

Find 12/27/94  
Fed# NMD980749311

NEW MEXICO ENVIRONMENT DEPARTMENT

In The Matter Of:            )  
                                  )  
CHINO MINES COMPANY,        )  
                                  )  
          Respondent.         )

---

**ADMINISTRATIVE ORDER ON CONSENT**

---

# ADMINISTRATIVE ORDER ON CONSENT

## TABLE OF CONTENTS

ARTICLE		PAGE
I.	BACKGROUND/HISTORY.....	1
II.	PURPOSE OF AGREEMENT.....	2
III.	JURISDICTION AND AUTHORITY.....	3
IV.	PARTIES BOUND/TERMS AND CONDITIONS.....	5
V.	DEFINITIONS.....	5
VI.	COMMUNITY RELATIONS AND PUBLIC PARTICIPATION.....	12
VII.	COST REIMBURSEMENT.....	12
VIII.	STIPULATED PENALTIES FOR NONCOMPLIANCE.....	15
IX.	DOCUMENTS, INFORMATION AND REPORTING REQUIREMENTS.....	17
X.	INVESTIGATION AREA ACCESS.....	20
XI.	PROJECT MANAGER, TECHNICAL AND ADVISORY GROUPS.....	21
XII.	RESOLUTION OF DISPUTES/ENFORCEMENT.....	23
XIII.	COMPUTATION OF TIME.....	26
XIV.	TIME FRAMES; EXTENSIONS; <i>FORCE MAJEURE</i> .....	28
XV.	TERMINATION.....	31
XVI.	COMPLIANCE WITH APPLICABLE LAW.....	33
XVII.	INDEMNIFICATION AND HOLD HARMLESS PROVISION .....	35
XVIII.	GOOD FAITH PERFORMANCE.....	35
XIX.	AMENDMENTS.....	36
XX.	FINANCIAL ASSURANCE.....	36
XXI.	TRANSFER OF PROPERTY.....	37
XXII.	COVENANT NOT TO SUE.....	37
XXIII.	SEVERABILITY.....	39
XXIV.	DELEGATION.....	39
XXV.	EFFECTIVE DATE.....	39
XXVI.	AUTHORITY OF SIGNATORY.....	40
	APPENDIX A	

## **ADMINISTRATIVE ORDER ON CONSENT**

This Administrative Order on Consent ("AOC") is made and entered as of this 23rd day of December, 1994, by and between Chino Mines Company ("Chino" or "Respondent"), a New Mexico general partnership, owner and operator of the Chino facility in Grant County, New Mexico and the New Mexico Environment Department ("NMED"), an agency of the State of New Mexico.

### **I. BACKGROUND/HISTORY**

A. Chino owns and operates a copper mine, mill and smelting complex, precipitation plant and a solvent extraction/electrowinning operation located near Hurley, New Mexico. Chino is the largest operating copper mining entity in the area.

B. The upper portion of Whitewater Creek on and near property owned by Chino specifically including the Investigation Area has a long history of mining activity. Historical mining, milling and leaching practices, both by Chino and others, may have affected the environment in the area, including ground and surface water quality in and around the Whitewater Creek drainage area.

C. Further investigation is required to determine whether any portion of the area poses a substantial risk of harm to the public health, welfare, or the environment.

## II. PURPOSE OF AGREEMENT

A. The objective of the Parties in entering into this AOC is to protect the public health and welfare and the environment at the Investigation Area through a Remedial Investigation, Feasibility Study, and the development, design and implementation of a Remedial Action plan or plans for the Investigation Units consistent with the National Contingency Plan (NCP). The entire Investigation Area is subject to this AOC. However, to avoid duplication of environmental closure activities to the extent that the Investigation Area is subject to existing Discharge Plans, those Discharge Plans shall not be incorporated into this AOC and shall continue to govern compliance with applicable provisions of the New Mexico Water Quality Act. It is the Parties' intent that Discharge Plans in the Investigation Area shall continue to cover the areas described within each such Discharge Plan, including investigation, corrective action, if required, and environmental closure actions related to each such Discharge Plan area. It is also the Parties' intent that Discharge Plan areas within the Investigation Area can be subject to investigation and remediation, if necessary, for specific media under this AOC pursuant to an expansion of an Investigation Unit if the media is not being addressed by the Discharge Plan. In the event of an Investigation Unit expansion into a Discharge Plan area, Chino shall propose for NMED approval either seeking a modification to the Discharge Plan or an investigation and corrective action, if required, under this AOC in consideration of site specific conditions.

B. NMED shall direct and oversee Chino's development, design and implementation of a Remedial Action plan or plans for the Investigation Units with input and comments throughout the process from the public.

C. The Work to be performed will:

1. assess present Investigation Unit conditions in the Investigation Area associated with risks to public health and welfare and the environment;

2. to the extent necessary to select a remedy, or remedies, evaluate alternative remedial technologies appropriate for the Investigation Units in the Investigation Area; and

3. implement the selected remedy or remedies.

D. The Parties intend that Work undertaken pursuant to this AOC be in lieu of investigation and remediation which could be required under CERCLA. The Parties agree and understand that this AOC in no way alters or diminishes NMED's contractual and legal commitment and obligation to respond to EPA requests for data and information concerning the Investigation Area.

E. The Parties agree and understand that this AOC is not intended to, and does not address, natural resource damages, except insofar as Remedial Actions undertaken pursuant to this AOC may coincidentally restore damaged natural resources, if any.

### **III. JURISDICTION AND AUTHORITY**

NMED asserts it has jurisdiction and authority over Chino and the subject matter of this AOC pursuant to and including, without limitation, the following statutes and regulations:

A. The federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA),

B. The Federal Water Pollution Control Act a/k/a the Clean Water Act,

C. The federal Clean Air Act,

D. The federal Resource Conservation and Recovery Act,

E. The New Mexico Water Quality Act, and the New Mexico Water Quality Control Commission Regulations,

F. The Water Quality Standards for Interstate and Intrastate Streams in New Mexico,

G. The New Mexico Hazardous Waste Act and Regulations,

H. The New Mexico Solid Waste Act and Regulations,

I. The New Mexico Air Quality Control Act and Regulations,

J. The New Mexico Department of Environment Act,

K. The New Mexico Environmental Improvement Act,

L. The New Mexico statutory and common laws of nuisance and trespass, and

M. The New Mexico Mining Act.

Chino does not dispute that NMED has authority to issue and enforce this AOC under some or all of the foregoing statutes and regulations, but denies that these statutes and regulations may be applied against it for alleged acts or omissions, past or present, occurring or having occurred at the Investigation Area. By entering into this AOC and complying with its terms, Chino does not admit any liability to NMED or any other person relating to contamination on or emanating from the Investigation Area.

#### **IV. PARTIES BOUND/TERMS & CONDITIONS**

This AOC shall apply to and be binding upon NMED and Chino and any successors and assigns. Chino understands and agrees that failure to perform certain obligations or meet certain commitments under this AOC may subject it to stipulated civil penalties as set forth herein. Nothing contained in this AOC shall affect any right, agreement, claim for contribution or indemnification, cause of action or defense of either party with respect to others not a party to this agreement. Neither the execution of this AOC nor Chino's payments or performance hereunder, shall constitute an admission regarding any of the matters set forth in this AOC.

#### **V. DEFINITIONS**

A. Whenever the terms listed below are used in this AOC, the following definitions shall apply:

1. **Administrative Record** shall mean the compilation of documents related to this AOC separately kept and secured by NMED as an official record of the obligations and performance of obligations under this AOC, and which form the basis for the selection of appropriate and necessary response actions at the Investigation Units, and shall include all documents that either party requests to be placed into the Administrative Record.

2. **AOC** shall mean this Administrative Order on Consent including the SOW, and such other attachments and amendments as may from time to time be added by written agreement of the Parties pursuant to Article XIX (Amendments) of this AOC.

3. **Applicable Standards** shall mean federal and state environmental laws, regulations, standards, requirements, criteria, guidelines or limitations that are legally applicable or relevant and appropriate.

4. **Article** shall mean those portions of this AOC designated with roman numerals including all Sections thereof.

5. **CERCLA** shall mean the federal Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended October 1986 by the Superfund Amendments and Reauthorization Act (SARA) (42 U.S.C. § 9601 et seq.), and as amended from time to time.

6. **Day** shall mean a calendar day unless expressly stated to be a Working Day.

7. **Deliverable** shall mean any document required to be submitted to NMED for review or comment by a particular date as set forth in this AOC.

8. **Due Date** shall mean those dates designated as such in this AOC on or before which Chino must complete an activity or submit a Deliverable to NMED, or be liable for stipulated penalties as set forth herein.

9. **EPA** shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

10. **Feasibility Study (FS)** shall mean a comprehensive, written review, screening, and evaluation of alternatives developed during the Remedial Investigation to define the objectives of the



response action, and to develop appropriate and necessary Remedial Action plans to be implemented at each Investigation Unit.

11. **Final Order** shall mean an order by an arbitrator or the Secretary resolving a dispute between the Parties which is not timely appealed, or which under this AOC is not an appealable order.

12. **Force Majeure** shall mean any event arising from unforeseeable causes beyond the control of Chino which could not be overcome by reasonable due diligence which delays or prevents performance by a date required by this Consent Agreement. *Force Majeure* does not include unanticipated or increased costs of performance, or changed economic circumstances of Chino.

13. **Health and Environmental Risk Assessment (HERA)** shall mean a quantitative scientific estimate to be performed by NMED or its contractor of the current and potential risks to human health and the environment from exposure to Waste Materials from the Investigation Area.

14. **Investigation Area** shall mean all initial Investigation Units within sections, townships and ranges in the following geographic area:

T17S, R11W, Sec. 30 and 31.

T17S, R12W, Sec. 23 - 26, 33 - 36, parts of 27, 28, and 29 and 32.

T18S, R12W, Sec. 2 - 5, 7, 18, 19 - 32, parts of 6.

T18S, R13W, Sec. 12, 13, 24, 25, 36.

T19S, R12W, Sec. 4 - 9, 16 - 21, 28 - 33.

T20S, R12W, Sec. 4.

The Investigation Area is shown on Map 1 in the SOW. Criteria for expansion of an Investigation Unit are described in Section 1.1 of the SOW.

15. **Investigation Unit** shall mean a geographically discrete but expandable subdivision of the Investigation Area with distinct physical characteristics meriting separate technical and/or operational approaches. The long-term remedy developed for each Investigation Unit shall be consistent with an overall long-term remedy for the Investigation Area. The Investigation Units addressed in this AOC are geographically described in Section 1.9 of the SOW and are shown on Map 1 in the SOW.

16. **NMED** shall mean the New Mexico Environment Department and/or any successor or predecessor department or agency of the State.

17. **Oversight Costs** shall mean all costs as set forth in Article VII (Cost Reimbursement), which NMED and its contractors incur in undertaking tasks required by this AOC, in overseeing this AOC. Oversight Costs shall initially include the salary and benefit costs of one NMED staff position for the oversight of this Project, and may include the salary and benefit costs of additional NMED staff which the Parties mutually agree is necessary for timely and efficient oversight of this Project. Oversight Costs shall also include the reasonable cost of contracts entered into by NMED as required under this AOC.

18. **Parties** shall mean NMED and Chino.

19. **Project Manager** shall mean a qualified professional with appropriate experience to oversee the activities required by

this AOC who is the principal person selected and retained by Chino to supervise and direct the implementation of the Chino's Work under this AOC.

20. **Receipt** shall mean either the date shown on a U.S. Postal Service certified mail return receipt or, when certified mail is not used for a document mailed or delivered, the date it is received or hand-delivered.

21. **Record of Decision (ROD)** shall mean the document, published by the NMED after completion of a Remedial Investigation and Feasibility Study (RI/FS), which identifies the remedial alternative(s) chosen for implementation at each Investigation Unit. The ROD shall be based on information contained in the official Administrative Record.

22. **Remedial Action (RA)** shall mean the actual construction and implementation of an NMED-approved Remedial Design that results in long-term Investigation Unit clean-up.

23. **Remedial Action Criteria (RAC)** shall mean Investigation Area-specific numerical standards for Waste Material of concern, developed by NMED as part of the Record of Decision, and based upon results from the Health and Environment Risk Assessment and upon Applicable Standards developed in the Remedial Investigation. A pre-Feasibility Study list of RAC will be issued pursuant to Section 2.6 (Pre-FS RAC) of the SOW. A complete and final list of RAC will be selected in accordance with Section 2.9 (Record of Decision) of the SOW.

24. **Remedial Design (RD)** shall mean the documents(s) detailing technical approach(es) and engineering drawings and

specifications for implementing the remedial response(s) at the Investigation Units. RD includes the methods to be followed during the entire remediation process, from developing the Remedial Design to implementing the selected remedy through completion of remediation. The Parties agree that pollutants and contaminants not applicable to PRPs under CERCLA, such as total dissolved solids and sulfates, are likely to be remediated with metals remediation and as part of the Discharge Plans and, therefore, the remediation of such pollutants and contaminants can be deferred until metals remediation has been implemented. At that time, the Parties shall meet and agree what, if any, further action need be taken to remediate such pollutants and contaminants, taking into consideration factors including, but not limited to, the risk, toxicity, mobility, volume of material, technical feasibility and a comparison of costs to the benefits of such remediation. If the Parties are unable to agree on further actions for remediation of such pollutants and contaminants, this matter shall be subject to the provisions of Article XII (Resolution of Disputes).

25. **Remedial Investigation (RI)** shall mean the comprehensive technical study conducted to investigate the nature and extent of contamination at each Investigation Unit, to determine the necessity for Remedial Action, and to support the evaluation of remedial alternatives.

26. **Secretary or the Secretary** shall mean the Secretary of NMED.

27. **Section** shall mean those Sections of Articles of this AOC designated with letters of the alphabet or by arabic numerals.

28. **Sole Discretion** when used in relation to an action or decision of the Secretary or NMED under this AOC shall mean that such action or decision is not subject to the Resolution of Dispute procedures of Article XII (Resolution of Disputes/Enforcement), and that such decisions are binding upon Chino.

29. **SOW** shall mean the Statement of Work attached hereto as Appendix A.

30. **Waste Material** or **Waste(s)** shall mean any material for which there are Applicable Standards as defined herein.

31. **Work** or **the Project** shall mean all activities that Chino is required to perform under this AOC, as described herein.

32. **Work Day** or **Working Day** shall mean a day other than a Saturday, Sunday, or a Federal or State of New Mexico holiday. In computing any period of time under this AOC, where the last day would fall on a Saturday, Sunday, or Federal of State of New Mexico holiday, the period shall run until the close of business on the next Working Day.

Other terms not specifically defined herein, if defined in CERCLA or regulations promulgated thereunder (40 C.F.R. Part 300) shall be accorded their meaning under that Act. Terms not defined under CERCLA, in CERCLA implementing regulations, in case law interpreting CERCLA, or environmental statutes or regulations of the state of New Mexico shall be accorded their usual and

ordinary dictionary meaning or their common legal meaning in usage in an applicable trade or profession.

#### **VI. COMMUNITY RELATIONS AND PUBLIC PARTICIPATION**

Chino shall prepare and submit to NMED for its review and final approval a draft community relations plan (CRP), as specified in Section 2.4 of the SOW, specifying community relations activities Chino expects to undertake during the course of activities undertaken pursuant to this AOC. The purposes of the CRP are:

A. to provide opportunities for the community to learn about the Investigation Area,

B. to ensure appropriate opportunity for public input on the draft Record of Decision, and

C. to develop at least one technical assistance grant to be funded by Chino to assist the community to learn about and provide informed input into Work to be performed under this AOC, and as set forth in the SOW.

NMED shall either approve, or present any objections to the draft CRP in writing to Chino within thirty (30) Days after it is submitted.

#### **VII. COST REIMBURSEMENT**

A. Chino shall pay to NMED an amount equal to one base salary and benefits attributable to one full-time equivalent ("FTE") designated to be responsible for oversight of Remedial Action and Remedial Design activities undertaken at the

Investigation Area as a result of this AOC, as well as the actual cost of supplies, laboratory services and in-state travel necessary for such oversight. Additionally, Chino shall pay to NMED an indirect cost rate on expenditures excluding capital outlays and contracts in excess of \$25,000. That indirect cost rate shall be as established in that certain "OMB Circular A-87 Cognizant Agency Negotiation Agreement" (known internally within NMED as "Indirect Costs Agreement") by and between NMED and the U.S. Environmental Protection Agency, as amended from time to time. That rate as of August 30, 1994, is 15.63%.

B. Within 30 Days of the execution of this AOC, NMED shall designate an individual to act as the oversight representative under this provision. Whenever there is a vacancy in the position of oversight representative, NMED shall notify Chino of such vacancy.

C. Within 60 Days of execution of this AOC, the Parties shall agree upon an amount of estimated Oversight Costs that will be incurred in overseeing Chino's activities under this agreement for the calendar year 1995. This amount shall be paid to NMED within 90 Days of the date of execution of this AOC.

D. Thereafter, on or before December 1st of each calendar year that this AOC is in effect, NMED and Chino shall agree upon an amount of estimated Oversight Costs that will be incurred in overseeing Chino's activities under this AOC during the next calendar year. Estimated Oversight Costs may include the base salary, benefits and overhead of additional NMED staff which the

Parties mutually agree is necessary for timely and efficient oversight of this Project.

E. On or before January 1st of each calendar year that this AOC is in effect, Chino shall pay to NMED, in advance, one hundred percent (100%) of the amount of estimated Oversight Costs agreed upon for that year. NMED shall expend such funds only to pay Oversight Costs that come due during that calendar year.

F. If NMED's actual incurred Oversight Costs for the initial period or a given calendar year are less than the estimated Oversight Costs, NMED shall carry over into the next calendar year any funds not expended. Any amount left over in the account after termination of the AOC shall be reimbursed to Chino.

G. If NMED's actual Oversight Costs in overseeing Chino's activities under this AOC for the initial period or a given calendar year exceed the amount of estimated Oversight Costs, Chino shall reimburse to NMED within a period not to exceed ninety (90) Days following written notification by NMED of the exceedance, any excess funds expended by NMED in connection with the terms of the AOC.

H. NMED shall keep complete records of expenditures of any funds under this Article, and shall provide such records to Chino for examination with any request for additional funds under Section G, above, or upon request by Chino. Such records and the history of Oversight Costs incurred as a result of this AOC shall be taken into consideration when arriving at each year's amount of estimated costs.



I. In the event of a dispute as to Oversight Costs, Chino shall continue to tender to NMED its Oversight Costs. Any unresolved dispute shall be subject to Article XII (Resolution of Disputes/Enforcement). The accrual, assessment, demand, dispute regarding, or payment of, stipulated penalties as set forth in Article VIII (Stipulated Penalties for Noncompliance), whether paid or unpaid at the time of a dispute as to Oversight Costs, shall be no basis for claiming an offset to Oversight Costs, or for otherwise disputing Oversight Costs in any way.

#### **VIII. STIPULATED PENALTIES FOR NONCOMPLIANCE**

A. **General.** If Chino fails to complete those certain performance requirements of Section A.2, or fails to mail or hand-deliver those certain Deliverables enumerated in Section A.1 on or before their Due Date as set forth in this AOC, then following written notification of failure to comply and a demand for payment by NMED, Chino shall be liable for payment of stipulated penalties as follows:

1. **Failure To Timely Submit Deliverables.**

\$250.00 per Day for each of the following Deliverables not received by NMED on or before its Due Date:

- a. Remedial Investigation Proposal(s)
- b. Remedial Investigation Report(s)
- c. Feasibility Study Report(s)
- d. Proposed and Final Remedial Action Plan(s)
- e. Remedial Investigation Background Report
- f. Quality Assurance/Quality Control Plan

- g. Community Relations Plan
- h. Health and Environmental Risk Assessment
- i. Investigation Area Health and Safety Plan
- j. Long-Term Operations and Maintenance Plan.

Chino shall not be liable for stipulated penalties under Section A.1. of this Article in excess of one hundred thousand (\$100,000.00) dollars per calendar year.

**2. Failure To Complete The Remedial Investigation Task, The Feasibility Study Task, or Remedial Action Plan Work Under This AOC.**

\$1,000.00 per Day for: (1) the Remedial Investigation task, (2) the Feasibility Study task, or (3) Remedial Action plan work not completed by a Due Date as set forth in this AOC. Chino shall not be liable for stipulated penalties under Section A.2. of this Article in excess of one hundred thousand (\$100,000.00) dollars per Investigation Unit per calendar year, or in excess of three hundred fifty thousand (\$350,000.00) dollars per calendar year for all Investigation Units.

**B. Payment and payment procedures.** Stipulated penalties shall begin to accrue upon the passing of a Due Date without performance unless an extension of time to perform has been requested and granted by NMED prior to the expiration of the Due Date, in accordance with Article XIV (Time Frames; Extensions; *Force Majeure*). Penalties shall continue to accrue as set forth above until Chino cures its noncompliance. Upon Receipt of a written demand for payment of stipulated penalties, penalties shall be deemed to be immediately due and payable in full. Payment shall be made by check, draft or other negotiable instrument made payable

to the State of New Mexico and mailed by certified mail or hand-delivered to the New Mexico Environment Department, Office of General Counsel, Attention: Linda Romero, 1190 St. Francis Drive, Room N4084, Post Office Box 26110, Santa Fe, New Mexico 87502. Nothing herein shall preclude the simultaneous or overlapping assessment of separate stipulated penalties for separate instances of noncompliance with Due Dates. This Section shall be subject to Article XII (Resolution of Disputes/Enforcement).

The obligation to pay stipulated penalties shall be stayed in the event a penalty is disputed under Article XII (Resolution of Disputes/Enforcement), and in that event, shall be governed by the provisions of Section XII.H. of Article XII.

#### **IX. DOCUMENTS, INFORMATION AND REPORTING REQUIREMENTS**

**A. Exchange of Information and Legal Privileges.** Chino agrees to cooperate fully with NMED in providing requested data and information. Chino agrees to freely and routinely communicate with NMED concerning the status and progress of the Project. No such communications shall alter or waive any rights or obligations of Chino under this AOC. No guidance, suggestions or comments by NMED shall be construed as relieving Chino of its obligation to obtain formal approval where such approval is required by this AOC. Chino is encouraged to confer with NMED at any time prior to submission of any proposals, plans, studies, reports or other reports or other documents required by this AOC.

**B. Business or Trade Secrets.** Any data or information provided by Chino during the course of the Work performed under

this AOC which discloses a proprietary process or trade secret shall be clearly marked and identified as such by Chino and shall be submitted under separate, written request that it be treated as confidential by NMED and not be disclosed by NMED to any other person to the extent consistent with applicable state or federal law.

**C. Reservation of Privileges.** The Parties expressly reserve any and all legal privileges, such as the attorney-client and attorney work product, to which they are entitled. Nothing in this AOC shall be construed as a waiver by either Party of any of these privileges. No exchange of information by the Parties to which privileges may be available shall be construed to be a waiver of such privilege. All provisions in the AOC regarding information sharing are subject to these privileges. Except as expressly provided herein, the Parties reserve all other privileges and rights.

**D. Records Inspection, Retention and Copying.** For Work undertaken pursuant to this AOC, Chino shall permit NMED, its contractors, designees and agents at all reasonable times to inspect and copy all non-privileged records, files, photographs, documents, and other writings, including all sampling and monitoring data. Chino shall retain all such documents in its files for a period of at least three (3) years from the date the document is generated.

**E. Reporting Requirements.** Throughout the course of activities performed pursuant to this AOC, Chino shall submit to NMED periodic written progress reports on not less than a quarterly

basis. These progress reports shall include, at a minimum, the following:

1. a brief description of activities completed during the reporting period to implement the requirements of this AOC;
2. a brief description of activities scheduled for the following reporting period;
3. a description of personnel changes related to this AOC which occurred during the reporting period;
4. a description of problems encountered during the reporting period and mechanisms used or proposed for resolving the problems; and
5. tables and figures summarizing all data, sampling, and test results for the period.

Chino shall furnish such progress reports to NMED as soon as possible and in no event later than the 30th Day of the month following the month for which the report is due. The first progress report shall be due 30 Days after the end of the first full calendar quarter after the execution of this AOC, and subsequent deadlines computed from that date.

**F. NMED Approval.** To the extent that Chino's written submissions require approval or other action by NMED under this AOC, NMED shall reply to Chino within thirty (30) Days for all written submissions including Deliverables, except for Remedial Investigation reports and Feasibility Study reports for which NMED shall reply to Chino within sixty (60) Days. If NMED fails to reply to Chino within the specified time frame, subsequent deadlines shall be extended for a period equal to the number of

Days that NMED's reply is delinquent. In its written responses, NMED shall indicate to Chino the specific basis for approval or disapproval, and shall suggest solutions or alternatives. If the NMED response is other than approval, Chino shall provide a final written submission to NMED within thirty (30) Days of NMED's response for the Remedial Investigation report(s) and the Feasibility Study report(s), and for all other Deliverables within fifteen (15) Days. Any dispute regarding NMED approval of Deliverables shall be subject to Article XII (Resolution of Disputes).

**X. INVESTIGATION AREA ACCESS**

A. Chino shall at all reasonable times afford NMED, its contractors, designees and agents, access to such portion of the Investigation Area under control of Chino, with or without prior notice. Chino shall have the right to accompany all NMED personnel, contractors, designees and agents while in the Investigation Area.

B. NMED, its contractors, designees and agents shall abide by all applicable Occupational Health and Safety Act and Mine Safety and Health Act requirements while in the Investigation Area. NMED, its contractors, designees and agents also shall abide by additional Chino health and safety requirements and procedures in areas of the Investigation Area which present special or unique workplace safety risks due to ongoing mining activities.

C. In the event NMED desires that Chino or its designees be present during any inspection, NMED shall request Chino's presence

at least forty-eight (48) hours in advance of the inspection. Upon such notice, Chino shall provide an authorized representative to accompany NMED's employees or contractors while in the Investigation Area.

D. To the extent that access to property owned or controlled by persons other than Chino ("non-owned property") is required to carry out the terms of this AOC, Chino shall use its best efforts to obtain from such persons access for itself, its contractors and agents, and NMED, its contractors, designees and agents. In the event that Chino is unable to gain needed access to non-owned property, and no locations owned or controlled by Chino are suitable, NMED shall encourage non-owned property owners in writing to grant access to Chino to accomplish the purposes of this AOC, and may in the Secretary's Sole Discretion and consistent with its statutory authority, assist Chino by bringing legal proceedings to gain access. The inability to gain access to such non-owned property after compliance with Chino's obligations under this Section shall constitute a *Force Majeure* event under Article XIV (Time frames; Extensions; *Force Majeure*).

#### **XI. PROJECT MANAGER, TECHNICAL AND ADVISORY GROUPS**

A. **Project Manager(s).** All aspects of the Work to be performed by Chino, including quality assurance, sampling and data analysis, required to be conducted pursuant to this AOC shall be supervised by the Project Manager. Chino shall provide a copy of this AOC to the Project Manager and shall condition all contracts

entered into for Work under this AOC upon performance in conformity with the terms of this AOC.

**B. NMED Notification.** Within thirty (30) Days after this AOC is executed, Chino shall notify NMED in writing of the name, title, and qualifications of the person proposed to be the Project Manager. If at any time Chino proposes to change a Project Manager, Chino shall give at least seven (7) Days notice to NMED. Chino shall identify to NMED the key supervisors under the Project Manager.

**C. Technical Group.** Chino and NMED shall establish a Technical Group to meet periodically and as necessary to review and discuss issues of a scientific and engineering nature concerning direction and implementation of the Work called for by this AOC. The Technical Group shall be composed of two technical designees of the Secretary, a technical representative designated by Chino, and Chino's Project Manager.

**D. Advisory Group.** Chino and NMED shall establish an Advisory Group to meet as necessary to resolve disputes in accordance with Article XII (Resolution of Disputes/Enforcement). The Advisory Group shall be composed of the Secretary's designee and a designee of Chino.

**E. Meetings of the Technical and Advisory Groups.** Except with respect to Article XII of this AOC (Resolution of Disputes/Enforcement), meetings of the Advisory and Technical Groups shall be considered informal working sessions. Statements made by anyone during such sessions shall not be construed as



representing official positions unless confirmed in writing by the party making the statement.

### **XII. RESOLUTION OF DISPUTES/ENFORCEMENT**

A. **General.** Except as to matters over which NMED or the Secretary may exercise Sole Discretion under this AOC, any dispute as to the obligations of this AOC shall be subject to this Article. Matters contained within this AOC over which NMED or the Secretary may exercise Sole Discretion shall not be challengeable through this Article. The exchange of documents under this Article shall be in accordance with Article IX (Documents, Information and Reporting Requirements).

B. **Informal resolution.** Any dispute subject to this Article shall in the first instance be the subject of informal negotiation between NMED and Chino. The period for informal negotiation shall not exceed twenty (20) Work Days from the time the disputing party notifies the other party in writing that it wishes to commence informal dispute resolution, unless an extension of time is requested in writing within the prescribed twenty Work Days and agreed to by NMED. The Parties shall meet and confer as necessary to attempt to resolve the dispute within the twenty Work Day informal resolution period.

#### **C. Formal Resolution by Technical Group.**

1. **Invoking Formal Procedure.** In the event that the Parties cannot resolve a dispute by informal negotiation, then the disputing party may invoke formal dispute resolution by submitting to the other party and the members of the Technical Group a written

Statement of Position on the matter in dispute, including, but not limited to any factual data, analysis, opinion, or documentation supporting its position.

2. **Responses.** Within fifteen (15) Work Days of Receipt of the disputing party's Statement of Position, the responding party shall submit to the disputing party and the members of the Technical Group its Statement of Position, including but not limited to any factual data, analysis, opinion, or documentation supporting that position.

3. **Technical Group Resolution.** After Receipt of the responding party's Statement of Position, the Technical Group shall have fifteen (15) Work Days to resolve the dispute.

**D. Formal Resolution by Advisory Group.**

1. **Submission to Advisory Group.** In the event the Technical Group is unable to resolve the dispute within the time prescribed, the disputing party shall, within fifteen Work Days after such period, submit to the members of the Advisory Group copies of all documents furnished to the Technical Group.

2. **Advisory Group Resolution.** After Receipt of this documentation, the Advisory Group shall have fifteen (15) Work Days to resolve the dispute.

**E. Final Decision by the Secretary.** In the event the Advisory Group has been unable to resolve the dispute within the time prescribed, the disputing party shall submit a written Request for Final Decision to the Secretary. The written request shall be accompanied by all documentation furnished to the Technical and Advisory Groups. Within thirty (30) Work Days of Receipt of the

written Request for Final Decision, the Secretary shall issue a final decision, including a written statement of the reasons for the decision. The Secretary's decision shall be binding upon the Parties unless timely appeal to the Arbitrator as set forth in Section G., below, is taken.

**F. Extension of Time for Formal Dispute Resolution.** If, during the formal dispute resolution process, it appears that resolution may be achieved by an extension of time, the Technical Group may petition any member of the Advisory Group, and the Advisory Group may petition the Secretary for an extension of time in which to resolve the dispute.

**G. Binding Arbitration.** A party may invoke binding arbitration from a final decision of the Secretary in accordance with the American Arbitration Association rules and procedures within fifteen (15) Work Days of Receipt of the Secretary's final decision. The disputing Parties shall share equally in the costs of such binding arbitration. The written decision of the arbitrator shall be final, unappealable and binding upon the disputing Parties.

**H. Effect of Dispute Resolution on Chino's Obligations.** Chino's obligations under this AOC are not waived by the invocation of this dispute resolution process. The performance of a disputed obligation may, in Chino's discretion be suspended until conclusion of the dispute resolution process of this Article. The payment of stipulated penalties for obligations Chino elects to suspend, shall be stayed during the pendency of any dispute under this Article. Stipulated penalties shall accrue during the dispute resolution

process unless Chino timely requests an extension of the performance Due Date for the disputed obligation, and the request is granted by NMED pursuant to Article XIV (Time Frames; Extensions; *Force Majeure*). Stipulated penalties accruing during the dispute resolution process shall be subject to the penalty caps of Article VIII (Stipulated Penalties for Noncompliance), and shall only be payable if NMED is the prevailing party to the dispute.

**I. Incorporation by Amendment.** Upon resolution of a dispute pursuant to this Article, the resolution shall be incorporated into this AOC by appropriate amendment.

**J. Potential Inconsistency with Other Requirements.** The Parties recognize that requirements of laws and regulations applicable to Chino, including Chino's Discharge Plans and requirements under the New Mexico Mining Act, and other statutes and regulations could lead to obligations inconsistent with this AOC. Given this possibility, NMED agrees to meet with Chino upon written request when any such requirements are deemed by Chino to be inconsistent with the AOC to discuss possible modification of this AOC consistent with the Parties' desire not to subject Chino to requirements duplicative or inconsistent with the requirements herein.

### **XIII. COMPUTATION OF TIME**

In computing any period of time prescribed in this AOC, the day of the act, event, requirement or default from which the designated period of time begins to run shall not be included. Except as to penalties which could accrue under Article VIII

(Stipulated Penalties for Noncompliance), the last day of the period so computed shall be included, unless it is a Saturday, Sunday or federal or State of New Mexico holiday, in which event the period runs until the end of the next day which is not a Saturday, Sunday or holiday.

A. **Delivery of Documents.** Whenever the terms of this AOC require delivery of documents, such delivery shall be made by mail, or by facsimile if followed by mailing a copy within one Work Day, or by hand-delivery to the individuals at the addresses below, unless those individuals or their successors give notice in writing to the other Parties of a change in designated recipient or address. The delivery of documents required under this AOC shall be complete upon Receipt or upon hand-delivery to a designated representative of the individuals listed below:

**For NMED:**

Director of Water Waste Management Division  
1190 St. Francis Drive  
P.O. Box 26110 Santa Fe, NM 87502  
(505) 827-4358

and

General Counsel  
NMED Office of General Counsel  
1190 St. Francis Drive  
P.O. Box 26110  
Santa Fe, NM 87502  
(505) 827-2990

**For Chino Mines Company (Chino):**

W. S. Brack, Manager  
CHINO MINES COMPANY  
P.O. Box 7  
210 Cortez Street  
Hurley, NM 88043

and

Director of Environmental Services  
PHELPS DODGE CORPORATION  
2600 N. Central Avenue  
Phoenix, AZ 85004

**XIV. TIME FRAMES; EXTENSIONS; FORCE MAJEURE**

A. **Extensions for Good Cause.** Before the Due Dates for performance of obligations or delivery of documents as set forth in this AOC, and for good cause shown, Due Dates may be extended with the written permission of the Secretary as follows:

1. **Extensions Of More Than 30 Days.** Any request for extension of 30 Days or more shall be made in writing and, if practicable, received by NMED at least twenty (20) Days prior to the Due Date for which the extension is sought. The Secretary shall, if practicable, approve or deny the request in writing within ten (10) Days after Receipt of the extension request.

2. **Extensions Of Less Than 30 Days.** Any request for an extension of less than thirty (30) Days shall be made in writing and, if practicable, received by NMED at least five (5) Days prior to the Due Date. The Secretary shall, if practicable, approve or deny the request in writing or orally with written confirmation within two (2) Days.

3. **Requests for Extension; Content Required.** All requests for extension claiming good cause shall include:

- a. the Due Date sought to be extended;
- b. the length of the extension sought;
- c. the good cause(s) alleged to support the requested extension;

- d. a description of all related Due Dates that may be affected if the extension is granted.

The grant or denial of a request for extension of a Due Date based upon good cause shall be within the Sole Discretion of the Secretary.

**B. Extensions for Force Majeure.** Chino agrees to implement this AOC in accordance with the schedules set forth herein. Chino further agrees to adopt all reasonable measures including contractual arrangements with third parties to avoid, or minimize any delays in the implementation of this AOC, and to mitigate to the fullest extent practicable, a *Force Majeure* event.

1. **Claiming Force Majeure.** To claim *Force Majeure* Chino shall give prompt oral notification to NMED within forty-eight (48) hours after first becoming aware of an event claimed to constitute a *Force Majeure*, with written confirmation mailed within ninety-six (96) hours thereafter. No claim of *Force Majeure* shall be made after the expiration of a Due Date claimed to be affected, unless Chino demonstrates that the *Force Majeure* event occurred within forty-eight (48) hours of the Due Date.

2. **Required Content of Written Notice.** All written notifications of *Force Majeure* shall include:

- a. a description of the event claimed to constitute *Force Majeure*;
- b. an estimate of the anticipated length of delay;
- c. a description of all related Due Dates that may be affected, and;

d. the length of the extension sought and a plan of corrective action and, if applicable, of proposed measures to prevent recurrence.

e. a description of all steps taken to mitigate or attempt to mitigate the *Force Majeure* event.

3. **NMED Acknowledgement.** NMED shall, within seven (7) Days after Receipt of a notification of *Force Majeure*, accept or deny in writing Chino's claim of *Force Majeure*. NMED's written acceptance of *Force Majeure* shall include a grant of the requested extension, or of a different period of extension deemed reasonable under the circumstances. If NMED denies Chino's claim of *Force Majeure*, or upon granting a shorter extension of time, NMED shall state in writing the reasons therefor. NMED's denial of a timely claim of *Force Majeure* or grant of a shorter *Force Majeure* period than requested by Chino, shall be subject to Article XII (Resolution of Disputes/Enforcement).

C. **Extensions Due to Delays by NMED.** In the event NMED fails to meet a Due Date for which it is responsible in the SOW, all Due Dates subsequent to that NMED Due Date shall be extended by a period of time equal to the number of Days between the NMED Due Date specified in the SOW and the later of the date NMED actually completes its action or the date NMED notifies Chino of such performance in writing.

D. **Waiver.** Unless Chino has timely requested an extension for good cause or timely notified NMED of a claim of *Force Majeure*, failure to timely submit a Deliverable or complete an activity shall constitute a waiver of any right to dispute the Due Dates for



such obligations. No extension of time, deferral, grant, or waiver by NMED or the Secretary as provided in this AOC shall be construed as waiver or authorization for any other delays, defaults or omissions.

**E. Time Frames; Effect on Obligations.** Within the times for performance or service of documents set forth in this AOC and for good cause shown, times may be extended upon written request of Chino, and by written order of the Secretary. The grant or denial of a request for extension of time shall be within the Sole Discretion of the Secretary. The Secretary in her Sole Discretion and for good cause shown, may excuse untimely service or performance, declare a dispute to be continuing, or both.

#### **XV. TERMINATION**

**A. By Investigation Unit.** This AOC shall terminate as to each Investigation Unit upon the Secretary's written notice that all of the AOC terms applicable to such Investigation Unit have been completed satisfactorily.

**B. Overall.** Chino shall be responsible for satisfactory completion of the Work required to be performed under this AOC. This AOC shall terminate overall upon the Secretary's written determination that all of its terms have been completed.

**C. Notification of Completion.** Chino shall notify NMED of Investigation Unit and Overall completion. NMED shall evaluate the Notification of Completion and, within ninety (90) Days after Receipt, shall provide a written acceptance, rejection or partial acceptance or partial rejection of the completion, and shall set

forth in writing the reasons for such response. No Notification of Completion may be accepted prior to the submission of plans for long-term operation and maintenance of each Investigation Unit, if required. The Secretary's acceptance of completion shall not be withheld unreasonably. Any dispute over whether completion has been achieved shall be subject to Article XII (Resolution of Disputes/Enforcement).

**D. Satisfactory Completion.** For purposes of overall termination, "satisfactory completion" shall mean, at a minimum, that all Investigation Units have been determined to require no further action or have been remediated and stabilized to the extent required in final RODs, and that NMED has approved Chino's plan(s) for long-term monitoring, operation, and maintenance, if these are necessary, of the Investigation Units.

**E. Unilateral Termination by Chino.** Chino may unilaterally terminate this AOC if EPA nominates for, or adds at least five percent (5%) of the Investigation Area to, the National Priorities List or determines not to defer investigation and cleanup of the site to NMED pursuant to this AOC.

**F. Bilateral Termination.** The Parties further agree that their obligations under this AOC may be terminated by mutual written agreement.

**G. Termination by NMED.** In addition to specific grounds for termination set forth in this AOC, the Secretary, in her discretion, reserves the right to terminate this AOC at any time by serving a written notice of termination upon Chino, if at any time the Secretary determines that the objectives of the AOC are not

being satisfactorily met, are not being met in accordance with the terms or spirit of this AOC, or have been substantially impaired or impeded by the actions or inactions of Chino, whether foreseeable or unforeseeable, including without limitation, actions or inactions which constitute *Force Majeure* under this AOC. In the event of termination, Chino understands that the Secretary may seek such other and further remedies as may be available under law with respect to the matters set forth herein. The Parties agree and understand that decisions made pursuant to this Article XV may be overturned only under Article XII (Resolution of Disputes/Enforcement), upon a showing by Chino that the Secretary's decision to terminate was arbitrary or capricious, or not supported by substantial evidence.

#### **XVI. COMPLIANCE WITH APPLICABLE LAW**

All activities required by this AOC shall be undertaken in compliance with the requirements of all applicable federal, state, and local laws, regulations, and ordinances. Except as provided in Article XV (Termination), nothing in this AOC shall be construed as relieving Chino of any liability under, or obligation to comply with applicable laws.

A. **Permits.** This AOC is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation. Where any portion of the Work requires a federal or state permit or approval for new construction, modifications or otherwise, Chino shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals. Chino and NMED agree to act with due diligence and in

good faith in seeking or processing all legal permissions and permits which may from time to time be required in order to comply with this AOC. Upon a showing by Chino of due diligence and good faith in seeking all legal permissions and permits which may from time to time be required in order to comply with this AOC, Chino's failure to obtain a permit required for any Work to be conducted pursuant to this AOC shall constitute *Force Majeure*. The failure to submit a timely and administratively complete permit application required for any Work to be conducted pursuant to this AOC shall bar any claim for *Force Majeure* alleging inability to obtain a permit, and shall constitute grounds for denial of a request for extension of a Due Date for the Work, based upon good cause as set forth in Article XIV (Time Frames; Extensions; *Force Majeure*).

1. **NMED Assistance.** NMED shall, consistent with its statutory authority and obligations to other applicants, utilize its best efforts to assist Chino in obtaining permits (including the timely consideration of permit applications by Chino to NMED), releases, or other types of permission or authorization from governmental agencies and political subdivisions, both state and federal. At a minimum, NMED upon request shall provide a written statement that the Work for which a permit or other type of permission is sought is required for compliance with the terms of this AOC. NMED's decision to assist or refrain from assisting Chino to obtain permits, releases, or other types of permission or authorization, or its failure to successfully assist Chino in this regard for any reason, shall not, by itself, constitute *Force Majeure*, except that Chino's inability to obtain permits,

releases or other types of permission or authorization may constitute *Force Majeure* as set forth herein.

#### **XVII. INDEMNIFICATION AND HOLD HARMLESS CLAUSE**

Neither NMED nor its agents, employees or contractors shall be liable to Chino or third parties for any injuries or damages, whether contractual, tortious or otherwise in nature, which arise directly or indirectly out of, or result directly or indirectly from the activities, approvals, disapprovals or comments required of NMED under this AOC. Neither NMED nor its agents, employees or contractors shall be held out as a party to any contract, agreement or understanding entered into by Chino in carrying out the obligations of this AOC. Specifically and without limitation, neither NMED nor its agents, employees or contractors shall be liable to Chino or third parties for termination of this AOC by the Secretary.

#### **XVIII. GOOD FAITH PERFORMANCE**

The Parties agree that they will act reasonably and in good faith at all times to accomplish the objectives of this AOC. Chino agrees to perform all evaluations and actions required by this AOC using sound scientific or technical judgment. If at any time while this AOC is in effect NMED determines that material facts or data have been intentionally misrepresented, or that misleading or intentionally erroneous data have been submitted, NMED may terminate this AOC, or pursue any other lawful remedies, or both.

## **XIX. AMENDMENTS**

Except as set forth below for provisions of the SOW, this AOC may be amended only by mutual, written agreement of the Parties, signed by Chino and the Secretary of NMED. Amendments shall become effective upon execution by both Parties, and shall be incorporated into this AOC by reference and marked as to the date of execution as additional attachments. The SOW may be amended by the mutual, written agreement of the Technical Group, signed by at least one Chino member and one NMED member of the Technical Group.

## **XX. FINANCIAL ASSURANCE**

### **A. Initially. Chino shall:**

1. within thirty (30) Days of execution of this AOC, demonstrate by satisfactory evidence a tangible net worth equal to or greater than fifty million dollars (\$50,000,000.00);

2. by June 30, 1995, establish a standby trust fund for the benefit of the State of New Mexico c/o Secretary, New Mexico Environment Department in a form satisfactory to NMED.

B. Beginning when the ROD is finalized (or RODS, if done by Investigation Unit), Chino shall demonstrate by satisfactory evidence on an annual basis a tangible net worth equalling or exceeding three times the estimated annual cost of the Work to be performed under this AOC during the following year.

C. Chino shall, for the duration of this AOC, maintain at least sixty-six percent (66%) of the tangible net worth required under this Article, in assets within the continental United States.

D. If at any time for the duration of this AOC, Chino fails to meet any of the criteria set forth in this Article, then Chino shall promptly fund the standby trust fund in an amount sufficient to cover Chino's then-estimated remaining Work under the AOC.

E. In the event that Chino fails to maintain financial assurance in accordance with this Article, the Secretary, in her Sole Discretion, reserves the right to terminate the AOC by written notice of Termination to Chino.

#### **XXI. TRANSFER OF PROPERTY**

This AOC shall be binding upon Chino and its successors and assigns. Any change in ownership or identity of Chino, including, but not limited to, any transfer of assets or real or personal property, or transfer of control of assets or real or personal property, shall in no way alter Chino's obligations or commitments under this AOC. The requirements of this AOC shall run with the land and shall be disclosed to any successors in interest or title. The obligations under this AOC are not assignable or transferable without NMED's advance, written approval. Within fourteen (14) Days of any conveyance Chino shall notify NMED of the conveyance and shall make and disclose to NMED financial and other arrangements satisfactory to assure uninterrupted Work under this AOC.

#### **XXII. COVENANT NOT TO SUE**

For so long as Chino remains in compliance with the terms and conditions of this AOC, NMED agrees to refrain from initiating or

pursuing criminal, civil or administrative relief in any other forum which might otherwise be available under New Mexico and federal law, including without limitation the right to seek and recover damages or penalties against Chino, its successors, assigns and employees for the allegations set forth herein or for the actions required to be performed under this AOC.

**A. Rights Expressly Reserved.** NMED reserves the right to pursue civil or administrative relief for any other violations of state or federal law, past or future, which are not the subject matter of this AOC. NMED reserves the right to seek enforcement of this AOC pursuant to Article XII (Resolution of Disputes/Enforcement); and to take emergency response action at property owned or controlled by Chino to the extent authorized by law in the event conditions pose an imminent and substantial endangerment to human health. No extension of time, deferral, grant, or waiver by NMED or the Secretary as provided in this AOC shall be construed as a waiver or authorization for any other delays, defaults or omissions. The failure or election by either party not to exercise any power or authority in this AOC shall not be construed as a waiver or relinquishment of such right or power. NMED specifically retains the right to conduct other environmental studies, investigations, monitoring, or emergency activities at property owned or controlled by Chino, and to enforce all laws, statutes and regulations NMED is authorized to enforce.



### **XXIII. SEVERABILITY**

The provisions of this AOC are severable. If any provision of this AOC is declared by a court of law to be invalid or unenforceable, all other provisions of this order shall remain in full force and effect, unless NMED determines that the objectives of this AOC are substantially impaired by the court's ruling. In that event, NMED may terminate this AOC in accordance with the provisions of Article XV (Termination), and seek such other or further administrative or judicial relief as it may be entitled to assert under law.

### **XXIV. DELEGATION**

Except with respect to Final Orders or decisions to terminate this Consent Agreement, and other matters committed to the Sole Discretion or decision of the Secretary, NMED's powers and authorities under this AOC may be delegated to its Deputy Secretary, its Division Director for the Water and Waste Management Division, and the Bureau Chief for the Ground Water Protection and Remediation Bureau as set forth herein, or if not set forth in this AOC, then as determined and allocated amongst them.

### **XXV. EFFECTIVE DATE**

This AOC is effective on the day on which the Parties execute this document.

**XXVI. AUTHORITY OF SIGNATORY**

The persons executing this AOC represent that they have read and fully understand this AOC, and that they have the requisite authority to bind either Chino Mines Company or the New Mexico Environment Department to the terms of this AOC. The persons executing this AOC further agree that their representation of authority shall be legally sufficient evidence of actual or apparent authority to bind the foregoing entities to all of the terms and conditions of this AOC.


FOUR DUPLICATE ORIGINALS EXECUTED this 23rd day of December, 1994.

  
\_\_\_\_\_  
JUDITH M. ESPINOSA, Secretary  
NEW MEXICO ENVIRONMENT DEPARTMENT

STATE OF NEW MEXICO            )  
  ) ss.  
COUNTY OF Santa Fe        )

On December 23rd, 1994, before me, the undersigned, a Notary Public in and for said County and State, personally appeared Ms. Judith M. Espinosa, a person known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the foregoing instrument.

WITNESS my hand and official seal.

  
\_\_\_\_\_  
NOTARY PUBLIC

My Commission Expires: 9-11-98

On behalf of Chino Mines Company:

*WS Brack*

WILLIAM S. BRACK, Manager  
CHINO MINES COMPANY

STATE OF NEW MEXICO            )  
  )    ss.  
COUNTY OF GRANT            )

On December <sup>23rd</sup>, 1994, before me, the undersigned, a Notary Public in and for said County and State, personally appeared Mr. William S. Brack, a person known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the foregoing instrument.

**WITNESS** my hand and official seal.



OFFICIAL SEAL  
LEAH A. SCHMIDT  
NOTARY PUBLIC-STATE OF NEW MEXICO  
My Commission Expires: 4/2/97

*Leah A. Schmidt*

NOTARY PUBLIC

My Commission Expires: 4/2/97

NEW MEXICO ENVIRONMENT DEPARTMENT

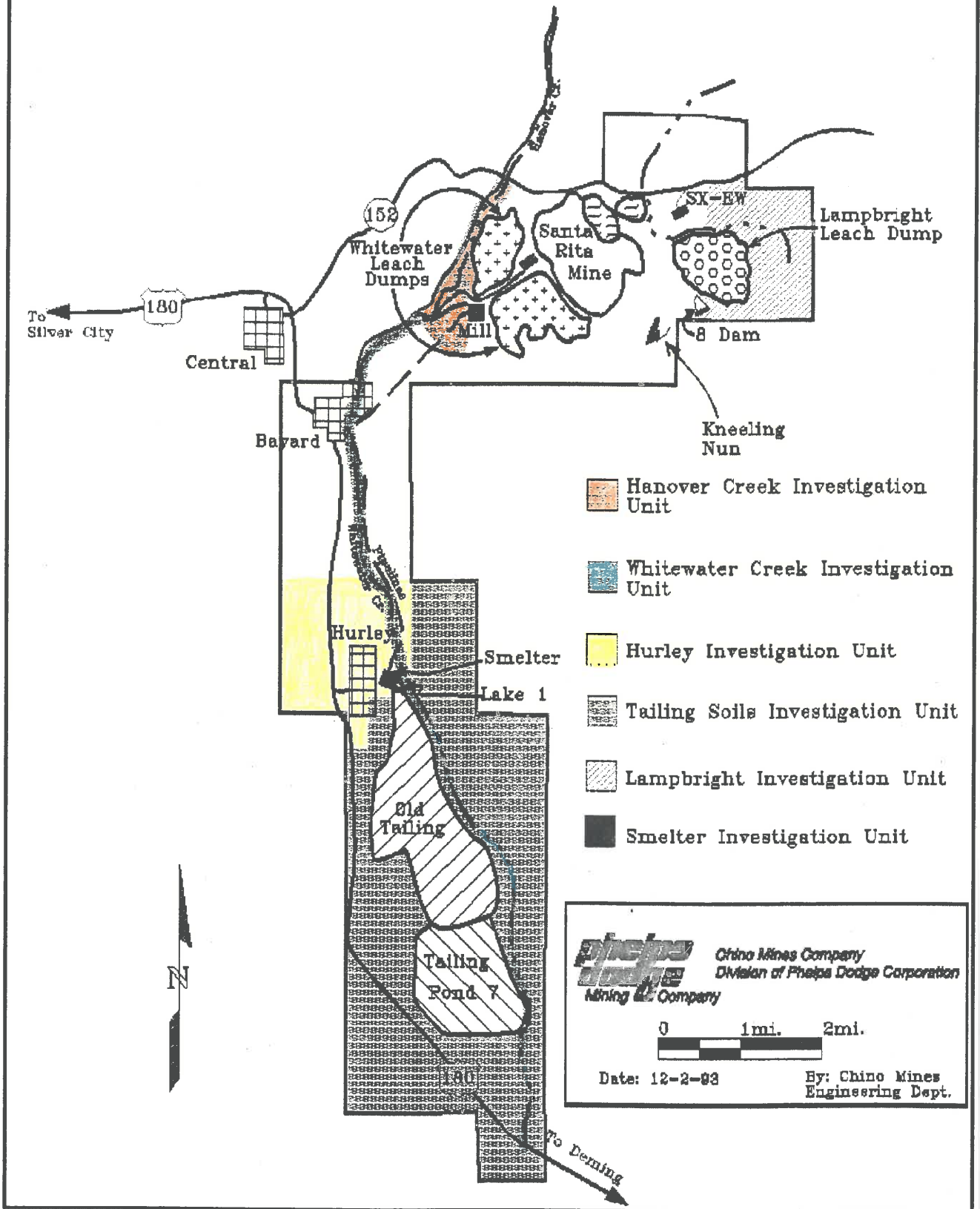
In The Matter Of: )  
 )  
 )  
CHINO MINES COMPANY, )  
 )  
 )  
Respondent. )

FINAL ORDER

The Secretary, having reviewed the above-captioned Administrative Order on Consent, including all attachments incorporated by reference, having determined that it is consistent with applicable state laws and the objectives of this Department, and having ascertained that Chino Mines Company is desirous of entering into this AOC as evidenced by the signature of its Chief Executive Officer affixed to the AOC, hereby approves the AOC and orders that it take full force and effect on this 23rd day of December, 1994.

  
\_\_\_\_\_  
JUDITH M. ESPINOSA, Secretary  
NEW MEXICO ENVIRONMENT DEPARTMENT

# PROPOSED AOC INVESTIGATION UNITS FOR CHINO AREA



MAP 1

NEW MEXICO ENVIRONMENT DEPARTMENT/CHINO MINES COMPANY  
AOC STATEMENT OF WORK TABLE OF CONTENTS

1.	SCOPE OF INVESTIGATION AND REMEDIATION . . . . .	1
	1.1. Investigation Area . . . . .	1
	1.2. Media to be Investigated . . . . .	1
	1.3. Investigation Parameters . . . . .	2
	1.4. Applicable Standards (ASs) and RAC . . . . .	2
	1.5. Objectives . . . . .	3
	1.6. Guidance Documents . . . . .	4
	1.7. Quality Assurance, Sampling, and Data Analysis . . . . .	5
	1.8. Samples . . . . .	5
	1.9. Investigation Units . . . . .	6
	1.9.1. Description . . . . .	6
	1.9.2. Required Activities . . . . .	8
2.	WORK TO BE PERFORMED . . . . .	10
	2.1. Activities To Be Conducted . . . . .	10
	2.2. Interim Actions . . . . .	10
	2.3. Remedial Investigation . . . . .	11
	2.3.1. Project Planning Meeting . . . . .	11
	2.3.2. Background Report . . . . .	11
	2.3.3. Remedial Investigation Proposal . . . . .	12
	2.3.4. Quality Assurance Plan . . . . .	14
	2.3.5. Investigation Area Health and Safety Plan . . . . .	15
	2.3.6. Remedial Investigation . . . . .	16
	2.3.7. Remedial Investigation Report . . . . .	17
	2.4. Community Relations and Public Participation . . . . .	19
	2.5. Health and Environmental Risk Assessment . . . . .	21
	2.6. Pre-FS Remedial Action Criteria (RAC) . . . . .	23
	2.7. Feasibility Study . . . . .	23
	2.7.1. Description of Current Situation . . . . .	24
	2.7.2. Treatability Studies and Identification and Screening of Potentially Applicable Technologies . . . . .	24
	2.7.3. Development of Remedial Alternatives . . . . .	25
	2.7.4. Initial Screening of Remedial Alternatives . . . . .	26
	2.7.5. Evaluation of Remedial Alternatives . . . . .	26
	2.7.6. Description and Justification of Preferred Alternative . . . . .	28
	2.7.7. FS Report . . . . .	29
	2.8. Technical Infeasibility Demonstration . . . . .	29
	2.9. Record of Decision . . . . .	31
	2.10. Remedial Design and Remedial Action . . . . .	31
	2.10.1. RAC Compliance/Long Term Operation and Maintenance . . . . .	32

FIGURES

MAP 1. . . . .	33
----------------	----

## APPENDIX A: NMED/CMC SOW

### 1. SCOPE OF INVESTIGATION AND REMEDIATION.

1.1. **Investigation Area.** The investigation shall include, but not necessarily be limited to, the geographic area as described in the AOC. Investigation units are initially defined in the AOC and shall be described in the background report (section 2.3.2).

The Investigation Area or Investigation Units shall be extended beyond the described areas if NMED determines that Waste Materials originating from the Investigation Area have caused or have significant potential to cause adverse environmental or health effects beyond the Investigation Area described above with respect to one or more of the Media to be Investigated, as defined in section 1.2 of this Statement of Work (SOW). At any time during the term of the AOC, Chino may propose to divide the Investigation Area into separate Investigation units, each of which will be subject, in parallel manner, to the procedures specified below.

1.2. **Media to be Investigated.** The investigation shall include, but not necessarily be limited to, the following media:

- o the uppermost ground water aquifer and any deeper ground water aquifers potentially impacted by the uppermost aquifer or Waste Material sources in the Investigation Area;
- o soil, the vadose zone, vadose zone moisture, perched

## APPENDIX A: NMED/CMC SOW

ground water, and vadose zone vapor in the Investigation Units;

- o surface water pathways and stream sediment in the Investigation Units;
- o air and airborne contaminants, including particulates originating within the or migrating from the Investigation Units;
- o Habitat used by State or Federal designated endangered or threatened species, or wetlands in the Investigation Units;
- o fish tissue in the Investigation Units; and
- o other plant or animal life in the Investigation Units as determined to be necessary by NMED.

**1.3. Investigation Parameters.** Chino shall identify and assess the nature and extent of health and environmental risks and contamination caused by Waste Materials that may have been released in the Investigation Area. Waste Materials of concern for each unit of investigation shall be identified in the Remedial Investigation Background Report (section 2.3.2 of this SOW).

**1.4. Applicable Standards (ASs) and RAC.** Applicable Standards shall mean federal and state environmental laws, regulations, standards, requirements, criteria, guidelines or limitations that are legally applicable or relevant and



## APPENDIX A: NMED/CMC SOW

appropriate. Remedial Action Criteria (RAC) are quantitative and qualitative criteria that will be used to determine the effectiveness and completeness of the Remedial Action alternative selected for the Investigation Area pursuant to section 2.7 of this SOW. For most criteria, the ASs will be the RAC. ASs, however, may not exist for all criteria for which RAC are needed. In these instances, the Health and Environmental Risk Assessment (HERA, section 2.5 of this SOW), or definitions as provided in the Federal National Contingency Plan (NCP), may be used to establish RAC for such criteria.

A complete and final list of ASs will be developed in accordance with section 2.3.7 (Remedial Investigation Report) of this SOW. A Pre-Feasibility Study list of RAC will be issued pursuant to section 2.6 (Pre-FS RAC) of this SOW. A complete and final list of RAC will be selected in accordance with section 2.9 (Record of Decision) of this SOW.

**1.5. Objectives.** The principal objectives of the work to be performed under the AOC and SOW are: (1) to assess present Investigation Units conditions associated with risks to human health and the environment; (2) to evaluate alternative remedial technologies to the extent necessary to select a remedy, or remedies, appropriate for the Investigation Units in the Investigation Area; and (3) to implement the selected remedy or remedies.

## APPENDIX A: NMED/CMC SOW

All work performed and all work products submitted to NMED by Chino are subject to NMED approval.

**1.6. Guidance Documents.** For Waste Materials, the parties shall endeavor to create documents that are consistent, as determined by NMED, with the requirements and goals of a CERCLA Remedial Investigation and Feasibility Study (RI/FS), Health and Environmental Risk Assessment (HERA), Record of Decision (ROD), and Remedial Design and Remedial Action (RD/RA). The work shall be conducted in accordance with the AOC, CERCLA, the National Contingency Plan (NCP), and applicable federal, state, and local laws, regulations, and ordinances. NMED recommends that Chino follow the procedures set forth in section 3-107.B of NMWQCC regulations and in EPA guidance documents for conducting RI/FS and RD/RA projects. Such EPA guidance documents include, but are not limited to, "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA" (October 1988, Interim Final, OSWER Directive 9355.3-01), "Guidance on Remedial Actions for Contaminated Groundwater at Superfund Sites" (December 1988, OSWER Directive 9283.1-2), "Data Quality Objectives for Remedial Response Activities" (March 1987, OSWER Directive 9355.0-7B), "Risk Assessment Guidance for Superfund" volumes 1 and 2 (December 1989, Interim Final), "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans" (December 29, 1980, QAMS-005/80), "Management of Investigation-Derived Wastes During

## APPENDIX A: NMED/CMC SOW

Site Inspections" May 1991 (EPA/540/G-91/009), and any revisions or updates to these documents.

### **1.7. Quality Assurance, Sampling, and Data Analysis.**

Chino shall use quality assurance, quality control, and chain of custody procedures for all samples collected pursuant to this SOW. Chino shall submit to NMED a Quality Assurance Project Plan for NMED approval in accordance with the AOC. Chino shall afford to NMED the opportunity to approve or disapprove in advance the laboratories proposed to be utilized for sampling and analysis.

**1.8. Samples.** Upon request, Chino shall allow NMED to take split or duplicate samples of any samples collected pursuant to this SOW. Chino shall, to the maximum extent possible, provide at least seven (7) working days advance notice of any sample collection dates. When it is not possible to provide the full 7-day notice, Chino agrees to provide as much advance notice as possible, but in no event less than seventy-two (72) hours' oral notice prior to collection of samples, unless otherwise agreed. Samples required to be collected immediately following rainfall or snow melt events shall not be subject to this 72-hour provision. Chino shall notify NMED immediately by telephone of its intention to conduct event-related sampling. When at least 72 hours advance notice of sampling is given, or the sampling is event-related, Chino may proceed with the sampling without being delayed by a

APPENDIX A: NMED/CMC SOW

request to split samples. NMED shall at any time and with respect to any sample, have the right to request that Chino perform a reasonable number of blind, blank, spike, and/or duplicate samples as needed in accordance with EPA methodology to demonstrate the quality of the analytical data produced by laboratories utilized to implement the work requirements included in this SOW.

**1.9. Investigation Units**

1.9.1. Description. The Investigation Area may be divided into, but is not necessarily limited to, the following Investigation Units:

a. "Lampbright Draw" Investigation Unit shall include:

- (1) Lampbright Draw channel downgradient from Dam 8;
- (2) Lampbright Cut Diversion on the north boundary of the Lampbright Leach Pile;
- (3) Any tributaries to Lampbright Draw downgradient of the Lampbright Leach Pile or the Lampbright Cut Diversion.

These areas are included in sections 30 and 31 of T17S, R11W.

b. "Hanover Creek Channel" Investigation Unit shall include:

- (1) Hanover Creek Channel in sections 28, 29

APPENDIX A: NMED/CMC SOW

and 32 of T17S, R12W.

(2) Any tributaries to Hanover Creek which originate from Chino's West Leach Piles and Rock Piles.

c. "Whitewater Creek Channel" Investigation Unit shall include:

(1) All sections of the Whitewater Creek channel downgradient from Chino's precipitation plant.

(2) Any tributaries to Whitewater Creek within the investigation area that are not included in other units and are found to contain waste materials.

This unit occurs in section 32 of T17S, R12W; sections 6, 7, 18, 19, 30, and 31 of T18S, R12W; sections 12 and 13 in T18S, R13W; sections 5, 8, 9, 16, 21, 28 and 33 of T19S, R12W; section 4, of T20S, R12W.

d. "Smelter" Investigation Unit shall include:

(1) All areas containing and proximal to Chino's primary copper smelter including slag.

(2) All areas containing or which contained facilities ancillary to the primary copper smelter.

APPENDIX A: NMED/CMC SOW

This Investigation Unit is contained in section 31 of T18S, R12W.

e. "Hurley Soils" Investigation Unit shall include:

- (1) All soil in the town of Hurley, N.M.
- (2) Soils contiguous to the town of Hurley as the investigation may delineate contamination from mineral processing operations.

The Investigation Unit is in section 31, T18S, R12W.

f. "Tailing Impacted Soils" Investigation Unit shall include:

- (1) All soils adjacent to Chino's tailing facility near Hurley, N.M., and those soils which investigation shows to be contaminated by the Hurley tailings.

This Investigation Unit is in sections 4, 5, 6, 7, 8, 9, 16, 17, 18, 19, 20, 21, 28, 29, 30, 31, 32 and 33 of T19S, R12W.

1.9.2. Required Activities

a. The required activities for the Investigation Area may be completed for the Investigation Area as a whole or for individual Investigation Units,

## APPENDIX A: NMED/CMC SOW

provided the activities are completed for all areas containing or waste material of concern within the entire Investigation Area and are completed to identify the nature and extent of waste material impact. The required activities shall consist of the following:

- (1) A Remedial Investigation which shall include section 2.3 through 2.6 of this SOW.
- (2) Interim Remedial Actions which may be required by section 2.2 of this SOW.
- (3) A Feasibility Study which shall include section 2.7 through 2.8 of this SOW.
- (4) A Record of Decision which shall include section 2.9.
- (5) A Remedial Design as required in section 2.10 of the SOW.
- (6) Long-Term Remedial Actions as set forth in the approved Remedial Action Plan (section 2.10 of this SOW).
- (7) Long-Term Operation and Maintenance as set forth in the approved Long-Term Operation and Maintenance Plan (section 2.10.1 of this SOW).

APPENDIX A: NMED/CMC SOW

2. WORK TO BE PERFORMED.

2.1. **Activities To Be Conducted.** Activities to be conducted or funded by Chino under this AOC shall include, but are not necessarily limited to:

- Interim Remedial Action (if needed);
- Remedial Investigation;
- Community Relations and Public Participation;
- Health and Environmental Risk Assessment
- Feasibility Study;
- Technical Infeasibility Demonstration (if needed);
- Record of Decision (issued by NMED); and
- Remedial Design and Remedial Action, if required by ROD.

2.2. **Interim Actions.** If the need for source control, removal, containment, public or private water-supply treatment, provision of an alternate water supply, or other interim remedial action is identified by NMED or Chino at any time during the term of the AOC, and prior to issuance of the final Record of Decision, Chino shall submit a proposed interim Remedial Action Plan (RAP), for NMED approval, within ninety (90) days of such identification.

The interim RAP shall be subject to NMED approval procedures as set forth in Article IX.F of the AOC.

Chino shall implement the interim remedial action in



## APPENDIX A: NMED/CMC SOW

accordance with the interim RAP approved by NMED.

**2.3. Remedial Investigation.** Chino shall complete the following tasks and deliverables for NMED approval during the Remedial Investigation (RI):

**2.3.1. Project Planning Meeting.** An initial meeting between staff of NMED and Chino shall be held within sixty (60) days of the effective date of the AOC to assist Chino's preparation of, for NMED approval, a Background Report, a Remedial Investigation Proposal for each Investigation Unit, an Investigation Area Quality Assurance Plan, and an Investigation Area Health and Safety Plan. The Health and Safety Plan will include subsections appropriate to specific work areas of the Investigation Area.

**2.3.2 Background Report.** Within 180 days of the Project Planning Meeting, Chino shall submit, for NMED approval, a Background Report that shall include the following for each Investigation Unit, or for the Investigation Area as a whole:

- o description including geology, hydrology, geographic and cultural features, and biota including fish;
- o description of the history, including all operations, known releases, and previous investigations;
- o a determination of additional data and sampling needs or

## APPENDIX A: NMED/CMC SOW

alternatives for those locations where sufficient data exist; and

- o development of preliminary remedial action objectives and alternatives, preliminary identification of known Waste Material of concern and preliminary identification of Applicable Standards (ASs).

The Background Report shall be subject to NMED approval procedures as set forth in Article IX.F of the AOC.

**2.3.3 Remedial Investigation Proposal.** Within 90 days of NMED's approval of the Background Report, Chino shall submit, for NMED approval, a Remedial Investigation Proposal and completion schedule for each Investigation Unit, or for the Investigation Area as a whole, that will define project approach, project rationale, and activities to be undertaken during the RI. The Remedial Investigation Proposal will specify data to be collected, methods to be employed, and product(s) to result from each activity. The Remedial Investigation Proposal shall include a proposed monitoring program for all media of concern, as determined by NMED. Chino may propose, subject to NMED approval, a phased RI based upon Investigation Unit media, Waste Material, or location. The Remedial Investigation Proposal will include a schedule for each activity unless a phased RI is approved by NMED, in which case an Investigation Proposal will be submitted for NMED approval for each separate phase.

## APPENDIX A: NMED/CMC SOW

Chino shall design the Remedial Investigation proposal to generate data necessary to evaluate actual and potential risks to health and to the environment, and to evaluate alternative remedial actions. Anticipated RI activities include, but are not limited to:

- o preparation of a base map;
- o preparation of a geologic map;
- o sampling areas to determine background;
- o definition of the nature, extent and magnitude of any contamination;
- o characterization of surface and subsurface hydrogeologic conditions for the Investigation Area or Units.

Chino shall prepare a base map for the Investigation Units and surrounding area at an appropriate scale that will exhibit topographic contours, cultural features, and drainages. Permanent survey monuments will be set on the Investigation Units if they do not already exist on or near the units, and all well head elevations will be established relative to the monument within + or - 0.01 foot. Available geologic maps and subsurface geologic data will be reviewed and summarized to characterize the surface and subsurface geology of the Investigation Units and surrounding areas. A geologic map and cross-sections will be prepared for the Investigation Units, if they are not already available at a suitable scale or with sufficient detail.

Chino shall perform hydrogeologic investigations to

## APPENDIX A: NMED/CMC SOW

determine (1) whether Waste Materials derived from sources in the Investigation Units are impacting ground water, (2) the horizontal and vertical extent of vadose zone and ground water contamination including isopleth diagrams, (3) the location and number of wells actually or potentially being affected by such contamination, (4) the rate and direction of Waste Material migration, (5) subsurface hydraulic parameters including hydraulic conductivity, transmissivity and storativity, and (6) an inventory of public and private supply wells which are located within four (4) miles of the Investigation Units.

Chino shall define surface water hydrology, seasonal stream-flow characteristics, wetlands and riparian areas, ground water-surface water relationships, the species of benthic macroinvertebrate populations, and the extent and magnitude of contamination of surface water, stream sediment, fish and other wildlife.

Chino shall propose sampling stations and a sampling frequency for all media of concern.

The Remedial Investigation Proposal shall be subject to NMED approval procedures as set forth in Article IX.F of the AOC.

**2.3.4 Quality Assurance Plan.** Within sixty (60) days of NMED's approval of the Remedial Investigation Proposal, Chino shall submit an Investigation Area Quality Assurance Plan (QAP), for NMED approval. The QAP shall be developed in accordance with

## APPENDIX A: NMED/CMC SOW

established U.S. EPA guidance (i.e., "Data Quality Objectives for Remedial Response Activities" EPA/540/G-87/003 and "A Compendium of Superfund Field Operations Methods" EPA/540/P-87/001), section 3-107.B of N.M. WQCC regulations, section 1-103 of N.M. WQCC Water Quality Standards for Interstate and Intrastate Streams in New Mexico, or other appropriate guidance approved by NMED. The QAP shall address all field and laboratory activities and procedures for the entire RI.

The QAP shall propose a data management system, including field logs, sample management and tracking procedures, and document control and inventory procedures for both laboratory data and field measurements to be used to ensure data collected are of adequate quality to be used in the HERA (section 2.5 of this SOW), Feasibility Study (section 2.7 of this SOW), Remedial Design and Remedial Action (section 2.10 of this SOW), and to demonstrate compliance with the final RAC that will be developed pursuant to section 2.9 of this SOW.

The Quality Assurance Plan shall be subject to NMED approval procedures as set forth in Article IX.F of the AOC.

### **2.3.5 Investigation Area Health and Safety Plan.**

Within sixty (60) days of NMED's approval of the Remedial Investigation Proposal and prior to the initiation of work on the RI for each Investigation Unit, Chino shall submit an Investigation Area Health and Safety Plan (IASHSP), for NMED review, prior to the

APPENDIX A: NMED/CMC SOW

initiation of work for the RI. The Plan shall address all activities conducted pursuant to the AOC on- or off- the Investigation Area, and shall be consistent with 29 CFR § 1910.120. The plan will be available at Chino during all field activities and all workers shall be made familiar with its provisions. The plan will contain, at a minimum, the following:

- o the name of the Health and Safety Officer and alternates, and a description of his or her authority and responsibility;
- o type and character of hazardous substances which may be encountered;
- o plans and requirements for the use of personnel protective equipment, including respiratory protection;
- o use of surveillance equipment;
- o decontamination procedures for equipment and personnel;
- o training, physical examinations, and other requirements for on-site personnel;
- o information concerning emergency services; and
- o a contingency plan that meets the requirements of 29 CFR § 1910.120(1).

The IAHSP shall be subject to NMED approval procedures as set forth in Article IX.F of the AOC.

**2.3.6. Remedial Investigation.** Within sixty (60) days of NMED's approval of the Quality Assurance Plan, Chino shall

## APPENDIX A: NMED/CMC SOW

commence the Remedial Investigation in accordance with the Remedial Investigation Proposal, QAP and IAHSR as approved by NMED.

**2.3.7. Remedial Investigation Report.** Within ninety (90) days of receipt of the final laboratory data collected during each Investigation Unit Remedial Investigation, or completion of the work described in the approved Remedial Investigation Proposal, Chino shall submit, for NMED approval, a written RI Report documenting all activities conducted and conclusions drawn during each Investigation Unit RI. Each Investigation Unit RI report may incorporate earlier submittals, by reference, and will provide, at a minimum, the following:

- o a list of preliminary remedial action objectives and alternatives;
- o a proposed list of Applicable Standards (ASs);
- o an evaluation of the quality and usefulness of existing data;
- o a summary of the known history of Investigation Unit or operations related to release of waste material of concern in that unit;
- o a summary of meteorologic conditions at the Investigation Unit;
- o a series of topographic base maps and isopleth diagrams at an appropriate scale showing: (1) the location and distribution of historical operations; (2) the location

## APPENDIX A: NMED/CMC SOW

- of all historical investigations and sampling points;
- (3) the location of all RI activities and sampling points; (4) a combination of 1, 2, and 3, above; (5) water-level elevations at the Investigation Unit; (6) soil, soil gas, ground water, surface water, and stream sediment geochemistry and Waste Material distribution on the Investigation Unit and any area to which Waste Material has migrated from the Investigation Unit;
- o maps at an appropriate scale showing geology, ground water elevations, populations, and ground water use within four (4) miles (or more if NMED deems necessary) of the Investigation Unit;
  - o a summary of the nature, magnitude and extent of surface and subsurface contamination based on previously existing data and data gathered during the RI investigation;
  - o geologic cross-sections incorporating lithologic information for existing well borings and monitor well borings or test holes completed during the RI;
  - o completion diagrams for monitor wells installed during the RI, if any;
  - o analytical data for samples collected during the RI and existing data as appropriate including discharge plan or other permit data;
  - o results of the water-well inventory;



APPENDIX A: NMED/CMC SOW

- o interpretation of vadose zone and ground water hydraulics including quantification of the rate and direction of Waste Material migration, and potential impacts to down-gradient ground-water users;
- o interpretation of surface water hydrology;
- o effects of Waste Material on animals which live in, or depend on, surface waters including benthic macroinvertebrates, fish, amphibians, reptiles, and mammals;
- o any other technical information requested by NMED that is reasonably necessary to meet the requirements of this AOC;
- o workplan for the feasibility study including a proposed schedule for FS tasks and completion of a FS report.

All Investigation Unit RI Reports shall be subject to NMED approval procedures as set forth in Article IX.F of the AOC.

**2.4. Community Relations and Public Participation.**

Within ninety (90) days of NMED's approval of the first submitted Investigation Unit RI Report, Chino shall prepare a draft Community Relations Plan (CRP) specifying community relations activities to be undertaken pursuant to this section and Article VI of the AOC.

The CRP shall be subject to NMED approval procedures as set

APPENDIX A: NMED/CMC SOW

forth in Article IX.F of the AOC.

Within sixty (60) days of NMED's approval of the final CRP, NMED shall prepare, with review by Chino, a Fact Sheet describing site history, remedial investigation plans, and opportunities for public participation. The Fact Sheet shall be written in both Spanish and English. NMED will arrange for distribution of the Fact Sheet and any press releases, as appropriate with review by Chino.

Within thirty (30) days following completion of the draft Record of Decision (section 2.9 below), NMED shall publish notice, in a local newspaper of general circulation, of the availability of the draft Record of Decision at NMED's offices in Silver City and at the local information repository, and of the opportunity for the public to submit written comments on the draft Record of Decision for a thirty (30) day period commencing on the notice's publication date. NMED will hold a public meeting to explain the Record of Decision and to receive additional public input. NMED shall attach any written public comments and NMED responses to the final Record of Decision. NMED shall not be obligated to respond to every comment received, but will take such comments into consideration when issuing the final Record of Decision.

NMED shall establish and maintain two public documents repositories. One shall be located at NMED offices in Santa Fe and a second shall be maintained at a suitable location in Hurley. The original of all official documents required to be developed and

## APPENDIX A: NMED/CMC SOW

submitted under this AOC shall be filed with NMED in Santa Fe, and a copy shall be maintained at NMED's office in Silver City. All documents required by this AOC shall be filed in both places. The repository maintained at NMED's office in Santa Fe shall constitute the formal Administrative Record made in connection with this AOC. Documents maintained in both repositories shall be available for inspection and copying by the general public during usual business hours. Chino shall provide to the person designated by NMED in Article VII.B of this AOC the original and four (4) copies of all documents required to be developed and submitted under this AOC.

Within sixty (60) days of NMED's approval of the final CRP, NMED will initiate formation of a Community Working group (CWG) as defined in the CRP. After formation of the CWG, financial assistance in the form of a technical assistance grant, provided by Chino, will be made available to the CWG. The technical assistance grant will not exceed fifty thousand dollars (\$50,000).

**2.5. Health and Environmental Risk Assessment.** Within one hundred eighty (180) days of NMED's approval of each Investigation Unit RI report, at NMED's discretion Chino or NMED or its contractor shall perform a Health and Environmental Risk Assessment (HERA). The objectives of the HERA will be to:

- o determine the actual or potential risk to public health and environment resulting from Waste Material in the

APPENDIX A: NMED/CMC SOW

Investigation Unit, and migration of Waste Material to areas outside the Investigation Unit, under the "No Action" scenario; and

- o assist in the development of RAC for situations in which Applicable Standards (ASs) do not exist.

The HERA will evaluate environmental and human health hazards posed by hazardous substances on or in the vicinity of the Investigation Units and will be based on information acquired during the RI. The HERA will include the following:

- o Waste Material Characterization - utilizing information provided in the RI Report and existing information, hazardous constituents in the Waste Material on the Investigation Units will be identified;
- o exposure assessment - actual or potential exposure pathways will be identified and potentially exposed populations characterized;
- o toxicity assessment - Waste Materials of concern will be assessed for adverse health or environmental effects; and
- o risk characterization - information obtained during the exposure and toxicity assessments will be integrated to characterize the risk posed by Waste Material at the Investigation Units and the risk posed by migration of Waste Material off the Investigation Units.

Chino or NMED shall conduct the HERA in a manner consistent

## APPENDIX A: NMED/CMC SOW

with the NCP, and EPA risk assessment guidance documents such as those specified in section 1.6 of this SOW, and will issue a final HERA report. If the HERA is performed by NMED, Chino shall have an opportunity to review and comment on the final HERA report prior to the release of the report to the public, although NMED shall have final authority on the HERA. If the HERA is performed by Chino, NMED shall have final comment and approval authority. The final HERA report shall be subject to NMED approval procedures as set forth in Article IX.F of the AOC.

**2.6. Pre-FS Remedial Action Criteria (RAC).** Within sixty (60) days of issuance of the final HERA report for each Investigation Unit, NMED shall issue a list of preliminary RAC that will be used by Chino in conducting the Feasibility Study (FS) pursuant to section 2.7 of this SOW. NMED shall use the final Applicable Standards (ASs) contained in the approved RI report and information generated during the HERA to develop the Pre-FS RAC. The list of Pre-FS RAC shall be subject to NMED approval procedures as set forth in Article IX.F of the AOC.

**2.7. Feasibility Study.** Within sixty (60) days of NMED issuance of the Pre-FS RAC for each Investigation Unit and completion of any Dispute Resolution activities, Chino shall commence the following Feasibility Study (FS) tasks:

## APPENDIX A: NMED/CMC SOW

**2.7.1. Description of Current Situation.** Chino shall develop a summary of the current understanding of the Investigation Units, based on historical information as well as information obtained during the RI. This summary will include information concerning Waste Material characteristics, exposure routes, human and environmental targets, risks posed by Waste Materials on the Investigation Unit, and, if applicable, off-Investigation Unit risks posed by the migration of Waste Materials from the Investigation Unit.

The summary shall state the purpose of the FS and will include identification of exposure pathways which should be addressed during assessment of remedial alternatives. Remedial response objectives will be developed based on the current understanding of the Investigation Unit, the HERA, and a proposed final list of RAC.

**2.7.2. Treatability Studies and Identification and Screening of Potentially Applicable Technologies.** Chino shall identify treatment technologies potentially appropriate for remediation of Waste Material originating from or occurring at the Investigation Unit through literature review and bench or pilot studies. If necessary, Chino shall design treatability studies for the most promising treatment technologies identified. Prior to initiation of any treatability studies, Chino shall develop and submit for NMED approval a Treatability Study Work Plan identifying

## APPENDIX A: NMED/CMC SOW

the types and goals of the studies, a schedule for completion, and a data management plan.

A master list of potentially feasible technologies will be developed based on Investigation Unit-specific problems and general response objectives identified. These technologies may include both on-Investigation Unit and off-Investigation Unit remedies, depending on the problems identified. The list of technologies will be screened based on Investigation Unit conditions, contamination characteristics, and technical development to eliminate or modify those technologies that may prove extremely difficult to implement, will require unreasonable time periods, or will rely on insufficiently developed technology.

**2.7.3. Development of Remedial Alternatives.** Chino shall develop potentially applicable technologies identified in section 2.7.2 above into remedial alternatives. The technologies will address the remedial objectives identified in section 2.7.1 above, be based on accepted engineering practices and principles, and reduce the toxicity, mobility, and volume of Waste Material. The rationale for excluding any technologies will be documented. Remedial action alternatives will be developed for each of the following categories, consistent with the requirements of CERCLA:

- o no action;
- o remedial action which does not attain public health or environmental standards (i.e., RAC) but will reduce the

## APPENDIX A: NMED/CMC SOW

likelihood of a present or future threat from the hazardous substances. This alternative must closely approach the level of protection provided by applicable standards;

- o attainment of public health or environmental standards (i.e., RAC);
- o remedial action which exceeds public health and environmental standards (i.e., RAC), and
- o removal for treatment or disposal.

### **2.7.4. Initial Screening of Remedial Alternatives.**

Chino may, with prior NMED approval, eliminate from further consideration alternatives which obviously do not meet Health and Environmental Risk Assessment objectives or are not technically feasible for conditions at the Investigation Unit. Alternatives will be evaluated for:

- o environmental protection and effects;
- o effectiveness and ability to be implemented;
- o technical feasibility; and
- o cost (this factor may be considered only after environmental and public health factors have been considered, and will not be the basis for eliminating any alternatives at this point).

### **2.7.5. Evaluation of Remedial Alternatives.** Chino



## APPENDIX A: NMED/CMC SOW

shall develop in detail, and then evaluate for consistency with CERCLA, remedial action alternatives which meet the remedial response objectives (section 2.7.1). The detailed development will include:

- o a description of treatment, storage, and disposal technologies to be used;
- o a discussion of how each remedy does (or does not) comply with specific requirements of environmental laws and regulation. When an alternative does not comply, a description of special design considerations which could affect compliance will be included;
- o a description of environmental impacts of proposed methods and costs for mitigating any adverse affects;
- o an assessment of operation, maintenance, and monitoring requirements of each remedy and their costs;
- o a review of any facilities proposed for use to ensure compliance with RAC and to determine if off-Investigation Unit management of Waste Material could result in the potential for a future release from the disposal or waste-management facility;
- o identification of temporary storage requirements, disposal needs, and transportation plans;
- o an assessment of each alternative to determine whether it results in permanent treatment or destruction of the wastes, and if not, the potential for future release to

## APPENDIX A: NMED/CMC SOW

the environment;

- o a description of the safety requirements for implementing each remedial alternative; and
- o a description of special engineering requirements or site preparation considerations for each remedial alternative:

Chino shall, consistent with CERCLA, specifically assess the alternatives to determine:

- o overall protection of human health and the environment;
- o compliance with public health and environmental standards;
- o long-term effectiveness and permanence;
- o reduction of toxicity, mobility, and volume through treatment;
- o short-term effectiveness;
- o ability to be implemented;
- o cost-effectiveness [including the present value of costs of implementation and extended Remedial Action (operation and maintenance)]; and
- o community acceptance.

**2.7.6. Description and Justification of Preferred Alternative.** For each Investigation Unit, Chino shall describe and justify its preferred alternative based on the criteria listed in section 2.7.5 of this SOW.

## APPENDIX A: NMED/CMC SOW

**2.7.7. FS Report.** Chino shall prepare and submit for NMED approval a Feasibility Study report to provide, at a minimum, the following:

- o a description of the current situation;
- o a list of potentially applicable technologies identified during the FS;
- o a list of the alternatives developed during the FS and a description of each alternative;
- o the methods used for initial screening of the alternatives and the results of the screening;
- o descriptions of the methods used for evaluating the remedial alternatives and the results of the evaluation;
- and
- o a description and justification of Chino's preferred remedial alternative.

The FS Report shall be subject to NMED approval procedures as set forth in Article IX.F of the AOC.

**2.8. Technical Infeasibility Demonstration.** For each Investigation Unit, Chino may propose, for NMED approval, either in the Feasibility Study Report or during remediation, that RAC compliance is technically infeasible.

Technical infeasibility may be proposed in the Feasibility Study by a demonstration that a RAC cannot be met by using best reasonably proven remediation technology. The proposal shall

APPENDIX A: NMED/CMC SOW

include projected reductions in Waste Material concentration.

For each Investigation Unit, technical infeasibility may be proposed during remediation by a statistically valid extrapolation of the decrease in concentration of any constituent over the remainder of a twenty (20) year period, such that projected future reductions during that time would be less than 20% of the concentration at the time the technical infeasibility proposal is prepared. A statistically valid decrease cannot be demonstrated by fewer than eight (8) consecutive quarters.

In no event shall technical infeasibility be proposed, either in the FS or during remediation, unless the contamination level at the time of the proposal is 200% or less of the RAC. Chino shall include in its proposal alternate cleanup criteria which are technically feasible, and shall meet RAC for all other constituents not demonstrated to be technically infeasible. If NMED approves the proposal, Chino's obligation shall be terminated pursuant to Article XV of the AOC when it has met those alternate cleanup criteria as well as RAC for all other constituents not approved by NMED as technically infeasible.

Each technical infeasibility proposal shall be subject to NMED approval procedures as set forth in Article IX.F of the AOC.

If technical infeasibility cannot be proposed because the contaminant level is greater than 200% of the RAC for that contaminant, and if all other requirements of this section are met, Chino may seek a variance from the N.M. WQCC pursuant to section 1-

## APPENDIX A: NMED/CMC SOW

210 of N.M. WQCC regulations.

**2.9. Record of Decision.** For each Investigation Unit, or for the Investigation Area as a whole, within ninety (90) days of approval of the Feasibility Study Report, NMED shall issue a draft Record of Decision stating NMED's:

- o final list of RAC; and
- o preferred remedial action alternative.

NMED will issue a final Record of Decision within sixty (60) days after the public meeting to discuss the Record of Decision described in section 2.4 of the SOW.

To the extent that federal and state regulations, standards, criteria and guidelines are incorporated by reference into the final list of RAC, the federal and state regulations, standards, criteria and guidelines effective on the day NMED issues the final Record of Decision shall be the effective federal regulations, standards, criteria and guidelines for the purpose of this SOW.

**2.10. Remedial Design and Remedial Action.** For each Investigation Unit, within thirty (30) days after the final Record of Decision is issued, Chino shall propose for NMED approval a schedule for completion of the proposed Remedial Action Plan (RAP) if the final Record of Decision demonstrates the need for remedial action. The RAP sets forth the plans and schedules to develop the final plans, drawings, specifications, general provisions and

## APPENDIX A: NMED/CMC SOW

special requirements necessary to implement the remedial actions selected in the ROD(s). The RAP shall be designed to achieve remediation to RAC unless technical infeasibility was demonstrated in the NMED approved Feasibility Study Report. The RAP shall also provide a schedule of remedial action which considers the need to conduct remedial actions at some upstream sources before related remediation of downstream sources begin. The RAP also shall provide for monitoring to assess the effectiveness of remediation and to verify that remediation is effective for two years after RAC are met.

The Remedial Action Plan shall be subject to NMED approval procedures as set forth in Article IX.F of the AOC.

Chino shall commence implementation of the Remedial Action in accordance with the RAP approved by NMED within sixty (60) days of RAP approval. Chino shall provide quarterly progress reports during the remediation period. These reports shall not be subject to stipulated penalties. At the completion of the remedial action, Chino shall submit to NMED a Remedial Action Completion Report prior to or concurrent with submittal of the Long Term Operation and Maintenance Plan.

**2.10.1. RAC Compliance/Long Term Operation and Maintenance.** Within ninety (90) days of the completion of the Remedial Action in accordance with the approved RAP, Chino shall propose sampling stations with a Long Term Operation and

APPENDIX A: NMED/CMC SOW

Maintenance Plan to demonstrate RAC compliance. Chino may make phased proposals for different media or geographic areas.

The proposed compliance stations and Long-Term Operations and Maintenance Plan shall be subject to NMED approval procedures as set forth in Article IX.F of the AOC.

Ground water, surface water, and stream-sediment remediation shall be complete after eight (8) consecutive quarterly samples from the NMED-approved ground water and NMED-approved surface water compliance stations meet RAC.