Paragraph, Respondent BCI shall not be liable for any additional stipulated penalties related to the SEP under Paragraph 43.

43. If Respondents fail to comply with the terms of this CAFO or its Appendix and the failure is not excused under the provisions of this CAFO or its Appendix, Respondents shall pay stipulated penalties as follows:

<b>VIOLATION</b>	<b>STIPULATED PENALTY</b>
a. Failure to pay the civil penalty specified in Paragraph 38.	\$1,000 per calendar day
b. Failure to timely submit, modify, or implement, as approved, reports (including the SEP Completion Report and Final Audit Report), studies, analyses, protocols, or other submittals required in this CAFO or its Appendix.	\$500 per day per violation during the first thirty (30) calendar days, \$1,000 per day per violation thereafter

44. All stipulated penalties shall begin to accrue on the day after the performance is due or on the day a violation occurs, whichever is applicable, and shall continue until performance is satisfactorily completed or until the violation ceases, whichever is applicable. Nothing in this CAFO shall prevent the simultaneous accrual of separate stipulated penalties for separate violations of this CAFO.
45. EPA may, in its unreviewable discretion, waive payment of any portion of stipulated penalties that may accrue under this CAFO.
46. All stipulated penalties are due and owing, upon written demand by EPA, no later than

thirty (30) calendar days after Respondent receives such demand. EPA's notice shall not stop the accrual of stipulated penalties.

47. All stipulated penalties shall be paid in a manner set forth in Paragraphs 39 and 40.

#### G. CERTIFICATION OF COMPLIANCE

48. In executing this CAFO, Respondents agree to each certify by March 1, 2015 that, to the best of their knowledge, they have fully completed and submitted to EPA all of the required Form Rs in compliance with the statutory and regulatory obligations of EPCRA § 313.

#### H. FORCE MAJEURE

49. If any event occurs which impedes, delays or makes impossible Respondents' performance under Sections I.C (SEP) or I.D (Audit) of this CAFO or its Appendix, Respondents shall notify Complainant in writing not more than ten (10) calendar days after the event or Respondents' knowledge of the anticipated or actual event, whichever is earlier, to the persons in Paragraph 17 above. For purposes of this section, events giving rise to *force majeure* include any event arising from causes beyond the control of Respondents, of any entity controlled by Respondents, or of Respondents' contractors that delays or prevents the performance of any obligation under this CAFO despite Respondents' best efforts to fulfill the obligation and include Acts of God (including fire, flood, earthquake, storm, hurricane or other natural disaster), war, invasion, act of foreign enemies, hostilities (regardless of whether war is declared), civil war, rebellion, revolution, insurrection, military or usurped power or confiscation, terrorist activities, nationalization, government sanction, blockage, embargo, labor dispute, strike, lockout or interruption or failure of electricity or telephone service. The notice shall describe in

detail the event, the precise cause or causes of the event, the measures taken and to be taken by Respondents to prevent or minimize delayed performance or non-performance caused by the event, and the timetable by which those measures will be implemented.

The Respondents shall adopt all reasonable measures to avoid or minimize any delayed performance or non-performance caused by the event. Failure by Respondents to comply with the notice requirements of this Paragraph shall render this Paragraph void and of no effect as to the particular incident involved and constitute a waiver of the Respondents' right to request an extension of its obligation under this CAFO or its Appendices based on such incident.

50. If an event causing delayed performance or non-performance under Sections I.C (SEP) and/or I.D (Audit) of this CAFO or its Appendix has been or will be caused by circumstances entirely beyond the control of Respondents, the time for performance hereunder may be extended for a period no longer than the delay resulting from such circumstances. In such event, the parties shall agree to such extension of time, during which period Respondents shall not be deemed to be in violation of this CAFO.
51. In the event that the parties dispute whether an event causing delayed performance or non-performance under Sections I.C (SEP) and/or I.D (Audit) of this CAFO or its Appendix has been or will be caused by circumstances beyond the control of the Respondents, such dispute shall be submitted to the Division Director to determine whether the delayed performance or non-performance was caused by circumstances beyond Respondents' control. The Division Director will notify Respondents in writing of his/her decision. If the Division Director determines that the delayed performance or non-performance was not caused by circumstances beyond Respondents' control and that

stipulated penalties accrued for such delayed performance or non-performance, the stipulated penalty shall be limited to \$250 per day per violation of this CAFO during the first thirty (30) calendar days and \$500 per day per violation of this CAFO thereafter.

52. The burden of proving that any delayed or non-performance is caused by circumstances entirely beyond the control of the Respondents shall rest with the Respondents. Increased costs or expenses associated with the implementation of actions called for by this CAFO shall not, in any event, be a basis for changes in this CAFO or extensions of time under Paragraph 50. Delay in achievement of one interim step shall not necessarily justify or excuse delay in achievement of subsequent steps; it is Respondents' burden to establish that a delay in achievement of one interim step justifies or excuses delay in achievement of subsequent steps.

#### I. RETENTION OF RIGHTS

53. Except as provided in Paragraph 54 and in accordance with 40 C.F.R. § 22.18(c), this CAFO only resolves Respondents' liability for federal civil penalties for the violations and facts specifically alleged in the Second Amended Complaint. Nothing in this CAFO is intended to or shall be construed to resolve: (i) any civil liability for violations of any provision of any federal, state, or local law, statute, regulation, rule, ordinance, or permit not alleged in the Second Amended Complaint; or (ii) any criminal liability.
54. EPA reserves any and all authorities, rights, and remedies available to it (including, but not limited to, injunctive or other equitable relief or criminal sanctions) to address any alleged violation of this CAFO or any alleged violation not alleged in the Second Amended Complaint, or not resolved by Respondents' satisfaction of the requirements of Section I.D (Audit) of this CAFO, including but not limited to meeting all of the

following requirements: (i) the alleged violation is disclosed in the Final Audit Report; and (ii) the alleged violation has been corrected by the filing of a new or corrected Form R; and (iii) Respondents have paid a stipulated penalty for the alleged violation consistent with Paragraph 36.

55. This CAFO does not exempt, relieve, modify, or affect in any way Respondents' duty to comply with all applicable federal, state, and local laws, regulations, rules, ordinances, and permits. .

J. ATTORNEYS' FEES AND COSTS

56. Each party shall bear its own attorneys' fees, costs, and disbursements incurred in this proceeding.

K. EFFECTIVE DATE

57. In accordance with 40 C.F.R. §§ 22.18(b)(3) and 22.31(b), this CAFO shall be effective on the date that the final order contained in this CAFO, having been approved and issued by either the Regional Judicial Officer or Regional Administrator, is filed.

L. TERMINATION

58. Respondents' obligations under this CAFO and its Appendix shall terminate upon Respondents:
- a. paying the civil penalties specified in Section I.E (Civil Administrative Penalty);
  - b. satisfactorily completing the SEP and paying any stipulated penalty due under Paragraph 43; and
  - c. satisfactorily completing the Audit (which includes submitting new or corrected Form Rs as required by Paragraphs 27 and 32) and paying any stipulated penalty due under Paragraphs 36 and 43.

59. Respondents may send a letter to EPA, to the persons specified in Paragraph 17, requesting that EPA confirm that Respondents have met all the requirements for termination of Respondents' obligations under this CAFO and its Appendix in accordance with Paragraph 58. If EPA agrees, the Division Director shall provide to Respondents a written confirmation that Respondents' obligations under this CAFO and its Appendices have been met.

M. JOINT AND SEVERAL LIABILITY

60. Respondents are jointly and severally liable for compliance with all the requirements set forth in this CAFO and its Appendix.

N. BINDING EFFECT


61. The undersigned representative of Complainant and the undersigned representatives of Respondents each certifies that he or she is fully authorized to enter into the terms and conditions of this CAFO and to bind the party he or she represents to this CAFO.

62. The provisions of this CAFO shall apply to and be binding upon Respondents and their officers, directors, employees, agents, trustees, servants, authorized representatives, successors, and assigns.



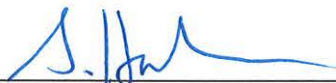
FOR BARRICK CORTEZ, INC.:

1/21/2013  
DATE

  
By: Gary Halverson  
Title: CEO & president  
Address: 460 W 50 N, Suite 500  
Salt Lake City, UT 84101


FOR BARRICK GOLD U.S., INC.:

1/21/2013  
DATE

  
By: Gary Halverson  
Title: CEO & President  
Address: 460 W 50 N, Suite 500  
Salt Lake City, UT 84101

FOR HOMESTAKE MINING COMPANY OF CALIFORNIA:

1/21/2013  
DATE

  
By: Gary Halverson  
Title: President  
Address: 460 W 50 N, Suite 500  
Salt Lake City, UT 84101

FOR COMPLAINANT EPA REGION IX:

1/28/13  
DATE



Enrique Manzanilla

Director  
Communities and Ecosystems Division  
United States Environmental  
Protection Agency, Region IX  
75 Hawthorne Street  
San Francisco, California 94105

## II. FINAL ORDER

EPA Region IX; and Barrick Cortez, Inc., Barrick Gold U.S., Inc., and Homestake Mining Company of California, having entered into the foregoing Consent Agreement,

IT IS HEREBY ORDERED that this CAFO (Docket No. EPCRA-09-2011-0004) be entered; and Respondents Barrick Cortez, Inc., Barrick Gold U.S., Inc., and Homestake Mining Company of California shall pay a civil administrative penalty in the amount of \$278,000, perform the SEP, as set forth in Section I.C of this CAFO, and perform the Audit, as set forth in Section I.D of this CAFO, and otherwise comply with the terms set forth in the CAFO.

01/29/13

DATE



STEVEN JAWGIEL  
Regional Judicial Officer  
United States Environmental  
Protection Agency, Region IX

## APPENDIX

## Barrick Cortez, Inc.

### Scope of Work for Proposed Bench Testing of Cortez Mill Conditions

Barrick Cortez, Inc. (Cortez) proposes a testing program to provide empirical data regarding the coincidental manufacturing of metal compounds in the Cortez oxide mill circuit. "Coincidental manufacturing," for purposes of the test, means any change in chemical form of metals in ore. The program being proposed herein is based on closely controlled and monitored laboratory scale testing. Sampling of the ore slurry in the field at the mill was considered but rejected because of the variable ore character present in the ore feed to the mill circuit. The quantities of ore slurry in each of the subject steps in question is very large and it is quite likely that variability in the ore chemistry of the input and output of each step would be great enough to mask the changes in chemistry caused by any coincidental manufacturing that may occur in each of these steps. To avoid this problem, the testing program described herein is based on laboratory-scale simulations of the Cortez mill circuit conditions. These laboratory tests will allow observation of any coincidental manufacturing that may occur without the confounding effects of variability caused by the testing of different materials as would be the case in the full scale mill circuit.

This scope of work describes a bench-scale laboratory test designed to simulate the conditions present in the full scale mill circuit at Cortez. The laboratory will recreate the same operating conditions in each of the four steps as they are known to exist at the Cortez mill. The liquid and solid samples generated by the bench testing procedure will be subjected to a suite of mineralogical tests capable of identifying changes in the forms of minerals occurring in the liquid and solid phases of the slurry.

#### **I. Sample Collection and Preparation**

**Ore Samples.** Cortez will obtain a representative sample of ore feed by cross belt sampling of the feed conveyor at the Cortez mill. The sample will be taken randomly each shift for a week and will be composited into a 55 gallon drum weighing approximately 600 pounds.

**Solutions Samples.** Cortez will obtain five gallons of process solution from the Process Water Tank at the Cortez mill. The vendor will perform inductively-coupled plasma mineral analysis (ICP), pH, oxygen reduction potential (ORP), and cyanide concentration analysis on a split of the process solution.

**Lime Samples.** Cortez will obtain a sample of lime from the lime silo at the Cortez mill. The vendor will perform an ICP (4 acid digestion) on the lime sample.

**Crushing.** The entire ore sample will be crushed to a nominal one inch (1") size and blended by traditional cone and quartering. Opposite quarters will be placed back into the barrel as a reserve sample. The remaining two quarters will be crushed to approximately 10 mesh (1.7 mm) and blended. Half of this material will be bagged and saved in reserve. The other half will be split again with one half bagged and saved and the other half rotary split into equal samples.

One of these samples will be split and assayed as outlined in Section IV, below. The other half will be used for the bench test outlined in Section II, below.

## II. Bench Test Steps

**Step One - Grinding.** A weighed and measured amount of ore (5000 grams of 10 mesh material) and process solution will be added to the grinding mill to obtain the correct percent solids (72% by weight). Lime will also be added at the mill-expected consumption rate (2.5 pounds per ton of ore ground). The ore will be ground to achieve the desired grind of 80% passing 140 mesh and 100 % passing 50 mesh.

The slurry will then be transferred to a mixing tank representing the grind sump in the actual mill. During the transfer of the ore to the mix tank a measured amount of process solution will be added to simulate the process solution added to the sump box that feeds the cyclones. The amount of process solution added will be the amount necessary to achieve 38% solids. Once all the solids and process solution have been transferred and added to the mix tank, the slurry will be agitated (mixed) for 5 minutes.

A sub-sample of the slurry will be taken and measured for temperature, pH, oxidation reduction potential (“ORP”) and percent solids. The solids will be separated from the liquids in the sub-sample to obtain a solid sample that will be analyzed as outlined in Section IV, below. The liquid fraction of the sub-sample will be analyzed for total metals using ICP. The remaining slurry will proceed to Step Two.

**Step Two - Cyanidation.** After the first sub-sample from the grinding step is taken, sodium cyanide will be added at the mill-expected rate (0.35 pounds of sodium cyanide per ton of ore), and the slurry will be agitated for 15 minutes. Flocculent will then be added at the mill-expected rate and the mixer turned off. The slurry will then be allowed to settle in the mix tank for 25 minutes simulating the surge tank and thickener in the actual mill. The separated liquid fraction of the settled slurry will have a measured portion of clear solution (representing the thickener overflow solution in the plant) removed from the tank either by siphon or pumping to achieve a 50 percent solid slurry. The agitator will be turned back on to re-suspend the solids and solution portions.

A sub-sample of the slurry will be obtained and measured for temperature, pH and ORP. The solids will be separated from the liquids in the sub-sample to obtain a solid sample that will be analyzed as outlined in Section IV, below. The liquid fraction of the sub-sample will be analyzed for total metals using ICP. The remaining slurry will proceed to Step Three.

**Step Three – Carbon in Leach.** The slurry will be checked and adjusted at the beginning of this step to ensure that mill-expected concentrations of sodium cyanide are present (0.15 pounds per ton of ore). Virgin activated carbon will be added to the slurry at mill-expected concentrations (15 grams per liter of slurry), air will be bubbled into the slurry through an air sparge, and the vessel will be mechanically agitated with a top center-suspended shaft with propeller for 48 hours to simulate the CIL retention time in the mill.

A sub-sample will be taken and measured for temperature, pH, ORP, and percent solids. The carbon will be screened from the slurry using a 20 mesh screen, and the solids will be separated from the liquids in the sub-sample to obtain a solid sample that will be analyzed as described in Section IV, below. The liquid fraction of the sub-sample will be analyzed for total metals using ICP. The remaining slurry will proceed to Step Four.

**Step Four – Cyanide Detoxification.** A measured amount of process solution will be added to the slurry to obtain mill-expected percent solids (30% by weight) and the air sparge will be turned off. The slurry will be agitated for 40 minutes. The pH will be measured and a measured amount of lime added to ensure mill-expected pH (10 to 10.5). Flocculent will be added at the mill-expected rate and agitation will be stopped to allow the slurry to settle. After 30 minutes, solution will be pumped or siphoned off to achieve the percent solids of the slurry after the first thickening stage in the cyanide recovery process (50%). The mechanical agitator will be turned on and a measured amount of process solution will be added to achieve the percent solids of the slurry at the second re-pulping phase (30%). After 5 minutes the agitator will be turned off allowing the solids to settle. After 30 minutes, solution will be pumped or siphoned off to achieve the mill-expected percent solids of the slurry after the second thickening step (50%). The mechanical agitator will be turned back on and ferric sulfate will be added at the mill-expected rate of consumption (0.071 pounds per ton of ore). Continue adding ferric sulfate until the NaCN titration is 0.08 pounds NaCN per ton of solution in the slurry mixture. The slurry will be mixed for 15 minutes.

A sub-sample of the slurry will be obtained and measured for temperature, percent solids, pH and ORP. The solids will be separated from the liquids in the sub-sample to obtain a solid sample that will be analyzed as outlined in Section IV, below. The liquid fraction of the sub-sample will be analyzed for total metals using ICP.

### **III. Mineralogical Analyses**

Mineralogical analysis of the feed ore and solid samples taken at the end of the process steps outlined above will be conducted to determine mineral abundances, mineral compositions, mineral grain sizes, mineral locking characteristics and mineral associations. The mineralogical analysis will be conducted using Quantitative Evaluation of Materials by Scanning Electron Microscope (QEMSCAN) for modal mineralogy, Electron Probe Microanalysis (EMPA) for quantitative mineral composition, and X-Ray Diffraction (XRD) for a back-up data source and to provide general mineralogy. The analysis of the feed ore will be conducted in accordance with the following methodology:

1. The crushed ore sample described above will be cut into subsamples (100 grams) by rotary splitter, and the splits will be recombined through an odds and evens blending procedure to produce 10 final 100 gram samples.
2. Three splits will go for full multi-element ICP (4 acid digestion), aqua regia (suited to As, Hg & Pb), gold fire, Leco suite and XRF to give complete “whole rock” chemistry and to test for sample homogeneity.
3. Two splits will be further split into portions that will be used to make 40 - 50 - 30mm diameter polished sections for QEMSCAN and EMPA analysis.

4. Three portions will be prepared for powder XRD analysis for quantitative Rietveld Refinement analysis of the diffraction patterns to give mineral weight %'s by XRD.
5. QEMSCAN measurements of enough polished sections to give modal mineralogy on a minimum of 5,000 particles will also give grain size and mineral association data.
6. EPMA analysis of representative gangue and ore minerals will give average mineral weight % compositions for each gangue and ore mineral species. Twenty to thirty point analyses of each mineral species are typically done to establish a defined composition range for each mineral. The defined composition range accounts for the natural variation of each element within a mineral. The defined concentration range for an element within a mineral is the mean concentration of the element plus or minus three standard deviations.
7. Calculated assays from EPMA mineral compositions, including trace elements, and QEMSCAN modal mineralogy will be compared to chemical assays for key mineral forming elements and trace elements to provide assay reconciliation.
8. Contingent upon ICP analyses indicating the presence of beryllium, beryllium concentrations will be quantified using a Dynamic Secondary Ion Mass Spectrometer (D-SIMS).

The analysis for the process samples will be conducted in accordance with the following methodology:

1. Representative splits of the solid sample from the end of each process step are made by micro-riffler (rotary splitter), 3 sub-samples go for full multi-element ICP (4 acid digestion), aqua regia (suited to As, Hg & Pb), gold fire, Leco suite and XRF analysis to give complete "whole rock" chemistry and to test for sample homogeneity.
2. Half is used for sizing to produce 4 to 5 size fractions (as determined by overall sample size distribution).
3. Each size fraction provides a split for assay and for polished sections for QEMSCAN and EMPA analysis.
4. Size fraction mass and modal data give a calculated head composition and head modal mineralogy (the benchmark mineralogy). A defined composition range of each mineral will be established. The defined composition accounts for the natural variation of each element within a mineral. The composition range for an element within a mineral is the mean concentration of the element plus or minus three standard deviations.
5. Mineral compositions and the mineral assemblage at each stage are compared to the defined concentration range to determine if average mineral compositions are outside the defined concentration range of the mineral and to determine if new minerals have appeared.

6. Contingent upon ICP analyses indicating the presence of beryllium, beryllium concentrations will be quantified using a Dynamic Secondary Ion Mass Spectrometer (D-SIMS)

#### IV. **Quality Assurance and Verification**

**Quality Assurance/Quality Control.** All vendors undertaking tasks described in this protocol will provide quality assurance/quality control plans.

**Split Samples.** The contract laboratories will retain two split portions of any sample collected until Barrick provides notification that the splits are no longer required to be preserved.

**Validation of Bench-Scale Model.** The parameters measured during the bench test (e.g., pH, ORP) will be compared to the values observed in the full-scale process, which will be provided at the time the feed material is delivered, to validate the bench test.

**Validation of ICP and Mineralogical Analyses.** The contract laboratory will validate the ICP and mineralogical analyses using two steps: (1) the ICP results will be compared to the mineralogical analyses to determine that all TRI chemicals have been properly analyzed. For example, if antimony is measured in the solid phase by ICP, the mineralogical analysis should identify antimony compounds. (2) the various analyses that estimate percent mineral composition will be compared to identify metals for which results from two different tests vary by more than 25 percent (relative standard deviation).

#### V. **Report**

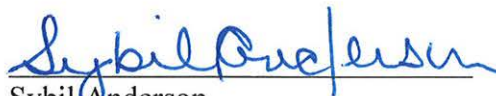
The contract laboratory will prepare a technical report documenting the test procedure and analytical and mineralogical results. The report must contain a CLP level IV data package for the ICP analysis and a similar level of documentation, including raw data, for solid analysis results.



In The Matter of **Barrick Cortez; Respondent**  
**Docket No. EPCRA-09-2011-0004**

**CERTIFICATE OF SERVICE**

I certify that the foregoing **Consent Agreement and Final Order**, dated January 29, 2013 was sent this day in following manner to the addresses listed below:



Sybil Anderson  
Headquarters Hearing Clerk

Dated: **Feburay 1, 2013**

Copy By Regular Mail and Email to

David Kim, Esq  
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