



NEW MEXICO

Abandoned Mine Lands

Project Manual
Including Plans and Specifications
for Construction of

HARDING PEGMATITE MINE SAFEGUARD PROJECT – PHASE II

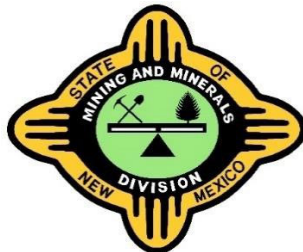
Taos County, New Mexico

PROJECT NO.
EMNRD-MMD-2022-02

AUTHORIZED BY:

ABANDONED MINE LAND PROGRAM
MINING and MINERALS DIVISION
STATE OF NEW MEXICO, ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT*
(with reclamation fees paid by the New Mexico Coal Industry)

AUGUST 2022



00002 – CERTIFICATION PAGE

PROJECT NAME: **HARDING PEGMATITE MINE SAFEGUARD PROJECT – PHASE II**

LOCATION: **TAOS COUNTY**

PROJECT NUMBER: **EMNRD-MMD-2022-02**

AML PROJECT ENGINEER: **MEGHAN J McDONALD, P.E.**
Mining and Minerals Division
State of New Mexico, Energy, Minerals and Natural Resources
Department
1220 South St. Francis Drive Santa Fe, New Mexico 87505
Telephone 505.629.9872

The technical material and data contained in the specifications were prepared under the supervision and direction of the undersigned, whose seal as a Professional Engineer (P.E.), licensed to practice in the State of New Mexico, is affixed below.



DATE SIGNED: SEPTEMBER 1, 2022

ENGINEER OF RECORD:



2440 Louisiana Boulevard NE
Suite 700
Albuquerque, NM 87109

James Joseph, P.E.
License No. 16227
Expires 12/31/2023

Michelle Lujan Grisham, Governor

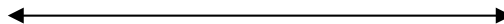
All questions about the meaning or intent of these documents shall be submitted only to the General Services Department, State Purchasing Division Procurement Specialist, in writing.

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00004 – LIST OF DESIGN DRAWINGS, STATUTES, AND TABLES

The following sections list the figures, statutes, and tables that are referenced in the Specifications and are incorporated herein by reference as if set out in their entirety.

I. DESIGN DRAWINGS

The following figures may be found as an attachment:

SHEET NUMBER	TITLE
01	COVER SHEET
02	GENERAL NOTES AND MARKER DETAIL
03	SITE PLAN
04	GATE 1 STABILIZATION
05	FENCING DETAILS – ICEBERG PIT AND FEATURE SUB-1
06	FEATURES SUB-1 AND F9 PLAN AND PROFILE – EXISTING CONDITIONS
07	FEATURE F9, REOPENED DECLINE ADIT DETAILS
08	FEATURE SUB-1, OPEN STOPE – SCHEMATICS OF EXISTING CONDITIONS
09	FEATURE SUB-1, OPEN STOPE – SCHEMATICS OF TOROID TIRE PLUGS
10	FEATURE SUB-1, OPEN STOPE FILL DETAIL
11	FEATURE SUB-2, EXISTING CONDITIONS AND MINE VENT DETAIL
12	FEATURE SUB-2, MINE VENT DETAILS AND NOTES

II. STATUTES

The following statutes may be referenced in the text:

NMSA 1978, §§ 13-1-28 through 199:	Procurement Code
NMSA 1978, §§ 13-4-1 through 30:	Public Works Contracts
NMSA 1978, §§ 13-4-31 through 43:	Subcontractors Fair Practices Act
NMSA 1978, §§ 41-4-1 through 2:	Tort Claims Act
NMSA 1978, §§ 52-1-1 through 70:	Workers' Compensation Act
NMSA 1978, §§ 69-25B-1 through 12:	Abandoned Mine Reclamation Act
NMSA 1978, §§ 74-13-1, <i>et seq.</i> :	Recycling and Illegal Dumping Act
NMSA 1978, §§ 76-10-11 through 22:	New Mexico Seed Law

III. TABLES

The following tables are referenced in the specifications text (Appendix B):

Table I: Seed Mix Table

Table II: Project Summary Table

IV. APPENDIX

The following appendices are referenced in the text:

Appendix A: Vendor Information Form

Appendix B: Specifications



PURCHASING DIVISION (GSD)

BIDDER:

Name:

Address:

Phone:

E-mail:

PROJECT:

HARDING PEGMATITE MINE
SAFEGUARD PROJECT – PHASE II
TAOS COUNTY, NEW MEXICO
PROJECT NO.: EMNRD-MMD-2022-02

ARCHITECT/ENGINEER OF RECORD

James Joseph, P.E.

Telephone: (505) 264-3847

Email: jjoseph@intera.com
OWNER/POINT OF CONTACT:

Abandoned Mine Land Program
Mining and Minerals Division
State of New Mexico, Energy, Minerals and
Natural Resources Department
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505
Telephone: (505) 629-9872

INVITATION TO BID CONSTRUCTION CONTRACT

BID NUMBER: 30-52100-22-06089

Sealed bid opening FORMAL
NM STATE PURCHASING DIVISION

BID DUE DATE: Friday, September 23, 2022
AND TIME of 2:00 PM MDT

Procurement Officer: **Michael Saavedra**

Contact Number: Michael.Saavedra@state.nm.us or
505-372-8489

IMPORTANT

**ONLY ELECTRONICALLY SUBMITTED BIDS
WILL BE ACCEPTED.** No hardcopy, faxed or
emailed bids will be accepted.

FOR ELECTRONICALLY UPLOADED BIDS: such
bids will be time-stamped in the system when Bidder
clicks “OK” after “Review and Submit.” You will
receive a confirmation email of the submission for
your records. Such electronic submissions will be
considered sealed bids in conformance with statute.
To register as a Supplier with the State of New
Mexico, or to log in if already registered go to:
<https://suppliers.scquest.com/StateOfNewMexico>

THIS BID IS SUBJECT TO THE REQUIREMENTS OF THE BIDDING DOCUMENTS AS DEFINED IN THE
"INSTRUCTIONS TO BIDDERS."

THE BID PROPOSAL FORM MUST BE ACCOMPANIED BY A SURETY BOND, SUBCONTRACTOR
LISTING FORM, AND DOCUMENTS SPECIFIED IN THE "INSTRUCTIONS TO BIDDERS."

This mailing contains five pages

INVITATION TO BID page 2

Bidding Documents: Bidding documents, plans, specifications, drawings etc. may be obtained at the office of the Architect / Engineer of Record at no charge for each complete set. Incomplete sets will not be issued.

Bidding Documents may be obtained / reviewed at the following location:

Meghan J. McDonald, P.E.
New Mexico Abandoned Mine Land Program
Telephone: (505) 629.9872
Meghan.McDonald@state.nm.us
<http://www.emnrd.state.nm.us/MMD/AML/AML-ConstructionProjects.html>

The Bidding Documents contain a time for completion of the work and further impose liquidated damages for failure to complete the work within that time period.

Bids shall be presented in the form of a total Base Bid proposal under a Lump Sum Contract plus any additive or deductive alternates that are selected by the Owner. A bid must be submitted on all bid items and alternates; segregated bids will not be accepted.

NOTE: Base Bid price shall not include state gross receipts or local options taxes. Taxes will be included in the Contracted Amount at prevailing rates as a separate item to be paid by Owner.

In submitting this bid, each Bidder must satisfy all terms and conditions of the Bidding Documents. No Bidder may withdraw his bid for **NINETY (90) DAYS** after the actual date of the opening thereof.

Wage Rates & Workforce Solutions Registration: Pursuant to the Public Works Minimum Wage Act, Section 13-4-10 to 13-4-17 NMSA 1978, all work covered by this Invitation to Bid shall be in accordance with applicable state laws and, if the bid amount is sixty thousand dollars (\$60,000) or more, is subject to the minimum wage rate determination issued by the New Mexico Department of Workforce Solutions, Labor Relations Division, Public Works Unit. Section 13-4-13.1 *requires* Contractors when their bid is over sixty thousand dollars (\$60,000) and subcontractors of all tiers when their portion of the work is over sixty thousand dollars (\$60,000), to be registered with the Labor Relations Division of the Department of Workforce Solutions. This registration is available under the “Contractor Registration” section at the following website:

<http://www.dws.state.nm.us/LaborRelations/LaborInformation/PublicWorks>

There may be some administrative delay in processing your registration. Pursuant to Section 13-4-13.1 NMSA 1978, the State Purchasing Division **cannot accept your bid if you are not registered at the time of bid opening**. Please direct all questions concerning registration to DWS at (505) 841-4400.

INVITATION TO BID page 3**Bidder Instructions for Invitation to Bid (ITB)****Viewing ITB:**

Bidders can access active procurements at the following sites:

- <https://www.generalservices.state.nm.us/statepurchasing/active-procurements.aspx>
- <https://bids.scquest.com/apps/Router/PublicEvent?CustomerOrg=StateOfNewMexico>

Complete bid documents as required by the ITB Specifications, and submit any required documentation, supporting materials, certificates, etc. in addition to the bid documents.

Submitted Bids:

Bidders have one option to submit bids to the State Purchasing Division (SPD):

- Electronic submissions through eProNM at the following site:
<https://bids.scquest.com/apps/Router/PublicEvent?CustomerOrg=StateOfNewMexico>
- Bids will be time-stamped in the system when Bidder clicks “OK” after “Review and Submit.” The bidder will receive a confirmation email of the submission for their records. Such electronic submissions will be considered sealed bids in conformance with statute.
- Bids must be received by the due date and time listed on the front page of this ITB or as amended. Bids submitted electronically within 2 hours of the close time cannot be guaranteed to upload successfully.
- If an amendment is processed after you submit your bid, you must resubmit your bid in order for your bid to be considered fully submitted.

Formal Sealed Bid Opening, to occur immediately following due date/time:

Place: https://teams.microsoft.com/l/meetup-join/19%3ameeting_NDBmNmQzMDUtNzNjYi00YzUyLTkyOGEtMTE5ZDZiMGRhOGE2%40thread.v2/0?context=%7b%22Tid%22%3a%2204aa6bf4-d436-426f-bfa4-04b7a70e60ff%22%2c%22Oid%22%3a%2217362856-1f15-4445-851c-d0a4af6e7161%22%7d

Bonds: Bid Security in the form of a surety bond executed by a surety company authorized to do business in the state of New Mexico in the amount of five percent (**5%**) of the total bid, or the equivalent in cash by means of a cashier's check or in a form satisfactory to the Owner, must accompany each bid in accordance with the Instructions to Bidders.

A one hundred percent (100%) Performance Bond and a one hundred percent (100%) Payment and Materials Bond for the total contract amount, including appropriate New Mexico Gross Receipts Tax, executed by a surety company authorized to do business in the state of New Mexico shall be required from the successful Bidder prior to award of contract. A subcontractor shall provide performance and payment bonds if the subcontractor's contract (to the Contractor) for work to be performed is one hundred twenty five thousand dollars (\$125,000) or more. Failure of a subcontractor to provide the required bonds shall not subject owner to any increase in cost due to approved substitution of subcontractor.

The Owner intends to award this Project to the lowest responsible Bidder. The Owner reserves the right to reject any and all bids, to waive technical irregularities, and to award the contract to the Bidder whose bid it deems to be in the best interest of the Owner.

Preferences: Because this project is one hundred percent (100%) federally funded, none of the resident preferences will be accepted nor applied.

New Mexico Employees Health Coverage

- A. If Contractor has, or grows to, six (6) or more employees who work, or who are expected to work, an average of at least 20 hours per week over a six (6) month period during the term of this Agreement, Contractor certifies, by signing this agreement, to have in place, and agree to maintain for the term of the Agreement, health insurance for those employees and offer that health insurance to those employees if the expected annual value in the aggregate of any and all contracts between Contractor and the State exceed \$250,000 dollars.
- B. Contractor agrees to maintain a record of the number of employees who have (a) accepted health insurance; (b) declined health insurance due to other health insurance coverage already in place; or (c) declined health insurance for other reasons. These records are subject to review and audit by a representative of the state.
- C. Contractor agrees to advise all employees of the availability of State publicly financed health care coverage programs by providing each employee with, as a minimum, the following web site link to additional information: <https://bewellnm.com>.

Pre-Bid Meeting: A Mandatory Pre-Bid Meeting will be held as follows:

A virtual pre-bid meeting will be held at the date and time listed below. Prospective Bidders are required to attend the pre-bid meeting to familiarize themselves with the work to be conducted and the existing conditions that may affect the performance of the contract work. Subcontractors and suppliers are not required to attend the pre-bid conference; however, failure to participate in the virtual pre-bid meeting will not relieve subcontractors and suppliers from the responsibility of properly estimating the difficulty and cost of performing their portion of the work.

DATE: Wednesday September 14, 2022

TIME: 10:00 AM MDT

LOCATION: Microsoft Teams Meeting https://teams.microsoft.com/l/meetup-join/19%3ameeting_ZGU3ZmI2YmQtNmZiMS00M2M3LTk4NGQtMGYxYmE4ZmU4ODg2%40thread.v2/0?context=%7b%22Tid%22%3a%2204aa6bf4-d436-426f-bfa4-04b7a70e60ff%22%2c%22Oid%22%3a%2231075152-c777-45d3-b63e-76dc922a7f38%22%7d

Meeting ID: 265 164 624 827

Passcode: RRqMes

Optional Site Visit: An optional site visit will be held as follows:

DATE: Thursday September 15, 2022

TIME: 10:00 AM MDT

Meeting Location: Dixon Cooperative Market, 215 NM-75, Dixon, NM 87527

Directions: From Española, head north on NM-68 for 20 miles. Turn right onto NM-75 toward Dixon and travel 2 miles to the Dixon Cooperative Market parking lot. From the meeting place, the group will travel 6 miles east on NM-75 to the Harding Mine turnoff.

Details: The site visit is expected to take approximately two (2) hours, including travel to and from the meeting site. Prospective Bidders must provide their own transportation to the site.

The site is accessed via a maintained dirt road and is usually accessible with a low clearance two-wheel drive vehicle except when the road is muddy or during snow events.

Access to the mine features will involve mild to moderate hiking. The mine features are located below a mine highwall with a rockfall hazard; hard hats are required. Mine features are also located in active subsidence zones.

Please wear appropriate field gear and bring supplies for the terrain and weather conditions. This includes but is not limited to long sleeves and pants, hiking boots, sun hat, hard hat, sunscreen, insect repellent, and water.

Restrictions: Please minimize the number of vehicles due to site access constraints. The site visit will follow all current Covid restrictions required by the State of New Mexico.

SITE VISIT POINT OF CONTACT: Meghan McDonald, Project Engineer, New Mexico Abandoned Mine Land Program, 505.629.9872, Meghan.McDonald@state.nm.us

Additional Deadlines:

Questions Deadline: **Friday, September 16, 2022 at 5 pm MDT**

Answers Deadline **Wednesday, September 21, 2022**

Last Amendment Deadline: **Wednesday, September 21, 2022**

END OF INVITATION TO BID

00100 – INSTRUCTIONS TO BIDDERS

Title IV of the federal Surface Mining Control and Reclamation Act (SMCRA) of 1977, 30 U.S.C. Section 1201, *et seq.* provides for the reclamation of abandoned mine lands. All operators of coal mining operations subject to the provisions of SMCRA pay to the Secretary of the Interior Department, for deposit in the fund, a reclamation fee of thirty-one and a half (31.5) cents per ton of coal produced by surface coal mining and thirteen and a half (13.5) cents per ton of coal produced by underground mining. Under SMCRA, individual states acquire federal funds from the Office of Surface Mining, Reclamation, and Enforcement (OSMRE) to administer an approved state reclamation program and to implement specific reclamation projects. The State of New Mexico Energy, Minerals and Natural Resources Department (EMNRD) administers the Abandoned Mine Land (AML) Program within New Mexico pursuant to a state approved plan and the requirements of the New Mexico Abandoned Mine Reclamation Act, NMSA 1978, § 69-25 B-1, *et seq.* The supervision and coordination of work done under the AML Program are conducted by the Mining and Minerals Division (MMD) of EMNRD. Wherever the term Owner is used, it shall mean the MMD Director. EMNRD, MMD, and Owner may be collectively referred to as “EMNRD.”

MMD has obtained one hundred percent (100%) federal funds for this construction project. MMD is, by this Invitation to Bid (ITB), requesting bids from responsible, qualified Bidders for the construction project in accordance with the terms of this ITB. Bidders are advised that responsive bids are invited from both profit making and nonprofit organizations. EMNRD is an affirmative action and equal opportunity employer.

Bids in response to this ITB will be opened publicly at:

Place: https://teams.microsoft.com/l/meetup-join/19%3ameeting_NDBmNmQzMDUtNzNjYi00YzUyLTkyOGEtMTE5ZDZiMGRhOGE2%40thread.v2/0?context=%7b%22Tid%22%3a%2204aa6bf4-d436-426f-bfa4-04b7a70e60ff%22%2c%22Oid%22%3a%2217362856-1f15-4445-851c-d0a4af6e7161%22%7d

The name of each Bidder, the lump sum of each bid, and the Bidder’s Contractor License Number will be announced.

The Contract Time for project completion shall be no later than two hundred forty (240) calendar days, including all Sundays, holidays, and non-workdays, after the Contractor receives a Notice to Proceed via USPS mail.

An abstract of the bids may be available for public inspection from the State Purchasing Division upon request. Those portions of any bid for which a Bidder has made a written request for confidentiality and for which the SPD Director has made a finding which concurs in that confidentiality shall be withheld from public inspection.

00120 – SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

The following shall be included with each responsive bid:

I. Information

A fully completed Vendor Information Form (see Section 00010, Pre-Bid Information), including the name, address, telephone number, Taxpayer Identification Numbers, and signature of the Bidder, or of an officer or employee who has the authority of the Bidder. Do not leave blanks. This signature shall signify that the matters stated or certified on the form are true and accurate to the best of the Bidder's knowledge.

II. Bid

A fully completed Bid Form (Section 00300), including the name, address, telephone number, New Mexico Contractor's License Number, Contractor and Subcontractor New Mexico Labor Enforcement Fund Registration Numbers for bids and subcontracts greater than sixty thousand dollars (\$60,000.00), and signature of the Bidder, or of an officer or employee who has the authority to bind the Bidder. Do not leave blanks. This signature shall signify that the matters stated or certified in the bid are true and accurate to the best of the Bidder's knowledge and that the bid was made without collusion or fraud.

III. Security

Bid security shall be required of Bidders for construction contracts procured by competitive sealed bid. A bid security shall be in the form of a negotiable Surety Bond (see an example in Section 00410), Cashier's Check, Certified Check, or Money Order in the amount of at least five percent (5%) of the total bid payable to the Energy, Minerals and Natural Resources Department. A letter of credit is not acceptable.

IV. References

A list of the Bidder's general background including relevant resources, capabilities, experience, and references with telephone numbers (Section 00420). Do not leave blanks. The Bidder must have a minimum of five (5) years of related construction experience to qualify.

V. Supplements

A complete listing of all subcontractors (Section 00430), if applicable, including for each subcontractor: the work to be performed; the subcontractor's name, address, telephone number, and New Mexico Contractor License Number, if applicable; and a complete listing of pertinent equipment (Section 00450) including for each piece of equipment: the type, manufacturer, model, capacity, and condition. Do not leave blanks.

If for any reason this ITB requires further amendment, such amendments shall be sent via addenda to all parties recorded by the Project Engineer as having received the Bidding Documents. Each Bidder shall be required to acknowledge the receipt of any addenda on the bid form. If such addenda become necessary, they will be distributed within a reasonable time to allow the Bidders to consider the amendment in preparation of their bid.

A responsive bid to the ITB shall be submitted as a sealed electronic bid and shall include project costs for each work task on the Bid Form (Section 00300). Prices quoted in these sealed bids shall be firm fixed prices for both lump sum and/or unit prices as listed on the Bid Form. This ITB shall become a part of the final contract agreement.

The total bid amounts as read at the Bid Opening are tentative only and subject to verification of mathematical accuracy. Such verification may result in a change to the order of the bids. The Bidder with the lowest overall total bid price will be announced as the apparent low Bidder. The apparent low Bidder's bid will be carefully evaluated to ensure that it complies with the evaluation criteria listed below and the other requirements of this ITB. The bid will be awarded with reasonable promptness by written Notice of Award to the lowest responsible, qualified Bidder. If for any reason the apparent low Bidder does not meet all the evaluation criteria listed below or comply with all the requirements of this ITB, the next lowest Bidder will be evaluated and awarded the contract if the evaluation criteria are met.

The evaluation criteria include:

1. possession of a valid New Mexico Contractor License appropriate for the work;
2. proof of registration with Labor Relations Division of the New Mexico Department of Workforce Solutions for contractor and subcontractors when Bidder submits a bid valued at ore \$60,000; and
3. proven records of satisfactory work performance for both Bidder and listed subcontractors.

This evaluation is not conducted to determine whether one Bidder's offering is superior to another Bidder's but only to determine that a Bidder's offering is acceptable as set forth in the ITB.

Each Bidder shall submit information sufficient to evaluate the bid based on documentation of the Bidder's proven ability to perform the required tasks. Failure to provide the information required to evaluate the bid shall result in rejection of the bid without further discussion.

All questions about the meaning or intent of the Bidding Documents shall be submitted to the Project Engineer in writing. Replies will be issued by Addenda mailed or delivered to all parties recorded by the Project Engineer as having received the Bidding Documents. Questions received less than ten (10) business days before the date for opening of Bids will not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without effect. Bidders or the Contractor shall promptly notify the Project Engineer of any ambiguity, inconsistency, or error which they may perceive upon examination of the Bidding Documents or of the site and local conditions.

Note: Because this project is one hundred percent (100%) federally funded none of the Resident Preferences will be accepted or applied.

VI. New Mexico Employees Health Insurance

- A. If Bidder has, or grows to, six (6) or more employees who work, or who are expected to work, an average of at least twenty (20) hours per week over a six (6) month period during the term of any Agreement which may result from this ITB, Bidder agrees, by submitting a bid, to have in place, and agree to maintain for the Agreement's term, health insurance for those employees and offer that health insurance to those employees if the expected annual value in the aggregate of any and all contracts between Bidder and the state exceed two hundred fifty thousand dollars (\$250,000).
- B. Bidder agrees to maintain a record of the number of employees who have:
 - 1) accepted health insurance;
 - 2) declined health insurance due to other health insurance coverage already in place; or
 - 3) declined health insurance for other reasons.

These records are subject to review and audit by a representative of the state.

- C. Bidder agrees to advise all employees of the availability of state publicly-financed health care coverage programs.

VI. Use of Brand Name Specifications

Use of any brand name herein is for the purpose of describing the standard of quality, performance and characteristics desired and is not intended to limit or restrict competition.

00125 – BID ASSURANCES

In addition to the requirements above, the Bidder must make, include, and agree to the following assurances as a part of the responsive bid submitted in response to this Invitation for Bids (ITB)

I. General

This ITB does not commit EMNRD to pay any costs incurred by any Bidder in the submission of a responsive bid, in making necessary studies and designs for the responsive bid, or in procuring or contracting for services or supplies for the preparation of the responsive bid. Issuance of this ITB does not constitute an award commitment by EMNRD. An ITB may be canceled and any or all bids may be rejected in whole or in part, when it is in the best interest of the State of New Mexico. EMNRD may waive, in its sole discretion, technical irregularities that do not affect the contractual conditions, delivery, price, quality, or quantity of the construction, services, or items of tangible personal property that are bid. EMNRD specifically reserves the right to reject responsible, qualified bids from which EMNRD is not able to determine the true amount of the bid, and bids that exceed EMNRD's budgeted or available funds for the project. Final approval for funding is contingent upon approval from the Department of the Interior: Office of Surface Mining Reclamation and Enforcement - Denver Regional Office.

II. Confidentiality

It is further understood that all bids shall become a part of the official file on this matter without obligation of EMNRD and shall be made available for public inspection, unless the Bidder specifies in writing that specific portions of the bid are confidential and are to be held confidential by EMNRD in accordance with NMSA 1978, § 71-2-8. All matter intended to be confidential shall be submitted in a sealed envelope marked "confidential" and each page of the material shall also be marked clearly with the word "confidential". EMNRD reserves the right to review information submitted as to confidentiality. For this purpose, confidential information includes, but is not limited to, matter that relates to trade secrets or which is privileged commercial or financial information that affects the competitive rights of the person, firm, or corporation that submits it.

III. Inspection

To assure EMNRD that the Bidder has the competence, equipment, facilities, and staff to furnish the services required under this contract, EMNRD shall be allowed to determine the

adequacy of the competence, equipment, facilities, and staff of any Bidder considered for the contract award. For this purpose, if EMNRD deems it appropriate, the Bidder shall permit representatives of EMNRD to inspect the Bidder's equipment and facilities.

IV. Samples

Bid samples or descriptive literature should not be submitted unless expressly requested. Regardless of any attempt by a Bidder to condition the bid, unsolicited bid samples or descriptive literature, which are submitted at the Bidder's risk, will not be examined or tested, and will not be deemed to vary any of the provisions of this ITB.

V. Cancellation

Failure by the successful Bidder to return the signed contract with acceptable contract bond and insurance within ten (10) business days after receipt via certified mail of the Notice of Award shall be just cause for the cancellation of the award and the forfeiture of the proposal guaranty which shall become the property of EMNRD, not as a penalty, but in liquidation of damages sustained.

00130 – MANDATORY PRE-BID CONFERENCE

Prospective Bidders are required to attend the pre-bid conference, in order to inspect some of the mine features where the work is to be conducted and to familiarize themselves with the existing conditions that may affect the performance of the contract work. Subcontractors and suppliers are not required to attend the pre-bid conference; however, failure to inspect the site will not relieve subcontractors and suppliers from the responsibility of properly estimating the difficulty and cost of performing their portion of the work.

The mandatory virtual pre-bid conference and optional site visit will be held to explain the work requirements. See the Invitation to Bid for date, location, and time. AML representatives will present the work site conditions and the scope of work during the virtual meeting. Potential Offerors must submit questions in writing to be considered binding to **Michael Saavedra at Michael.Saavedra@state.nm.us**. See the Invitation to Bid for date, location, and time.

Those attending are advised to be prompt.

NOTE: NOTHING STATED AT THE PRE-BID CONFERENCE SHALL CHANGE THIS INVITATION FOR BIDS UNLESS SUCH CHANGE IS MADE BY WRITTEN AMENDMENT.

ATTACHMENT CHECKLIST

The following forms and attachments shall be submitted with your bid:

- A. ____ Bidder Information
- B. ____ Schedule of Values
- C. ____ Experience Summary
- D. ____ References List
- E. ____ Equipment List
- F. ____ Bid Security Bond Form with Agent's Affidavit
- G. ____ Subcontractor & Department of Workforce Solutions, Industrial & Labor
Division Listing Requirements
- H. ____ List of Subcontractors
- I. ____ DOI OSMRE Certification Regarding Debarment, Suspension and Other
Responsibility Matters, Drug-Free Workplace Requirements and Lobbying
- J. ____ DOI OSMRE Applicant/Violator System Information Form

The following forms and attachments are due at time of award:

- K. ____ Certificate of Insurance with Agency named as additional insured (all
subcontractors also insured)
- L. ____ Performance Bond and Labor & Material Payment Bond
- M. ____ Wage Rate Determination if bid amount is sixty thousand dollars (\$60,000.00)
or more issued by NM Dept. of Workforce Solutions

The following forms shall be submitted after award

- N. ____ Application for Payment (*submit when invoicing*)

00300 – BID FORMS

BIDDER NAME: _____

Instructions:

For lump sum Bid Items, only enter bid in right column, “Bid Amount”; otherwise, provide both a Unit Price and Bid Amount (Unit Price X Quantity). All bids must include the written value of the same amount as the Bid Amount in the right column (Example: if \$13,500.00 is the Bid Amount in the right column, then this amount must be written below it as “Thirteen thousand five hundred dollars and zero cents”). In case of discrepancy, the amount shown in words shall govern. All entries shall be either typed or entered in block print. The provided quantities are of materials and work required to complete the project are approximations only and are given as a basis for calculation upon which the contract award will be determined. All provided costs shall exclude applicable state gross receipts tax or applicable local option tax.

BID ITEM	MATERIAL / WORK DESCRIPTION	UNITS	UNIT PRICE (US \$)	QUANTITY	BID AMOUNT (US Dollars)
1	Mobilization (Not to exceed 10% of TOTAL BASE BID)	Lump Sum	NA		\$ _____
	(Written Bid Amount in Dollars and Cents)				
2	Backfill Feature SUB-1, Open Stope Toroid Tire Plugs, PUF Fill, Soil Cap, Seeding, and fence installation	Lump Sum	NA		\$ _____
	(Written Bid Amount in Dollars and Cents)				

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Harding Pegmatite Mine Safeguard Project – Phase II Taos County, New Mexico

BID ITEM	MATERIAL / WORK DESCRIPTION	UNITS	UNIT PRICE (US \$)	QUANTITY	BID AMOUNT (US Dollars)
3	Backfill Feature SUB-2 and Install Vent Pipe Fabricate and install vent pipe with grate and secure with PUF, bentonite, and soil cap	Lump Sum	NA		\$ _____
(Written Bid Amount in Dollars and Cents)					
4	Repair Feature F9, Reopened Decline Adit Excavate Opening, PUF Seal, Backfill	Lump Sum	NA		\$ _____
(Written Bid Amount in Dollars and Cents)					
5	Stabilize Gate 1 Place fill and Riprap, Spread excess fill	Lump Sum	NA		\$ _____
(Written Bid Amount in Dollars and Cents)					
6	Iceberg Pit Fence Installation Install new fence above highwall	Linear Feet	\$ _____	150	\$ _____
(Written Bid Amount in Dollars and Cents)					

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Harding Pegmatite Mine Safeguard Project – Phase II Taos County, New Mexico

BID ITEM	MATERIAL / WORK DESCRIPTION	UNITS	UNIT PRICE (US \$)	QUANTITY	BID AMOUNT (US Dollars)
7	Site Maintenance Rock Fall Clearing, Pedestrian Access Maintenance (skid steer, operator, 2 laborers, and hand tools)	4-hour Intervals	\$ _____	4	\$ _____
(Written Bid Amount in Dollars and Cents)					
8	Reseeding of Disturbed Areas Seeding (including amendments) and Mulch placement	½-acre	\$ _____	1	\$ _____
(Written Bid Amount in Dollars and Cents)					
9	Hazard / Directive Signs Procurement and installation of signs and signposts	Sign (installed)	\$ _____	6	\$ _____
(Written Bid Amount in Dollars and Cents)					

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TOTAL BASE BID¹ (sum of Bid Amounts for Bid Items 1 through 9)

_____ Dollars (\$ _____)
(Written Dollars and Cents)

(Amounts above shall be shown in both words and figures. In case of discrepancy, the amount shown in words shall govern.)

END OF BID FORM

¹ The total bid amount shall exclude the applicable state gross receipts tax or applicable local option tax.

I agree to the assurances set out in the Invitation for Bids, all of which are incorporated in this Bid Form by reference. I certify that I have the authority to bind the Bidder. The matters stated in this bid are true and accurate to the best of the Bidder's knowledge. This bid is made without collusion or fraud.

SIGNED: _____

TITLE: _____

DATE: _____

BIDDER'S NAME: _____

ADDRESS: _____

TELEPHONE NO.: _____

NEW MEXICO CONTRACTOR'S LICENSE NO: _____

LICENSE CATEGORIES: _____

CONTRACTOR NM LABOR ENFORCEMENT FUND REGISTRATION NO.:² _____

SUBCONTRACTOR LABOR ENFORCEMENT FUND REGISTRATION NO.(S):¹ _____

I (we) do hereby acknowledge receipt of the following addenda to the project documents:

Addendum No. _____ **Dated:** _____

Addendum No. _____ **Dated:** _____

Addendum No. _____ **Dated:** _____

² Required for bids and subcontracts valued at more than fifty thousand dollars (\$50,000).

00400 – SUPPLEMENTS TO BID FORMS**00410 - Bid Security Form**

Bond No. _____

KNOW ALL MEN BY THESE PRESENTS, that we _____

(Insert full name and address or legal title of Contractor)

as Principal, hereinafter called the Principal, and _____

(Insert full name and address or legal title of Surety)

a corporation duly organized under the laws of the State of New Mexico as Surety, hereinafter called the Surety, are held and firmly bound unto the Energy, Minerals and Natural Resources Department, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, as Obligee, hereinafter called the Obligee, in the sum of _____ Dollars (\$ _____), for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for the Project.

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract or give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this _____ day of _____, 20_.

PRINCIPAL (Seal)_____
WITNESS_____
TITLE_____
SURETY (Seal)_____
WITNESS_____
TITLE

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00420 - Bidder's Qualification Forms**CONTRACTOR'S QUALIFICATION STATEMENT**

To be filled out by the Bidder and returned with the responsive Bid.

BIDDER: _____

I. Experience

List the relevant construction projects that your organization has completed in the past ten (10) years, giving the name of the project, project owner, contract amount, date of completion, and percentage of the cost of the work performed with your own forces. Do not leave blanks.

I. Project Name: _____

Owner: _____

Contract Amount: \$ _____

Completion Date: _____ Percentage: _____

II. Project Name: _____

Owner: _____

Contract Amount: \$ _____

Completion Date: _____ Percentage: _____

III. Project Name: _____

Owner: _____

Contract Amount: \$ _____

Completion Date: _____ Percentage: _____

IV. Project Name: _____

Owner: _____

Contract Amount: \$ _____

Completion Date: _____ Percentage: _____

V. Project Name: _____

Owner: _____

Contract Amount: \$ _____

Completion Date: _____ Percentage: _____

II. References

List references for the above projects including work performed, contact person, firm represented, mailing address, email address, and phone number with area code. Do not leave blanks.

1. Work Performed: _____

Contact Name: _____

Firm Represented: _____

Mailing Address: _____

Email Address: _____

Phone Number: (____) _____

2. Work Performed: _____

Contact Name: _____

Firm Represented: _____

Mailing Address: _____

Email Address: _____

Phone Number: (____) _____

3. Work Performed: _____

Contact Name: _____

Firm Represented: _____

Mailing Address: _____

Email Address: _____

Phone Number: (____) _____

4. Work Performed: _____

Contact Name: _____

Firm Represented: _____

Mailing Address: _____

Email Address: _____

Phone Number: (____) _____

5. Work Performed: _____

Contact Name: _____

Firm Represented: _____

Mailing Address: _____

Email Address: _____

Phone Number: (____) _____

6. Work Performed: _____

Contact Name: _____

Firm Represented: _____

Mailing Address: _____

Email Address: _____

Phone Number: (____) _____

7. Work Performed: _____

Contact Name: _____

Firm Represented: _____

Mailing Address: _____

Email Address: _____

Phone Number: (____) _____

8. Work Performed: _____

Contact Name: _____

Firm Represented: _____

Mailing Address: _____

Email Address: _____

Phone Number: (____) _____

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LIST OF SUBCONTRACTORS AND EQUIPMENT

To be filled out by the Bidder and returned with the responsive Bid.

BIDDER: _____**00430 – SUBCONTRACTORS LIST**

Any person submitting a bid shall in this bid set forth the name and location of the place of business of each subcontractor under subcontract to the Contractor who will perform work or labor or render service to the Contractor in or about the construction of the public works construction project and whose total contract will be in excess of five thousand dollars (\$5,000.00) and the nature of the work which will be done by each subcontractor under the New Mexico Subcontractors Fair Practices Act, NMSA 1978, § 13-4-34. The Contractor shall list only one subcontractor for each category as defined by the Contractor in this bid. Do not leave blanks. If no subcontractors, indicate such. The statute does not require listings of second tier subcontractors, material suppliers, and subcontractors whose contracts are less than five thousand dollars (\$5,000.00).

1. Work: _____

Public Works Number: _____

Firm Represented: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Phone No.: (____) _____ License No.: _____

2. Work: _____

Public Works Number: _____

Firm Represented: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Phone No.: (____) _____ License No.: _____

3. Work: _____

Public Works Number: _____

Firm Represented: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Phone No.: (____) _____ License No.: _____

4. Work: _____

Public Works Number: _____

Firm Represented: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Phone No.: (____) _____ License No.: _____

5. Work: _____

Public Works Number: _____

Firm Represented: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Phone No.: (____) _____ License No.: _____

6. Work: _____

Public Works Number: _____

Firm Represented: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Phone No.: (____) _____ License No.: _____

00450 – EQUIPMENT LIST

List all pertinent equipment proposed to be employed on the above Project as required by the bidding documents. Attach a list on a separate piece of paper if more space is needed.

The equipment list will be used to determine eligibility of bidders. All bids must include the Equipment List.

- A. Equipment Type: _____
Manufacturer: _____
Model: _____
Capacity: _____
Condition: _____
- B. Equipment Type: _____
Manufacturer: _____
Model: _____
Capacity: _____
Condition: _____
- C. Equipment Type: _____
Manufacturer: _____
Model: _____
Capacity: _____
Condition: _____
- D. Equipment Type: _____
Manufacturer: _____
Model: _____
Capacity: _____
Condition: _____
- E. Equipment Type: _____
Manufacturer: _____
Model: _____
Capacity: _____
Condition: _____

F. Equipment Type: _____
Manufacturer: _____
Model: _____
Capacity: _____
Condition: _____

G. Equipment Type: _____
Manufacturer: _____
Model: _____
Capacity: _____
Condition: _____

H. Equipment Type: _____
Manufacturer: _____
Model: _____
Capacity: _____
Condition: _____

I. Equipment Type: _____
Manufacturer: _____
Model: _____
Capacity: _____
Condition: _____

00500 – SAMPLE AGREEMENT FORMS

SHARE Contract No. XXXXX

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
CONSTRUCTION SERVICES CONTRACT

THIS AGREEMENT is made and entered into by and between the State of New Mexico Energy, Minerals and Natural Resources Department (EMNRD), and XXX (Contractor). EMNRD's Director and staff of the Mining and Minerals Division (MMD) shall supervise and coordinate the work under this Construction Services Contract (Agreement).

IT IS MUTUALLY AGREED BETWEEN THE PARTIES:**I. Scope of Work**

A. The Contractor shall perform the work described in the Specifications for the Harding Pegmatite Mine Safeguard Project Phase II in Taos County, New Mexico in the Project Manual which is part of Invitation to Bid (ITB) No. XXX. The ITB was solicited by the General Services Department, State Purchasing Division ITB No. XXX. The Project Manual, Specifications, ITB, and Contractor's completed Bid Response (dated: XXXXX) are all incorporated into and made a part of this Agreement by reference. EMNRD shall have the sole authority to approve any changes to the Scope of Work and the Specifications and to approve the Contractor's final work product.

B. Within thirty (30) calendar days of receiving the written Notice to Proceed (NTP) via certified mail, the Contractor shall mobilize to the site and commence work. Prior to commencement of work, the Contractor shall obtain all necessary permits required for this work.

C. **BEFORE ANY WORK IS INITIATED**, the Contractor shall give notice to all utility companies that provide service to the contract site and inform the utility companies of the work to be performed. In the event that work performed in connection with this Agreement may disturb utilities, Contractor shall coordinate with utility companies to ensure that locations of overhead or buried utilities and appurtenances are marked. Prior to work taking place, Contractor shall provide advance notice to consumers who may be affected by service disruption.

II. Compensation

A. EMNRD shall pay the Contractor in current funds for the performance of the Work, subject to additions and deductions by Change Order as provided in the Contract Documents, the Contract Sum of XXX (\$xxx,xxx.xx), including New Mexico Gross Receipts Taxes, if applicable.

The Contract Sum is determined as follows:

Total Base Bid	\$
Gross Receipts Tax @ 7.3750%	\$
Total Contract Sum	\$

If the state gross receipts tax or local option tax increases the Contractor must submit a request for a change order in order to increase the state gross receipts tax or local option tax on this Agreement (1.4.1.24 NMAC).

Agreements solicited by competitive sealed bids shall require that the bid amount exclude the applicable state gross tax or local option tax but that EMNRD shall be required to pay the tax including any increase in the tax becoming effective after this Agreement is entered into. The tax shall be shown as a separate amount on each billing or requires for payment made under this Agreement.

B. Subject to subparagraph II.A. above, and based on Applications for Payment (invoice), a copy of which is included herein at Section 00900 of the Project Manual, submitted to the EMNRD Project Engineer by the Contractor and Certificates for Payment issued by the EMNRD Project Engineer, EMNRD shall make progress payments on account of the Contract Sum, to the Contractor as provided in the Contract Documents for the period ending the last day of the month as follows: no later than twenty-one (21) days following receipt by EMNRD of the undisputed Application for Payment, one hundred percent (100%) of the portion of the Contract Sum properly allocable to labor, materials, and equipment incorporated in the Work, and one hundred percent (100%) of the portion of the Contract Sum properly allocable to materials and equipment suitably stored at the site or some other location agreed upon in writing for the period covered by the Application for Payment, less the aggregate of previous payments made by EMNRD; and upon Substantial Completion of the entire Work, a sum sufficient to increase the total payments to one hundred percent (100%) of the Contract Sum, less such amounts as the EMNRD Project Engineer shall determine for all incomplete Work and unsettled claims as provided in the Contract Documents, which shall be paid in accordance with this Compensation Section.

C. Prompt Payment Act Compliance: Contractor shall comply with the Prompt Payment Act, NMSA 1978, § 57-28-5(C), in making prompt payments to its subcontractors and suppliers for amounts owed for work performed relating to this Agreement within seven days of receipt of payment from EMNRD.

D. Final Payment: Final payment constituting the entire undisputed and unpaid balance of the Contract Sum shall be paid by EMNRD to the Contractor within ten (10) days after the EMNRD Project Engineer completes a final inspection and the EMNRD Project

Manager notifies the Project Engineer that all incomplete and unacceptable work that was noted during the Final Inspection has been corrected.

III. Term and Liquidated Damage for Inconvenience and Increased Administrative Cost

The Work to be performed under this Agreement shall commence no later than thirty (30) consecutive calendar days after the date of written “Notice to Proceed.” Project completion (see Section 00100 of the Project Manual) shall be no later than two hundred forty (240) days, including all Sundays, holidays, and non-workdays, after the Contractor receives a written Notice to Proceed, except as hereafter extended by EMNRD by valid written Change Order.

The parties agree that time for the performance of this Agreement is of the essence. Should the Contractor fail to perform the entire project within the Contract Time for project completion, the Contractor agrees to the charge of three hundred dollars (\$300) per calendar day of liquidated damages representing inconvenience and increased administrative cost. Such damages shall begin to accrue on the calendar day following the last day for performance of work under this Agreement. The Contract stipulates that EMNRD may withhold additional payments under this Agreement or attach the performance bond to cover the liquidated damages set forth above or to cover the cost of any duplicative work that is made necessary by Contractor’s failure to perform as required by this Agreement. Liquidated damages shall continue until written notice of satisfactory completion is forwarded by the Project Manager to the Project Engineer. This provision is limited to damages for inconvenience and increased administrative cost, and shall not otherwise affect EMNRD’s right to seek other remedies including other damages, at law or in equity.

IV. Termination

A. For Reasons Beyond Contractor’s Control

1. EMNRD may, by written order, terminate this Agreement or any portion thereof after determining that, for reasons beyond Contractor’s control, the Contractor is prevented from proceeding with or completing the work as originally contracted for, and that termination would therefore be in the public interest. Such reasons for termination may include, but need not be limited to, executive orders of the President relating to prosecution of war or national defense, acts of God, labor strikes, a national emergency which creates a serious shortage of materials, orders from duly constituted authorities relating to energy conservation, and restraining orders or injunctions obtained by third-party citizen action resulting from national, state or local environmental protection laws or where the issuance of such order or injunction is primarily caused by acts or omissions of persons or agencies other than the Contractor.

2. If EMNRD orders termination of this Agreement effective on a certain date, payment shall be made for the actual number of units or items of work completed at the

contract unit price, or as mutually agreed for items of work partially completed.

3. Acceptable materials Contractor obtains for the work, but which have not been incorporated therein, may, at EMNRD's option, be purchased from the Contractor at actual cost, delivered to a prescribed location, or otherwise disposed of as mutually agreed.

4. After receipt of EMNRD's notice of termination issued pursuant to this Section IV.A., the Contractor may submit a claim for costs not covered above or elsewhere in the Specifications. Such claim may include such cost items as reasonable idle equipment time, mobilization efforts, overhead expenses attributable to the project terminated, legal and accounting charges involved solely in preparing the claim for costs, subcontractor costs not otherwise paid for, actual idle labor costs if work is stopped in advance of termination date, and guaranteed payments for private land usage as part of the original contract. In no event, however, shall loss of anticipated profits be considered as part of any settlement.

5. The Contractor agrees to make all cost records available upon EMNRD's request.

6. Termination of a contract or portion thereof shall not relieve the Contractor of any contractual responsibilities for the work completed, nor shall it relieve the surety of its obligation for and concerning any just claim arising out of the work performed.

B. For Reasons Within Contractor's Control:

1. If the Contractor:

- a. fails to begin the work under this Agreement within the time specified in the Notice to Proceed;
- b. fails to perform the work with sufficient skilled workers and equipment or with sufficient proper materials to assure the prompt completion of said work;
- c. fails to comply with laws, ordinances, rules, regulations or orders of public authority having jurisdiction;
- d. performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable;
- e. discontinues the prosecution of the work, without EMNRD's prior written approval;
- f. fails to resume work which has been discontinued without EMNRD's prior written approval within a reasonable time after notice to do so;
- g. becomes insolvent or files for bankruptcy or is placed into bankruptcy by creditors, or commits any acts of bankruptcy or insolvency;
- h. allows a final judgment, in a suit filed in connection with this

- Agreement, to stand against the Contractor unsatisfied for a period of 30 business days;
- i. makes an assignment, in connection with this Agreement, for the benefit of creditors;
 - j. fails to carry on the work in an acceptable manner; or
 - k. otherwise has committed a material breach of this Agreement.

If EMNRD wishes to terminate this Agreement for any of the above reasons, EMNRD shall give notice in writing to Contractor and the surety of the occurrence(s) upon which EMNRD bases the termination, and the corrective measures to be taken (Default Notice), if any. Failure of EMNRD to provide a default notice or terminate this Agreement shall not operate as a waiver by EMNRD either at the time of such failure or in the future.

If the Contractor or surety, within a period of ten (10) business days after such notice, does not proceed in accordance therewith, then EMNRD shall have full power and authority without violating this Agreement to take possession of the premises and of all materials thereon and finish the work by whatever method it may deem expedient. In such case, the Contractor shall not be entitled to receive any further payment for the work that Contractor performed after the date of the Default Notice until the work is finished. EMNRD shall also have all remedies available to it at law and in equity.

V. Status of the Contractor

The Contractor and its agents and employees are independent Contractors performing construction services for EMNRD and are not employees of the State of New Mexico. The Contractor and its agents and employees shall not accrue leave, retirement, insurance, bonding, use of state vehicles, or any other benefits afforded to employees of the State of New Mexico as a result of this Agreement.

VI. Assignment

The Contractor shall not assign or transfer any interest in this Agreement or assign any claims for money due or to become due under this Agreement without the prior written approval of EMNRD.

VII. Subcontracting

The Contractor shall comply fully with the provisions of the New Mexico Subcontractors Fair Practices Act, NMSA 1978, § 13-4-31 through 13-4-42. The Contractor shall not subcontract any portion of the services to be performed under this Agreement or obligate itself in any manner to any third party, with respect to any rights or responsibilities under this Agreement, without the prior written approval of EMNRD.

VIII. Records and Audit

The Contractor shall maintain detailed time and expenditure records that show the date, time, nature and cost of services rendered under this Agreement and retain them for six years from the date of final payment under this Agreement. These records shall be maintained and available within the State of New Mexico if the Contractor has an office within the state; otherwise, Contractor shall make such records available to EMNRD within New Mexico within five business days upon EMNRD's request. The records shall be subject to inspection by EMNRD, DFA, the State Auditor and the U.S. Department of the Interior (DOI). Contractor further agrees to include in all subcontracts hereunder the same right of inspection and audit against all subcontractors. EMNRD shall have the right to audit billings both before and after payment. Payment under this Agreement shall not foreclose EMNRD's right to recover excessive or illegal payments. The periods of inspection and audit may be extended for records, which relate to litigation or settlement of claims arising out of performance of this Agreement and costs and expenses of this Agreement for which exception is under consideration by DOI or any authorized representative and shall continue until all potential litigation, appeals, claims or exceptions have expired or been resolved.

IX. Appropriations

The terms of this Agreement are contingent upon sufficient appropriations and authorization being made by the Legislature of New Mexico, the federal Congress, and DOI for the performance of this Agreement. If sufficient appropriations and authorization are not made, this Agreement shall terminate upon written notice being given by EMNRD to the Contractor. EMNRD's decision as to whether sufficient appropriations are available shall be accepted by the Contractor and shall be final.

X. Release

The Contractor, upon final payment of the amount due under this Agreement, releases EMNRD, its officers and employees, and the State of New Mexico from all liabilities, claims, and obligations whatsoever arising from or under this Agreement. This release is self-executing upon such final payment. The Contractor agrees not to purport to bind the State of New Mexico to any obligation unless the Contractor has express written authority to do so, and then only within the strict limits of that authority.

XI. Confidentiality

Any confidential information provided to or developed by the Contractor in the performance of this Agreement shall be kept confidential and shall not be made available to any individual or organization by the Contractor without the prior written approval of EMNRD.

XII. Amendment or Change Order

This Agreement shall not be altered, changed, or amended except by instrument in writing executed by the parties hereto.

XIII. Scope of Agreement

This Agreement incorporates all the agreements, covenants, and understandings between the parties hereto concerning the subject matter hereof, and all such agreements, covenants, and understandings have been merged into this written Agreement. No prior agreements or understandings, verbal or otherwise, of the parties or their agents shall be valid or enforceable unless expressly incorporated into this Agreement.

XIV. Civil and Criminal Liability Notice

The Procurement Code, NMSA 1978, §§ 13-1-28 through 13-1-199, imposes civil and misdemeanor criminal penalties for its violation. In addition, the New Mexico criminal statutes impose felony penalties for bribes, gratuities, and kickbacks.

XV. Equal Opportunity Compliance

Contractor agrees to abide by all federal and state laws and rules and regulations, and executive orders of the Governor of the State of New Mexico, pertaining to equal employment opportunity. In accordance with all such laws of the State of New Mexico, Contractor assures that no person in the United States shall, on the grounds of race, religion, color, national origin, ancestry, sex, age, physical or mental handicap, or serious medical condition, spousal affiliation, sexual orientation or gender identity, be excluded from employment with or participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity performed under this Agreement. If Contractor is found not to be in compliance with these requirements during the life of this Agreement, Contractor agrees to take appropriate steps to correct these deficiencies.

XVI. Applicable Law

This Agreement shall be governed by the laws of the State of New Mexico, without giving effect to its choice of law provisions. In any lawsuit filed that relates to or arises from this Agreement or any obligations hereunder, venue shall be only in the New Mexico State District Court in Santa Fe, New Mexico. By executing this Agreement, Contractor agrees and consents to the personal jurisdiction of the State Court of New Mexico over any and all lawsuits relating to or arising from this Agreement or any obligation hereunder.

XVII. Waiver

No waiver of any of the terms or conditions of this Agreement shall be valid or binding

unless the waiver request is submitted in writing by the party making the request and then approved and signed by the party granting the waiver.

XVIII. Notices

A. Unless EMNRD specifies otherwise in a writing that is delivered pursuant to this Paragraph, notices and all other matters concerning the work to be performed hereunder shall be addressed to EMNRD as follows:

Project Engineer: Meghan J. McDonald, P.E.
Mining and Minerals Division
Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505.476.3417

B. Unless the Contractor shall specify otherwise in a writing that is delivered pursuant to this Paragraph, notices and all other matters concerning the work to be performed hereunder shall be addressed to the Contractor as follows:

NAME OF CONTRACTOR
ADDRESS
ADDITIONAL ADDRESS
CITY, ST, ZIP
(XXX) XXX-XXXX

C. Any and all notices or other communications required or permitted by this Agreement or by law to be served or given to either party hereto by the other party hereto shall be in writing and shall be deemed duly served and given upon actual receipt by or three (3) business days subsequent to certified mailing to the party to whom it is directed, whichever is earlier.

XIX. Indemnification

The Contractor shall defend, indemnify, and hold harmless EMNRD, and its officers, employees, agents and representatives, and the State of New Mexico from all actions, proceedings, claims, demands, costs, damages, attorneys' fees, and all other liabilities and expenses of any kind from any source that may arise out of this Agreement's performance, caused by the negligent or intentional act or failure to act of Contractor, its officers, employees, servants, subcontractors, consultants, clients, or agents, resulting in injury or damage to persons or property during the time when Contractor, its officers, agents, employees, servants, subcontractors, or consultants has or is performing services pursuant to this Agreement. In the event that any action, suit, or proceeding related to the services performed by Contractor, its officers, agents, employees, servants, subcontractors, clients, consultants under this Agreement is

brought against Contractor, or any of its officers, agents, employees, servants, subcontractors or consultants, Contractor shall, as soon as practicable but no later than two days after it receives notice thereof, notify EMNRD's legal counsel and the Risk Management Division of the New Mexico General Services Department by certified mail. Nothing in this Agreement shall be deemed to be a waiver by the State of New Mexico of the provisions of the Tort Claims Act, NMSA 1978, §§ 41-4-1 *et seq.*

XX. Duty to Insure

A. In respect solely to the work occasioned by this Agreement, the Contractor shall obtain and maintain at all times during the term of this Agreement, and any extension thereof, insurance of the kind and in the amounts herein specified. Such insurance shall be provided by insurance companies authorized to do business in New Mexico and shall name the "State of New Mexico, EMNRD, MMD, and its agents and employees thereof" as either additional insured, co-insured, or third-party beneficiaries and shall specifically state the coverage provide under the policy is primary over any other valid and collectible insurance and provide a waiver of subrogation.

1. General Liability. Bodily injury liability and property damage liability insurance in the following minimum amounts: five hundred thousand dollars (\$500,000.00) for damages to or destruction of property arising out of a single occurrence; one million dollars (\$1,000,000.00) to any person for any number of claims arising out of a single occurrence for all damages other than property damages, and one million dollars (\$1,000,000.00) for all claims arising out of a single occurrence.

2. Automobile Liability. Automobile liability insurance covering the ownership, operation, and maintenance of owned, non-owned, and hired vehicles, in the following amounts:

Bodily injury liability –

Seven hundred thousand dollars (\$700,000.00) each person

One million dollars (\$1,000,000.00) each occurrence;

Property damage liability--

One million dollars (\$1,000,000.00) each occurrence.

3. Workers' Compensation. The Contractor shall comply fully with the provisions of the New Mexico Workers' Compensation Act, NMSA 1978, §§ 52-1-1 through 52-1-70.

B. The Contractor shall furnish EMNRD with certificates of insurance and such other proof of insurance as EMNRD may require, prior to commencing work under this Agreement, and shall not commence any work under this Agreement until the required insurance coverage is obtained. The insurance coverage shall not be changed, canceled, or allowed to lapse without giving EMNRD thirty (30) business days' prior written notice.

XXI. New Mexico Employees Health Insurance

A. If Contractor has, or grows to, six (6) or more employees who work, or who are expected to work, an average of at least twenty (20) hours per week over a six (6) month period during the term of this Agreement, Contractor certifies, by signing this Agreement, to have in place, and agree to maintain for this Agreement's term, health insurance for those employees and offer that health insurance to those employees if the expected annual value in the aggregate of any and all contracts between Contractor and the state exceed two hundred fifty thousand (\$250,000).

- B. Contractor agrees to maintain a record of the number of employees who have:
- 1) accepted health insurance;
 - 2) declined health insurance due to other health insurance coverage already in place; or
 - 3) declined health insurance for other reasons.

These records are subject to review and audit by a representative of the state.

C. Contractor agrees to advise all employees of the availability of state publicly-financed health care coverage programs.

XXII. Disputes

Any dispute, other than the Contractor's acts set forth in Section IV, Termination, B., For Reasons Within Contractor's Control, concerning a question of fact arising under this Agreement, not disposed of by agreement, shall, first, be decided by the MMD Director, who shall reduce a decision to writing and furnish a signed copy to the Contractor. Such decision shall be final and conclusive unless, within thirty (30) calendar days from the date of notification of the decision by certified mail, the Contractor mails or otherwise furnishes to the MMD Director, a written appeal, addressed to the EMNRD Secretary, to which MMD may respond in ten (10) business days. The Contractor shall be afforded an opportunity to be heard. The decision of the EMNRD Secretary or the authorized representative thereof, shall be final and conclusive.

XXIII. Suspension of Work

A Suspension of Work Notice may be issued by the Project Manager if the Project Manager believes that any action of the Contractor is contrary to the intent of this Agreement or that any health or safety standard is violated or that a threat to public health or safety exists. No work performed after issuance of a Suspension of Work Notice shall be eligible for payment while such notice is in effect. No work shall proceed until such notice is vacated, in writing, by the MMD Director.

XXIV. Compliance with the Public Works Minimum Wage Act and Minimum Wage Rate Decision

A. If the Work to be performed under this Agreement is subject to the provisions of the Public Works Minimum Wage Act, NMSA 1978, Section 13-4-11 *et seq.*, Contractor shall comply with such act and applicable state rules. Each Application for Payment submitted to EMNRD shall include a certification by Contractor that it has complied with the provisions of NMSA 1978, Section 13-4-11 and applicable state rules when making wage payments for work performed pursuant to this Agreement.

B. This Agreement is within the scope of the Public Works Minimum Wage Act, NMSA 1978, §§ 13-4-10, *et seq.* The Minimum Wage Rate Decision No. LU-19-2265-H of the New Mexico Labor and Industrial Division (1.505.841.4408) shall be complied with by the Contractor and any subcontractors. A copy of the Decision is included at Section 00830 of the Project Manual.

C. If compensation to be paid under this Agreement is in excess of sixty thousand dollars (\$60,000.00), the minimum wages and fringe benefits to be paid to various classes of laborers and mechanics, shall be based upon the wages and benefits that will be determined by the Director (Director) of the Labor Relations Division (LRD) of the New Mexico Workforce Solutions Department, to be prevailing for the corresponding classes of laborers and mechanics employed on contract work of a similar nature in the state or locality.

D. The Contractor, subcontractor, employer or a person acting as a contractor shall pay all mechanics and laborers employed on the site of the project, unconditionally and not less often than once a week and without subsequent unlawful deduction or rebate on any account, the full amounts accrued at time of payment computed at wage rates and fringe benefit rates not less than those determined pursuant to NMSA 1978, Section 13-4-11.B to be the prevailing wage rates and prevailing fringe benefit rates issued for this project.

E. Pursuant to 11.1.2.9.B(6) through (10) NMAC, Public Works Minimum Wage Act Policy Manual, Contractor and all tiers of subcontractors shall submit certified weekly payroll records to EMNRD on a bi-weekly basis, and, to the LRD Director when requested by the Director or an interested party such as contractors, contracting agencies, labor organizations and contractor associations.

1. All payroll records provided to EMNRD must contain the following information in the specified format:

- (a) the employee's full name and address need only appear on the first payroll on which the employee's name appears, unless a change of address necessitates an additional submittal to reflect the new address;
- (b) the employee's classification (or classifications);

(c) the employee's hourly wage rate (or rates); the employee's hourly fringe benefits; and where applicable, the employee's overtime hourly wage rate (or rates);

(d) the daily and weekly hours worked in each classification, including actual overtime hours worked (not adjusted);

(e) the itemized deductions made;

(f) the net wages paid; and

(g) the number of the wage rate decision issued on the project by the Director.

2. All payrolls shall be numbered, starting with number one for the first payroll at the beginning of the job and continuing in numerical order until the job is completed.

3. Contractor and each of his or her subcontractors shall submit a bi-weekly statement of compliance in the following form:

Date _____

I, _____, (Name of Signatory Party)
(Title)

do hereby state:

That I pay or supervise the payment of the persons employed by _____
(contractor or subcontractor) on the _____; that (building or work)

During the payroll period commencing on the _____ day of _____, 20_____, and ending the _____ day of _____, 20_____, all persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said _____ (Contractor or subcontractor) from the full weekly wages earned by any person and that no deductions have been made either directly or indirectly from the full wages earned by any person, other than deductions permitted by law.

That any payrolls under this Agreement required to be submitted for the above period are correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the applicable wage rates incorporated into the Agreement; that the classifications set forth therein for each laborer or mechanic conform with the work he performed. That any apprentices or trainees employed in the above period are duly registered in a bona fide apprenticeship program registered with a state apprenticeship agency recognized by the office of apprenticeship United States department of labor, or properly enrolled in a bona fide training program approved for application on public works construction projects by the appropriate state or federal agency(ies) if and as required by law and applicable federal regulation.

I, _____, being first duly sworn on oath under penalty of perjury, swear that the foregoing information is true and correct.

Notary: Subscribed and sworn to before me at _____ this _____ day of _____, 20____.

Notary public

(SIGNATURE)

(DATE)

My commission expires: _____

4. The Contractor and all subcontractors and their tiers shall deliver or mail to EMNRD legible copies of the certified weekly payrolls prepared in accordance with these regulations to the prime contractor and the contracting agency no more than five (5) working days following the close of the second payroll period. Weekly payrolls shall be submitted bi-weekly.

5. The affidavit form must be filed prior to the final payment to a Contractor. Bond monies and retainage will be released only to Contractors who have filed affidavits pursuant to the provisions of 11.1.2. NMAC. Any Contractor or subcontractor who files a false statement or refuses to file any statement or record required to be filed under the provisions of 11.1.2 NMAC shall be considered as non-compliant and shall be subject to debarment proceedings. EMNRD and Contractor shall keep all certified payroll records for four (4) years after the completion of this Agreement.

F. EMNRD shall require wage rate inspections during the period of construction.

G. Contractors and all contracting tiers on projects must file a statement of intent to pay prevailing wages (intent), and an affidavit of wages paid (affidavit). The intent form must be filed with EMNRD within three (3) business days of the award of each respective contract. EMNRD will make no payments to a non-compliant contractor until an intent form is filed.

H. Contractor or subcontractor shall post minimum wage rates in a prominent, easily accessible place at the site of each particular project.

I. The LRD Director shall furnish EMNRD with a poster containing the minimum wage rates. EMNRD shall forward said poster to Contractor for posting at each particular project site.

J. Contractor and subcontractor shall comply with all requirements imposed by the Public Works Minimum Wage Act and 11.1.2 NMAC.

K. Contractor's records shall be subject to inspection by state and federal agencies that have jurisdiction over such matters to determine compliance with the provisions of NMSA 1978, Section 13-4-11 *et seq.*, as provided above or by an applicable federal or state law. If Contractor fails to comply with the provisions of this Section XXVII, EMNRD may terminate this Agreement by giving notice in the manner provided herein.

XXV. Required Bond for Public Works Contractor

This Agreement is within the scope of NMSA 1978, §§ 13-4-18 through 13-4-20. BEFORE BEGINNING ANY WORK UNDER THIS AGREEMENT, the Contractor shall furnish a performance bond (see example in Section 00610 of the Project Manual) and a payment bond (see example in Section 00620 of the Project Manual) both executed by the Contractor and issued by a surety authorized to do business in the State of New Mexico in an amount equal to

one hundred percent (100%) of the total Agreement price. Agreement price equals bid total plus gross receipts tax. A letter of credit is not acceptable.

The performance bond shall be conditioned upon the Contractor's performance and faithful completion of this Agreement, according to the terms, in compliance with all requirements of law. The payment bond shall guarantee payments of all just claims for the labor performed and for materials and supplies furnished, whether the labor and supplies are furnished to the prime Contractor or any subcontractors. These bonds shall be in the form approved by EMNRD. The surety shall be subject to the approval of EMNRD. The decision of EMNRD shall be accepted by the Contractor as final.

XXVI. Compliance with Trafficking Victims Protection Act of 2000

A. Pursuant to 2 C.F.R, Chapter 1, Part 175, § 175, EMNRD may immediately and unilaterally terminate this Agreement without penalty if the Contractor or subcontractor:

- 1) engages in severe forms of trafficking in persons during this Agreement's term;
- 2) procures a commercial sex act during this Agreement's term; or
- 3) uses forced labor in the performance of this Agreement.

B. Contractor shall immediately inform EMNRD of any information Contractor receives from any source alleging a violation of a prohibition in Paragraph A. of this Section 13.28.

C. Contractor shall include the requirements of this Section XXIII in any subcontract which may result from this Agreement.

XXVII. Compliance with use of Minority Business Enterprises (MBEs) and Women's Business Enterprises (WBEs)

Contractor shall take affirmative steps to assure that MBEs and WBEs are used when possible as sources of supplies, equipment, construction, and services. The affirmative steps shall include the following:

- a) including qualified MBEs/WBEs on solicitation lists;
- b) assuring that MBEs/WBEs are solicited once they are identified;
- c) when economically feasible, dividing total requirements into smaller tasks or quantities so as to permit maximum MBE/WBE participation;

- d) where feasible, establishing delivery schedules which will encourage MBE/WBE participation;
- e) encouraging use of the services of the U.S. Department of Commerce's Minority Business Development Agency and the U. S. Small Business Administration to identify MBEs/WBEs, as required; and
- e) if any subcontracts are to be let, requiring the subcontractor to take the affirmative steps listed above.

XXIX. Compliance with Federal Laws

A. Contractor shall comply with 2 C.F.R. Sections 200.318 through 200.326 for procurement conducted pursuant to this Agreement.

B. If this Agreement is valued at more than one hundred thousand dollars (\$100,000), Contractor shall comply with all applicable standards orders or requirements issued under the federal Clean Air Act (42 U.S.C. §7401 et seq.); Clean Water Act (33 U.S.C. §1251 et seq.); Executive Order 11738 (Providing for Administration of the Clean Air Act and the Federal Water Pollution Control Act with Respect to Federal Contracts, Grants, or Loans); and U.S. Environmental Protection Agency regulations.

C. If this Agreement is valued at more than one hundred thousand dollars (\$100,000), Contractor shall comply with 40 U.S.C §§ 3702 and 3704 of the Contract Work Hours and Safety Standards Act (Act), as supplemented by U.S. Department of Labor regulations (29 C.F.R. Part 5). Under 40 U.S.C. 3702 of the Act, Contractor must compute the wages of every mechanic and laborer on the basis of a standard work week of forty (40) hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and one-half (1 ½) times the basic rate of pay for all hours worked in excess of forty (40) hours in the work week. The requirements of 40 U.S.C § 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements to not apply to the purchases of supplies or materials or articles ordinarily available on the open market.

D. Contractor shall comply with Section 6002 of the Solid Waste Disposal Act, as amendment by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the EPA at 40 C.F.R. Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the items exceeds ten thousand dollars (\$10,000) or the value of the quantity acquired during the preceding fiscal year exceeded ten thousand dollars (\$10,000); procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

E. If the value of this Agreement exceeds one hundred thousand dollars (\$100,000), Contractor shall comply with the Byrd Anti-Lobbying Amendment (31 U.S.C. § 1352) regarding the limitations of use of appropriated funds to influence certain federal contracting and financial transactions.

F. Contractor shall comply with the Copeland “Anti-Kickback” Act (40 U.S.C. 3145), as supplemented by U.S. Department of Labor regulations (29 C.F.R. Part 3, Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States”). Contractor and subcontractors are prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. EMNRD shall report all suspected or reported violations to the Office of Surface Mining Reclamation and Enforcement.

G. Contractor shall not award subcontracts to parties listed on the government-wide exclusions in the System for Award Management (SAM) in accordance with the OMG guidelines at 2 C.F.R. 180 that implement Executive Orders 12549 (3 C.F.R. part 1986 Comp., p. 189) and 12689 (3 C.F.R. part 1989 Comp., p. 235), “Debarment and Suspension.” SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written below.

**STATE OF NEW MEXICO, ENERGY, MINERALS AND NATURAL RESOURCES
DEPARTMENT**

By: _____ Date: _____
Cabinet Secretary or Designee

CONTRACTOR

By: _____ Date: _____
Authorized Representative

Printed Name and Title

**STATE OF NEW MEXICO, GENERAL SERVICES DEPARTMENT, STATE
PURCHASING DIVISION**

By: _____
State Purchasing Agent

Date: _____

The records of the Taxation and Revenue Department reflect that the Contractor is registered with the Taxation and Revenue Department of the State of New Mexico to pay gross receipts and compensating taxes.

**STATE OF NEW MEXICO
TAXATION AND REVENUE
DEPARTMENT**

Contractor Name: _____

NM I.D. No.: _____

By: _____

Date: _____

00600 – BONDS AND CERTIFICATES

**00610 - Performance
Bonds**

Bond No. _____

KNOW ALL MEN BY THESE PRESENTS: that __________
(Insert full name and address or legal title of Contractor)

as Principal, hereinafter called Contractor, and, _____

(Insert full name and address or legal title of Surety)

as Surety, hereinafter called Surety, are held and firmly bound unto the Energy, Minerals and Natural Resources Department, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, as Obligee, hereinafter called the Owner, in the amount of _____ Dollars (\$_____), for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated _____, 20_, entered into a contract with Owner for the Harding Pegmatite Mine Safeguard Project, Phase II, Project No. EMNRD-MMD-2022-02, Taos County, New Mexico, in accordance with the enclosed Drawings and Specifications, which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

Performance Bond

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Contractor shall promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

The surety hereby waives notice of any alteration or extension of time made by the Owner.

Whenever Contractor shall be, and declared by Owner to be in default under the Contract, the Owner having performed Owner's obligations thereunder, the Surety may promptly remedy the default, or shall promptly

- 1) Complete the Contract in accordance with its terms and conditions, or
- 2) Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, or, if the Owner elects, upon determination by the Owner and the Surety jointly of the lowest responsible bidder, arrange for a contract between such bidder and Owner, and make available as Work progresses (even though there should be a default or a succession of defaults under the contract or

contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the contract price," as used in this paragraph, shall mean the total amount payable by Owner to Contractor under the Contract and any amendments thereto, less the amount properly paid by Owner to Contractor.

Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the Contract falls due.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the Owner named herein or the heirs, executors, administrators, or successors of the Owner.

Signed and sealed this _____ day of _____, 20_.

WITNESS

WITNESS

PRINCIPAL (Seal)

TITLE

SURETY (Seal)

TITLE

00620 - Payment Bonds

Bond No. _____

THIS BOND IS ISSUED SIMULTANEOUSLY WITH PERFORMANCE BOND IN FAVOR OF THE OWNER CONDITIONED ON THE FULL AND FAITHFUL PERFORMANCE OF THE CONTRACT.

KNOW ALL MEN BY THESE PRESENTS: that _____

(Insert full name and address or legal title of Contractor)

as Principal, hereinafter called Contractor, and,

(Insert full name and address or legal title of Surety)

as Surety, hereinafter called Surety, are held and firmly bound unto the Energy, Minerals and Natural Resources Department, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, as Obligee, hereinafter called the Owner, in the amount of Dollars (\$_____), for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has by written agreement dated_____, 20_, entered into a contract with Owner for the Harding Pegmatite Mine Safeguard Project, Phase II, Project No. EMNRD-MMD-2022-02, Taos County, New Mexico, in accordance with the enclosed Drawings and Specifications, which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

Labor and Material Payment Bond

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise, it shall remain in full force and effect, subject, however, to the following conditions:

1. A claimant is defined as one having a direct contract with the Principal or with a Subcontractor of the Principal for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental of equipment directly applicable to the Contract.

2. The above-named Principal and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any costs or expenses of any such suit.

3. No suit or action shall be commenced hereunder by any claimant:

a) Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to any two (2) of the following: the Principal, the Owner, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name

of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, Owner, or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer.

b) After the expiration of one (1) year following the date on which Principal ceased Work on said Contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

c) Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the Project, or any part thereof, is situated, or in the United States District Court for the district in which the Project, or any part thereof, is situated, and not elsewhere.

4. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.

Signed and sealed this _____ day of _____, 20_.

PRINCIPAL (Seal)

WITNESS

TITLE

SURETY (Seal)

WITNESS

00650 – CERTIFICATE OF INSURANCE

This certificate is issued as a matter of information only and confers no rights upon the addressee. It does not amend, extend, or alter the coverage afforded by the policies listed below.

Name and Address of Insured	COMPANIES AFFORDING COVERAGE
Covering (Project Name and Location)	A
Address: Mining and Minerals Division Energy, Minerals and Natural Resources Department State of New Mexico 1220 South St. Francis Drive Santa Fe, New Mexico 87505	B
	C
	D
	E
	F

This is to certify that the following described policies, subject to their terms, conditions, and exclusions, have been issued to the above- named insured and are in force at this time.

TYPE OF INSURANCE	CO. CODE	POLICY NUMBER	EXPIRATION DATE	LIMITS OF LIABILITY IN THOUSANDS		
					EACH OCCURRENCE	AGGREGATE
(a) Worker's Compensation				Statutory		
(b) Employer's Liability					\$	Each Accident
Comprehensive General Liability including:				Bodily Injury	\$	\$
<input type="checkbox"/> Premises – Operations <input type="checkbox"/> Independent Contractors <input type="checkbox"/> Products and Completed Operations <input type="checkbox"/> Broad Form Property Damage Contractual Liability <input type="checkbox"/> Explosion and Collapse Hazard <input type="checkbox"/> Underground Hazard <input type="checkbox"/> Personal Injury with Employment Exclusion Deleted				Property Damage	\$	\$
				Bodily Injury and Property Damage Combined	\$	\$
				*Applies to Products and Completed Operations Hazard		\$ (Personal Injury)
Comprehensive Automobile Liability				Bodily Injury (Each Person)	\$	
<input type="checkbox"/> Owned <input type="checkbox"/> Hired <input type="checkbox"/> Non-Owned				Bodily Injury (Each Accident)	\$	
				Property Damage	\$	
				Bodily Injury and Property Damage Combined	\$	\$
Excess Liability				Bodily Injury and Property Damage Combined	\$	\$
<input type="checkbox"/> Umbrella Form <input type="checkbox"/> Other than Umbrella						
Other (Specify)				The State of New Mexico, EMNRD, MMD, and its agents and employees thereof are either additional insured, co-insured, or principal beneficiary.		

1. Products and completed Operations coverage will be maintained for a minimum period of: ☐ 1 ☐ 2 year(s) after final payment
2. Has each of the above-listed policies been endorsed to reflect the company's obligation to notify the addressee in the event of cancellation or non-renewal?
☐ Yes ☐ No

CERTIFICATION

I hereby certify that I am an authorized representative of each of the insurance companies listed above, and that the coverage's afforded under the policies listed above will not be canceled or allowed to expire unless thirty (30) days written notice has been given to the addressee of this certificate.

Name of Issuing Agency

Signature of Authorized Representative

Address

Date of Issue

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00700 – GENERAL CONDITIONS

00704 - Differing Site Conditions

During the progress of work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the contract, are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before they are disturbed and before the affected work is performed.

Upon written notification, the Project Engineer will investigate the conditions, and if the Project Engineer determines that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the contract, an adjustment, excluding loss of anticipated profits, will be made and the contract modified in writing accordingly. The Project Engineer will notify the Contractor of the determination whether or not an adjustment of the contract is warranted.

No contract adjustment that results in a benefit to the Contractor will be allowed unless the Contractor has provided the required written notice.

No contract adjustment will be allowed under this clause for any effects caused by unchanged work.

00713 – Warranty and Guarantee

The Contractor shall obtain and assign to EMNRD all manufacturers' and producers' guarantees or warranties which are normally provided as customary trade practice for items and materials incorporated into the work. In the absence of a manufacturer's or producer's guarantee, the Contractor warrants that equipment and material incorporated into the work is free from any defects or imperfections in workmanship and material for a period of one year after acceptance by EMNRD. The Contractor shall promptly, without cost to EMNRD, and in accordance with EMNRD's written instructions, either correct such defective work, or, if it has been rejected by EMNRD, remove it from the site and replace it with non-defective work. If the Contractor does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, EMNRD may have the defective work removed and replaced, and all direct, indirect, and consequential costs of such removal and replacement (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals) will be paid by the Contractor.

00720 - Duties, Responsibilities and Limitations of Authority of the Project Manager**A. General**

The Project Manager is the EMNRD employee who monitors construction and who will confer with the Project Engineer regarding project actions. The Project Manager's dealings in matters pertaining to the on-site work shall in general be only with the Project Engineer and the Contractor, and dealings with subcontractors shall only be through or with the full knowledge of the Contractor. Written communication with EMNRD will be through or as directed by the Project Engineer.

B. Duties and Responsibilities.

The Project Manager will:

1. Schedules: Review the progress schedule prepared by the Contractor and consult with the Project Engineer concerning acceptability.
2. Conferences: Attend preconstruction conferences, progress meetings, job conferences as required in consultation with the Project Engineer, and other project related meetings.
3. Liaison: Serve as the Project Engineer's liaison with the Contractor, working principally through the Contractor's superintendent and assist the superintendent in understanding the intent of the Contract Documents.
4. Shop Drawings and Samples:
 - a. Receive and record date of receipt of shop drawings and samples, receive samples that are furnished at the site by the Contractor, and notify the Project Engineer of their availability for examination.
 - b. Advise the Project Engineer and the Contractor or its superintendent immediately of the commencement of any work requiring a shop drawing or sample submission if the Project Engineer has not accepted the submission.
5. Review of Work, Rejection of Defective Work, Inspections and Tests:
 - a. Conduct on-site observations of the work in progress to assist the Project Engineer in determining if the work is proceeding in accordance with the Contract Documents, and that completed work will conform to the Contract Documents.

- b. Report to the Project Engineer whenever the Project Manager believes that any work is unsatisfactory, faulty or defective or does not conform to the Contract Documents, or does not meet the requirements of any inspections, tests or approvals required to be made, or has been damaged prior to final payment; and advise the Project Engineer when the Project Manager believes work should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.
 - c. Verify that tests, equipment and systems startups and operating and maintenance instructions are conducted as required by the Contract Documents and in presence of the required personnel, and that the Contractor maintains adequate records thereof; observe, record and report to the Project Engineer appropriate details relative to the test procedures and startups.
 - d. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project, record the outcome of these inspections and report to the Project Engineer.
- 6. Interpretation of Contract Documents: Transmit to Contractor the Project Engineer's clarifications and interpretations of the Contract Documents.
- 7. Modifications: Consider and evaluate the Contractor's suggestions for modifications in drawings or Specifications and report them with recommendations to the Project Engineer.
- 8. Records:
 - a. Maintain at the job site orderly files for correspondence, reports of job conferences, shop drawings and samples submissions, reproductions of original Contract Documents including all addenda, change orders, field orders, additional drawings issued after the execution of the Contract, the Project Engineer's clarifications and interpretations of the Contract Documents, progress reports, and other Project related documents.
 - b. Keep a diary or logbook, recording hours on the job site, weather conditions, data relative to questions of extras or deductions, list of visiting officials and representatives of manufacturers, fabricators, suppliers and distributors, daily activities, decisions, observations in general and specific observations in more detail as in the case of observing test procedures. Send copies to the Project Engineer. Record names, addresses and telephone numbers of all the

Contractors, subcontractors and major suppliers of materials and equipment.

9. Reports:

- a. Furnish the Project Engineer periodic reports as required of progress of the work and the Contractor's compliance with the approved progress schedule and schedule of shop drawing submissions.
- b. Consult with the Project Engineer in advance of scheduled major tests, inspections or start of important phases of the work.
- c. Report immediately to the Project Engineer upon the occurrence of any accident.

10. Payment Requisitions: Review Applications for Payment with the Contractor for compliance with the established procedure for their submission and forward them with recommendations to the Project Engineer, noting particularly their relation to the schedule of values, work completed and materials and equipment delivered at the site but not incorporated in the work.

11. Certificates, Maintenance and Operation Manuals: During the work, verify that certificates, maintenance and operation manuals and other data required to be assembled and furnished by the Contractor are applicable to the items installed; and deliver this material to the Project Engineer for review prior to final acceptance of the work.

12. Completion:

- a. Before the Contractor issues written certification to the Project Engineer that the project is complete, submit to the Contractor a pre-final list of observed items requiring completion or correction.
- b. Conduct final inspection in the company of the Project Engineer and the Contractor and prepare a final list of items to be completed or corrected.
- c. Verify that all items on final list have been completed or corrected and make recommendations to the Project Engineer concerning acceptance.

C. Limitations of Authority.

Except upon written instructions of the Project Engineer and notification to the Contractor, the Project Manager:

- a. Shall not authorize any deviation from the Contract Documents or approve any substitute materials or equipment.
- b. Shall not exceed limitations on the Project Engineer's authority as set forth in the Contract Documents.
- c. Shall not undertake any of the responsibilities of the Contractor, subcontractors or the Contractor's superintendent, or expedite the work.
- d. Shall not issue directions relative to any aspect of the means, methods, techniques, sequences or procedures of construction unless such is specifically called for in the Contract Documents.
- e. Shall not issue directions as to safety precautions and programs regarding the work.
- f. Shall not participate in specialized field or laboratory test, unless such is specifically called for in the Contract Documents.
- g. Shall not receive any materials, supplies, equipment, etc. on behalf of the Contractor.

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00800 – SUPPLEMENTARY CONDITIONS

**00825 – CERTIFICATION REGARDING DEBARMENT, SUSPENSION AND OTHER
RESPONSIBILITY MATTERS, DRUG-FREE WORKPLACE REQUIREMENTS AND
LOBBYING**

**U.S. DEPARTMENT OF THE INTERIOR
Office of Surface Mining Reclamation and Enforcement**

**Certifications Regarding Debarment, Suspension and
Other Responsibility Matters, Drug-Free Workplace
Requirements and Lobbying**

Persons signing this form should refer to the regulations referenced below for complete instructions.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transactions (See Appendix B of Subpart D of 43 C.F.R. 12).

Certification Regarding Drug-Free Workplace Requirements (Grantees Other Than Individuals) (See Appendix C of Subpart D of 43 C.F.R. 12).

Certification Regarding Lobbying (See 43 C.F.R. 18).

Signature on this form provides for compliance with certification requirements under 43 C.F.R. Parts 12 and 18. The certifications shall be treated as a material representation of fact upon which reliance will be placed when the Office of Surface Mining determines to award the covered transaction, grant or cooperative agreement.

PART A: Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transactions

— *CHECK IF THIS CERTIFICATION IS FOR A LOWER TIER COVERED TRANSACTION AND IS APPLICABLE.*

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction by any federal department or agency.
2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

PART B: Certification Regarding Drug Free Workplace Requirements

— *CHECK IF THIS CERTIFICATION IS FOR AN APPLICANT WHO IS NOT AN INDIVIDUAL.*

1. The grantee certifies that it will or continue to provide a drug-free workplace by:
 - (a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;
 - (b) Establishing an ongoing drug-free awareness program to inform employees about –
 - (1) The dangers of drug abuse in the workplace;
 - (2) The grantee's policy of maintaining a drug-free workplace;
 - (3) Any available drug counseling, rehabilitation and employee assistance programs; and
 - (4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
 - (c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);
 - (d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will –
 - (1) Abide by the terms of the statement and
 - (2) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;
 - (e) Notifying the agency in writing, within 10 calendar days after receiving notice under subparagraph (d)(2) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to every grant officer on whose grant activity the convicted employee was working, unless the Federal agency has designated a central point for the receipt of such notices. Notice shall include the identification numbers(s) of each affected grant;
 - (f) Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph (d)(2), with respect to any employee who is so convicted –
 - (1) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended;

or

- (2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State or local health, law enforcement, or other appropriate agency;

(g) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a), (b), (c), (d), (e) and (f).

2. The grantee shall provide below the site(s) of the performance of work done in connection with the specific grant:

Place of Performance (Street address, city, county, state, zip code)

☐ Check if there are workplaces on file that are not identified here.

PART C: Certification Regarding Lobbying

CHECK IF CERTIFICATION IS FOR THE AWARD OF ANY OF THE FOLLOWING AND THE AMOUNT EXCEEDS \$100,000: A FEDERAL GRANT OR COOPERATIVE AGREEMENT; SUBCONTRACT OR SUBGRANT UNDER THE GRANT OR COOPERATIVE AGREEMENT.

The undersigned certifies, to the best of his or her knowledge and belief, that:

- No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress and officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants and contracts under grants, loans and cooperative agreements) and that all subrecipients shall certify accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

As the authorized certifying official, I hereby certify that the above specified certifications are true.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL

NAME

DATE

TITLE

This form consolidates DI-1953, DI-1954, DI-1955, DI-1956 and DI-1963.

DI-2010 (March 1995)
Modified for AML Use

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00826 – APPLICANT/VIOLATOR SYSTEM INFORMATION

Instructions for Completing the AML Contractor Form OMB #1029-0119

Purpose: The purpose of this form is to allow the Applicant/Violator System (AVS) database office to conduct an eligibility check to make sure that your company is not associated with any violations related to coal mining in accordance with the Surface Mining Control and Reclamation Act (SMCRA). The AVS is a database that maintains relationship information between individuals and companies so when personnel actions (hiring, retiring, etc.) or business actions (name changes, mergers, etc.) happen the system will need to be updated. Through this form you can tell us if your company information in the AVS is correct, needs to be updated, or needs to be created. If you have any questions at any time do not hesitate to contact the AVS Office at 800-643-9748.

Part A: General Information: Part A should be completed by the AML Contractor. Please fill in the requested business information in the provided fields. You can find an electronic copy of the form on our website (<http://www.osmre.gov/programs/AVS.shtm>).

Part B: Obtain an Organizational Family Tree (OFT): Part B should be completed by the AML Contractor. An Organizational Family Tree (OFT) indicates the relationships individuals and other businesses have with your organization. It lets you know what information we currently have for your company in the AVS.

If you are new company or this is your first AML bid: Your business is most likely **not** in the AVS. If your business is not in the AVS you cannot obtain an OFT. You should check to see if you are in the system by following the steps for obtaining an OFT below. If your company does not appear in the AVS search, move on to Part C, check Box 3, and complete Part D of this form so we can add you to the system.

If your company has worked on previous AML projects or in the coal mining industry: Your business is most likely in the AVS. If this is the case we need you to obtain your OFT (instructions below) and review it to see if all the information is correct. If you find that your company is not in the AVS follow the instructions for “If you are a new company” above.

You can obtain an OFT two ways:

1. Calling the AVS Office at 800-643-9748 and requesting your company’s OFT.
2. Accessing the AVS from your personal computer: Go to the AVS website (<https://avss.osmre.gov>). Click “Access AVS”, and then “Login as Guest”. Place your cursor on the “Entity” Module and “Click”. Type your business name (or entity number if you know it) in search box and press enter key. If more than one entity record appears, select your company and then “Click” on the “Relationship” tab to display your Entity OFT information. Print the Entity OFT from AVS by right clicking and selecting “Print”. Review the OFT to determine what to do in Part C. Attach the OFT to your AML Contractor Form.

Part C: Certifying and updating information in the Applicant/Violator System (AVS). Part C should be completed by the AML Contractor. Please check the box that best describes your situation, sign and date. **Note: signature date must be recent (within thirty (30) days) to be considered.** An explanation

of when each box is appropriate:

Box 1: If information in your OFT is accurate, complete, and up-to-date, please check this box and sign and date. **Attach the OFT printout** that you reviewed to the OMB #1029-0119 form and submit it to the AML Contracting Officer your business is working with.

Box 2: If upon reviewing your OFT, you discover the information contained in AVS is not accurate, complete and up-to-date, then check this box **and complete Part D** to provide missing or corrected information. Sign and date, **attach your OFT printout** to the OMB #1029-0119 form and submit the form and attachment to the AML Contracting Officer your business is working with.

Box 3: If your business does not appear to have any information in the AVS, then check this box **and complete Part D**. Sign and date and submit the OMB #1029-0119 form to the AML Contracting Officer your business is working with.

Part D: OFT Information. Part D should be completed by the AML Contractor **only** if you want to make updates to what information is in the AVS or if your company does not have any information in the AVS (Boxes 2 and 3 in Part C). Please use as many pages and necessary. **To reduce the processing time:** please include **all** fields, including the relevant begin and/or end dates for individuals. Providing middle name or initial for individuals can also help reduce processing time so we can more easily distinguish individuals with the same name in the AVS.

Here are some answers to Part D FAQs:

Which employees should be included in Part D?

There is a list of every position that should be listed at the top of Part D. It is all officers, directors, and the shareholders/members owning more than 10% whether that is an individual or a businesses. For those that own less than 10% reporting the ownership is optional. Many AML Reclamation companies do not have large business structures so use your judgment as to who directs, manages, or controls the project. If, for example, a Professional Engineer has the power to determine how the project is conducted you should include him/her on Part D.

What address and phone number should I use?

Use the address and phone number where the person would like to receive business correspondence.

What are the begin and end dates for?

Begin dates indicate when a person started at that position in your company. If an individual started on 1/1/2001 and still works at the company, you can simply fill in the begin date and leave the end date blank or write "N/A". **End dates** are used for indicating that someone no longer works at the company due to retirement, death, etc. You can write the person's name and title and then the end date so we know to update the system to indicate that individual is no longer associated with the company. **If you hold more than one position** or title, be sure to note if there are different begin dates for each position. For example, if John Smith started as Secretary on 1/1/2001 and continued being Secretary but also became Vice President on 2/2/2004 both of those begin dates would need to be reflected. If he stopped being Secretary when he became Vice President, we would need an end date for his role as Secretary.

**REQUEST FOR AN APPLICANT/VIOLATOR SYSTEM (AVS)
AML CONTRACTOR DATA EVALUATION**

An AVS data evaluation for AML contractors is required under the Federal rules at 30 C.F.R. 874.16.
Please provide the information requested below and send your request via postal mail, e-mail or FAX to:

Liz Cox
Office of Surface Mining
Applicant/Violator System Office
2679 Regency Road
Lexington, Kentucky 40503
Telephone: 800.643.9748 ext.472
FAX: 859.260.8418
E-mail: lcx@osmre.gov

Date _____

Requesting Office _____

Contact _____

Contact's Telephone _____

Preferred response method:

E-M AIL: _____

or

FAX: (_____) _____

Level of your request: Emergency _____

(Expect your response within 4 hrs. if received before 3 PM Eastern)

Non-Emergency _____

(Expect your response with two business days)

Note to Evaluator:

00830 – WAGE DETERMINATION SCHEDULE**LABOR RELATIONS DIVISION**

401 Broadway NE
Albuquerque, NM 87102
Phone: 505-841-4400
Fax: 505-841-4424

226 South Alameda Blvd
Las Cruces, NM 88005
Phone: 575-524-6195
Fax: 575-524-6194

WWW.DWS.STATE.NM.US

1596 Pacheco St, Suite 103
Santa Fe, NM 87505
Phone: 505-827-6817
Fax: 505-827-9676

Wage Decision Approval Summary

1) Project Title: Harding Pegmatite Mine Safeguard Project - Phase II

Requested Date: 07/26/2022

Approved Date: 07/29/2022

Approved Wage Decision Number: TA-22-1912-A

Wage Decision Expiration Date for Bids: 11/26/2022

2) Physical Location of Jobsite for Project:

Job Site Address: Travel east from Dixon on NM-75 for 6.5 mi, Turn right onto dirt road and travel 0.5 mi

Job Site City: Penasco

Job Site County: Taos

3) Contracting Agency Name (Department or Bureau): NM Energy, Minerals, and Natural Resources Department

Contracting Agency Contact's Name: Meghan McDonald

Contracting Agency Contact's Phone: (505) 629-9872 Ext.

4) Estimated Contract Award Date: 10/01/2022

5) Estimated total project cost:

a. Are any federal funds involved?: Yes

b. Does this project involve a building?: No

c. Is this part of a larger plan for construction on or appurtenant to the property that is subject to this project?: No

d. Are there any other Public Works Wage Decisions related to this project?: No

e. What is the ultimate purpose or functional use of the construction once it is completed?: This project involves constructing and enhancing mine safeguard measures to address site security and identified site hazards. Work will include earthwork to safeguard reopening and collapsing mine openings, backfill with soil and polyurethane foam, bat gate installation at a mine opening, fencing, and gate repairs.

6) Classifications of Construction:

Classification Type and Cost Total	Description
Highway/Utilities (A)	Construction and enhancement of mine safeguard measures to address site security and identified site hazards. Work will include earthwork to safeguard reopening and collapsing mine openings, backfill with soil and polyurethane foam, bat gate installation at a mine opening, fencing, and gate repairs. Work will be done with light construction equipment such as backhoes, skid steers, and an excavator.



LABOR RELATIONS DIVISION
401 Broadway NE
Albuquerque, NM 87102
Phone: 505-841-4400
Fax: 505-841-4424

WWW.DWS.STATE.NM.US

PUBLIC WORKS PROJECT REQUIREMENTS

As a participant in a Public Works project valued at more than \$60,000 in the state of New Mexico, the following list addresses many of the responsibilities that are defined by statute or regulation to each project stakeholder.

Contracting Agency

- Ensure that all contractors wishing to bid on a Public Works project when the project is \$60,000 or more are actively registered with the Public Works and Apprenticeship Application (PWAA) website: <http://www.dws.state.nm.us/pwaa> (Contractor Registration) prior to bidding.
- Please submit Notice of Award (NOA) and Subcontractor List(s) to the PWAA website promptly after the project is awarded.
- Please update the Subcontractor List(s) on the PWAA website whenever changes occur.
- All sub-contractors and tiers (excluding professional services) regardless of contract amount must be listed on the Subcontractor List and must adhere to the Public Works Minimum Wage Act.
- Ninety days after project completion please go into the PWAA system and close the project. Only contracting agencies are allowed to close the project. Agents or contractors are not allowed to close projects.

General Contractor

- Provide a complete Subcontractor List and Statements of Intent (SOI) to Pay Prevailing Wages for all contractors, regardless of amount of work, to the contracting agency within 3 (three) days of award.
- Ensure that all subcontractors wishing to bid on a Public Works project have an active Contractor Registration with the Public Works and Apprenticeship Application (PWAA) website: <http://www.dws.state.nm.us/pwaa> prior to bidding when their bid will exceed \$60,000.
- Make certain the Public Works Apprentice and Training Act contributions are paid either to an approved Apprenticeship Program or to the Public Works Apprentice and Training Fund.
- Confirm the Wage Rate poster, provided in PWAA, is displayed at the job site in an easily accessible place.
- When the project has been completed, make sure the Affidavits of Wages Paid (AWP) are sent to the contracting agency.
- All subcontractors and tiers (excluding professional services) regardless of contract amount must pay prevailing wages, be listed on the Subcontractor List, and adhere to the Public Works Minimum Wage Act.



LABOR RELATIONS DIVISION

401 Broadway NE
Albuquerque, NM 87102
Phone: 505-841-4400
Fax: 505-841-4424

WWW.DWS.STATE.NM.US

Subcontractor

- Ensure that all subcontractors wishing to bid on a Public Works project have an active Contractor Registration with the Public Works and Apprenticeship Application (PWAA) website: <http://www.dws.state.nm.us/pwaa> prior to bidding when their bid will exceed \$60,000.
- Make certain the Public Works Apprentice and Training Act contributions are paid either to an approved Apprenticeship Program or to the Public Works Apprentice and Training Fund.
- All subcontractors and tiers (excluding professional services) regardless of contract amount must pay prevailing wages, be listed on the Subcontractor List, and adhere to the Public Works Minimum Wage Act.

Additional Information

Reference material and forms may be found in the New Mexico Department of Workforce Solutions Public Works web pages at: <https://www.dws.state.nm.us/Labor-Relations/Labor-Information/Public-Works>.

CONTACT INFORMATION

Contact the Labor Relations Division for any questions relating to Public Works projects by email at public.works@state.nm.us or call (505) 841-4400.



TYPE "A" – STREET, HIGHWAY, UTILITY & LIGHT ENGINEERING

Effective January 1, 2022

Trade Classification	Base Rate	Fringe Rate
Bricklayer/Block layer/Stonemason	24.46	8.81
Carpenter/Lather	26.48	12.14
Carpenter- Los Alamos County	29.24	13.94
Cement Mason	17.74	7.41
Drywall Finisher/Taper	25.21	8.00
Glazier		
Glazier/Fabricator	21.00	6.45
Delivery Driver	11.50	6.45
Ironworker	27.70	17.89
Painter- Commercial	17.75	8.20
Paper Hanger	17.75	8.20
Plumber/Pipefitter	33.10	13.10
Electricians- Outside Classifications:		
Zone 1		
Ground man	24.57	11.74
Equipment Operator	35.25	16.06
Lineman	44.32	18.08
Journeyman technician	41.47	17.37
Cable Splicer	48.75	19.19
Electricians-Outside Classifications:		
Zone 2		
Ground man	24.57	11.74
Equipment Operator	35.25	16.06
Lineman	44.32	18.08
Journeyman technician	41.47	17.37
Cable Splicer	48.75	19.19
Electricians-Outside Classifications:		
Los Alamos		
Ground man	25.27	11.76
Equipment Operator	36.27	16.09
Lineman	45.47	18.36
Journeyman technician	42.41	17.60
Cable Splicer	49.59	19.40
Laborers		
Group I	14.79	6.93
Group II	15.29	6.93
Group III	16.79	6.93
Group IV	17.29	6.93
Operators		
Group I	19.93	6.74
Group II	20.92	6.74
Group III	21.02	6.74
Group IV	21.14	6.74
Group V	21.24	6.74
Group VI	21.44	6.74
Group VII	21.61	6.74
Group VIII	21.92	6.74
Group IX	29.87	6.74
Group X	33.32	6.74
Soft Floor Layers	20.75	8.45
Truck Drivers		
Group I-IX	17.65	8.72

NOTE: All contractors are required to pay SUBSISTENCE, ZONE AND INCENTIVE PAY according to the particular trade. Details are located in a PDF attachment at WWW.DWS.STATE.NM.US. Search Labor Relations/Labor Information/Public Works/Prevailing Wage Rates.

For more information about the Subsistence, Zone, and Incentive Pay rates, or to file a wage claim, contact the Labor Relations Division at (505) 841-4400 or visit us online at www.dws.state.nm.us.

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00900 – APPLICATION FOR PAYMENT

APPLICATION FOR PAYMENT
Harding Pegmatite Mine Safeguard Project - Phase II
Taos County, New Mexico
EMNRD-MMD-2022-02

Contract No. _____ Contractor: _____ Billing No. _____ Billing Date _____ Terminate _____

Mailing Address: _____ Billing represents work completed through (date) _____

ITEM NO.	<u>MATERIAL OR WORK DESCRIPTION</u>	<u>BASIS OF EVALUATION</u>	<u>CONTRACT AMOUNT</u>	<u>UNITS OR PERCENT THIS BILLING</u>	<u>AMOUNTS THIS BILLING</u>	<u>UNITS OR PERCENT PREVIOUS BILLINGS</u>	<u>AMOUNTS PREVIOUS BILLINGS</u>	<u>UNITS OR PERCENT REMAINING</u>	<u>AMOUNTS REMAINING</u>
1.	Mobilization (Not to exceed 10% of total base bid)	For the lump sum of							
2.	Backfill Feature SUB-1, Open Stope	For the lump sum of							
3.	Backfill Feature SUB-2 and install vent pipe	For the lump sum of							
4.	Repair Features F9, reopened decline adit	For the lump sum of							
5.	Stabilize Gate 1.	For the lump sum of							
6.	Iceberg Pit fence installation	Footage of fence installed							
7.	Site maintenance	Pedestrian access improvements in 4-hour increments for labor and equipment							

ITEM NO.	MATERIAL OR WORK DESCRIPTION	BASIS OF EVALUATION	CONTRACT AMOUNT	UNITS OR PERCENT THIS BILLING	AMOUNTS THIS BILLING	UNITS OR PERCENT PREVIOUS BILLINGS	AMOUNTS PREVIOUS BILLINGS	UNITS OR PERCENT REMAINING	AMOUNTS REMAINING
8.	Reseeding of disturbed areas	Completion of seeding and mulch placement in increments of ½-acres							
9.	Hazard / Directive Signage	Procurement and installation of signs and signposts in increments per sign.							
TOTAL CONTRACT	\$ _____								

CERTIFICATION

I do hereby certify that the work described herein has been performed and that no previous payment for the Total Amount Due this Statement, as shown above, has been received.

By: _____ By: _____ By: _____

Mining and Minerals Division Director

Contractor

AML Project Engineer

DATE: _____ DATE: _____ DATE: _____

APPENDIX A
VENDOR INFORMATION FORM

PURSUANT TO INTERNAL REVENUE SERVICE REGULATIONS, VENDORS MUST FURNISH THEIR TAXPAYER IDENTIFICATION NUMBER (TIN) TO THE STATE. IF THIS NUMBER IS NOT PROVIDED, THE VENDOR MAY BE SUBJECT TO A TWENTY PERCENT (20%) WITHHOLDING ON EACH PAYMENT. TO AVOID THIS TWENTY PERCENT (20%) WITHHOLDING AND TO ENSURE ACCURATE TAX INFORMATION IS REPORTED TO THE INTERNAL REVENUE SERVICE AND THE STATE, PLEASE USE THIS FORM TO PROVIDE THE REQUESTED INFORMATION.

Legal Business Name: _____

Address: _____

Telephone Number: _____

9 DIGIT TAXPAYER IDENTIFICATION NUMBER

Social Security Number -----
---- or ----

Federal Employer Identification Number _____

Type of Business (Check One):

____ Individual
____ Sole Proprietorship
____ Partnership
____ General Limited
____ Corporation
____ Public Service Corporation
____ Government/Nonprofit
____ Other (please specify)

OTHER TAX ACCOUNT NUMBERS

New Mexico BTIN Identification Number: _____

State Unemployment Tax Number: _____

Under penalties of perjury, I hereby declare that I have examined this form and to the best of my knowledge and belief, it is true and correct, and complete.

Name (print or type)

Title (print or type)

Signature

Date

APPENDIX B SPECIFICATIONS

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02	GENERAL NOTES AND MARKER DETAIL
03	SITE PLAN
04	GATE 1 STABILIZATION
05	FENCING DETAILS – ICEBERG PIT AND FEATURE SUB-1
06	FEATURES SUB-1 AND F9 PLAN AND PROFILE – EXISTING CONDITIONS
07	FEATURE F9, REOPENED DECLINE ADIT DETAILS
08	FEATURE SUB-1, OPEN STOPE – SCHEMATICS OF EXISTING CONDITIONS
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10	FEATURE SUB-1, OPEN STOPE FILL DETAIL
11	FEATURE SUB-2, EXISTING CONDITIONS AND MINE VENT DETAIL
12	FEATURE SUB-2, MINE VENT DETAILS AND NOTES

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SPECIFICATIONS

Please Note – Use of Brand Name Specifications: Use of any brand name herein is for the purpose of describing the standard of quality, performance, and characteristics desired and is not intended to limit or restrict competition.

DIVISION 1 – GENERAL REQUIREMENTS

The following sections describe the general requirements of this project. References to Sheet Numbers, refer to the design drawings, which are included in this Project Manual.

01010 – SUMMARY OF WORK

The Harding Pegmatite Mine Safeguard Project is located between the towns of Dixon and Peñasco in Taos County, New Mexico. The project area (see Sheet No. 3) is on private land owned by the University of New Mexico in Section 29, Township 23 South, Range 11 East (USGS 7.5' Trampas Quadrangle).

This project involves constructing and enhancing safeguard measures to address site security and identified site hazards. The project will include the following work:

- Constructing safeguard measures to address areas of subsidence and collapse into existing mine features. Three subsidence features will be addressed:
 1. Subsidence into a reopened decline adit at Feature F9. The declined adit opening will be fully exposed and then sealed with a polyurethane foam (PUF) plug. The PUF plug will then be covered over with existing and imported granular fill. Construction details are shown on design drawing Sheets 02, 03, 06, and 07.
 2. Soil piping has created a vertical opening into the mine near the main adit. The opening (Feature SUB-2) has been identified as an enhancement to bat habitat in the mine, and a vent pipe will be installed in the hole with the annulus filled with PUF and capped with granular fill. Construction details are shown on design drawing Sheets 02, 03, 11, and 12.
 3. A large collapse has created an open stope at a location above the highwall at the mine site. The open stope affords unauthorized and dangerous entrance into the mine workings. The open stope (Feature SUB-1) will be completely filled to existing grade. Construction will include bridging the openings into the mine workings using toroid tire plugs, covering the tires with a geotextile, filling much of the open stope with PUF, and capping the PUF with salvaged topsoil and imported granular fill. Construction details are shown on design drawing Sheets 02, 03, 06, 08, 09, and 10.

- Safeguard measures to discourage visitors from approaching vertical highwalls will include:
 1. Ensuring that a portion of barbed wire fence that will be temporarily removed for work at Feature SUB-1 is replaced.
 2. Installation of new six-strand barbed wire fencing around portions of a mine feature known as the Iceberg Pit.

Construction details are shown on design drawing Sheets 03, 05, 06, 08, and 10.

- Enhancement to site security will include work at the entrance to the site (Gate 1) to stabilize a gate post where the erosion has exposed the footing. Granular imported fill and riprap will be used to replace lost material and stabilize the gate post. Construction details are shown on design drawing Sheets 03 and 04.
- General site enhancement and visitor safety improvements shall include performing maintenance to public access routes (foot travel) and clearing of fallen rock from in front of the Mine Features at the site. Work shall be provision of labor and small equipment (e.g., skid steer) to perform maintenance directed by the Project Manager.

Table I, below, lists the mine features where safeguard improvements will be made along with approximate size of openings needing filling, the estimated amount of material needed to make the improvement, and an indication of the type of work to be accomplished. Note the time restrictions for closure of some of the mine features.

Demobilization shall be conducted in such a manner to ensure that the Contractor leaves all project areas in as good or better condition than before disturbance.

TABLE I
PROJECT SUMMARY INCLUDING APPROXIMATE MINE OPENING
DIMENSIONS AND MINE FILL VOLUME ESTIMATES

The approximate mine opening dimensions and mine fill volume estimates are provided only for the information of the Potential Bidder. The Abandoned Mine Land Program makes absolutely no guarantee of their accuracy or precision. Volume estimates are of the material that may be required to fill the mine cavities and adjacent areas as indicated, including an allowance for shrinkage, irregularities and known underground mine voids. All mine features are irregular in shape. Estimates of mine fill volumes are generally not indicated at structural closures; excavation, fill and other earthmoving activities there are considered incidental to the work. Mine fill volume estimates are indicated at those structural closures with significant volumes of earthwork required.

To comply with wildlife restrictions, construction is limited to certain periods of the year. Should construction activities take place during the **migratory bird nesting season (February 15 - September 15)**, a pre-construction nesting bird survey will be completed by the AML Program or representatives of the AML Program to locate any active nest that would need to be avoided. This survey should be conducted no more than 10 days prior to the start of construction. If occupied nests are found, they must be avoided until the young have fledged to comply with the requirements of the MBTA.

As it is likely the project area supports winter bat hibernation use, it is recommended to **avoid** any construction activities between **December 1 – February 28**. If any work is required within those specified periods, written permission from the Project Engineer will be required before work can commence.

AML FEATURE NUMBER	TYPE OF MINE FEATURE	APPRX. DIMENSIONS (FEET)	QNTY / VOLUME	WORK REQUIRED / COMMENTS
Gate 1	Site Security	See Drawing Sheet 04	5 YD ³	Place granular fill to support gate post
			2 YD ³	Place riprap over granular fill
Feature SUB-1	Open Stope	19 ft to 20 ft Across, 3 to 8 ft Deep	65 Tires	Fill openings with toroid tire plugs
			54 YD ³	Fill opening with polyurethane foam (PUF)
			25 YD ³	Cap PUF with imported soil fill
			4 YD ³	Place salvaged topsoil on imported fill to final grade.
			120 Lin ft	Temporarily remove existing six-strand barbed wire fence across SUB-1 and replace after fill has been placed.
Feature SUB-2	Soil Piping/ Collapse	3 ft to 4 ft in Diam., 12 ft Deep	2.4 YD ³	Construct mine vent with metal grate and secure in place with PUF
			2 YD ³	Cap PUF with imported soil fill
Feature F9	Reopened Decline Adit	7 ft to 10 ft Across, 4 ft into Mine	7.5 YD ³	Open adit entrance and install PUF plug. Replace and compact soil over plug
Iceberg Pit	Fencing		150 Lin ft	Install six-strand barbed wire fence along crest of the highwall
Site-wide	Not Applicable			Remove fallen rocks from entrances to mine features and clear / improve access routes.
			½ Acre	Application of mulch and seed mix on disturbed areas
			6 Signs	Install Hazard / Warning signs and posts

01011 – SUMMARY OF PROJECT AND CONSTRUCTION ACCESS

The project site consists of a historic underground mine with multiple mine opening that were secured by the AML Program during Phase I of the Safeguard Project in 2011. Mine features to be safeguarded in this project and the methods and time restrictions for safeguarding are summarized in Table I.

To the maximum extent practicable, construction access is limited to existing jeep trails and hiking trails, except as otherwise shown, specified, or allowed by the Project Manager. Feature access may require small off-road vehicles such as utility terrain vehicles.

The Contractor shall be responsible for thoroughly investigating site conditions and scheduling their equipment, equipment operations, personnel, and safety procedures to prevent accidents and injuries.

01012 – AVOIDANCE AREAS FOR PRESERVATION OF CULTURAL AND BIOLOGICAL RESOURCES

The Contractor shall avoid designated cultural and biological resources. The Contractor shall avoid any activities outside of the designated areas of disturbance. Additionally, existing mine features and interpretive displays shall not be removed or damaged as a result of the work. Access routes and methods to construction areas shall be coordinated with the Project Manager prior to mobilizing to targeted mine features. No construction disturbances (including excavation, fill and stockpiling of construction materials) or moving of artifacts shall take place unless directly specified in design documents. Avoidance zones within the designated disturbance area shall extend to five meters (16.4 feet) from the existing mine features structures, except where construction is indicated within this zone in which case the disturbance within the avoidance zone shall be minimized as practicable. The Project Manager or Project Engineer may designate special avoidance areas.

Wherever the Contractor is working with equipment near designated avoidance features and avoidance areas and wherever construction access routes pass next to these features, the Contractor shall place four-foot high, temporary, high-visibility barrier fencing (Hi-Vis, ADPI, or equivalent) around the features. The Contractor shall provide a submittal for the barrier fencing to be used prior to installation. Barrier fencing shall be removed upon completion of work. An exception to this requirement may be during performing rock clearing from in front of mine entrances and clearing pedestrian approaches.

The Contractor shall bear all direct, indirect, and consequential costs of repairs due to unauthorized damage caused by the Contractor's operations to cultural and biological resources to be avoided. These costs shall include but are not limited to fees and charges of engineers, attorneys, and other professionals, made necessary thereby.

The Contractor shall cooperate fully to preserve archaeological and historic artifacts and any threatened or endangered species found within the project area. If the Contractor encounters a previously uninventoried archaeological site, historic site, or species listed as or proposed to be listed as threatened or endangered, the Contractor shall terminate all further operation in that immediate area until the archaeological or biological preservation agencies have had the opportunity to survey the site. This termination shall not preclude continuation of work in other

areas nor shall it entitle the Contractor to additional payment in any form, other than an extension of time, unless the Contractor is substantially precluded from working on the entire project.

If construction occurs within the migratory bird nesting season (February 15 to September 15), a preconstruction migratory bird survey will be required. If needed, the AML Program will contract an outside consulting firm to perform the bird survey within 10 days to the start of construction. The Contractor shall contact the AML Program Project Engineer at least one month prior to commencement of construction to coordinate this survey or three weeks prior to Notice to Proceed. Failure by the Contractor to timely coordinate a preconstruction migratory bird survey may impact the Contractor's schedule and no additional time or compensation will be granted. Following receipt of NTP, the Contractor shall be responsible for maintaining nest free conditions in construction-impacted areas. The Contractor shall comply with the requirements of the Migratory Bird Treaty Act (MBTA), the United States Fish and Wildlife Service (USFWS), and shall not cause harm or harassment to migratory birds.

If occupied nests are found, the AML Program will coordinate with the New Mexico Game and Fish Department and USFWS to determine the appropriate exclusion buffer. This exclusion buffer will remain until after the juvenile birds have fledged (flown from the nest).

As stated in Table I above, it is likely the project area supports winter bat hibernation use, it is recommended to avoid any construction activities between December 1 – February 28. If any work is required within those specified periods and cannot be rescheduled, written permission from the Project Engineer will be required before work can commence.

01015 – CONTRACTOR'S USE OF THE PREMISES

The Contractor shall take reasonable measures to avoid traffic conflicts between vehicles of the Contractor's employees and private citizens and to avoid overloading of any driveways, roads and streets. The Contractor shall limit the access of equipment and trucks to the project site and provide protection for any improvements over which trucks and equipment must pass to reach the job site. If heavy equipment operated on wet or soft roads causes excessive rutting, the damage shall be repaired by grading the road upon completion of the work.

01025 – MEASUREMENT AND PAYMENT

The measurement for payment is as defined below. Payment shall be made based on the applicable unit or lump sum price bid therefor in the Bid Form. The estimated quantities of materials and work required to complete the project are approximations only and are given as a basis for calculation upon which the contract award will be determined. All estimated quantities could vary considerably and will depend on the actual conditions encountered at the time the work is performed. AML reserves the right to decrease or increase any or all of the quantities of materials or work as may be deemed necessary during the project.

01027 – APPLICATIONS FOR PAYMENT

All Applications for Payment for work performed under this contract shall whenever practicable, first be reviewed by the Project Manager before being submitted to:

Meghan J. McDonald, P.E.
Mining and Minerals Division
Energy, Minerals, and Natural Resources Department
State of New Mexico
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

All Applications for Payment shall include appropriate backup, such as daily reports, load counts, etc. Contract amount equals total base bid plus gross receipts tax.

01028 – PRICES

The following subsections describe the lump sum and unit prices to be paid under this contract.

Lump Sum Prices

The basis of payment of lump sum prices as outlined in the Bid Form is as follows:

A. Mobilization

Payment for Mobilization will be made at the lump sum prices bid therefor in the Bid Form but shall not exceed 10% of the total base bid. It is the intent of this specification to provide for the Contractor to receive 100% of the mobilization bid item by the time the Contractor has completed ten percent of the total original contract amount less mobilization. Total original contract amount less mobilization shall mean the total amount bid as compensation for the contract, excluding gross receipts tax, less the amount bid for mobilization. For lesser amounts of work completed (less than 10%), the Contractor shall receive a prorated portion of the mobilization.

In addition, payment for Mobilization will not be made until the Project Engineer's approval of an adequate performance. An "adequate performance" will be satisfied when the Contractor has shown the ability to successfully perform the required tasks of this project as outlined in these Specifications to the satisfaction of the Project Engineer. In case of any weather delays, compensation for additional Mobilization will not be made.

Payment for Mobilization shall include all equipment, fees, fuel, insurance, labor, permits, personnel, supervision and transportation to assemble, drive, operate, place, position, provide security measures for, and transport equipment, field offices, fuel, implements, machinery, materials, temporary sanitary facilities, and support facilities to and at the job site in conformance with the Project Manager's directives and these Specifications. This amount shall

include complete Mobilization no matter how often equipment is transported to individual sites within the project area.

Mobilization shall also include preparation of an Occupational Safety and Health Administration (OSHA) compliant Health and Safety Plan (HASP) detailing the site-specific hazards and safety precautions associated with site work. The HASP shall include a list of responsible persons, hazard identification, hazard controls and safe practices, emergency and accident response, employee training requirements, chemical safety data sheets (SDS), and communication information and procedures.

Mobilization shall also include providing materials for animal exclusion as defined in the beginning of Division 2 – Sitework.

Mobilization shall also include preparation of any other required pre-construction submittals as specified in this manual.

B. Safeguard of Specified Subsidence /Collapse Features

Payment for completing safeguard measures at specified mine features will be made at the lump sum price shown in the Bid Form. These prices shall include all work necessary to complete the safeguard measures in accordance with the drawings and specifications. This work shall include the tasks necessary to access the mine features, including clearing as necessary; removal of temporary fencing; temporary removal of existing barbed wire fence (one location); preparation of feature for backfilling; placement of corrugated steel pipe with bat gate for mine vent (one location); transportation, handling, and placement of toroid tire plugs (one location); handling, mixing, and application of polyurethane foam; placement and compaction of imported and salvaged backfill; grading/landforming of backfill; reinstalling existing barbed wire fence where temporarily removed (one location); and including all equipment, labor, material, and supervision costs necessary to complete safeguard construction.

C. Repair to Existing Swing Gate

Payment for construction of the specified repairs to Gate 1 will be made at the lump sum price bid therefor in the Bid Form. This price shall include all work necessary to complete the repairs in accordance with the drawings and specifications, including access to site; site preparation; transportation, placement, and compaction of imported granular fill material; transportation and placement of riprap; spreading of excess fill material in areas designated by the AML Project Manager; and all equipment, labor, and supervision necessary for executing the repair.

Unit Rate Prices

A. Public Safety Enhancement – Barbed Wire Fence Installation at Iceberg Pit

Payment for new fencing installation will be made at linear foot price shown in the Bid Form. This price shall include all work necessary to complete installation of the fencing in accordance with the drawings and specifications. This work shall include the tasks necessary to

clear fence alignments; install fence materials; and including all equipment, labor, material, and supervision costs necessary to complete construction.

B. Site Maintenance – Rock Fall Clearing and Pedestrian Access Maintenance

Payment for site maintenance work shall be made as a unit rate of 4-hour blocks for the provision of a skid steer, an operator, and two laborers with hand tools for improvements to pedestrian access routes (rock removal, erosion repair, fallen vegetation, etc.) and removal of fallen rock from the highwall that has accumulated in front of existing mine features. The Contractor shall maintain and submit records of work performed with dates and hours of work.

C. Reseeding of Disturbed Areas

The unit of measurement for payment for seeding will be per disturbed $\frac{1}{2}$ -acre, as measured in the field, parallel to the seeded surface using methods acceptable to the Project Engineer. Payment for seeding will be made at the unit price of the Contractor's bid on the Bid Form multiplied by the number of units installed. This price shall include soil preparation including raking, topdressing, incorporating specified soil amendments, mulch, and seeding by broadcasting including all equipment, labor, material and supervision costs necessary to complete installation, of all areas disturbed by construction activities.

Any surface disturbance areas of the project must be seeded/revegetated. Disturbed areas may include but are not limited to: filled areas, temporary access routes and obliterated roads, areas used for office (as necessary) and sanitation units, equipment parking, closed access trails, stockpile and storage areas, and service areas.

D. Warning Signage

The Contractor shall be reimbursed for each sign installed in rockfall hazard areas. The sign installations shall include procurement and installation of signs with specified graphics, posts, mounting hardware, and concrete.

01030 – ALTERNATES

Whenever equipment or materials are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular supplier, the naming of the item is intended to establish the type, function, and quality required. Unless the name is followed by words indicating that no substitution is permitted, the Project Engineer may accept equipment or materials of other suppliers if the Contractor submits sufficient information to allow for adequate determination that the equipment or materials proposed are equivalent or equal to that named.

01035 – MODIFICATION PROCEDURES

The following section describes procedures for making modifications to the contract by change orders. Modifications may involve changes in contract sum, contract time, and scope.

01036 – CHANGE ORDER PROCEDURES

The Contractor shall submit a request for any changes in the work under this contract, in writing, to the Project Engineer. No changes in work or quantities shown shall be authorized until a properly executed Change Order has been issued by MMD. Any work performed outside the original quantities or scope of work, before the issuance of a properly executed Change Order, shall be at the Contractor's risk.

The Contract Time may only be changed by a Change Order. Any claim for an extension in the Contract Time shall be based on written notice delivered to the Project Engineer within fifteen working days of the occurrence of the event causing the claim. The extent of the claim with supporting data shall be included unless the Project Engineer allows additional time to ascertain more accurate data. The Project Engineer shall determine all claims for adjustment in the Contract Time. Any change in the Contract Time resulting from any such claim shall be incorporated in a Change Order. The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of the Contractor if a claim is made therefore as provided above. Such delays shall include, but may not be restricted to, acts or neglect beyond the Contractor's control, epidemics, fires, floods, labor disputes, abnormal weather conditions, or acts of nature. In the event delays in construction occur due to weather, the conditions as outlined above will be in effect. If the Contractor leaves the project area due to a weather delay, the Contractor shall be responsible for assuring that all areas are left in a clean and safe condition as approved and directed by the Project Manager. In case of any weather delays, compensation for additional Mobilization or Demobilization will not be made.

01040 – COORDINATION

The following sections define the parties responsible for coordination of the contract work at the project and job site levels.

01041 - PROJECT COORDINATION

The Project Engineer will send the Contractor Notices to Proceed, Change Orders, other contract documents, and approvals on Applications for Payment. The Project Manager or Project Engineer may issue a Suspension of Work Notice if there is reasonable basis to believe that the Contractor is violating any condition or term of the contract or specifications, or that violations of health and safety standards will occur unless such notice is issued. No work shall proceed until the Suspension of Work Notice has been vacated.

01042 – MECHANICAL AND ELECTRICAL COORDINATION

The Contractor shall be responsible for the coordination of all mechanical and electrical aspects of the contract work. This includes overseeing of the general operation and maintenance of that equipment.

01043 – JOB SITE ADMINISTRATION

The Contractor shall be responsible for the administration of the contract work at the job site. This includes assuring that all equipment and materials used for the contract work meet the required specifications set forth and that all work is performed in a timely and orderly manner. The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs concerning the work. The Contractor shall designate a full time on-site superintendent or authorized representative who shall be present or can be contacted readily during project working hours. This person shall represent the Contractor in dealing with the Project Manager and shall insure adherence to these specifications and any other directives.

01050 – FIELD ENGINEERING

The Contractor shall be responsible for locating and avoiding all underground utilities at the contract work site. If damage to the utilities occurs during the contract work, the damage shall be repaired at the Contractor's expense.

The Contractor shall also be responsible for the proper setting of all construction staking. The Contractor shall provide engineering surveys for construction to establish reference points that are necessary to enable the Work to proceed. The Contractor shall be responsible for surveying and laying out the Work, shall protect and preserve any established reference points, and shall make no changes or relocations without the prior written approval of the Project Engineer. The Contractor shall report to the Project Engineer whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations. The Contractor shall replace and accurately relocate all reference points so destroyed, lost, or moved. When it becomes necessary in the construction of public works, to remove or obliterate any triangulation station, bench mark, corner monument, stake, witness mark, or other reference mark, it shall be the duty of the Contractor in charge of the work to cause to be established by a New Mexico registered land surveyor one or more permanent reference marks which shall be plainly marked as witness corners or reference marks, as near as practicable to the original mark, and to record a map, field notes, or both, with the county clerk and county surveyor of the county wherein located, showing clearly the position of the marks established with reference to the position of the original work. The surveys or measurements made to connect the reference marks with the original mark shall be of at least the same order of precision as the original survey. The developed data shall be certified by a licensed surveyor and submitted to the AML.

01060 – REGULATORY REQUIREMENTS

The Contractor shall keep fully informed of all federal and state laws, all local laws, ordinances, and regulations, and all orders and decrees of bodies or tribunals having any

jurisdiction or authority which in any manner affect those engaged or employed on the work or which in any way affect the conduct of the work. The Contractor shall at all times observe and comply with all such laws, ordinances, regulations, orders, and decrees and shall protect and indemnify the State of New Mexico and its representatives against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by the Contractor or any employees. The Contractor shall procure all permits and licenses, pay all charges, fees, royalties, and taxes, and give all notices necessary and incidental to the due and lawful prosecution of the work.

01090 – REFERENCES

Reference to standard specifications, manuals, or codes of any technical association, organization, or society, or to laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, laws, or regulation in effect at the time of opening of Bids, except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual, or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of the Contractor.

01092 - ABBREVIATIONS

The following is an explanation of the abbreviations that may be used in the contract documents:

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AML	Abandoned Mine Land Program of MMD
ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
ATSA	American Traffic Services Association
AWS	American Welding Society
CFR	Code of Federal Regulations
CO	carbon monoxide
CO ₂	carbon dioxide
CPR	cardiopulmonary resuscitation
CRSI	Concrete Reinforcing Steel Institute
EMNRD	Energy, Minerals, and Natural Resources Department (state)
H ₂ S	hydrogen sulfide
HASP	Health and Safety Plan
MBTA	Migratory Bird Treaty Act
MMD	Mining and Minerals Division of EMNRD
NMAC	New Mexico Administrative Code
NMSA	New Mexico Statutes Annotated
NTP	notice to proceed
OSHA	Occupational Safety and Health Administration
OSMRE	Office of Surface Mining, Reclamation, and Enforcement (federal)
PLS	Pure Live Seed

PUF	polyurethane foam
SAE	Society of Automotive Engineers
SDS	safety data sheet
USFWS	United States Fish and Wildlife Service

01094 – DEFINITIONS

The following is a definition of the terms that may be used in the contract documents (source: A Dictionary of Mining, Mineral, and Related Terms, Paul W. Thrush, Bureau of Mines, Department of the Interior, Washington, D.C., 1968):

- | | |
|-------------------|--|
| 1. adit | A horizontal or nearly horizontal passage driven from the surface for the working or dewatering of a mine. |
| 2. back | The roof or upper part in any underground mining cavity. |
| 3. cribbing | The close setting of timber supports when shaft sinking through loose ground. |
| 4. collar | Timbering or concrete around the mouth or top of a shaft; the junction of a mine shaft and the surface. |
| 5. decline | See “incline”. |
| 6. drift | A horizontal passage underground. |
| 7. entry | A haulage road, gangway, or airway to the surface. |
| 8. gob pile | A pile of heap mine refuse on the surface. |
| 9. incline | A shaft not vertical; usually on the dip of a vein. |
| 10. lagging | Planks, slabs, or small timbers placed over the caps or behind the posts of the timbering, not to carry the main weight, but to form a ceiling or a wall, preventing fragments or rock from falling through. |
| 11. lining | The brick, concrete, cast iron, or steel casing placed around a tunnel or shaft as a support. |
| 12. loading chute | A three-sided tray for loading or for transfer of material from one transport unit to another. |
| 13. portal | Any entrance to a mine. |
| 14. red dog | Material of a reddish color resulting from the combustion of shale and other mine waste dumps on the surface. |
| 15. shaft | An excavation of limited area compared with its depth, made for finding or mining ore or coal, raising water, ore, rock, or coal, hoisting and lowering personnel and material, or ventilating underground workings. |
| 16. spoil | The overburden or on-ore material removed in gaining access to the ore or mineral material in surface mining. |
| 17. stope | An excavation in which ore has been excavated in a series of steps. |

18. stull	A timber prop set between the walls of a stope, or supporting the mine roof.
19. subsidence	A sinking down of a part of the earth's crust.
20. talus	A heap of coarse rock waste at the foot of a cliff.
21. tippel	Originally the place where the mine cars were tipped and emptied of their ore, and still used in that sense, although now more generally applied to the surface structures of a mine, including the preparation plant and loading tracks.
22. winze	Interior mine shaft.

01100 – SPECIAL PROJECT PROCEDURES

The following section describes special procedures for alteration, preservation, security, hazardous materials, and other types of projects demanding unique procedures. Safety procedures and methods for all underground work inside abandoned mine entries shall be in accordance with the "New Mexico Mine Safety Code for All Mines," published by the New Mexico Institute of Mining & Technology, State Inspector of Mines, Bureau of Mine Inspection, P.O. Box W105, Socorro, NM 87801, 1.505.835.5460.

01135 - HAZARDOUS AND CONFINED AREA PROCEDURES

This project requires construction work in, around, and over hazardous and unprotected highwalls, mine shafts, stopes, adits, and other openings which may be open to the surface or hidden from view by vegetation, trash, debris, or thin and unstable layers of surface materials or rock. The Contractor shall be responsible for thoroughly investigating the site conditions and scheduling the Contractor's equipment, equipment operations, personnel, and safety procedures to prevent accidents and injuries.

Before entry, the Contractor shall review safety procedures with all persons entering the mine. At least one standby person shall remain outside the mine during entry by others. The standby person(s), whenever possible someone who is trained in CPR and mine rescue procedures, shall have access to first aid, appropriate rescue equipment, and a vehicle and shall know where the nearest telephone / cell service for emergency calls is found. A communication system shall be established between the person(s) working inside the mine and the standby person(s) outside.

All persons entering the mine opening shall wear appropriate clothing and carry appropriate gear, including, as required for the conditions present, harnesses, head, hand and foot protection, life lines, respirators or self-contained breathing apparatuses, and other special equipment. Proper ventilation and adequate lighting at the workplace inside the mine entry shall be provided. The Contractor shall review with their workers and personnel the use of hazardous chemicals or materials, electrical power, or internal combustion engines inside mine entries for safety precautions and procedures.

The Contractor is fully responsible for construction safety and shall keep the Project Manager informed of his hazardous area safety procedures. Following is a discussion of some common abandoned mine hazards and appropriate procedures to be followed.

I. Bad Air

Miners use the term "bad air" to describe an atmosphere that will not support life. The poor air circulation in some mine openings can allow carbon dioxide (CO₂), carbon monoxide (CO), methane, hydrogen sulfide (H₂S), or radon gas to accumulate. These gases are treacherous inside mine openings and even experienced miners have been killed or harmed by entering areas containing them. CO (product of combustion) cannot be readily detected and is lethal in very small amounts. The Contractor shall follow the following and other appropriate hazardous bad air procedures.

An oxygen meter shall be used to test air before and while any personnel work inside a mine opening. The oxygen meter shall be a National Mine Service (NMS) OX231 oxygen meter or equivalent. The oxygen meter shall continuously monitor oxygen levels and have an audible warning signal. If the oxygen level falls below 19 percent, all personnel shall withdraw from the working area in the mine until the oxygen content increases to safe levels.

Any remedy for increasing oxygen content of the working area or providing ventilation from the surface shall be determined in consultation with the Project Manager.

Adit Cave-ins

Cave-ins are a danger in any abandoned mine. Disturbances such as vibrations caused by walking, speaking, blasting, hammering, percussion drilling, or construction equipment may cause a cave-in inside an inactive mine. The Contractor shall follow appropriate adit cave-in protection procedures, including scaling and barring of loose rock before beginning work in an area, shoring of decayed or weak timber framing, and shoring, jacking, or rock bolting of materials in the back (roof) and sides of the adits.

Collar Cave-ins

The collar or top of a shaft, stope, or subsidence often contains decomposed rock, decayed timbers, and other conditions that allow for rapid disintegration at the opening. With the additional weight and vibration of construction machinery, workers, and backfilling operations near the mine opening, the area around the collar can slide into the opening, along with nearby machinery and laborers. Backfilling operations can tear loose cribbing or lining in a shaft leading to collapse at the collar. The Contractor shall follow appropriate collar cave-in protection procedures.

Falling

Because a shaft or stope has little light, the feeling of height and normal reaction to "pull back" is not evident to most persons. Many abandoned mine shafts, stopes, and winzes are deep

enough to cause injury or death to persons entering these features. Rescue operations of a fallen person can also be extremely hazardous.

Work above the highwall also presents fall hazards including unstable edges, poor footing, and/or trip hazards.

The Contractor shall follow appropriate hazardous fall protection procedures. This includes proper lighting, barricades, fences, personal fall arrest systems, guardrails, covers, safety net systems, safety monitoring systems, and other protection as suitable for the conditions. Fall protection shall be in accordance with OSHA regulations regarding construction fall protection (OSHA 29 CFR Subpart M). These regulations establish a six-foot threshold for the height at which fall protection is required, require employers to provide training for each employee who might be exposed to a fall hazard, and prohibit the use of body belts for fall protection and the use of non-locking snap hooks.

Loose Rock

The highwall is a dominant feature at the site and consists of vertical to near-vertical faces of weathered amphibolite and granite. The height of the highwall is variable, and the size of rock that could fall is expected to vary from small to many cubic feet in size. Any falling rock has the potential to injure or kill, and there is no way to predict when a rock fall will occur. Certain construction activities may promote rock fall including those that require vibration, shock, or removing material that may be supporting loose rocks. The Contractor shall require head protection and implement measures to protect workers (e.g. shields, scaling loose rocks, etc.)

A mineshaft or open stope will weather in much the same way as a cliff. Loose rocks are always found on timbers or on the walls. A small rock that falls a sufficient distance can penetrate a person's skull. The Contractor shall follow appropriate hazardous loose rock protection procedures, including scaling of loose rock, construction of shields, and wearing of head protection.

01170 - INDUSTRIAL WASTES AND TOXIC SUBSTANCES

The Contractor shall comply with all applicable laws and regulations existing or hereafter enacted or promulgated regarding industrial wastes and toxic substances. In any event, the Contractor shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et seq.) regarding any toxic substances that are used, generated by or stored at the project site. See 40 CFR, Part 702799. Additionally, any release of toxic substances (leaks, spills, etc.) greater than the reportable quantity established by 40 CFR, Part 117, shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Section 102b. A copy of any report required or requested by any federal agency or state government because of a reportable release or spill of any toxic substances shall be furnished to the Project Engineer concurrent with the filing of the reports to the involved federal agency or state government.

01200 – PROJECT MEETINGS

The following sections describe the required project meetings that the Contractor is expected to attend.

01210 - PRECONSTRUCTION CONFERENCES

Before starting work at the site, a conference will be held to review the construction schedules; to establish procedures for handling documents, drawings, other submissions, and for processing Applications for Payment; and to establish a working understanding between the parties as to the nature of the project. Present at the conference will be the Project Manager, the Project Engineer, the Contractor, the Contractor's superintendent, and other persons as appropriate. The Contractor shall present a progress schedule at the preconstruction conference as specified in Section 01310 below and a fire prevention and awareness plan as specified in Section 01565 below.

01220 - PROGRESS MEETINGS

Progress meetings may be held during construction for purposes of scheduling and coordination of work. Throughout the life of the project, the Contractor shall keep the Project Manager and Project Engineer well informed of the schedule of work.

01300 – SUBMITTALS

The following sections describe the required documents and reports to be submitted by the Contractor during the contract work.

01310 - PROGRESS SCHEDULES

The Contractor shall provide a detailed progress schedule to be followed in completing the work. This schedule shall be submitted in writing at the preconstruction conference and shall show the anticipated time required by the Contractor to complete each item of work in the Bid Form. Schedules may be prepared as a horizontal bar chart with a separate bar for each major portion of work or operation, identifying the first workday of each week.

01320 - PROGRESS REPORTS

The Contractor shall submit written accurate daily progress reports to the Project Manager. The reports shall include but are not limited to work accomplished, quantities of unit price bid items installed, including load tickets as appropriate, records of any complaints including corrective actions taken, records of visitors to the site, and records of any personal injury or property damage incidents. The Contractor's authorized representative shall meet the Project Manager a minimum of once each week to verify and sign-off on all payable units of work performed during that week. The authorized representatives from both parties shall be designated at the start of the project during the preconstruction conference.

01330 – HEALTH AND SAFETY PLAN

The Contractor shall prepare a Health and Safety Plan (HASP) detailing the site-specific hazards and safety precautions associated with site work. The HASP shall comply with OSHA standards and shall include a list of responsible persons, hazard identification, hazard controls and safe practices, emergency and accident response, employee training requirements, SDS, and communication information and procedures.

The HASP shall also describe hazards related to the COVID-19 Pandemic. The HASP shall include the Contractor's Infections Disease Preparedness and Response Plan, which shall include:

- Where, how, and to what sources of Covid-19 site personnel might be exposed.
- Non-occupational risk factors at home and in community settings.
- Workers' individual risk factors (e.g., older age; presence of chronic medical conditions, including immunocompromising conditions; pregnancy).
- Controls necessary to address these risks.
- Basic infection prevention measures.
- Policies and procedures for prompt identification and isolation of sick people.
- Workplace controls for reducing the risk of Covid-19 spread in the workplace.

Additional information and safety resources related to COVID-19 can be found on OSHA's website: <https://www.osha.gov/SLTC/covid-19/>

Contractor shall follow New Mexico Department of Health Public Health Orders, Executive Orders, and COVID safe practices for construction. Additional information may be found on the New Mexico Department of Health Coronavirus Disease 2019 webpage at <https://cv.nmhealth.org/>.

The Contractor shall submit a draft of the HASP to the Project Engineer for review and comment a minimum of one month before mobilization to the site. The Contractor shall finalize the HASP and submit a final copy to the Project Engineer prior to beginning work on the project site.

01340 - SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

The Contractor shall submit shop drawings, product data, and samples as required in the specifications. Submittals shall be organized such that each submittal covers items in no more than one specification section. The Contractor shall allow a minimum of 14 calendar days for the Project Engineer's review; shorter periods for Project Engineer's review will not be acceptable. The Contractor shall allow acceptable time for the entire review process including transmittal, initial Project Engineer's review, correction and resubmission, final review, and distribution.

Engineering data and shop drawings covering all equipment and fabricated materials shall be submitted to the Project Engineer for review and comments. These data shall include drawings and descriptive information in sufficient detail to show the kind, size, arrangement, and operation of component materials and devices; the external connections, anchorages, and supports required; and performance characteristics and dimensions needed for installation and correlation with other materials and equipment. Data submitted shall include drawings showing essential details of any changes proposed by the Contractor.

It shall be the duty of the Contractor to check all data and shop drawings for completeness before submittal for Project Engineer's review. Each drawing or data sheet shall have indicated there on the proposed use of the item as it pertains to the Work. Catalog cuts, pages, or copies submitted for review shall have items proposed for use in the Work clearly marked and identified. The current catalog number, date, and revision and drawing number (if applicable) shall be included.

Deviations from the drawings or specifications shall be identified on each submittal and shall be referenced in the Contractor's transmittal letter. The submittal for such deviations shall also include details of changes proposed and modifications required for all affected portions of the Work.

Shop drawings and other review data shall be submitted to the Project Engineer only from the Contractor.

The Contractor's submittal of shop drawings and other review material shall represent that the Contractor has reviewed the details and requirements of the Contract Documents, has coordinated the subject of the submittal with other portions of the Work, and has verified dimensions, quantities, construction details, materials, and installation criteria, as applicable for the Work. The Contractor shall accept full responsibility for the completeness of each submittal and, for re-submittals, verify that exceptions noted on the previous submittal have been accounted for.

Any requirement for more than one resubmission or delay in obtaining Project Engineer's review of submittals will not entitle the Contractor to an extension of Contract Time unless authorized by Change Order.

The Project Engineer's review of drawings and data submitted by the Contractor will cover only general conformity to the drawings and specifications, external connections, and dimensions that affect the plans and layout. The Project Engineer's disposition of submittals will not constitute a blanket approval of all dimensions, quantities, and details of the material, equipment, or item shown. Regardless of the corrections made in, or disposition given to, such drawings and data by the Project Engineer, the Contractor shall be responsible for the accuracy of such drawings and data and for their conformity and compliance with the contract documents.

No work shall be performed in connection with the fabrication or manufacture of materials and equipment, nor shall any material, accessory, or appurtenance be purchased until the drawings and data therefor have been reviewed.

Four copies of each drawing and necessary data shall be submitted to the Project Engineer. Each drawing or data sheet shall be clearly marked as instructed above. Submittals will be accepted only from the Contractor.

When the drawings and data are returned NOT APPROVED or RETURNED FOR CORRECTION, corrections shall be made as noted by the Project Engineer and four corrected copies resubmitted as instructed above.

When drawings and data are returned marked NO EXCEPTIONS NOTED, EXCEPTIONS NOTED, or RECORD COPY, no additional copies need be submitted.

The Project Engineer will return two copies with comments to the Contractor. The Contractor shall send additional copies with the original submittal if the Contractor requires more than two copies.

All drawings and data, after final processing by the Project Engineer, shall become a part of the contract documents and the work shown or described thereby shall be performed in conformity therewith unless otherwise required by the Project Engineer.

01380 - CONSTRUCTION PHOTOGRAPHS

At the request of the AML Program, the Contractor shall provide routine periodic construction photographs to support Applications for Payment and to supplement Project Record Documents.

01400 – QUALITY CONTROL

The following sections outline the duties, responsibilities, and qualifications of inspectors, testing laboratories, and the Contractor's quality control requirements required to perform the contract work.

01405 - CONTRACT QUALITY CONTROL

The Contractor shall be responsible for the maintenance of quality control throughout the period of the contract work. This includes making periodic spot checks to assure that equipment, materials, and construction quality, meet the contract specifications.

01410 - TESTING LABORATORY SERVICES

Independent commercial testing laboratories shall perform all tests required by the contract documents to determine compliance with the specifications. The testing laboratories shall be acceptable to the Project Engineer. The laboratories shall be in the regular business of testing services in accordance with the specifications for which tests are required, and shall be staffed with trained and experienced technicians, equipped properly, and fully qualified to perform the specified tests in accordance with reference standards.

All testing services for tests of materials required by the contract documents shall be the responsibility of the Contractor. The Project Engineer shall review all sources of materials before delivery of the materials to the job site. Before the performance of any testing, the Contractor shall obtain the concurrence of the Project Engineer for the laboratory or laboratories selected by the Contractor.

The Contractor shall require the producer or manufacturer of materials, for which the specifications require inspection or testing services during the production or manufacturing process, to arrange for and pay an independent organization to perform the specified services.

The Project Manager will determine the exact time and location of field sampling and testing. The Project Manager or Project Engineer may require additional sampling and testing as necessary to assure that materials conform to the contract documents. The Contractor shall pay the costs of any retesting or re-sampling required when initial tests or samples fail to meet the specified requirements.

Written reports of tests furnished by the Contractor for the Project Engineer's review shall be submitted in conformance to the procedures set forth in Section 01340.

01500 – CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

The following sections specify the types of construction facilities and temporary controls the Contractor shall provide for completion of the contract work.

01505 - MOBILIZATION

The Contractor shall furnish and mobilize all specified construction facilities, temporary controls, equipment, labor, materials, power, supervision, and supplies to the site and commence work within 30 working days after receipt via certified mail of the Notice to Proceed. Mobilization includes everything necessary to complete the required contract work. The Contractor shall inform the Project Manager of plans and schedules to move all equipment, machinery, and supplies to the job site. The Contractor shall locate and position the staging area including field offices, parking, storage, and support facilities as directed and approved by the Project Manager. All equipment and machinery shall be moved onto the job site in conformance with previously approved plans and schedules. It is the Contractor's responsibility to arrange for storage facilities for equipment and materials. City, state, federal, or other public or private property shall not be used as temporary storage or parking areas for any equipment or materials unless written clearance is obtained by the Contractor from the appropriate public officials or private individuals. The Contractor must be prepared to move all necessary equipment to each construction site within the project area. This movement of equipment shall be at the Contractor's expense and should be covered under Bid Item No. 1, Mobilization, on the Bid Form.

01510 - TEMPORARY UTILITIES

The following sections describe temporary utilities, controls, facilities, and construction aids required during construction. They include requirements for installation, maintenance, and removal.

01516 - TEMPORARY SANITARY FACILITIES

The Contractor shall provide temporary sanitation facilities during the contract work, and made available to MMD personnel. The facility shall be installed on the project site in a location removed from the immediate contract work area. Sanitation facilities (portable toilet units) shall include a handwash station. Sanitation unit(s) shall be staked down to prevent tipping from high winds. The facility shall be locked to prevent unauthorized access during the times work is not conducted.

Sanitation facilities shall be maintained and serviced at least twice a month, unless more frequent service is necessary. The Contractor shall remove the facility upon completion of the contract work and restore the area.

01530 – BARRIERS AND ENCLOSURES

The Contractor shall provide barricades with blinking markers for all equipment on roadways and pedestrian walkways. The barricades shall be no less than twenty feet from the front and rear of any equipment in the described rights-of-way. Traffic control devices shall be in substantial conformance with the American Traffic Services Association (ATSA) Guide for Work Area Traffic Control. The Contractor shall remove the barricades upon completion of the contract work.

01533 - TREE, PLANT AND WILDLIFE PROTECTION**I. Tree and Plant Protection**

Environmental disturbance shall be kept to a practical minimum.

In steep areas and around vegetation, the Contractor shall, before beginning work, discuss the planned extent and nature of disturbance with the Project Manager. Existing plants and trees shall be protected from damage or injury resulting from the Contractor's operations. Damaged trees and shrubs shall be trimmed to remove broken limbs where minor damage has occurred. Where directed by the Project Manager, cut or scarred surfaces of trees or shrubs shall be treated with a heavy coat of a tree sealant approved by the Project Manager.

II. Wildlife Protection

All area wildlife, including bats and owls, that may use the mine features are protected, and this safeguard project shall not adversely affect them. Refer to Table I for designated periods of the year where work restrictions shall be implemented to protect wildlife. Shooting at and chasing wildlife is prohibited.

At or before the preconstruction conference, the Contractor shall submit a construction schedule, which includes anticipated dates of closure of specified mine features, in accordance with Section 01310. Based on this schedule the AML biological staff will give authorization to proceed on closure of the mine features that require netting, tarping, or smoke bombing to exclude animals before closure. It is solely the Contractor's responsibility to obtain this

authorization. Normally a minimum of one week written notice of the dates of closure is needed from the Contractor to the AML biological staff. After approval of the schedule, any need for changes shall be coordinated with the AML biological staff a minimum of 48 hours before closure of the features. The Contractor's failure to follow this procedure may result in stoppage of the construction activity at the Contractor's expense until the biological staff can reschedule netting and tarping of the specified features.

The Contractor shall aid AML staff in using smoke bombs to expel remaining bats or other animals before backfilling or closing a mine feature, in covering the entrances of designated mine features with tarps or other barricades after the animals have exited and in removing the barricades following closure. The Contractor shall provide sufficient numbers and sizes of tarps, polyethylene sheets or other satisfactory covers for this purpose.

All mine openings, except those whose workings can be fully visually checked by the Project Manager and those which are safeguarded by the construction of bat closures, airflow closures or high-strength steel mesh, shall be tarped or netted before closure and require agreement on the dates of closure

During construction of bat closures, the Contractor shall schedule activities so the bats can readily pass through the partially completed closures from one hour before sunset until sunrise. In addition, during construction of bat closures at shafts, the Contractor shall take positive measures to reduce the rock and other material that drop into those mine features.

Internal combustion engines, including those used on air compressors, shall be placed such that exhaust from the engine is not drawn into the mine openings.

01535 - PROTECTION OF INSTALLED WORK

The Contractor shall protect installed work and control traffic in the immediate area to prevent damage from subsequent operations. Installed work includes existing safeguard measures (gates, adit closures, vents, etc.) and interpretive signs/infrastructure.

01540 – SECURITY

The Contractor shall act to assure the protection of the contract work and equipment at the contract work site. The Contractor shall furnish, install, and maintain safety fences around any hazardous or high-voltage equipment at the site for the duration of the project. Where appropriate, the Contractor shall restrict access to the project site by barricading access roads during off-hours and by posting "No Admittance" and "Hard Hat Area" signs.

The Contractor shall be responsible for the safety and security of equipment and materials. The Contractor may not claim damages or hold the State of New Mexico, the property owner, the property custodian, or the design engineer responsible for stolen, damaged, or vandalized materials and/or equipment. The work site will be accessible to the public during the construction period and fencing the entire site for security purposes is not practical.

Temporary fencing shall be placed around active work areas during off-hours.

01550 – ACCESS ROADS AND PARKING AREAS

Unless otherwise indicated, all Contractor personnel and equipment shall enter and leave the project site via existing roads and trails. Upon the regrading, recontouring, or reclamation of any part of the site, further vehicular use shall be limited to that necessary to complete operations. Any access routes that are determined by the Project Manager to be maintained throughout the project duration shall be left in as good or better condition than the condition before the start of the project. Existing roads and trails shall be used whenever possible.

Equipment shall be "walked" or operated cross-country to travel to work sites where roads do not exist. The Contractor shall advise the Project Manager and obtain prior approval every time any road blading, clearing, or dozing is required for access. Topdressing shall be stripped and stockpiled before blading as directed by the Project Manager. All unspecified roads, trails, or travel routes shall be regraded to approximate original contours, reclaimed, and revegetated, as necessary, in conformance with the specifications at no additional cost to EMNRD. Where directed by the Project Manager, the Contractor shall build earthen berms to discourage vehicular traffic and to control erosion on closed temporary construction access roads.

01560 – TEMPORARY CONTROLS

The Contractor shall take all reasonable steps to reduce any inconvenience and disruption to the public because of this project. The Contractor shall provide the following temporary controls for the duration of the contract work.

01561 - CONSTRUCTION CLEANING

The Contractor shall keep the contract work area, equipment, and adjacent areas free from spillages of construction and maintenance materials during the contract work. The Contractor shall also provide for the containment of solid debris created by unpackaging construction materials and waste from meals consumed at the contract work site. The Contractor shall assure the cleanup and removal of all spillages and solid debris to an approved disposal site at the end of each contract workday.

01562 - DUST CONTROL

The Contractor shall take all necessary measures to control dust emanations from the construction equipment. The Contractor shall assure that the equipment used in the contract work is fitted with all standard dust control devices. To maintain the health and safety of project personnel, dust control measures at this site shall comply with all local, state, and federal health and safety regulations. The Contractor shall be prepared to begin dust control measures anytime at the request of the Project Manager. Water for dust control shall be distributed in sufficient quantity and at proper times by water truck(s) equipped with spray bars, cannons, and hoses (of sufficient lengths) approved by the Project Manager. The quantity of water required and the frequency of watering shall be dependent upon the weather and the site's surface conditions and may vary throughout the project duration.

There is no source of water on site for dust suppression. The contractor shall be responsible for identifying a source for water and providing dust suppression at no additional cost to the project.

01564 - NOISE CONTROL

The Contractor shall assure that all equipment used in the contract work is fitted with standard noise suppression devices.

01565 - FIRE PREVENTION AND SAFETY AWARENESS

The Contractor shall develop an emergency plan that will outline precautionary measures and identify initial attack resources and procedures in case of a fire incident. This plan will be submitted to the Project Manager at the Pre-Construction meeting. The Project Manager will then provide feedback about the plan. The Contractor shall provide the fire emergency plan to all individuals working on this project.

Examples of precautionary measures might be:

1. Inspect all motorized and mechanized equipment to insure mufflers and spark arresters are operating properly.
2. Insure personnel are properly trained on the safe use of welding torches, arc welders, generators, saws, power grinders, chainsaws, and other tools and are also familiar with the potential of this equipment to create hot sparks and ignite fires.
3. Avoid welding or cutting in areas next to and above flammable materials or during windy conditions. This would pertain to materials inside the mine as well as outside the mine. Welding shall not take place within 25 feet of polyurethane foam during application. After its application, welding shall not take place above it without first covering the surface with at least 6" of fill material.

Examples of resources and procedures might be:

1. Implement a Hot Work Permit process to be issued for each hot work event.
2. Maintain adequate fire extinguishers, water tanks, sprayers, and other equipment at the work site that would enable personnel to immediately extinguish any accidental ignition.
3. Have personnel observe the work area while welders are operating (welders cannot see where the sparks are falling when the welder is under the welding hood).
4. Assign an individual to be responsible for the area being "safe" (no hot sparks, iron is cold) before leaving the work site.
5. Develop an emergency notification procedure in case the fire incident is or appears to be reaching an out-of-control status.

The Contractor shall obey all fire restrictions declared by the landowner(s) or adjoining property management agencies (i.e. University of New Mexico, U.S. Forest Service, and/or Bureau of Land Management).

01566 – PUBLIC SAFETY

Efforts to protect visitors from injury due to execution of the work shall be taken wherever practical. Examples of procedures that shall be followed include:

1. Use of caution signage.
2. Maintaining cleared unimpeded access to upper parking area.
3. Maintaining at least one cleared pedestrian access route to primary mine features at all times.
4. Securing of unused materials and equipment.
5. Cordon off active work areas using flagging (12-inch by 9-inch orange triangles, minimum) and/or construction fencing.

01570 – TRAFFIC REGULATION

The Contractor shall take the following measures for regulation of traffic at the contract work site.

01572 – FLAGGERS

The Contractor shall post flaggers during the off-loading and on-loading of equipment or materials in roadways at the contract work site access road entrance and/or during cleaning of the highway surface. The flaggers shall halt traffic during the off-loading or on-loading process or direct traffic to an alternate route.

01574 - HAUL ROUTES

The Contractor shall consult with the authority having jurisdiction in establishing public thoroughfares to be used for haul routes and site access. Any damage to the site access road from driving on wet/muddy surface shall be repaired at the end of the project, or as directed to maintain public access to the site.

01580 – PROJECT IDENTIFICATION AND SIGNS

At least one temporary project sign shall be furnished and erected by the Contractor at the most convenient point of public access to the project site. The proposed sign location, message

content, and font size shall be preapproved by contractor submittal, including sign mockup, prior to installation. The project identification sign shall be installed within ten working days after the receipt via certified mail of the Notice to Proceed or within five days after the Contractor initially mobilizes to the project site, whichever comes first. The sign is to be a minimum of four feet by eight feet by three quarter inch (4' x 8' x 3/4") exterior grade plywood and is to give the project title, project number, and other data within the box on the Title Page of this document. Exterior quality paint in contrasting colors shall be used. The Contractor shall remove sign, framing, supports, and foundations at completion of Project and restore the area. The costs connected to the construction, painting, erection, and later removal of the sign should be covered under Bid Item No. 1, Mobilization, on the Bid Form.

Sample of Sign:

<p style="text-align: center;">[PROJECT TITLE]</p> <p style="text-align: center;">[Nearest Municipality], [County], New Mexico</p> <p style="text-align: center;">PROJECT NO. EMNRD-MMD-####-##</p> <p style="text-align: center;">PLEASE PARDON THE INCONVENIENCE WE ARE PERFORMING MINE RECLAMATION SERVICES PLEASE AVOID AREAS IMPACTED BY WORK ACTIVITIES</p> <p style="text-align: center;">WORK AUTHORIZED BY: ABANDONED MINE LAND PROGRAM, MINING AND MINERALS DIVISION ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT STATE OF NEW MEXICO</p> <p style="text-align: center;">EMNRD PROJECT MANAGER: ##### CONTRACTOR: ##### CONTACT NUMBER: (505) ###-#### CONTACT NUMBER: (###) ###-####</p>
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01590 – FIELD OFFICES AND SHEDS

Portable or mobile buildings, or buildings constructed with floors raised above ground, may be provided by the Contractor in locations approved by the Project Manager and the landowner. At completion of work, the Contractor shall remove all buildings, foundations, utility services, and debris and restore areas.

01600 – MATERIALS AND EQUIPMENT

All materials and equipment required to complete the work shall be as specified. Any substitution to the specified products requires prior approval by the Project Engineer.

01700 – CONTRACT CLOSEOUT

The following sections specify the duties and responsibilities of the Contractor to close out the contract.

01701 - CONTRACT CLOSEOUT PROCEDURES

When work is completed, the Contractor shall submit project record documents to the Project Manager.

01702 - FINAL INSPECTION

Upon written notice from the Contractor that the entire Work or an agreed portion thereof is complete, the Project Engineer will make a final inspection with the Project Manager and Contractor and will notify the Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. The Contractor shall immediately take such measures as are necessary to remedy such deficiencies.

01710 - FINAL CLEANING

After completion of all work, the Contractor shall demobilize and remove all equipment, materials, spills, supplies, and trash from the project site and shall reclaim all areas disturbed by the Contractor's activities. Unless otherwise specified, developed, maintained roads that existed before commencement of the Contractor's activities need not be reclaimed, but must be left in a condition equal to or better than what existed before the Contractor's activities began. Fences, gates, plants, sod, and other surface materials disrupted by these operations shall be replaced or restored to original or better conditions immediately upon completion of work at the site. This shall include sweeping or cleaning the asphalt pavement on the highway if mud or soil is tracked onto the asphalt from the site access road. Other damage to private or public property shall be immediately repaired. All such cleanup, repair, or replacement work shall be done at the Contractor's expense and to the satisfaction of the Project Manager pending approval of the appropriate public officials and property owners. Payment for Demobilization should be covered under Bid Item No. 1, Mobilization, on the Bid Form.

01720 – PROJECT RECORD DOCUMENTS

The Contractor shall prepare final Project Record Documents providing information regarding all aspects of the Work, both concealed and visible, to enable future modification of the Work to proceed without lengthy and expensive site measurement, investigation, and examination. At Contract closeout, the Contractor shall deliver Project Record Documents and samples under provisions of Section 01701.

END OF DIVISION 1

DIVISION 2 – SITEWORK

The following sections describe the sitework to be performed under this contract.

02050 – DEMOLITION

The following section describes selective demolition to be performed under this contract.

02070 - SELECTIVE DEMOLITION

The mine openings and collapse features may require the removal of debris such as boards, signs, timbers, wire, temporary fencing, etcetera. Salvageable materials (e.g. T-posts and temporary chain link fencing) shall be neatly stacked on the site, while trash shall be properly disposed of at the Contractor's expense at an appropriate licensed landfill. All fasteners shall be removed from the lumber and timbers. All specified or established avoidance areas shall be avoided and the recommendations of the archaeological report and the State Historic Preservation Office (SHPO) will be followed.

Other debris that may cause bridging of backfill material or otherwise interfere with construction shall be removed as directed by the Project Manager.

02100 – SITE PREPARATION

02110 - SITE CLEARING

This work shall consist of trimming, removing, and disposing of vegetation and debris in accordance with these specifications, except those items designated to remain. This work shall also include the preservation from damage or defacement of all vegetation and items designated to remain.

Trimming shall consist of pruning low-hanging branches from trees and shrubs designated to remain to provide enough clearance for construction activities. Removal shall consist of cutting vegetation flush with the ground surface and the satisfactory disposal of trees, brush, and any other vegetation. The Contractor shall perform selective tree and shrub removal and trimming only in designated work areas as shown on the drawings.

The Contractor shall remove vegetation outside of the migratory bird nesting season (February 15-September 15). If any vegetation is to be removed during the migratory bird nest season, the Contractor shall contact the Project Manager four weeks prior to the removal to allow for completion of a migratory bird survey.

Within construction limits for borrowing backfill material, all surface debris, roots, stumps, trees, and other objectionable protruding obstructions shall be cleared with the Project Manager's concurrence.

All vegetation from trimming and removal operations shall be spread along and adjacent to the disturbed area as practicable and as designated by the Project Manager.

02200 – EARTHWORK

The following sections describe the earthwork to be performed under this contract.

02210 - GRADING

The following sections describe the grading to be performed under this contract.

02211 - ROUGH GRADING

Unless otherwise specified or indicated, all cut and fill slopes shall be rough graded so that slopes are not steeper than three horizontals to one vertical (3h:1v) in earth, two horizontals to one vertical (2h:1v) in incompetent rock and very rocky soils, and one half horizontal to one vertical (0.5h:1v) in competent rock. Where specified and as directed by the Project Manager, the Contractor shall grade sites and construct drainage ditches around safeguarded mine features to divert storm water away from those features.

Where cut slopes in competent rock are steeper than one and a half horizontal to one vertical (1.5h:1v), the maximum uninterrupted vertical height of the slopes shall be no more than ten feet. A series of slopes, each at between one half horizontal to one vertical (0.5h:1v) and one and a half horizontal to one vertical (1.5h:1v), may be constructed in competent rock if horizontal benches or terraces a minimum of six feet wide, within slopes of at least 4 percent, are built at a vertical spacing of no more than ten feet.

02212 - DECOMPACTION

Before construction demobilization and following the need for any construction access to each mine feature, the Contractor shall decompact areas compacted by construction activity, including temporary work areas and access trails, and staging, storage and parking areas. Areas where more than four feet of overburden material has been removed shall also be decompact. Decompaction shall be performed to the satisfaction of the Project Manager.

Where bedrock is exposed at the surface, such decompaction will not be required. Decompaction methods shall be effective at reducing soil density to a minimum depth of twelve inches (except where bedrock is closer to the surface) and shall be accomplished without inverting the soil layers. Where practicable, ripping shall be done along the contour. Alternatives to ripping or auguring for decompaction shall be acceptable to the Project Engineer.

02216 - ACCESS ROAD/ROUTE CLOSURES

Before construction demobilization and following the need for any construction access to the Feature SUB-1, the Contractor shall close temporary construction access roads/routes as specified and as directed by the Project Manager. The Contractor shall outslope the road surface and remove all berms along the outer edge of the road. By grading material toward the cut bank, the Contractor shall take care not to spill graded material over the fill slope. The outslope shall be enough to divert water over the bank at approximately four to eight percent.

The Contractor shall construct berms and cross-ditches as directed by the Project Manager, to restrict vehicular access and control erosion.

In addition, cross-drains shall be located to divert water where the road traverses a ridge, above and below road junctions, above steep incurves to prevent bank cutting and to keep road surface water from entering a draw, below sharp incurves to prevent water from a draw from coursing down the road, and below seeps and springs.

Construction access routes with minimal disturbance shall be raked out to the satisfaction of the Project Manager and seeded as specified in Section 02900 – Landscaping.

02220 - EXCAVATING, BACKFILLING, AND COMPACTING

The following sections describe the excavating, backfilling, and compacting to be performed under this contract.

02222 - EXCAVATION

The Contractor shall reopen, as necessary, the collapse features and decline adit that may be partially closed, by mucking out the debris, earth, and rock plugging or partially plugging them. Before removing any backfill, the Contractor shall discuss with the Project Manager where material shall be excavated, and shall obtain the Project Manager's approval of the excavation plan.

I. Feature F9 – Reopened Decline Adit

The reopened decline adit shall be excavated to clear all existing soil and rubble from the entrance to at least 4 feet into the decline adit as measured from the vertical section of the highwall above the opening. Excavated material shall be stockpiled near the feature for reuse in backfill after placing PUF in the opening.

Feature SUB-1 – Open Stope

The roof of the mine collapsed into the mine workings resulting in the Feature SUB-1 subsidence. The material in the subsidence feature includes the topsoil that dropped into the hole when it collapsed. The Contractor shall excavate and salvage as much of the topsoil as feasible for use as cover over the surface after PUF backfill. The underlying rock is assumed to have

broken up during the collapse resulting in rock rubble beneath the soil inside of the hole. Separation of soil from rock may be difficult due to the relative thinness of the topsoil in the area above the highwall. The Contractor shall limit the excavation of rock with the topsoil, and hand screen large rocks and place them back in the subsidence feature after soil excavation efforts are completed.

Salvaged topsoil shall be stockpiled near Feature SUB-1 and within the designated disturbance area.

Safety Note: The Contractor shall inspect the Feature SUB-1 prior to mobilizing equipment to the edge of the collapse feature. Underground mine workings extend away from the subsidence feature in two directions. The mine workings are voids that extend away from the hole and present risks of further collapse under the weight and vibration of equipment operation. The Contractor shall avoid placing equipment, personnel, or other resources over mine openings.

02223 - BACKFILLING OF MINE OPENINGS

This work shall consist of backfilling the mine features with specified engineered fill material or salvaged topsoil or excavated materials as designated in the specifications or as directed by the Project Manager. Three of the four features requiring fill material will include placement of PUF to reduce the amount of soil fill and enhance the filling of voids. Specifications for PUF material and placement are provided in Section 13050.

I. General

All backfill material shall be free of snow, ice, frozen lumps, logs, timbers, significant amounts of woody or vegetative debris, other deleterious materials and materials of such size and shape that they may bridge the opening being filled.

Hand backfilling is an option if the site is difficult for equipment access or too steep to operate equipment safely.

II. Materials

Contractor shall provide a submittal for all imported fill materials before delivery to the site. The Project Manager may request a sample of the material in addition to product data.

1. Imported Granular Fill: naturally occurring granular material free from wood vegetation, or other deleterious matter. Fill shall contain sufficient sand or filler to permit compaction. Unallowed material includes well sorted sands and gravels, very fine sand, shale, clayey soil, contaminated soil, or soil that will not support plant growth.
2. Riprap: Angular rock or stone free of seams, fractures, and coatings; and of such characteristics that will not disintegrate when subject to the action of flowing water. The minimum specific gravity of the stone shall be 2.65 as determined in accordance with ASTM C127, latest edition. The maximum resistance to abrasion shall be fifty

(50) percent determined in accordance with the requirements of ASTM C535, latest edition. The riprap shall have a maximum to minimum dimension ratio not more than 3:1. Allowable gradations shall be:

Maximum dimension (inches)	% Smaller
12	100
9	50-70
6	35-55
3	10

3. Water: Soil conditioning shall be performed using uncontaminated water provided by the Contractor. There is no source of water available on site or in the immediate vicinity of the site. Sourcing and transportation of water shall be the responsibility of the Contractor at no additional cost to the unit price provided for executing safeguard construction.

III. Final Layer of Fill

Wherever practicable, the final eight- to twelve-inch layer of the fill at mine openings shall be soil of comparable quality to the undisturbed soil surrounding the backfilled feature. Only use native sources of soil that are excavated from the feature being worked on. No borrow source is available on site.

02224 - BORROW

Except as otherwise noted or allowed by the Project Manager, the Contractor shall not use any material from within the mine area for borrow.

02229 - COMPACTION

Fill shall be constructed in compacted layers of uniform thickness. Soil shall be conditioned with water to improve compaction. Fill material which contains excessive moisture shall not be compacted until the material is dry enough to obtain relative compaction.

The loose thickness of each layer of fill material before compacting shall not exceed 8 inches, except as approved by the Project Manager. Any rock greater than 4 inches in any dimension shall be removed from the fill material prior to compaction. No large rocks shall be left in contact with the vent pipe, natural rock surfaces (e.g., highwall or adit surfaces), or other new or relic infrastructure.

Material used for fill shall be compacted whenever possible using multiple passes with a rammer/jumping jack compactor. Hand tampers may be used to achieve compaction at Features F9 and SUB-2, where mechanical equipment will not fit (e.g., inside the decline adit). The fill shall obtain a compaction density not less than what the equipment can reasonably obtain to the satisfaction of the Project Manager. Wheel rolling to achieve compaction is prohibited to prevent damage to nearby structures or collapse of underground mine voids.

02600 – PIPED UTILITY MATERIALS

The following sections describe piped utility materials to be installed under this Contract.

02613 - CORRUGATED METAL PIPE

Corrugated metal pipe and connectors shall be made from galvanized steel in conformance with the applicable requirements of AASHTO M218 or ASTM A929. The pipe shall be manufactured and inspected in conformance with the requirements of AASHTO M36 and as hereinafter specified. The size of the pipe shall be nominal 18-inch diameter. Nominal diameter or dimensions as referred to in AASHTO M36 shall be defined as the minimum inside dimension of the pipe.

Materials for corrugated metal pipe and appurtenances shall be as specified in AASHTO M36. Pipe in which the seams indicate slippage or unraveling will be rejected. Sawed ends and vent notches on pipes will be permitted provided all burrs are removed. Spelter coating damaged by welding or fabrication shall be repaired and recoated in accordance with AASHTO M36.

Unless otherwise indicated, corrugated steel pipe shall be Type I and consist of 14- or 16-gauge galvanized steel pipe with helical corrugations. The pipe shall be new, free of rust, gaps in seams, holes in the wall, and deformations that reduce the inside diameter by more than two inches.

Bands for connecting helically corrugated pipe shall conform to the requirements of AASHTO M36. Coupling bands shall be a minimum of 18 gauge and made of the same base metal and coating as the pipe. Coupling bands shall lap equally on each of the pipes being connected to form a tightly closed joint after installation. Flange bands will not be permitted.

The pipe shall be placed vertically and plumb in the collapse feature at Feature SUB-2. The bottom of the installed pipe shall be in contact with the earthen base of Feature SUB-2. Pipe shall be inspected before any backfill is placed. Any pipe found out of alignment, unduly settled, or damaged shall be taken up and reset or replaced.

Submittal approval for corrugated metal pipe and appurtenances is required before delivery.

02800 - SITE IMPROVEMENTS

Cattle guards, fences, gates, and other road or street improvements destroyed, removed, or damaged during construction shall be replaced with the same type and dimensions of units removed and shall be equal to and consistent with the undisturbed portions of the improvements existing before the project.

02830 - FENCES

Fencing Specifications shall conform to the requirements set forth in AASHTO M181, the New Mexico Standard for Public Works Construction, Section 410 and NMSA 1978, Sections 77-16-1 through 77-16-18, as modified below.

I. General

The Contractor shall submit one test certificate each to the Project Engineer certifying that the fencing materials conform to the requirements herein provided. When the locations of manufacturing plants allow, the plants may be inspected for compliance with specified manufacturing methods and material samples will be obtained for laboratory testing for compliance with material quality requirements. This can be the basis for acceptance of manufacturing lots as to quality. All materials will be subject to inspection for acceptance as to condition to check for compliance before or during incorporation of materials in the work. All fences shall be installed in the locations specified and as directed by the Project Manager.

II. Wire Fence

This work shall consist of the construction of fence in substantial compliance with the specifications, lines and grades shown on the plans or established by the Project Engineer.

A. Wire

All fences shall consist of six wires spaced as indicated.

Barbed wire shall conform to ASTM A121 Class 1 or 3 coating and shall consist of two strands of nominal 12 gauge (0.099-inch) coated diameter wire with either 2-point, fourteen gauge (0.080-inch) diameter barbs spaced approximately four inches apart or 4-point, 14 gauge (0.080-inch) barbs spaced approximately five inches apart. The shape of barbs may be flat, half-round, or round. Instead of galvanizing, the wire may be coated with aluminum alloy at the rate of not less than 0.30 ounces per square foot of wire surface and the barbs at the rate of not less than 0.25 ounces per square foot of wire surface.

Tie wires for fastening barbed wire to steel posts shall be not less than thirteen gauge (0.109-inch) coated diameter and galvanized conforming to ASTM A1 12. Eleven gauge (0.120-inch) coated diameter or heavier wire fasteners or metal clamps may be used instead of tie wires when approved in advance by the Project Engineer.

Stays for wire fences shall be not less than 9 gauge (0.142-inch) coated diameter galvanized wire conforming with ASTM A1 16 and of length and spacing shown on the plans.

B. Brace Panels and Posts

Intermediate brace, gate brace and corner panels shall be prefabricated assemblies, “Easy Fence” by D-C Industries (Blackfoot, ID, 208.782.1177) or approved equivalent, which require no concrete footings. They shall be installed following the manufacturer’s recommendations.

Line posts shall be metal. All posts shall be of the type, size and length shown on the plans and as herein provided.

Metal posts shall be fabricated from rail, billet, or commercial grade steel conforming to ASTM A702 and shall be galvanized or painted green as required. All metal posts throughout the project shall be either galvanized or painted the same color green. Galvanizing shall conform to ASTM A123. When painted green, the posts shall be cleaned of all loose scale before finishing and painted with one or more coats of weather resistant, air baking or drying, green paint or enamel.

Metal line posts shall consist of heavy-duty steel spaced sixteen and one half feet apart. Metal line posts shall have a minimum weight of 1.33 pounds per foot exclusive of anchor plates. A minus tolerance not to exceed 5 percent of the minimum weight of each post will be permitted. A plus tolerance of two inches and a minus tolerance of one inch in the length of each post will be permitted. Metal line posts may be I-beam, T-beam, U-beam, Y-beam, or H-column section.

Line posts shall be provided with corrugations, lugs, ribs, or notches spaced approximately one inch on centers to engage the required fence wire in designated spaces. Posts with punched tabs to be crimped around the wire will not be accepted. Anchor plates shall be an area of not less than eighteen square inches, shall weigh not less than 0.67 pound each and shall be securely welded, bradded, swaged, or riveted to each line post in a way that prevents displacement when the posts are driven.

C. Fittings

All fittings, hardware and appurtenances for fences shall be commercial quality steel, malleable iron, or wrought iron and shall be galvanized in accordance with the requirements of ASTM A153. Fittings shall be black PVC-coated with ultraviolet-resistant coating.

III. Construction

The Contractor shall perform such clearing and grubbing as may be necessary to construct the fence to the required grade and alignment. At locations where fence runs are completed, appropriate adjustment in post spacing shall be made to conform to the requirements for the type of closure indicated.

The tops of all posts shall be set to the required depth and alignment. Cutting off the tops of posts shall be allowed only with the approval of the Project Manager and under the conditions specified. Wire or fencing of the size and type required shall be firmly attached to the posts and

braced in the manner indicated. All wire shall be stretched tautly and shall be installed to the required elevations.

Wire fences shall be constructed in conformity with the details and at locations shown on the plans or staked by the Project Manager. All posts shall be set plumb and to the depth and spacing shown on the plans. Excavations for footings and anchors shall be to dimensions shown on plans or established by the Project Engineer. Metal line posts may be driven. Posthole backfill shall be placed in thin layers and each layer solidly compacted. Posts set in rock shall be placed as directed by the Project Manager.

Mechanical stretcher or other device designated for such use shall stretch fence wire and welded wire fabric. Stretching by motor vehicle will not be permitted. The length between pull posts shall not exceed nine hundred ninety feet for barbed wire fence.

Intermediate braces shall be placed at intervals not to exceed nine hundred ninety feet and shall be spaced evenly between corner posts.

Corner posts and braces shall be placed at appropriate fence angles or bends.

Fence materials of the same manufacturer, type, or process, conforming to the specifications and details shown on the plans, shall be used throughout the work unless otherwise authorized in writing by the Project Engineer.

Contractor personnel shall follow site safety requirements and use of personal protective equipment. Installation of fencing within 10 feet of the top edge of the highwall or near vertical slope shall be executed while wearing and maintaining fall protection equipment.

02840 - SIGNAGE

Rockfall presents a hazard that cannot be economically attenuated to the point of zero risk along the entire length of the highwall. To alert visitors to the site of the rockfall hazard, signs shall be posted. The contractor shall provide labor, equipment, and materials necessary to place posts and secure the hazard signs.

I. General

The Contractor shall install hazard signs and signposts at locations specified by the AML Program Project Manager. The locations shall be selected at the most visited mine features at the base of the highwall or other prominent site features. Provided signs shall have a 10-year durability warranty and shall not fade, peel, delaminate, or rust during that time. Two styles of signs shall be provided by the contractor:

A. Hazard Signs

Hazard signs shall be yellow diamonds complying with the Manual on Uniform Traffic Control Devices (2004 Edition inclusive of subsequent supplements). Signs shall be 24.2 inches tall and 18 inches on each of the four sides. Corners shall be rounded at a radius of 1.5 inches.

Signs shall be provided with two 3/8-inch holes located in the center of the sign and spaced 18-inches apart and equally spaced from the top and bottom corners of the diamond. A total of 5 signs shall be supplied, all with the same rockfall hazard warning pictorial (no text). The pictorial design provided shall directly match the following image:



B. Directive Sign

One sign shall be provided and installed that provides a directive to not undermine the highwall by removal of rock. This sign shall be a square with 18-inch sides and rounded corners with radii of 1.5 inches. Two 3/8-inch holes shall be provided in the horizontal center of the sign and 1.5 inches from the top and bottom of the sign. The pictorial design provided shall be centered on the sign and match the following image:



II. Materials

A. Signs

Signs shall be fabricated in accordance with U.S. Department of Transportation *Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects, FP-14* using

heavy-duty 80-mil rustproof aluminum (ASTM B 209, alloy 6061-T6) with a reflective finish (ASTM D4956).

Printed graphics shall be printed with 3M screen printing or 3M outdoor digital inks designed for outdoor traffic (equivalent manufacture printing and inks meeting warranty requirements are acceptable). Signs shall be laminated for enhanced UV resistance, durability, and graffiti resistance.

B. Signposts

U-Channel posts (open) shall be provided and fabricated from standard “T” rails weighing 91 pounds per yard or more according to ASTM A499, Grade 60. Signposts shall be 2.00 pounds per foot before punching and shall be punched with 0.375-inch diameter holes spaced 1 inch on centers across the entire length. Signpost width shall be greater than 3 inches and length shall be 8 feet with a tolerance of 2 inches plus or minus.

Signposts shall be finished with baked enamel green paint or galvanized per ASTM A123. The posts shall be punched and cleaned of all loose scale, burrs, and sharp edges before finishing and coating.

C. Sign Fasteners

Fastener hardware shall be zinc-plated steel bolts with matching nuts and lock washers. Steel hardware shall be 2.5 inches in length and 5/16-inch diameter.

Nylon washers shall be used to separate dissimilar materials (between the post and the sign and between the sign and the bolt head).

III. Construction

Submittals shall include a shop drawing of each sign type including the pictorial to be used and dimensions of the sign and material submittals for sign, signposts, and fasteners.

The locations for the signs shall be identified and marked as directed and approved by the AML Project Manager prior to placement of signpost. Locations shall not damage existing infrastructure or cultural resources and shall not block or impede pedestrian access routes or future maintenance activities. Consideration shall be given to possible future safeguarding measures to protect visitors from rockfall. Compliance with New Mexico Call Before You Dig regulations shall be maintained.

Signposts installed in soil shall be driven in accordance with manufacturer’s recommendations. At least 2.5 feet of the posts shall be embedded below the original surface grade. Posts shall be set plumb.

Should solid rock be encountered during signpost installations, the locations may be adjusted, but only with prior approval from the AML Project Manager; otherwise, rock coring or other appropriate equipment shall be used to excavate to the minimum embedment depth.

Signposts installed in rock shall be secured using concrete in the annular fill space within the core hole. The top of the concrete shall be crowned to shed water. For posts in concrete, install temporary guys or bracing to hold the posts in position until the concrete sets. Do not install materials on posts and do not strain posts set in concrete until seven (7) days after concrete placement, or until the concrete has reached a compressive strength of 2,500 psi, whichever occurs first. Any concrete testing costs shall be borne by the Contractor. Results of the test(s) shall be provided by an independent material testing company.

Signposts and signs shall be rotated to face away from the highwall or as directed by the AML Project Manager and mounted at the top of the posts. Bolts shall be tightened to the torque recommended by the sign manufacturer. Anti-theft measures shall be taken to protect the signs (e.g., tack weld bolt to nut, scar threads on bolt, and/or bend thread end of bolt).

02890 - FEATURE IDENTIFICATION MARKERS

The Contractor shall install identification markers at Features SUB-1, SUB-2, and F9. The identification markers shall be installed in at locations shown on the plans or as specified by the Project Manager.

I. Materials

A. Marker Caps

The caps will be bronze or other alloy typical of markers typically used by professional surveyors. The markers will be provided by the Project Manager with feature information already engraved on the surface.

B. Steel Pipe

The pipe shall be 3 ½-inch (4-inch outer diameter) schedule 40 galvanized steel pipe. Pipe shall be manufactured using steel conforming to the requirements of ASTM A1008/A1008M and A1011/A1011M.

C. Fill Sand

Clean sand shall be used to fill voids in the pipe. The sand shall be clean, well sorted, sand that can be poured into the pipe and fill the pipe without bridging or forming voids. Suitable material shall be Quikrete® Premium Play Sand or equivalent.

D. Cement Grout

Cement grout shall be high strength, non-metallic, and non-shrink, compliant with ASTM C1107. Grout shall be premixed, so only water is added at the job site. Acceptable material shall be Quikrete® non-shrink precision grout, or equivalent. Water shall be provided by the Contractor.

II. Construction

The locations of the markers are shown in the plans; however, locations may be changed in the field by the Project Manager.

Steel pipe shall be placed vertically and plumb in granular fill material. The pipe lengths shall be a minimum of 4 feet. The pipe shall have a minimum of 6 inches and a maximum of 12 inches exposed above grade. Once placed, the interior void of the pipe may be filled with sand to within 6 inches of the top of the pipe. A minimum of 6 inches from the top of the pipe shall be filled with hydrated non-shrink grout. The grout shall be hydrated such that it has just reached flowable characteristics, but not excessively. Ensure that there are no cavities or voids in the pipe during grouting. The provided marker cap shall be embedded in the grout. The marker shall be covered during curing if inclement weather is forecasted.

If site conditions prevent installation of the marker caps in the steel pipe, the Contractor shall obtain alternate installation instructions from the Project Manager. Alternate considerations may include drilling and grouting the caps in undisturbed, competent rock or concrete at or immediately adjacent to the feature.

02900 - LANDSCAPING

The following sections describe revegetation to be performed under this contract. Revegetation shall be required at Feature SUB-1, the overland access route to Feature SUB-1, and at areas disturbed during construction and as specified by the AML Project Manager.

2920 – SOIL PREPARATION / SURFACE ROUGHENING

Prior to seedbed preparation, the Contractor shall grade all disturbed areas as described, decompact those areas specified above, and roughen the surface as specified below.

On slopes up to 1.5h:1v, the soil surface in areas to be seeded shall be prepared to be continuously rough and hummocky. This shall be accomplished by using an excavator bucket, or other acceptable methods that produce similar results, to create small pockets and furrows to trap water and create favorable microclimates for plant growth.

After roughening, seed shall be broadcast or hydroseeded as specified below. In areas with extremely dry and loose soil, the Project Manager may require the Contractor to wait until the soil has settled before seeding.

Large and small boulders may be left exposed on site prior to seeding, either singly or in groupings that blend with the natural surroundings, as directed by the Project Manager. The Project Manager may require that additional boulders be placed on site to enhance visual variation and provide wildlife habitat.

Unless the soil is severely compacted or as otherwise noted, soil preparation will not be required for discontinuous, isolated areas of disturbance less than 0.05 acres (approximately 2,500 square feet or 50 feet by 50 feet).

The extent of seedbed preparation shall not exceed the area on which the entire seeding operation can be applied. Seed shall be applied before soil surface crusting occurs. Loss of seed and fertilizer due to erosion shall be prevented from occurring. If crusting or erosion occurs, the entire area affected shall be reworked beginning with seedbed preparation.

02921 - TOPDRESSING

As specified, on construction sites, mined areas, and other critical areas where the existing surface material is either chemically or physically unsuited to support adequate vegetation, the best available soil material as determined by the Project Manager shall be evenly spread on the surface in sufficient depths to maintain plant growth. Available topdressing in all areas to be disturbed shall be set aside prior to deeper soil disturbance for excavation, mine feature backfilling and access road blading.

Topdressing shall be applied generally along the contour, but if hazardous conditions arise, the application may be in another direction. In all cases, placement shall be such that erosion is kept to a minimum. All topdressed slopes shall be prepared by surface roughening before planting to reduce erosion.

02930 - GRASSES

The following section describes the seeding to be conducted under this contract.

02933 - SEEDING

Following completion of seedbed preparation, the Contractor shall seed areas according to the Specifications and as follows:

I. Seeding Time

Seeding shall be accomplished between June 15 and August 31 of each year, unless specific permission in writing is issued by the Project Engineer to allow seeding before or after these dates. Seeding shall not be done when the soil is too wet, too dry, or otherwise untillable as determined by the Project Manager.

II. Seed Species and Mixtures

To assure AML that the seed purchased shall exhibit the characteristics associated with the given variety, and that it is genetically pure, the Contractor shall provide certified seed of named varieties. For the unnamed varieties, the seed shall be obtained by the contractor from the

closest available source adapted to the climate and soil. The percentage of each species comprising seed mixtures for application is outlined below. The mixture is to be used for revegetation of areas defined above in Section 02920. Seed species and varieties, which are well adapted to the soil, climate, and topography of the disturbed areas, shall be used in revegetation and are discussed below.

III. Seeding Methods

A. Broadcasting/Hydroseeding

The seed shall be broadcast or hydroseeded. When broadcast seeding, passes shall be made over the site to be seeded such that an even distribution of seed is obtained. Broadcast seeding shall take place immediately following the completion of final soil preparation.

Broadcast seeding shall not be conducted when wind velocities would prohibit an even seed distribution as determined by the Project Manager. Broadcast seeding shall be followed by hand raking, manual use of a drag chain, or sweeping with sturdy tree or shrub branches to cover seed.

This shall be done over the entire seeded area but shall not be so extreme as to reduce the extent of soil relief.

Broadcast seeding of large areas shall be done using hand-operated “cyclone-type” mechanical seeders. All seeding equipment used shall be equipped with a metering device and set to the appropriate seeding rate.

Broadcast seeding of small areas of disturbance, less than 0.05 acres (approximately 2500 square feet or 50 feet by 50 feet) may be done by hand scattering and raking to ensure seeds are not exposed on the soil surface.

After completion of the broadcast seeding and seed covering, organic debris such as logs, tree stumps and grubbed vegetation shall be randomly redistributed across the sites. This shall be done at the Project Manager’s direction for the purpose of creating visual variation, ground shading, and production of wildlife habitat. Care shall be taken to avoid leveling the soil surface.

B. Completion

If the Contractor is scheduled to close the project outside the specified seeding time when seeding is the only incomplete item, the Contractor shall complete only seed bed preparation and 75 percent of the lump sum bid price for seeding will be retained. Then the job shall be held open for seeding during the next seeding season with the remainder of the bid price being paid upon completion and acceptance of seeding.

If all of the work required by the contract, except seeding, is completed before seeding is accomplished because of seasonal limitations, partial acceptance of the work will be made with

final acceptance delayed until seeding has been accomplished in accordance with these specifications. Liquidated damages will not be assessed against the Contractor during the interim period between the dates of partial acceptance and final acceptance if such delay is the result of seasonal limitations.

C. Seeding Rates

Seeding rates are given in Table II. Pure Live Seed (PLS) expresses seed quality. PLS is a percentage of pure, viable seed in a particular lot of seed. PLS is calculated by multiplying the percent total germination by the percent purity and dividing by one hundred (100):

$$\text{Percent PLS} = \frac{\text{Purity} \times \text{Germination}}{100}$$

TABLE II
SEED MIX

Class	Plant Species (Common Name/Scientific Name)	Pure Live Seed (pounds per acre)
Graminoids	Indian Ricegrass (<i>Achnatherum hymenoides</i>)	2.00
	Blue Grama (<i>Bouteloua gracilis</i>)	2.00
	Sideoats Grama (<i>Bouteloua curtipendula</i>)	1.50
	Arizona Fescue (<i>Festuca arizonica</i>)	1.00
	Galleta Grass (<i>Pleuraphis jamesii</i>)	1.50
Forbs	Narrow-leaf Penstemon (<i>Penstemon strictus</i>)	0.75
	Desert Paintbrush (<i>Castilleja chromosa</i>)	0.75
	Scarlet Globemallow (<i>Sphaeralcea coccinea</i>)	1.00

All seed shall comply with NMSA 1978, Sections 76-10-11 through -22 and 21.18.4 NMAC, Seed Standards and Classifications. Invoices or bag labels showing purity and germination for all seed shall be provided to the Project Manager before seeding.

The Contractor shall protect and care for seeded areas until final acceptance of the work and shall repair all damage to seeded areas caused by pedestrian or vehicular traffic at no additional cost to EMNRD.

02940 – MULCHING

The Contractor shall apply mulch to all seedbed areas. Mulching will not be permitted when the wind velocity exceeds fifteen miles per hour. The mulch type shall be coarse bark and/or wood chips or chunks, pecan shells, or approved equivalent. Materials shall be wind resistant. No more than 15 percent, by loose volume, shall pass through a 0.25-inch sieve. The

mulch shall not contain resin, tannin, or other compounds in quantities that would be detrimental to plant life. Sawdust or materials with noxious seed or plants will not be acceptable. Chipped, but uncomposted, yard waste will not be acceptable unless the material is certified to be free of weed seed. Plant trimmings generated from onsite activities may be shredded and used for mulch; however, deliberately trimming vegetation for the sole purpose of making mulch is not allowed.

The mulch shall be spread uniformly over the prepared area either by hand or with a mechanical mulch spreader. Mulch shall be applied by the Contractor to all seeded areas immediately after seeds are planted to provide suitable surface litter for improvement of moisture conditions and to reduce the potential for damaging erosion or soil blowing which might occur before or during plant establishment.

The rate of application of woody mulch shall be 140 to 160 cubic yards per acre (approximately 1-inch thick after spreading).

02955 – SALVAGE OF NATIVE PLANTS

Before any area is disturbed for access, borrow, fill or other construction activities, the Contractor, accompanied by the AML Project Manager, shall thoroughly scout the area for native plant species. All significant plants shall be marked by the Project Manager and avoided by the Contractor wherever practicable. Of those that need to be disturbed, the Contractor shall salvage those that can be replanted, as the Project Manager directs and as specified below. Species that shall be salvaged include prickly pears (*Opuntia spp.*) and other cactus species, including pincushion types.

Plants to be salvaged shall be dug from the soil before earthmoving operations, preserving as many roots and as much of the soil around the roots as practicable. The south side of the plant and the soil line shall be marked with paint or marking crayons. When transplanted the plant shall be placed in the same orientation it was exposed to before harvesting.

Cactus and other salvaged plants shall be planted as soon as possible but no more than one week after harvest.

Salvaged plants shall be placed into nearby uncompacted native soil, preferably in areas that have been disturbed by construction activities and along closed access roads.

Any transplanted plants shall be watered in at the time of planting; no further watering is required. Larger specimens shall be staked as necessary as determined by the Project Manager.

02990 - SUBMITTALS

Complete data and specifications for the following items shall be submitted in accordance with the procedure set forth in Section 01340:

- Materials:
 - Fill materials
 - Scoria
 - Corrugated metal pipe
 - Fencing and accessories
 - Signs
 - Signposts
 - Sign fasteners
 - Identification Markers
 - Seed mix
 - Mulch
- Excavation Plan (Section 02222)
- Shop Drawings
 - Signs

END OF DIVISION 2

DIVISION 5 – METALS

The following section specifies all items fabricated from metal shapes and all wrought or cast metal items. Fabricated metal items that are detailed in the contract documents but not mentioned specifically herein shall be fabricated in accordance with the applicable requirements of this section. This section excludes signs and signposts (see Section 02840).

05010 – METAL MATERIALS

All materials shall be new and undamaged and shall conform to pertinent ASTM or other industry standard specifications including the following

I. Steel

Shapes, Plates, and Bars	ASTM A36 (mild plate steel)
Structural Tubing	ASTM A500 or ASTM A1085, (cold-formed carbon steel)
Grating	ASTM A500 or ASTM A1085, (cold-formed carbon steel)
Bolts and Nuts	ASTM F593 and F594, (stainless steel grade 18.8 or 316) or ASTM A325, ASTM A307 (carbon steel, Grade A)
Flat Washers	ANSI B27.2, of the same material as bolts and nuts

The mine vent grate shall be fabricated from mild steel ($F_y=30,000$ psi), as specified above.

05030 – METAL FINISHES

Specified hereunder are shop-applied coatings. This section specifies the required shop coatings for metal services where it is not practicable to use a corrosion resistant material.

05031 – SHOP COATING

I. Materials

Unless otherwise authorized, shop applied prime coatings shall be:

Zinc-rich Urethane Primer Tnemec "90-97 Tneme-Zinc" or DuPont "Imron 62 ZF", or approved equivalent.

For repair of hot-dip galvanized surfaces and to rustproof welds, field applied coatings shall be:

Cold Galvanizing Compound Z.R.C. Cold Galvanizing Compound, or approved equivalent.

II. Cleaning

Surfaces shall be dry and of a proper temperature when coated, and free of grease, oil, dirt, dust, grit, rust, loose mill scale, weld flux, slag, weld spatter, or other objectionable substances. Articles to be galvanized shall be pickled before galvanizing. All other ferrous metal surfaces shall be cleaned by high power wire brushing or blasting. Welds shall be scraped, chipped, and brushed as necessary to remove all weld spatter.

III. Galvanizing

All galvanizing shall be done after fabrication by the hot-dip process in conformity with requirements of ASTM A123, A153 and A385.

IV. Steel

Unless otherwise specified and if such an occasion shall occur, all ungalvanized structural and miscellaneous steel shall be given an anticorrosion prime coat in the shop after fabrication. Steel surfaces shall be prime coated as soon as practicable after cleaning. All painting shall be done in a heated structure if the outside air temperature is below 50 degrees Fahrenheit. Steel shall not be moved or handled until the shop coat is dry and hard.

05500 – METAL FABRICATIONS

Structural steel and miscellaneous metals shall be erected in accordance with drawings that are a part of the contract documents. Structural steel and miscellaneous metal shall be stored on blocking so that no metal touches the ground and water cannot collect thereon. The material shall be protected against bending under its own weight or superimposed loads. Care shall be taken in handling steel and miscellaneous metals to avoid unsightly gouges and scrapes.

The Contractor shall make adequate provisions for all erection loads and for sufficient temporary bracing to maintain the structure safe, plumb and in true alignment until completion of erection and installation of necessary permanent bracing.

Before assembly, surfaces to be in contact with each other shall be thoroughly cleaned. All parts shall be assembled accurately as shown on the drawings. Light drifting will be permitted to draw parts together, but drifting to match unfair holes will not be permitted. Any

enlargement of holes necessary to make connections in the field shall be done by reaming with twist drills. Enlarging holes by burning is absolutely prohibited.

After erection, all welds, abrasions, and surfaces not shop-primed, except surfaces to be in contact with concrete, shall be primed, unless the steel is weathering steel. The primer shall be consistent with the shop prime coat.

Welders certified in accordance with American Welding Society (AWS) specifications for the intended work shall do all welding. A copy of certifications shall be furnished to the Project Engineer. All welding shall be consistent with the requirements of AWS D1.1, "Structural Welding Code," including adequate edge preparation and preheating and the selection of proper flux (when applicable).

Where feasible, welding and fabrication shall be executed off site and finished product mobilized to the site for installation.

The Contractor shall use caution when installing or fabricating metal works in mine openings so that no foreign materials or equipment are dropped into the mine (salvage may not be possible). Also, "bad air" is not anticipated hazard at the Harding Mine Site, but it is the Contractor's responsibility to execute the work in accordance with their Site-Specific Health and Safety Plan. Air monitoring should be performed as needed.

05990 – SUBMITTALS

- Complete data, detailed drawings, and setting or erection drawings covering all structural and miscellaneous metal items, including bolts and nuts, shall be submitted in accordance with the procedure set forth in Section 01340
- A detailed description of welding processes to be utilized (including electrode classification)
- AWS welding certifications

END OF DIVISION 5

DIVISION 13 – SPECIAL CONSTRUCTION

The following sections describe the special construction to be performed under this contract.

13050 - POLYURETHANE FOAM CLOSURES

The following section describes the polyurethane foam (PUF) closures to be installed in the specified mine features. The work consists of installing a bottom form (as needed), installing PUF to specifications, backfilling over the PUF to the specified level, and, where required, installing corrugated steel riser pipes with steel grates.

The Contractor shall inform the Project Engineer and Project Manager of the times and places at which PUF is to be placed at least three working days in advance.

13051 - MATERIALS AND EQUIPMENT

Unless otherwise specified, polyurethane foam (PUF) shall have a minimum installed density of 1.85 pounds per cubic foot (pcf). Machine-applied or poured-in-place PUF shall be equivalent to SWD Urethane Co. "SWD 425," North Carolina Foam Inc. "NCFI-811," Foam Concepts LLC, "EFS Equipment-less Foam Sealant", Mine Seal, LLC, "PUF-Seal" or Urethane Contractors Supply and Consulting "SES III 2.0 Pour." Bagged PUF shall be equivalent to Foam Concepts Inc. "EFS Equipment-less Foam Sealant" or Mine Seal, LLC "PUF-Seal," or approved equal.

PUF characteristics shall conform to the following standards:

PUF CHARACTERISTIC	STANDARD	SPECIFICATION
Density	As specified	ASTM D1622
Closed Cell Content	>85%	ASTM D6226
Compressive Strength	25 psi minimum	ASTM D1621
Water Absorption	0.2 lbs./sq. ft. maximum	ASTM D2842
Exothermic Reaction Rate	Low	-
Fire Resistance	High	-

PUF used in mine closures shall not contain chlorinated fluorocarbons (CFC's) or hydro-chlorofluorocarbons (HCFC's).

The proportioning unit shall be capable of attaining a minimum temperature of 125°F and shall be a Gusmer Model H-11 or equivalent. For remote project locations, or with the approval of the Project Manager, smaller capacity proportioners will be acceptable. In this event the proportioner shall be the Gusmer FF or equivalent.

Minimum heated hose length from proportioner to gun shall be 80 feet. The hose shall maintain or increase component temperature from the proportioner. Longer heated hose lengths may be required depending upon the distance from the proportioning unit to the reclamation site. Approval of the Project Manager is required for the use of any length of unheated hose on a PUF closure.

If the Contractor specifies the use of an application gun, it shall be capable of mixing plural components in the proper ratio at the minimum acceptable output of four pounds per minute. The gun shall be a Gusmer AR mechanically self-cleaning design or equivalent. Application guns constructed by individuals or manufacturers not typically used in the PUF industry may be used if warranted by the PUF supplier or manufacturer.

For poured foam, separate component measuring and mixing containers shall be used. Each component shall be assigned a specific measuring container, each marked with a predetermined volume level corresponding to the required mix ratio. The components shall always be measured in the same quantities, the components added in a separate container, and thoroughly mixed using an appropriate mixing device. In all cases, measuring and mixing of poured PUF shall be done in strict accordance with manufacturer's recommendations, including maintenance of recommended temperatures of the components for mixing and placement. The Contractor shall supply a proper thermometer and use it to check each mixed batch.

The manufacturer shall package bagged foam with pre-measured amounts of each component. Foam shall be used prior to the end of the manufacturer's designated shelf life.

13052 - MATERIAL SAFETY, HANDLING AND TRANSPORT

Materials shall be stored in accordance with the manufacturer's recommendations. All safety precautions outlined by the Polyurethane Division of the Society of Plastics Industries, NFPA, OSHA, EPA, and the manufacturer's Safety Data Sheets (SDS) shall be observed. SDS and technical data sheets shall be on-site and available at all times.

There shall be no welding, smoking, or open flames within 25 feet of PUF application. A minimum 15-pound, class ABC, fire extinguisher shall be on site during foam application.

Workers wearing organic respirator masks and safety glasses or goggles shall apply PUF. State or federal regulations requiring additional safety equipment shall supersede these requirements. Workers wearing respirator masks shall follow the training, fit testing, medical surveillance, and other relevant requirements specified in 29 CFR 1910.134.

The Contractor shall follow all applicable state and local regulations for the transport and use of PUF and chemicals required for cleanup. The Contractor shall obtain any required permits for transportation. In the event of a component leak or spill, the Contractor shall notify the appropriate agencies and jurisdictions.

An oxygen meter shall be used to test air before and during installation of the bottom forms or any other work more than 10 feet inside a mine opening. The oxygen meter shall be a National Mine Service (NMS) OX231 oxygen meter or equivalent. The oxygen meter shall continuously monitor

oxygen levels and have an audible warning. If the oxygen level falls below 19 percent, all personnel shall withdraw from the working area in the mine until the oxygen content increases to safe levels.

Any remedy for increasing oxygen content of the working area or providing ventilation from the surface shall be determined in consultation with the Project Manager.

13055 - EXECUTION

Debris, soil, and loose rock in each of the subsidence features shall be cleared wherever PUF will be installed. A reasonable effort shall be made to excavate any soils down to bedrock or based upon the limitation of the equipment used and safe equipment travel. Due to the shape of the subsided features (wider at the top than the bottom), subsidence feature(s) shall be over excavated to accommodate the appropriate thickness/depth of PUF material to support the overburden load and allow for maximum adhesion along the walls of the subsidence feature(s). Soils shall be separated for use as cover.

I. Formwork

The bottom form and cross members may consist of any commonly available building materials capable of sustaining an initial lift of two to four feet of PUF. Acceptable cross member materials include, but are not limited to, reinforcing steel, 2x4's, dowels, cardboard tubes, and fabric air-inflated plugs. Acceptable bottom form materials include, but are not limited to, foam that has been poured and allowed to cure, wire sheeting (e.g., hog wire) affixed to geonet material, plywood, cardboard, paneling, and carpeting. Any combination of the above materials will be acceptable. Alternate bottom forms shall be reviewed with the Project Engineer prior to use.

The formwork shall be installed at that level specified in the closure drawings or as directed by the Project Engineer following uncovering by the Contractor of the existing conditions within the mine opening. Unless otherwise indicated, cross members may be placed at an angle no greater than 20 degrees from the horizontal as long as both ends are seated in competent rock. The bottom form shall be set over the cross members.

All bottom forms shall be completed prior to the application of any polyurethane foam. The Contractor shall provide the Project Manager with a list of installed depth to bottom forms for polyurethane foam closures. Any breach in the bottom form caused by rock fall or other reason shall be repaired prior to the arrival of PUF applicators at that site. The Contractor shall be responsible for the integrity of the bottom form and the loss of any polyurethane should it fail.

Polyurethane Foam (PUF)

The depth of polyurethane foam installed to plug a feature opening shall be as specified or indicated in the project drawings.

In large pours, PUF can get hot enough to actually melt and even burn. This may leave a hollowed out plug or “eggshell” that has very little strength. The remaining foam will be cracked and discolored, very similar to severe UV damage.

Polyurethane foam shall be installed in lifts with a maximum rise of 18 inches. The lifts shall be installed no sooner than 20 minutes apart (and no sooner than 30 minutes apart for ambient air temperatures above 84°F) and have a maximum lift height of three vertical feet per hour. Installed PUF lifts shall pass through the tack free stage before applying the next lift. At no time shall sprayed or poured PUF cut into the rising foam. The PUF shall be applied in such a manner that the entire void is filled, that shadow zones or voids are not created during PUF application, and that temperatures are not raised to unsafe levels.

The Project Manager may use an infrared non-contact thermometer to monitor exothermic generation. If the ambient air temperature is below 60°F, extra time will be required to allow the PUF to fully expand and may prevent each lift from reaching a full height of 18 inches. Every degree of ambient air temperature over 65°F adds at least two degrees to the temperature of the rising foam. Ambient air temperatures above 90°F can cause problems with PUF formation. PUF application shall cease if heating or off-ratio foam is observed. The Contractor shall remedy off-ratio foam and demonstrate proper quality PUF to the Project Manager before application resumes. The surface temperature should reach a plateau and start to drop before resuming foam installation. If using bulk foam, reduce the quantity per bucket as the day heats up.

Bagged or poured-in-place polyurethane foam shall be placed in strict accordance with the manufacturer's recommendations, including the need for thorough mixing of components. If required by the Project Engineer, the manufacturer of bagged or poured-in-place polyurethane foam shall provide a certified representative experienced in the placement of their product for a minimum of one eight-hour day. This representative will direct field operations and instruct the Contractor in the proper mixing, placement, and safety procedures for bagged or poured-in-place PUF.

The surfaces of the void to be filled shall be as free as possible of grease and standing water. PUF shall not be applied to surfaces with running water. Remedial action for such situations shall be reviewed with the Project Manager. Polyurethane foam shall not be applied directly to a debris plug, but shall be applied to a bottom form of known physical and chemical properties. PUF shall not be applied during rain unless the foam is fully protected from interaction with water by a physical barrier.

If off-ratio PUF is observed, the applicator must stop, correct the imbalance, and continue application with the proper ratio PUF. Correction and determination of the foam ratio shall be done on a plastic sheet away from the work area. Any lift of off-ratio PUF comprising over two percent of the intended PUF column heights shall be removed. An amount of off-ratio PUF less than two percent of the specified volume may remain if allowed to cool and if the outer perimeter of off-ratio PUF is removed. If off-ratio foam comprises more than 10 % of the specified PUF volume, five percent of the price bid for the site will be deducted as a penalty.

The Contractor shall be responsible for lost or damaged equipment. Damages or claims arising from PUF overspray shall be the responsibility of the Contractor. Under no circumstances shall foreign material be placed in the PUF material unless specifically specified or authorized by the Project

Manager. Non-PUF materials shall be non-toxic and non-hazardous and shall not compromise the strength or water saturation characteristics of the PUF.

Upon reaching the specified grade level for application of PUF, the Contractor shall undertake cleanup of PUF operations.

Field Quality Control

The Project Manager will make periodic checks of the quality of PUF applied. The principal check on quality will be visual. Acceptable PUF shall be tan-white to buff in color with no vesicles and a smooth to coarse orange peel surface. Any one of the following conditions shall cause PUF application to cease and efforts to correct the off-ratio condition begun.

<u>Condition</u>	<u>Possible Cause</u>
Dark PUF color Smooth and Glassy Friable or Brittle PUF Improper Density	Excess A Component
Light in Color to White Bad Cell Structure Mottled Appearance Blowholes or Pinholes	Excess B Component
Slow Rise Poor Cell Structure Frequent Equipment Clogging Slow Curing Poor Physical Properties	Bad Material
Air Bubbles on Surface Tension Cracks on Surface Excessive Air Bubbles	Pouring Too Fast Between Lifts

At any time during PUF application the Project Manager may call for a density test. The Contractor shall provide and fill a container for this purpose and the sample will be tested for density. The density of the sample shall be within the range of 1.85 to 3.00 pounds per cubic foot. Density tests indicating that PUF installed is not within the minimum specified range shall cause corrective action resulting in PUF within the acceptable nominal range, less deviation due to barometric pressure changes from Standard Temperature and Pressure.

The Contractor shall conduct density tests of PUF at no additional expense to EMNRD. At the discretion of the Project Manager, density tests showing PUF in the acceptable range will be taken in the

center of the cavity to which PUF is being applied. A sampling box constructed of sheet aluminum and lined with polyethylene shall be lowered into the cavity to take a representative sample of PUF just above the level of installed polyurethane.

At the option of the Project Manager, up to three one-cubic-foot samples of PUF may be taken from the job site for density analysis at the Contractor's expense. In addition, at the option of the Project Manager, up to three samples of up to 100 cubic inches in volume may be taken for on-site tensile strength testing at the Contractor's expense. PUF shall be provided for the samples at no additional cost to EMNRD.

Backfilling

To protect the PUF from vandalism if the site is to be left unattended, two to six inches of fill shall be uniformly shoveled over the foam as soon as possible after the last layer of PUF has solidified. No sooner than 96 hours after PUF application, the remaining void above the PUF plug shall be backfilled. The first two-foot lift of fill shall be placed by hand, bucket, or chute to lower the velocity of impact against the PUF. With approval of the Project Manager, this fill may be placed by streaming from heavy equipment such as a loader bucket. The depths and types of fill over the PUF shall be as indicated or specified in the contract documents or as directed by the Project Manager. Unless otherwise indicated, the minimum cover shall be 18 inches of common fill.

Unless otherwise specified or directed by the Project Manager, common fill above polyurethane foam closures shall be nearby cohesionless material with no pieces larger than six inches in diameter, free of debris or trash, and containing no materials classified as toxic or hazardous. The unit weight of the fill material shall be less than 130 lb/cu. Ft.

Fill above the polyurethane foam closures shall be placed in a manner that will prevent damage to the polyurethane foam plug and riser pipes and will allow these structures to assume the load from the fill gradually and uniformly.

The use of riding vibratory compaction equipment shall be prohibited above polyurethane foam closures and vibrations due to other construction equipment operations shall be kept to a minimum in these areas. With care and for the minimum acceptable period of time, small walk-behind compaction equipment, such as rammer tampers, may be used in these areas.

Cleanup

The Contractor shall clean the site of all PUF fragments and overspray. PUF overspray greater than 1/8-inch thick on timbers or historic materials shall be scraped or ablated to 1/8 inch minus to permit ultraviolet degradation of over sprayed polyurethane. Tools and equipment shall be cleaned in such a manner as to avoid injury to vegetation or wildlife. Handling of chemicals used in cleanup shall comply with all applicable local, State and Federal regulations.

13140 – TOROID TIRE PLUGS

This section describes the toroid (tire) plug closures to be installed at Feature SUB-1. The work consists of preparing surface for placing tires, wedging used tires into the mine openings, covering tire plugs with a geotextile cloth fabric, and preparation for fill as specified in other Sections.

I. Materials

Used Tires

An estimated number and size of used tires needed is found on the construction drawings. The Contractor shall be responsible for obtaining and transporting the necessary tires. For transport, the Contractor shall either hire a registered scrap tire hauler or register as a scrap tire hauler per the Recycling and Illegal Dumping Act (NMSA 1978, 74-13-1, et seq.). EMNRD will provide the required used tire disposal permit and associated fees per the Recycling and Illegal Dumping Act.

Used tires shall be selected to be of a size similar to a passenger car tire model of 225/65R 17. Large truck, equipment, or off-road tires shall be avoided or used only to plug specific voids and not for toroid stacks. Tires shall be free of contaminants such as oil, grease, gasoline, diesel fuel, etc., that could create a fire hazard. Tires may be worn but shall be complete or nearly complete units that will perform the desired engineering functions.

Geotextile

The geotextile placed on top of the toroid tire plugs shall be a polypropylene, staple fiber, needle-punched, nonwoven geotextile fabric equivalent to GEOTEX 451 by Propex. Material shall have a tensile strength of 100 pounds, an apparent opening size of 70 US Standard Sieve, and permittivity of 2.0/second.

Wire Mesh

Wire mesh (when needed) shall be hexagonal wire mesh of low carbon steel with galvanized coating. The wire gauge shall be 18 to 23 (BWG) with normal twists. Openings shall not exceed 1-1/4-inch.

Material from other manufacturers may be acceptable, following review by the Project Engineer. Any substitution shall have equal quality of construction, similar materials, and the same performance characteristics as that specified. If the Project Engineer accepts the proposed substitution, the Contractor shall accept the unqualified responsibility for the performance of the substituted item. Changes or modifications of construction caused by the substitution shall be the responsibility of the Contractor and shall be at the Contractor's sole expense.

Execution

A. Preparation

Debris, vegetation, sloughed rock and soil, and other material as required shall be removed from the mine opening to the point where the opening is defined and adequately shaped for installation of the tire plug. Topsoil (as indicated by the growth of vegetation and as directed by the Project Manager) shall be pulled back and stockpiled for later use. The targeted mine openings are near-vertical; however, the bottom surfaces slopes steeply into the mine workings. During excavation of topsoil from the Feature SUB-1 collapse feature, the Contractor shall excavate a flat bench just inside the mine opening on which to place the toroid plugs. If possible, the bench shall be created by excavating material, rather than moving material and placing as fill. Compaction of the bench is not necessary, and personnel should not enter the collapse feature to execute the work, if possible. The Contractor shall ensure that work is performed in accordance with their HASP, including execution of monitoring for “bad air” and use of fall protection measures.

B. Tire Plugs

The tire plugs shall provide dynamic, expandable, flexible plugs that expand to fill the mine openings. A variety of tire sizes may be needed as mine openings come in various shapes and dimensions; however, tire stacks shall be of uniform outer diameter to minimize gaps between tire columns. The arrangement of tire placement may be varied from that indicated on the drawings to fit site conditions and tire availability, as long as the functionality of the plug is not compromised.

The Contractor shall adapt the use of the recycled tires to the shape and size of the mine opening. As indicated on the drawings, many of the openings can be successfully plugged by arranging the tires in a stack of four to six tires. The tires shall be compressed at the surface by an excavator, temporarily banded with steel cable, strapping, rope. The compressed stack shall then be moved into position so that most of the tire cylinder is within the mine opening. Once in position, the restraints shall be removed, and the compressed stack allowed to expand to fill the hole. Enough tires shall be included in the stack so that there is contact with the top of the mine entrance, and the tires are wedged into place.

An alternate method of plugging the smaller openings is to place the tires on edge so that the tops and bottoms of the tire (tread surfaces) are positioned against the floor and ceiling of the opening. An excavator with a thumb on it shall then be used to pinch the tires vertically and position them in the opening such that with the excavator thumb is released, the tire(s) will expand to fill the hole. See drawings for illustrations of tire placement.

As directed by the Project Manager and as indicated on the drawings, gaps between the tire plugs and/or the tire plugs and the mine openings greater one foot in any dimension shall be spanned with wire mesh secured to the tires with metal staples.

Once the tire plugs and wire mesh are secured to the satisfaction of the Project Manager, the exposed tire surfaces and wire mesh shall be covered with the geotextile. The geotextile shall be secured to the tires using metal staples. Any remaining voids large enough to allow the unabated flow of liquid

PUF into the mine workings (including through the center of the tire stacks) shall be plugged with wadded pieces of geotextile.

The Contractor shall provide the equipment; supplies, small tools (e.g., staple gun) and personnel necessary to complete the toroid tire plug closures.

Backfill of the Feature SUB-1 after placement of the tire plugs shall be executed in accordance with specifications in Division 5 (backfill and landscaping) and 13 (PUF).

13990 – SUBMITTALS

Complete data and specifications for the following items shall be submitted in accordance with the procedure set forth in Section 01340:

- Materials:
 - PUF and accessories
 - Geotextile
 - Wire Mesh
 - Tire materials
 - Tire scrap hauler registration

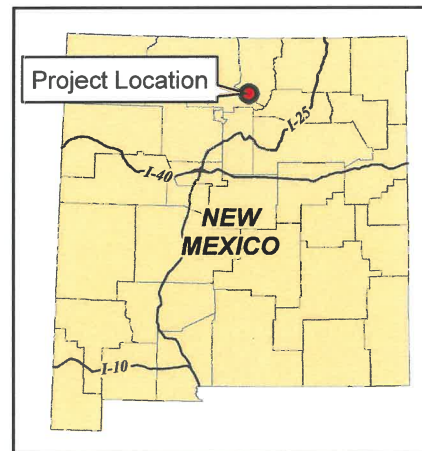
END OF DIVISION 13

END OF APPENDIX B

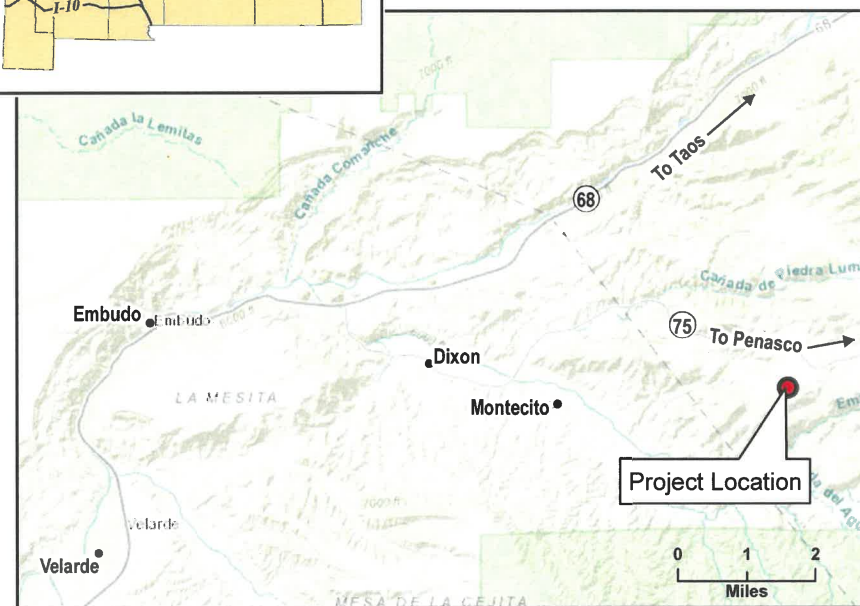


HARDING PEGMATITE MINE SAFEGUARD PROJECT - PHASE II DIXON, NEW MEXICO

PROJECT NO. EMNRD-MMD-2022-02



PROJECT LOCATION



SHEET INDEX:

SHEET NO.	TITLE
01	COVER SHEET
02	GENERAL NOTES AND MARKER DETAIL
03	SITE PLAN
04	GATE 1 STABILIZATION
05	FENCING DETAILS – ICEBERG PIT AND FEATURE SUB-1
06	FEATURES SUB-1 AND F9 PLAN AND PROFILE – EXISTING CONDITIONS
07	FEATURE F9, REOPENED DECLINE ADIT DETAILS
08	FEATURE SUB-1, OPEN STOPE – SCHEMATICS OF EXISTING CONDITIONS
09	FEATURE SUB-1, OPEN STOPE – SCHEMATICS OF TOROID TIRE PLUGS
10	FEATURE SUB-1, OPEN STOPE FILL DETAIL
11	FEATURE SUB-2, EXISTING CONDITIONS AND MINE VENT DETAIL
12	FEATURE SUB-2, MINE VENT DETAILS AND NOTES

SUBMITTED TO



NEW MEXICO ENERGY, MINERALS
AND NATURAL RESOURCES DEPARTMENT
1220 SOUTH ST. FRANCIS DRIVE
SANTA FE, NM 87505
PROJECT ENGINEER: MEGHAN McDONALD P.E.
PHONE: (505) 629-9872

PROJECT PARTNERS



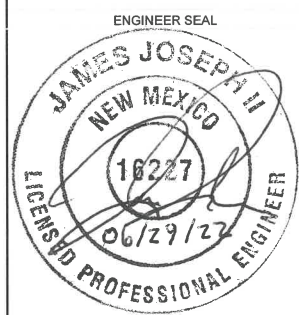
UNIVERSITY OF NEW MEXICO
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SUBMITTED BY / DESIGN ENGINEER

INTERA INCORPORATED
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PHONE: (505) 264-3847



CAUTION - THIS PROJECT REQUIRES CONSTRUCTION WORK IN, AROUND, AND OVER HAZARDOUS AND UNPROTECTED MINE SHAFTS, STOPES, ADITS, AND OTHER OPENINGS WHICH MAY BE OPEN TO THE SURFACE OR HIDDEN FROM VIEW BY TRASH, DEBRIS, OR THIN AND UNSTABLE LAYERS OF SURFACE MATERIALS OR ROCK. THE CONSTRUCTOR SHALL BE RESPONSIBLE FOR THOROUGHLY INVESTIGATING THE SITE CONDITIONS AND SCHEDULING EQUIPMENT, EQUIPMENT OPERATIONS, PERSONNEL AND SAFETY PROCEDURES TO PREVENT ACCIDENTS AND INJURIES.

001	3/2022	2020 SAFEGUARD MEASURES	JPJ
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ABANDONED MINE LAND PROGRAM
MINING AND MINERALS DIVISION
NEW MEXICO ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT



COVER SHEET

HARDING PEGMATITE MINE
SAFEGUARD PROJECT - PHASE II
DIXON, NEW MEXICO
PROJECT NO. EMNRD-MMD-2022-02

SHEET NO:
01

GENERAL NOTES:

1. THE PROPERTY IS OWNED BY THE UNIVERSITY OF NEW MEXICO AND IS OPEN TO PUBLIC VISITATION. THE SAFEGUARDING MEASURES BEING CONSTRUCTED ARE BEING CONTRACTED BY THE NEW MEXICO ABANDONED MINE LAND (AML) PROGRAM OF THE ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT. THE CONTRACTOR'S POINT OF CONTACT SHALL BE THE AML PROJECT MANAGER; HOWEVER SITE ACCESS AND VISITATION MAY BE COORDINATED THROUGH THE CARETAKER. CONTACT INFORMATION AND SCHEDULING SHALL BE ARRANGED PRIOR TO MOBILIZATION TO THE SITE.
2. THE HARDING MINE SITE HAS HIGH VISITATION (APPROVED AND TRESSPASS). ALTHOUGH THERE ARE GATES AT THE ENTRANCES, THEY DO NOT GUARANTEE SECURITY OF MATERIALS, EQUIPMENT, OR WORK AREAS. THE CONTRACTOR SHALL SECURE WORK AREAS AT THE END OF EACH WORK DAY AND WHEN NO ACTIVE SAFEGUARD WORK IS BEING PERFORMED. THE PROPERTY OWNER, MINE CARETAKER, AML, OR THE ENGINEER WILL NOT BE HELD RESPONSIBLE FOR STOLEN OR VANDALIZED MATERIALS, EQUIPMENT, AND/OR WORK.
3. CONTRACTOR PERSONNEL SHALL ANTICIPATE INTERACTION WITH THE PUBLIC DURING THE WORK AND SHOULD BE PREPARED TO STOP HEAVY EQUIPMENT OPERATION IN AREAS BEING VISITED. PLEASE DEFER QUESTIONS REGARDING THE WORK TO THE CARETAKER OR AML PROJECT MANAGER.
4. EXCESS IMPORTED SOIL FILL MAY BE PLACED ON ROADWAYS OR OTHER AREAS DIRECTED BY THE AML PROJECT MANAGER.
5. THIS PROJECT REQUIRES CONSTRUCTION WORK AROUND, OVER, AND (POTENTIALLY) IN MINE FEATURES AND AT THE BASE AND TOP OF AN EXPOSED VERTICAL HIGHWALL. THE CONTRACTOR IS RESPONSIBLE FOR INSPECTING THE SITE FOR HAZARDS, TRAINING THEIR PERSONNEL IN SAFE WORK PRACTICES, AND PROVIDING ADEQUATE PERSONAL PROTECTIVE EQUIPMENT TO PREVENT ACCIDENTS AND INJURIES.
6. ROCK FALL FROM THE HIGHWALL HAS BEEN IDENTIFIED AS A SITE HAZARD. WORKER PROTECTION MEASURES SHALL BE TAKEN WHEN WORKING AT THE BASE OF THE HIGHWALL.
7. HOURS FOR PERFORMING SITE WORK ARE RESTRICTED ON MONDAYS AND FRIDAYS TO ACCOMMODATE TRAVEL BY AML PERSONNEL. NO SITE WORK SHALL BE PERFORMED BEFORE 1000 ON MONDAYS OR AFTER 1500 ON FRIDAYS.

SUMMARY OF WORK

SAFEGUARD MEASURES ARE BEING CONSTRUCTED TO ADDRESS AREAS OF SUBSIDENCE AND COLLAPSE INTO EXISTING MINE FEATURES AND TO ADD FENCING ABOVE AREAS THAT POSE A FALL RISK.

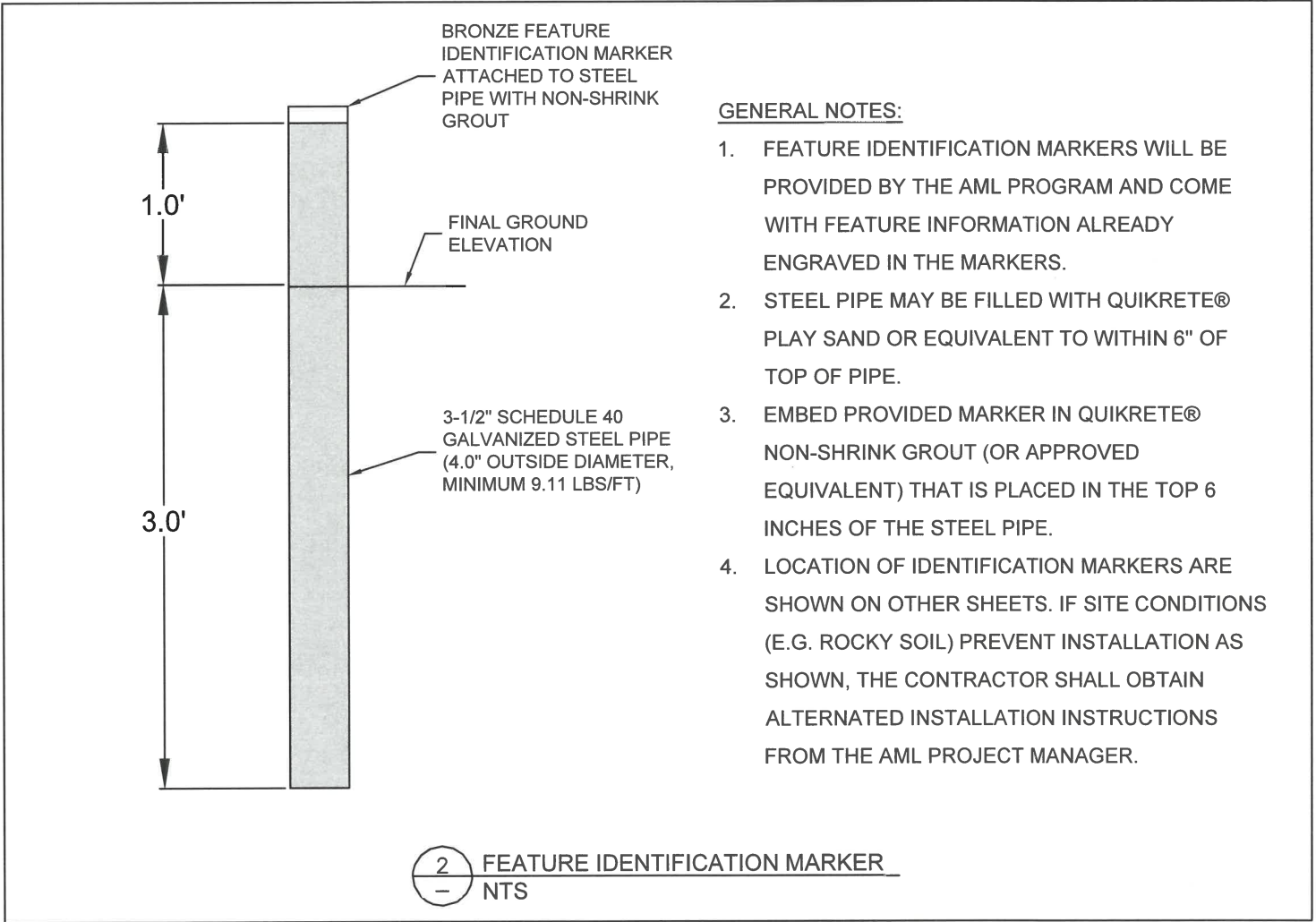
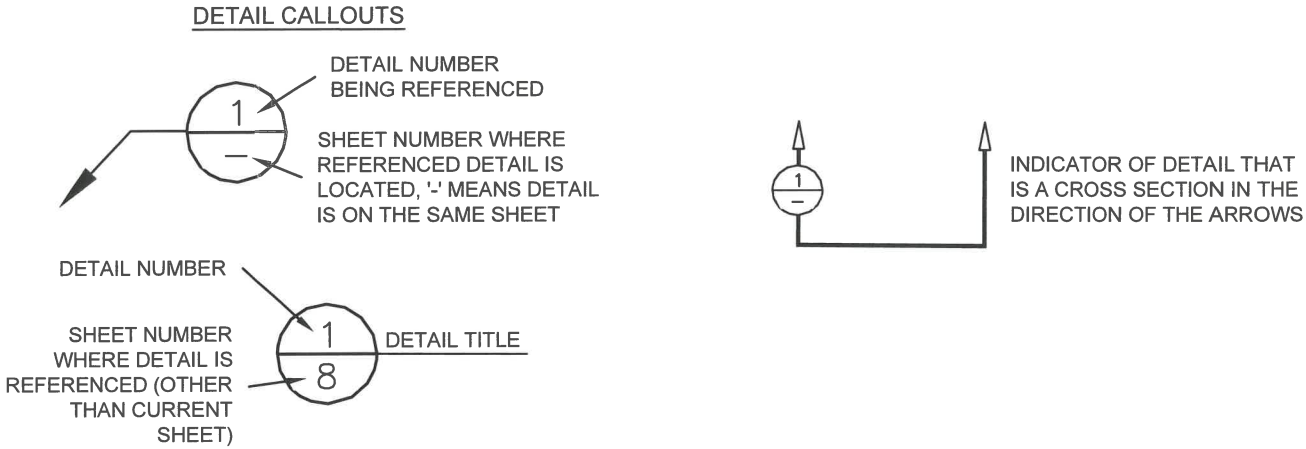
NEW FENCING WILL BE INSTALLED AT THE FEATURE IDENTIFIED AS THE ICEBERG PIT, WHICH WAS AN EXPLORATORY FEATURE WITH NO EXISTING CONNECTION TO UNDERGROUND MINE WORKINGS.

THREE SUBSIDENCE AREAS WILL BE REPAIRED INCLUDING:

1. SUBSIDENCE INTO A REOPENED DECLINE ADIT AT FEATURE F9. THE DECLINE ADIT WILL BE EXPOSED AND THE SAFEGUARD MEASURE WILL INCLUDE FILLING THE DECLINE ADIT OPENING WITH A POLYURETHANE FOAM (PUF) PLUG.
2. SOIL PIPING HAS CREATED AN OPENING INTO THE MINE NEAR THE MOST VISITED PORTION OF THE MINE SITE. THE OPENING HAS BEEN IDENTIFIED AS BENEFITING BAT HABITAT IN THE MINE, AND A VENT PIPE WILL BE INSTALLED CONCURRENT WITH INSTALLING A PUF PLUG. THIS FEATURE IS IDENTIFIED AS "SUB-2".
3. A LARGE COLLAPSE HAS CREATED AN OPEN STOPE AT FEATURE SUB-1. THE FEATURE HAS CREATED OPENINGS INTO THE MINE WORKINGS THAT MAY RESULT IN UNAUTHORIZED ENTRANCE INTO THE MINE. SAFEGUARD MEASURES WILL INCLUDE EXCAVATING TOP SOIL FROM THE SUBSIDENCE FEATURE, BLOCKING OFF THE OPENING WITH TOROID TIRE PLUGS, AND FILLING THE FEATURE WITH PUF AND A SOIL CAP. THE DISTURBED AREA AND TRAVEL ROUTE TO FEATURE SUB-1 SHALL BE REVEGETATED BY APPLYING A SEED MIXTURE

SITE CONTROLS WILL BE ENHANCED BY SECURING A GATE POST AT THE FIRST PRIMARY ACCESS GATE TO THE MINE (GATE 1).

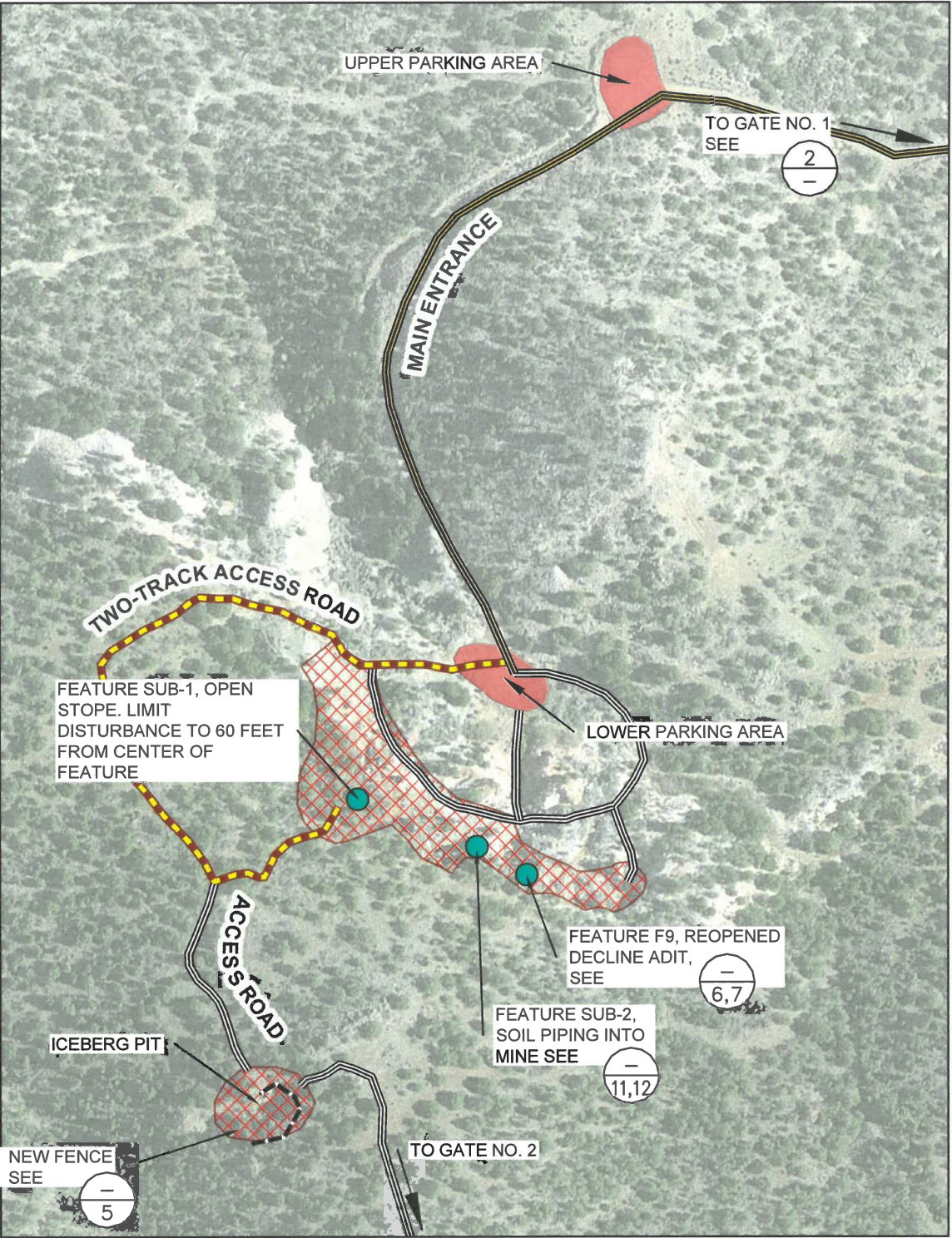
LEGEND



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ABANDONED MINE LAND PROGRAM MINING AND MINERALS DIVISION NEW MEXICO ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT	GENERAL NOTES AND MARKER DETAIL
	HARDING PEGMATITE MINE SAFEGUARD PROJECT - PHASE II DIXON, NEW MEXICO PROJECT NO. EMNRD-MMD-2022-02
	SHEET NO: 02

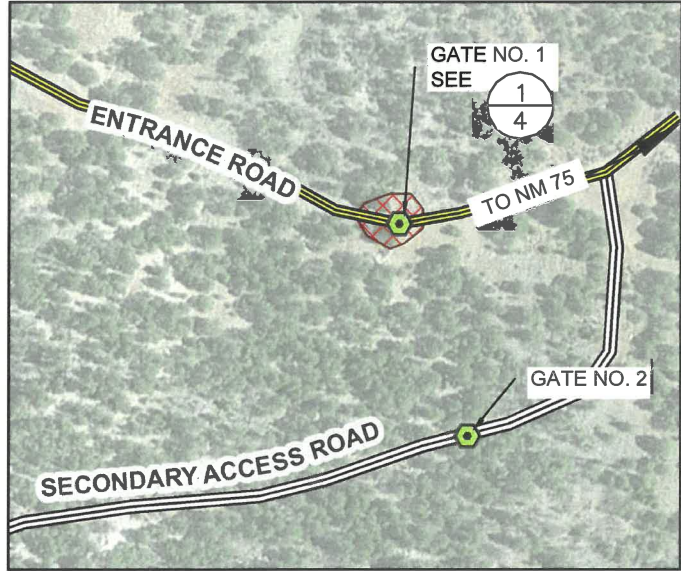
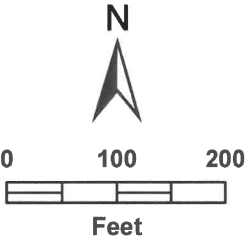


1 SITE PLAN – MAIN AREA



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2 SITE PLAN – GATES 1 AND 2

LEGEND

- PARKING AREA
- AREA OF POTENTIAL DISTURBANCE
- NEW FENCE ALIGNMENT
- TWO-TRACK ACCESS ROUTE
- ACCESS ROUTE TO FEATURE S1 FROM LOWER PARKING AREA
- ACCESS ROUTE TO MINE FEATURES

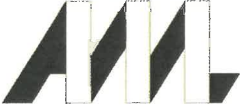
GENERAL NOTES:

- EQUIPMENT ACCESS TO FEATURE SUB-1 OPEN STOPE SHALL FOLLOW A PATH FROM THE LOWER PARKING AREA, ASCENDING THE HILL, AND APPROACHING FROM THE WEST, AS DIRECTED BY THE AML PROGRAM. ALTERNATE ROUTES SHALL BE APPROVED BY THE AML PROJECT MANAGER BUT ONLY IF IT IS WITHIN THE SHOWN "AREA OF POTENTIAL DISTURBANCE" AND AFFORDS LESS IMPACT ON VEGETATION AND/OR IMPROVED WORKER SAFETY CONDITIONS.
- DISTURBANCE TO THE AREA SHALL BE KEPT TO A MINIMUM. TREES SHALL BE TRIMMED WHERE NECESSARY TO ALLOW ACCESS FOR LARGER EQUIPMENT. TREE CUTTING SHALL BE AVOIDED AS MUCH AS PRACTICABLE AND SHALL BE GUIDED BY THE AML PROJECT MANAGER.
- UPPER AND LOWER PARKING AREAS SHALL BE USED FOR LAYDOWN AND STORAGE.
- AREAS OF POTENTIAL DISTURBANCE HAVE BEEN SURVEYED FOR CULTURAL RESOURCES. EQUIPMENT OPERATION, MATERIAL STORAGE/STAGING, OFFROAD TRAVEL, AND/OR OTHER PROJECT IMPACTS OUTSIDE OF CLEARED AREAS IS PROHIBITED.



ABANDONED MINE LAND PROGRAM
MINING AND MINERALS DIVISION
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SITE PLAN



HARDING PEGMATITE MINE
SAFEGUARD PROJECT - PHASE II
DIXON, NEW MEXICO
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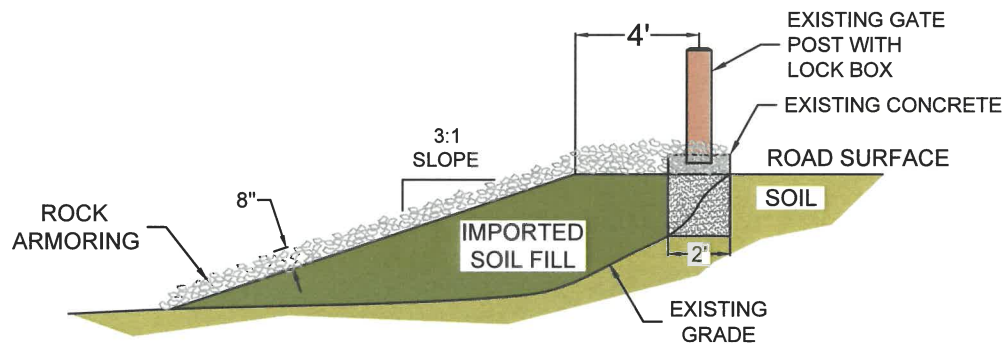
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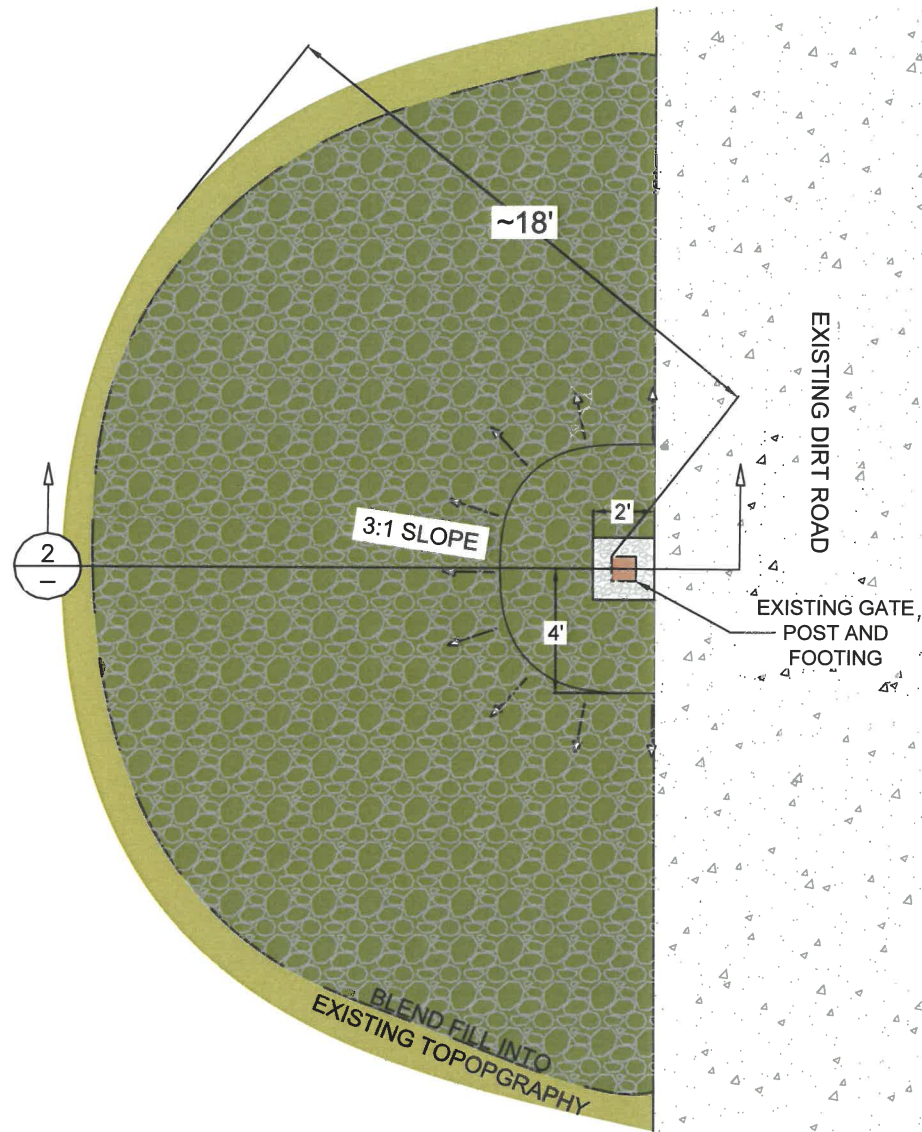
1
3
— GATE 1 RECEIVING POST (EXISTING CONDITION)

GENERAL NOTES:

1. IMPORTED SOIL FILL SHALL MEET REQUIREMENTS PROVIDED IN THE CONSTRUCTION SPECIFICATIONS.
2. ROCK ARMORING SHALL BE ANGULAR TO SUB-ROUNDED RIPRAP SIZED IN ACCORDANCE WITH CONSTRUCTION SPECIFICATIONS.
3. CLEAR EXISTING GROUND SURFACE OF LARGE ROCKS AND ORGANIC MATERIAL IN AREAS WHERE FILL WILL BE PLACED.
4. SCARIFY AND COMPACT EXISTING GROUND SURFACE BEFORE PLACING IMPORTED FILL.
5. PLACE AND COMPACT FILL MATERIAL IN MAXIMUM OF 12-INCH LOOSE LIFTS. COMPACTION SHALL BE OBTAINED USING A RAMMER/JUMPING JACK COMPACTOR.
6. CONDITION FILL MATERIAL WITH WATER FOR OPTIMUM COMPACTION. COMPACTION TESTING IS NOT REQUIRED; BUT LIFT COMPACTION AND FINAL COMPACTION MUST BE TO PROJECT MANAGER'S SATISFACTION.
7. ENSURE THAT THE GATE LATCH AND LOCKBOX ON THE POST ALIGN AND INTERLOCK WITHOUT RUBBING OR STRAINING BEFORE PLACING FILL AROUND EXPOSED FOOTING OF THE POST. ROUTINELY CHECK ALIGNMENT DURING FILL PLACEMENT AND COMPACTION ACTIVITIES. IF ALIGNMENT IS LOST DURING STABILIZATION ACTIVITIES, PLACED SOIL SHALL BE REMOVED AND THE POST REALIGNED AT CONTRACTOR'S EXPENSE.
8. MATERIAL VOLUME ESTIMATES: SOIL FILL = 5 CUBIC YARDS; RIP RAP = 2 CUBIC YARDS.



2
— GATE 1 POST STABILIZATION SCHEMATIC PROFILE VIEW
1" ≈ 6'



3
— GATE 1 POST STABILIZATION SCHEMATIC PLAN VIEW
1" ≈ 6"



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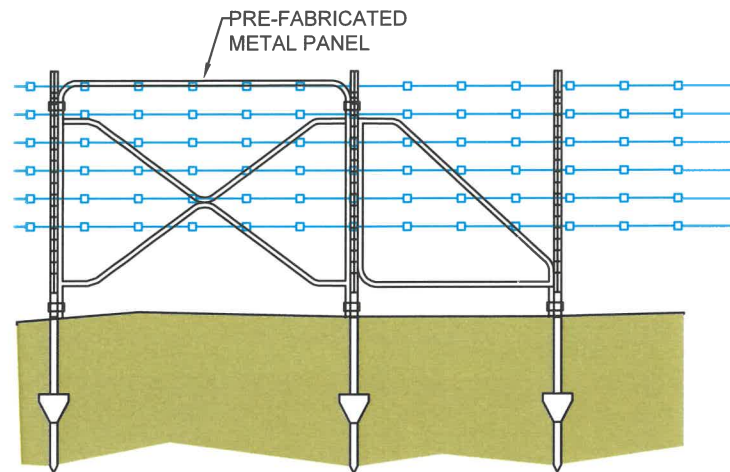
ABANDONED MINE LAND PROGRAM
MINING AND MINERALS DIVISION
NEW MEXICO ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT



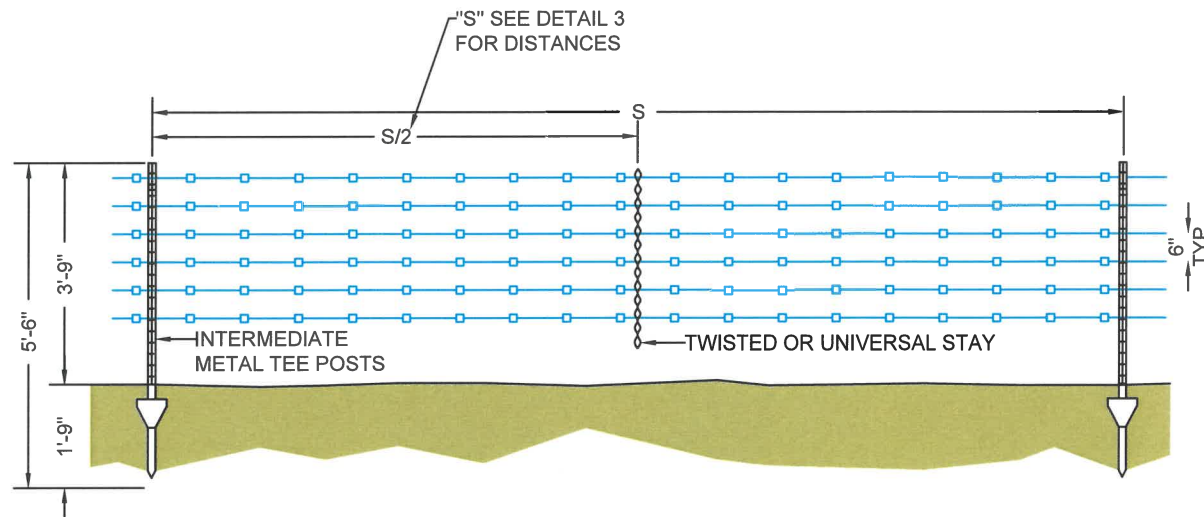
GATE 1 STABILIZATION

HARDING PEGMATITE MINE
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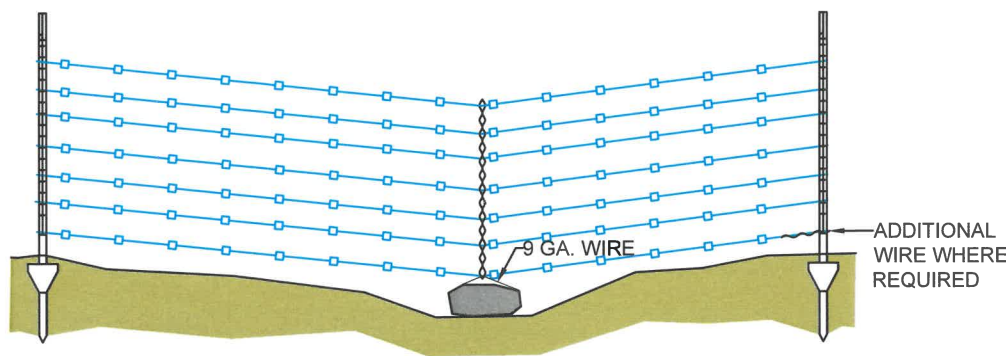
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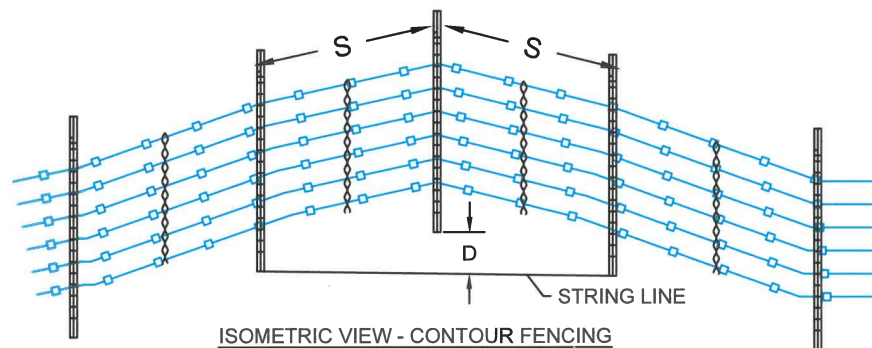
1 CORNER AND END BRACE DETAIL
NTS



2 LINE PANELS DETAIL
NTS



3 PANEL AT MINOR DEPRESSION DETAIL
NTS



4 ISOMETRIC VIEW - CONTOUR FENCING DETAIL
NTS

NOTE: ADD ADDITIONAL WIRE AND A ROCK DEADMAN (MINIMUM WEIGH 50 LBS.) WHEN SPACE BETWEEN BOTTOM WIRE AND GROUND EXCEEDS 18 INCHES.

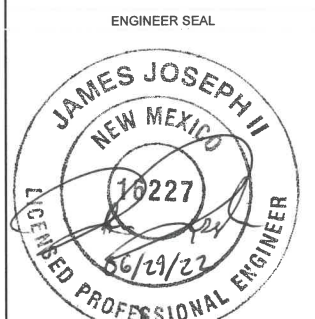
DISTANCE 'D'	POST SPACING 'S'
4" OR LESS	16.5
4" TO 6"	14'
6" TO 14"	10'

GENERAL NOTES:

1. AT FEATURE SUB-1, TEMPORARILY REMOVE EXISTING HANGING SECTION OF BARBED WIRE FENCE ACROSS THE COLLAPSE FEATURE. REPLACE REMOVED SECTION OF FENCE AFTER COMPLETION OF SAFEGUARD CONSTRUCTION ACTIVITIES. ASSUME REMOVAL AND REPLACEMENT OF 60 LINEAR FEET OF FENCE IN BOTH DIRECTIONS FROM THE CENTER OF THE COLLAPSE FEATURE (TOTAL OF 120 FEET). REMOVED FENCING SHALL BE DISPOSED OF OR SALVAGED, AS DIRECTED BY THE AML PROJECT MANAGER.
2. INSTALL APPROXIMATELY 150' OF SIX STRAND BARBED WIRE FENCE AT THE ICEBERG PIT AND REPAIR THE FENCE AT THE OPEN STOPE. THE BARBED WIRE SHALL BE NEW, DOUBLE-STRAND STEEL, 12 1/2 GAUGE OR 15 1/2 GAUGE HIGH TENSILE BARBED WIRE.
3. CONTOUR FENCING MAY BE USED WHERE A CURVED FENCE LINE AS DIRECTED. PLACE WIRES ON THE OUTSIDE OF THE POSTS SO THAT WHEN THE WIRE IS TIGHTENED IT WILL PULL AGAINST THE POSTS AND NOT THE TIES.
4. SET POSTS FOR CONTOUR FENCING LEANING OUT SEVERAL INCHES SO THAT POSTS WILL STRAIGHTEN TO A PLUMB POSITION WHEN WIRE IS TAUGHT. TIGHTEN WIRE TO A MODERATE TENSION FOR A CURVED FENCE. A SHARPER CURVE WILL RESULT IN LESS REQUIRED TENSION.
5. RUN FENCE IN STRAIGHT LINES BETWEEN END AND CORNER POSTS, EXCEPT WHERE CONTOUR FENCING IS USED.
6. AVOID ANGLES LESS THAN 90 DEGREES AT FENCE CORNERS.
7. CORNER AND END BRACE PANELS SHALL BE PREFABRICATED "EASY FENCE" PANELS MADE BY D-C INDUSTRIES OR ENGINEER-APPROVED ALTERNATIVE.
8. ALL POST LENGTHS AND DRIVEN DEPTHS SHALL BE CONSISTENT WITH THAT SHOWN ON DETAIL 2.
9. ICEBERG FENCE LOCATION SHOWN ON SHEET 3 AND SUB-1 FENCE LOCATION SHOWN ON SHEET 6. MAINTAIN A MINIMUM SETBACK DISTANCE OF 5 FEET FROM ANY HIGHWALL. ADJUST ALIGNMENT TO MINIMIZE REMOVAL OF VEGETATION, AND PRUNE RATHER THAN REMOVE WHEN PRACTICAL.
10. CONTRACTOR SHALL STAKE THE FENCE ALIGNMENT AT THE ICEBERG PIT AND RECEIVE PROJECT MANAGER APPROVAL BEFORE DRIVING POSTS.

ICEBERG PIT
APPROXIMATE LOCATION OF END
POSTS AND FENCE ALIGNMENT

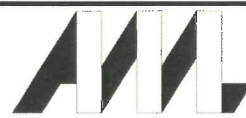
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36.19168	-105.79569
36.19176	-105.79563
36.1918	-105.79565
36.19184	-105.79572
36.19181	-105.79578



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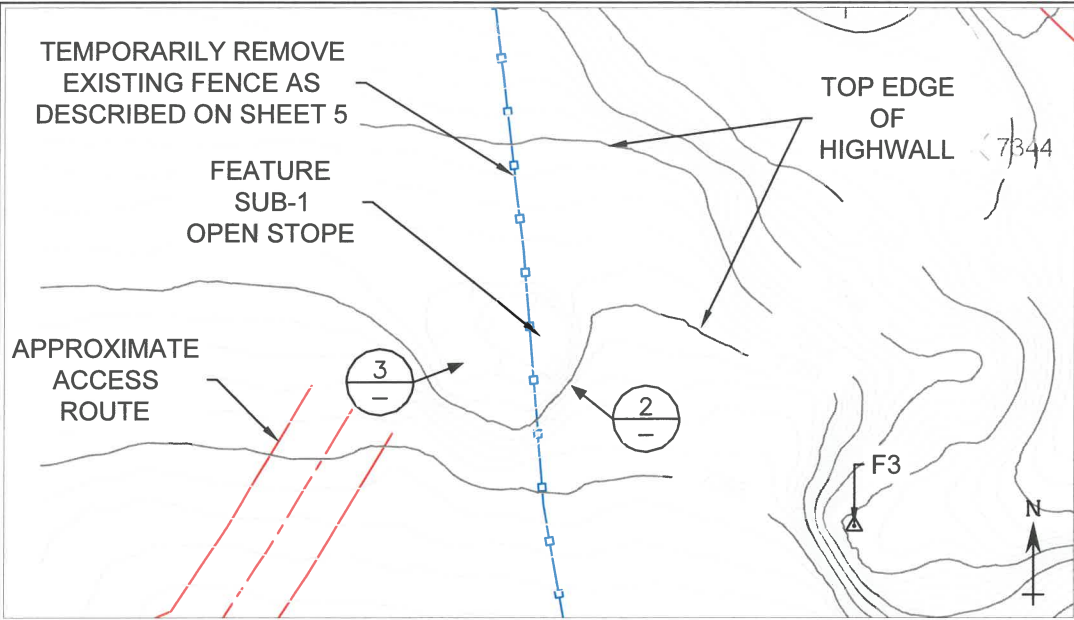
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NEW MEXICO ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT



FENCING DETAILS – ICEBERG PIT
AND FEATURE SUB-1

HARDING PEGMATITE MINE
SAFEGUARD PROJECT - PHASE II
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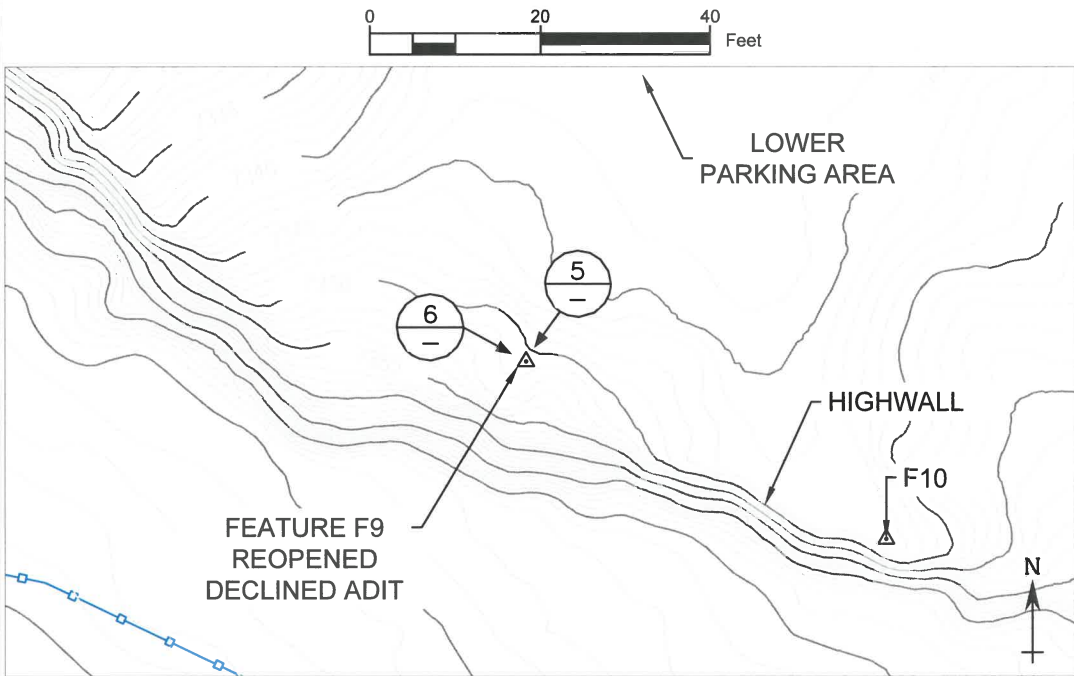
1 SUB-1 OPEN STOPE AND FENCE LOCATION – PLAN VIEW



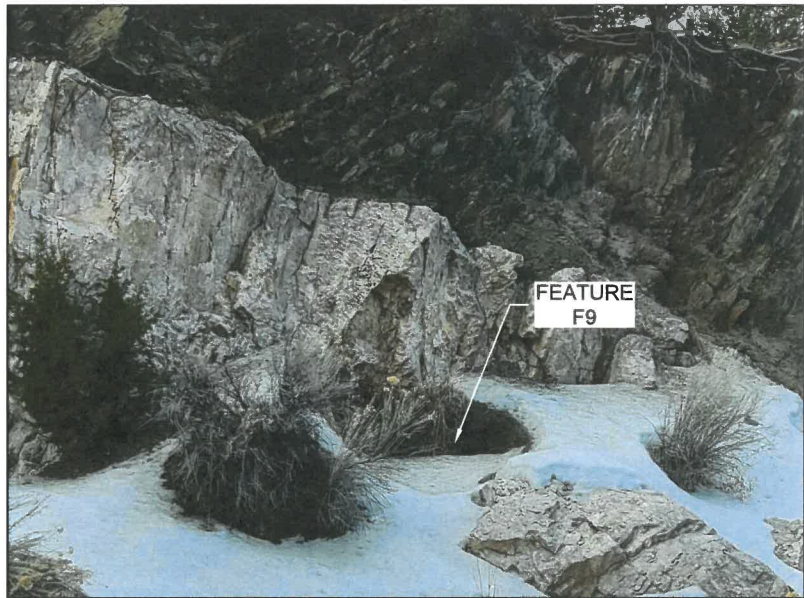
2 SUB-1 OPEN STOPE - EXISTING CONDITIONS
8 LOOKING NORTHEAST TOWARDS SMALL OPENING



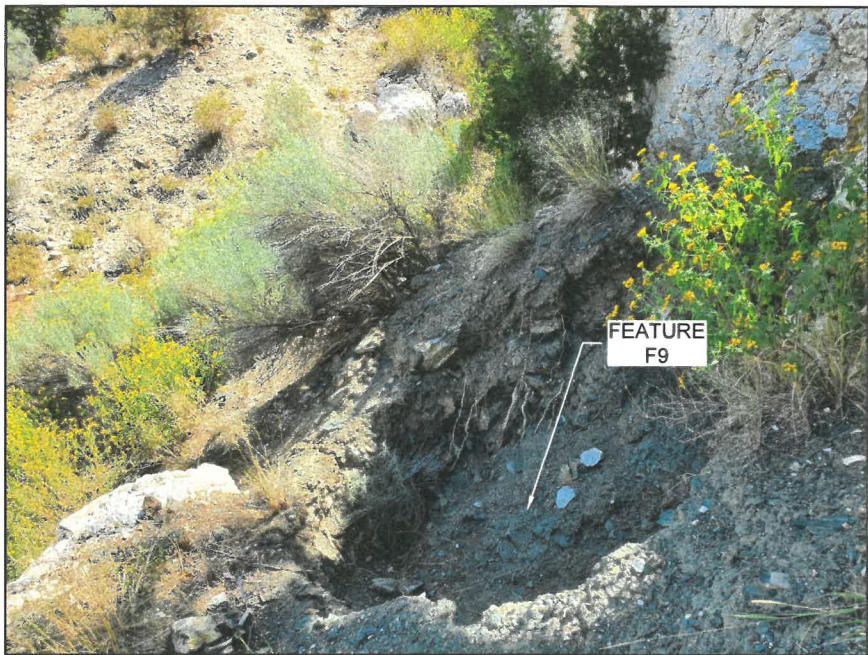
3 SUB-1 OPEN STOPE - EXISTING CONDITIONS
8 LOOKING EAST TOWARDS LARGE OPENING AND HIGHWALL



4 F9 REOPENED DECLINE ADIT – PLAN VIEW



5 FEATURE F9 - EXISTING CONDITION
LOOKING SOUTHWEST TOWARDS HIGHWALL



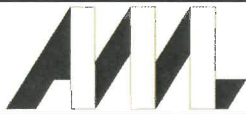
6 FEATURE F9 - EXISTING CONDITIONS
LOOKING SOUTHEAST PERPENDICULAR TO HIGHWALL



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**FEATURES SUB-1 AND F9 PLAN
AND PROFILE – EXISTING CONDITIONS**

HARDING PEGMATITE MINE
SAFEGUARD PROJECT - PHASE II
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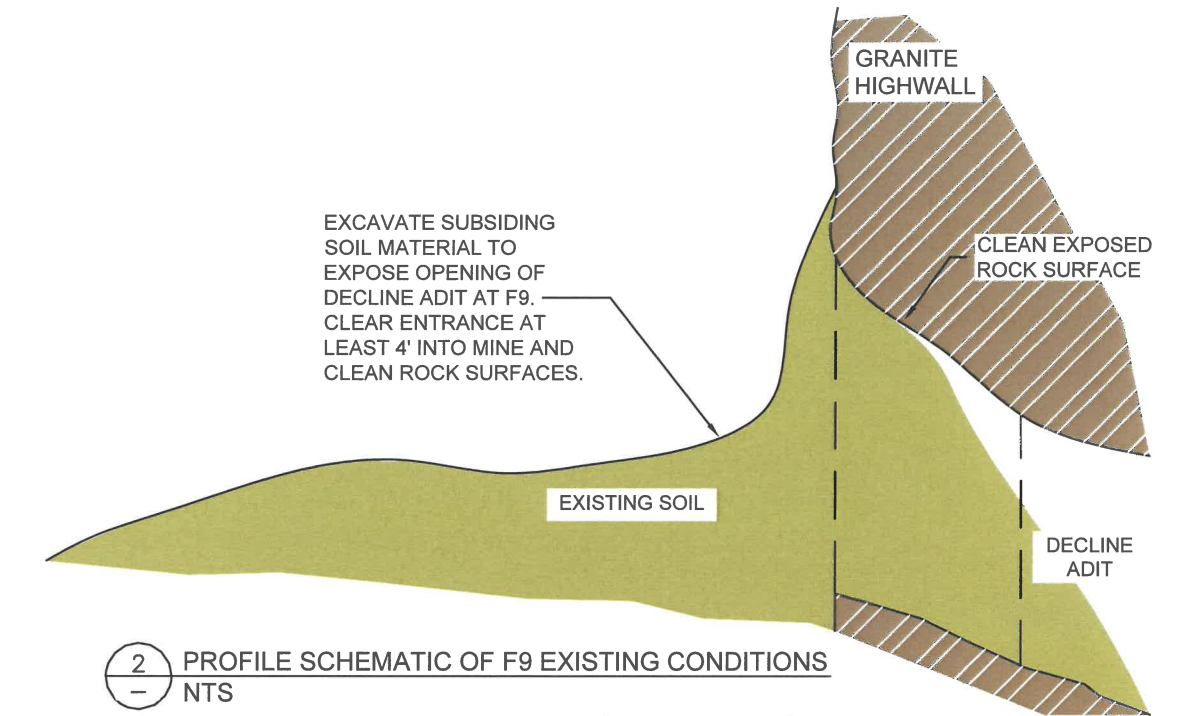
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GENERAL NOTES

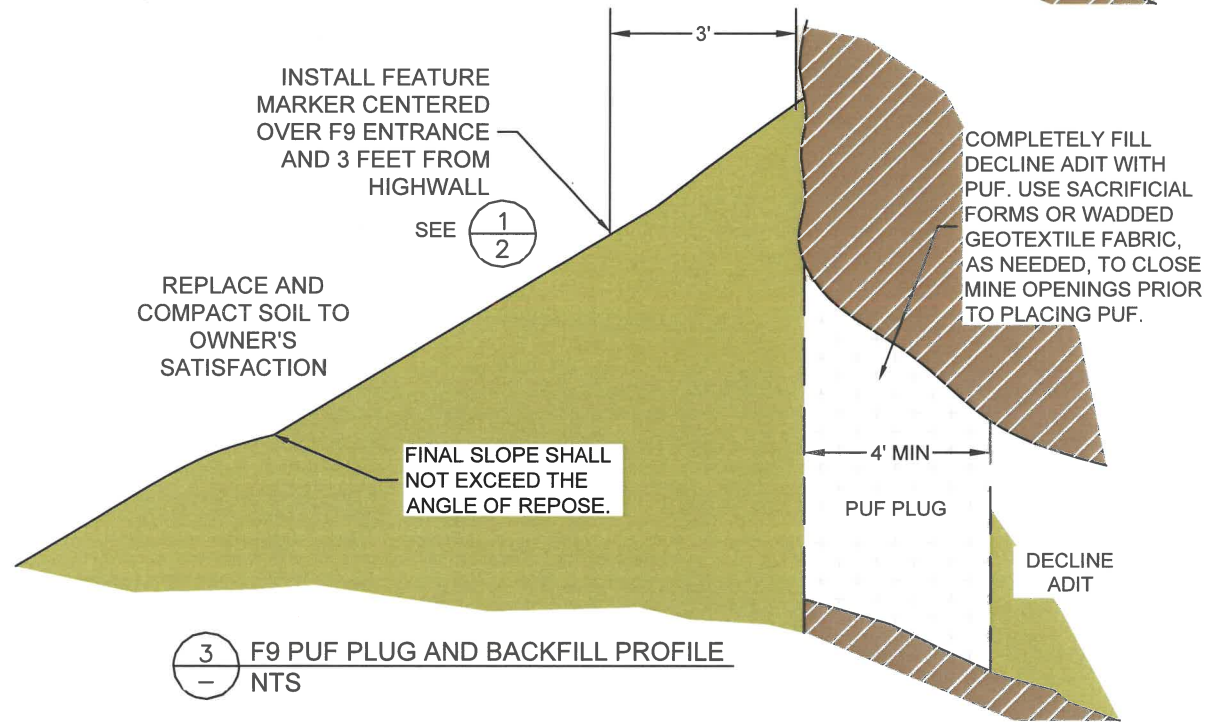
1. EXISTING SOIL SHALL BE EXCAVATED TO EXPOSE THE ENTRANCE TO THE DECLINE ADIT. MATERIAL FROM INSIDE THE ADIT SHALL BE REMOVED TO 4 FEET FROM THE ENTRANCE (AS DEFINED BY PROJECTION OF VERTICAL SECTION OF THE HIGHWALL IN THAT LOCATION).
2. CLEAN ALL ROCK SURFACES INSIDE THE ADIT ENTRANCE TO ENSURE CONTACT WITH PUF AND PREVENT FUTURE PIPING AROUND PUF PLUG.
3. PROTECTION MEASURES FOR WORKERS OPERATING AT THE BASE OF THE HIGHWALL AND DECLINE ADIT OPENING SHALL BE IMPLEMENTED TO PREVENT INJURY FROM ROCK FALL AND/OR MINE COLLAPSE.
4. THE FLOOR OF THE DECLINE ADIT MAY BE OVER OTHER MINE OPENINGS. REPORT EVIDENCE OF FLOOR COLLAPSE TO THE PROJECT MANAGER BEFORE PLACEMENT OF PUF PLUG.
5. APPLY PUF IN ACCORDANCE WITH CONSTRUCTION SPECIFICATIONS.
6. EXISTING SOIL CONSISTS OF UNCONSOLIDATED COLLUVIUM INCLUDING ROCK FRAGMENTS FROM THE HIGHWALL.
7. BACKFILL WITH EXISTING SOIL THAT IS EXCAVATED FROM THE DECLINE ADIT. BLEND SURFACE WITH SURROUNDING GRADE AND LAND. FORM TO SIMULATE NATURAL CONDITIONS.
8. THE GEOMETRY AND SIZE OF DECLINE ADIT ARE NOT WELL-DOCUMENTED. EXCAVATION SHALL BE OVERSEEN BY A COMPETENT PERSON, AS DEFINED BY OSHA. AS NEEDED, EXCAVATION SHALL EMPLOY PROTECTIVE SYSTEM AS REQUIRED BY 29 CFR PART 126, SUBPART P.
9. APPROXIMATELY 7.5 CUBIC YARDS OF CURED-IN-PLACE PUF WILL BE NEEDED. THE CONTRACTOR SHALL CONFIRM VOLUME AFTER OPENING THE DECLINE ADIT FOR INSPECTION.



1 FEATURE F9 – PHOTO OF EXISTING CONDITIONS



2 PROFILE SCHEMATIC OF F9 EXISTING CONDITIONS
NTS



3 F9 PUF PLUG AND BACKFILL PROFILE
NTS



CAUTION - THIS PROJECT REQUIRES CONSTRUCTION WORK IN, AROUND, AND OVER HAZARDOUS AND UNPROTECTED MINE SHAFTS, STOPES, ADITS, AND OTHER OPENINGS WHICH MAY BE OPEN TO THE SURFACE OR HIDDEN FROM VIEW BY TRASH, DEBRIS, OR THIN AND UNSTABLE LAYERS OF SURFACE MATERIALS OR ROCK. THE CONSTRUCTOR SHALL BE RESPONSIBLE FOR THOROUGHLY INVESTIGATING THE SITE CONDITIONS AND SCHEDULING EQUIPMENT, EQUIPMENT OPERATIONS, PERSONNEL AND SAFETY PROCEDURES TO PREVENT ACCIDENTS AND INJURIES.

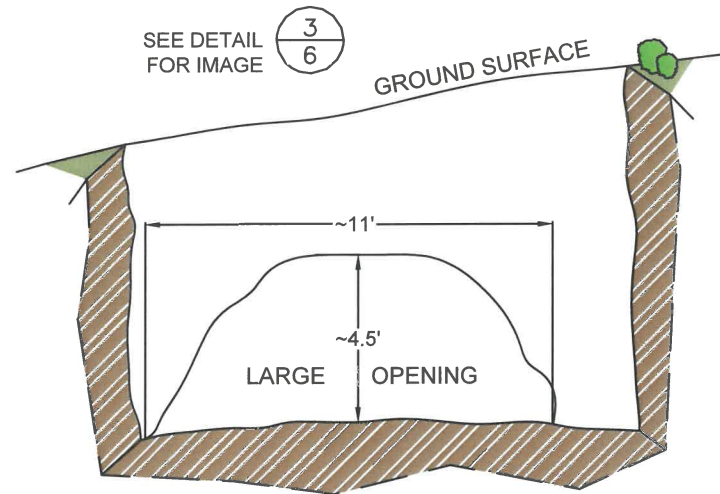
001	3/2022	2020 SAFEGUARD MEASURES	JPJ
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NEW MEXICO ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT

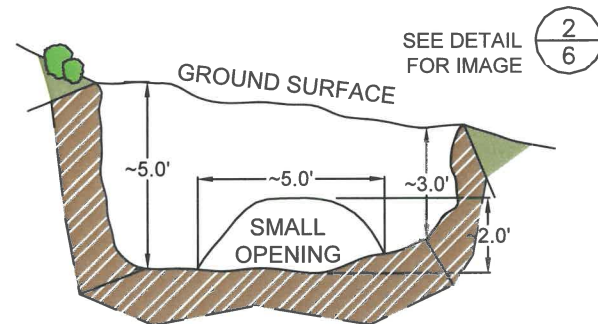
FEATURE F9, REOPENED DECLINE ADIT DETAILS

HARDING PEGMATITE MINE
SAFEGUARD PROJECT - PHASE II
DIXON, NEW MEXICO
PROJECT NO. EMNRD-MMD-2022-02

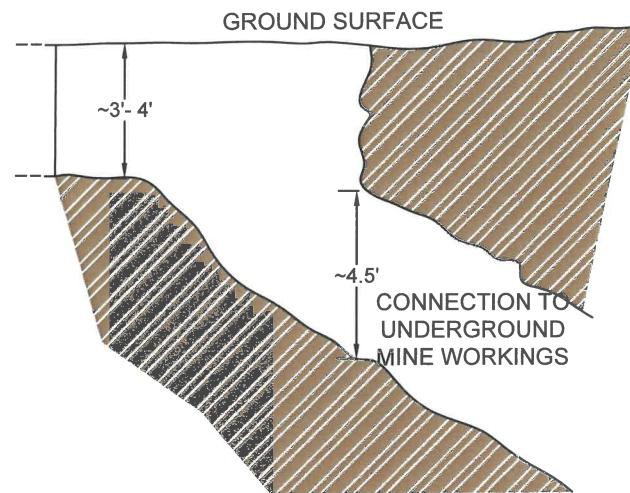
SHEET NO:
07



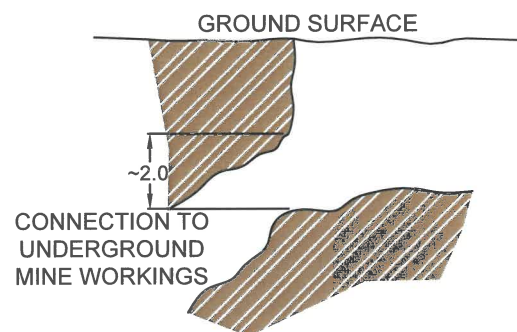
2 SECTION LARGE OPENING - NORTHEAST
1" ≈ 5'



4 SECTION SMALL OPENING - SOUTHWEST
1" ≈ 5'



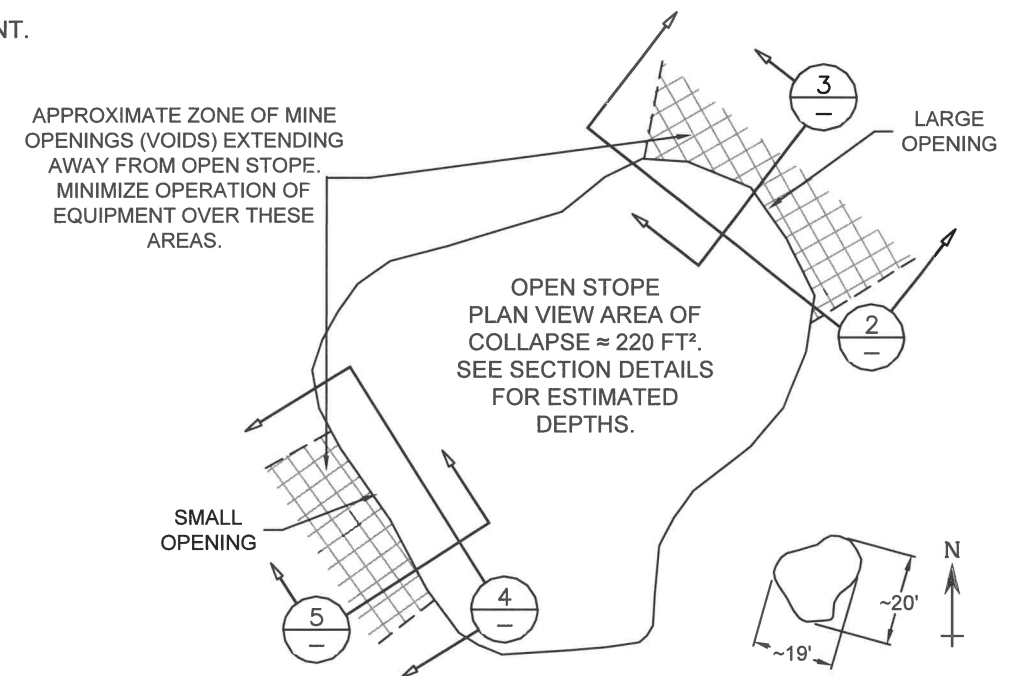
3 SECTION LARGE OPENING - NORTHWEST
1" ≈ 5'



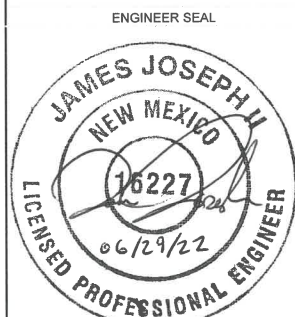
5 SECTION SMALL OPENING - WEST
1" ≈ 5'

GENERAL NOTES

1. FEATURE IS A COLLAPSED OPEN STOPE. UNDERGROUND MINE WORKINGS (VOIDS) ARE PRESENT AROUND THE FEATURE. THIN BEDROCK MAY BE PRESENT AROUND THE FEATURE. CONTRACTOR SHALL SIZE EQUIPMENT AND PLAN EQUIPMENT APPROACH ACCORDINGLY.
2. SHAPE AND DIMENSIONS ON SCHEMATICS ARE APPROXIMATED BASED ON OBSERVATIONS FROM OUTSIDE THE COLLAPSE FEATURE AND DATA FROM LIDAR SURVEY. CONTRACTOR SHALL VERIFY DIMENSIONS.
3. FEATURE SUB-1 IS SECURED BY TEMPORARY CHAIN LINK FENCE PANELS ERECTED AROUND THE FEATURE. THE CONTRACTOR SHALL REMOVE THE TEMPORARY FENCE AND TRANSPORT IT TO THE LAYDOWN AREA IN THE LOWER PARKING AREA FOR REMOVAL FROM THE SITE BY THE AML PROGRAM.
4. TEMPORARILY REMOVE SECTION OF BARBED WIRE FENCE OVER THE STOPE WHILE CONSTRUCTING SAFEGUARD MEASURES. REPLACE REMOVED FENCING AFTER FILLING OPEN STOPE IN ACCORDANCE WITH DETAILS ON SHEET 5.
5. FINAL DEPTHS OF OPEN STOPE PRIOR TO FILLING WILL BE DEPENDENT ON AMOUNT OF SOIL AND WEATHERED ROCK THAT IS EXCAVATED DURING PREPARATION FOR PLUG INSTALLS AND PUF PLACEMENT.



1 PLAN VIEW OF OPEN STOPE
NTS



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NEW MEXICO ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT



**FEATURE SUB-1, OPEN STOPE –
SCHEMATICS OF EXISTING CONDITIONS**

HARDING PEGMATITE MINE
SAFEGUARD PROJECT - PHASE II
DIXON, NEW MEXICO
PROJECT NO. EMNRD-MMD-2022-02

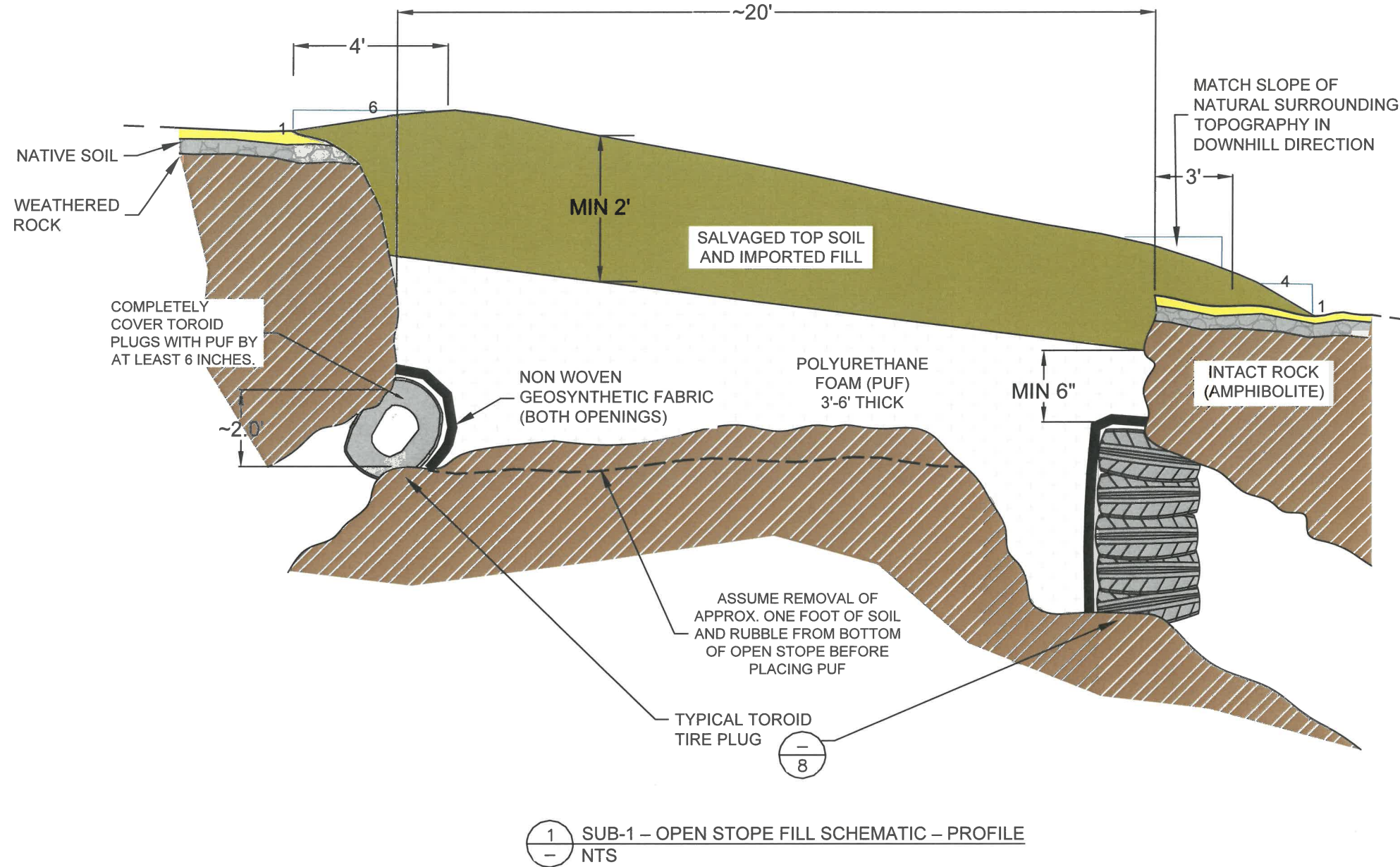
SHEET NO:
08



1. ENTRANCE INTO THE OPEN STOPE BY EQUIPMENT AND/OR PERSONNEL SHALL BE LIMITED, AS MUCH AS POSSIBLE. ALL INDIVIDUALS WORKING IN, OR AT THE EDGE OF, THE OPEN STOPE OR THE EDGE OF THE NEARBY HIGHWALL SHALL BE EQUIPPED WITH FALL RESTRAINT AND RECOVERY EQUIPMENT IN ACCORDANCE WITH THE CONTRACTOR'S HEALTH AND SAFETY PLAN. AN ATTENDANT MUST BE PLACED OUTSIDE OF THE OPEN STOPE AT ALL TIMES WHEN WORKERS ARE IN THE COLLAPSE FEATURE.
2. CONTRACTOR SHALL USE FIELD JUDGEMENT IN SELECTION OF NUMBER OF TIRES AND CONFIGURATION TO BEST CLOSE OFF OPENINGS INTO THE MINE.
3. ASSUME APPROXIMATE QUANTITY OF 65 TIRES NEEDED FOR TOROID PLUGS. USED PASSENGER VEHICLE TIRES OF CONSISTENT SIZE SHALL BE USED FOR TOROID TIRE PLUGS BASED ON COMMON TIRE SIZE (225/65R 17).
4. PERMITS MUST BE OBTAINED FROM THE SOLID WASTE BUREAU (SWB) OF THE NEW MEXICO ENVIRONMENT DEPARTMENT FOR USE OF SCRAP TIRES IN THIS CONSTRUCTION. NO TIRES SHALL BE PROCURED OR DELIVERED TO THE SITE UNTIL THE PERMIT IS IN PLACE. CONTRACTOR MUST BE REGISTERED WITH THE STATE OF NEW MEXICO TO HAUL SCRAP TIRES OR HAVE THE TIRES DELIVERED BY A REGISTERED SCRAP TIRE HAULER. THE CONDITIONS OF THE TIRE USE PERMIT MAY REQUIRE THAT THE SWB BE ALLOWED TO INSPECT THE TIRE PLUGS BEFORE BURYING. COORDINATION OF THE INSPECTION SHOULD BE MADE AS SOON AS POSSIBLE TO AVOID CONSTRUCTION DELAYS.
5. STACKED TIRES SHALL BE COMPRESSED WITH EXCAVATION EQUIPMENT AND TEMPORARILY BANDED BEFORE PLACING IN THE OPEN STOPE. ONCE THE TIRES ARE SATISFACTORILY PLACED, THE BANDS SHALL BE REMOVED TO ALLOW TIRES TO FILL IN AND CONTACT THE TOP OF THE OPENING (AS SHOWN IN SECTION 3). TIRES PLACED VERTICALLY (RESTING ON THE TREAD INSTEAD OF THE SIDEWALL OF THE TIRE) SHALL BE WEDGED INTO THE TARGETED VOID BY USING A THUMB ATTACHMENT ON THE EXCAVATION EQUIPMENT TO WEDGE THE TIRE INTO PLACE.
6. ONCE TOROID TIRE PLUGS ARE PLACED, COVER THE EXPOSED TIRE SURFACES WITH NONWOVEN GEOTEXTILE FABRIC TO PREVENT PUF FROM ENTERING THE MINE OPENING BEHIND THE TIRES. THE FABRIC SHALL BE PLACED IN A MANNER TO OPTIMIZE THE CONTACT SURFACE AREA OF THE PUF TO THE ROCK WALL. ANY OPENINGS IN THE TIRE PLUGS GREATER THAN 1 FOOT IN ANY DIMENSION SHALL BE SUPPORTED USING WIRE MESH BEFORE APPLICATION OF THE GEOTEXTILE FABRIC. SEE SHEET 10 FOR FABRIC PLACEMENT.
7. LOOSE SOIL, VEGETATION, AND WEATHERED ROCK SHALL BE EXCAVATED FROM THE OPEN STOPE PRIOR TO INSTALLING PLUGS OVER OPENINGS.



SHEET NO: 09



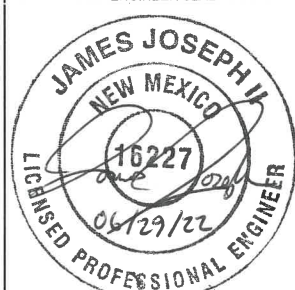
GENERAL NOTES

1. PRIOR TO PLACING THE POLYURETHANE FOAM (PUF) PLUG MATERIAL, SOIL AND WEATHERED ROCK WILL BE EXCAVATED FROM INSIDE OF OPEN STOPE TO EVIDENCE OF AMPHIBOLITE RUBBLE. REMOVED MATERIAL SHALL BE STOCKPILED FOR LATER USE IN CAP MATERIAL.
2. THE NEW MEXICO ENVIRONMENT DEPARTMENT SHALL BE GIVEN THE OPPORTUNITY TO INSPECT TOROID TIRE PLUGS PRIOR TO APPLYING GEOSYNTHETIC FABRIC AND COVERING WITH PUF.
3. APPLY PUF IN ACCORDANCE WITH CONSTRUCTION SPECIFICATIONS.
4. PLACE PUF AGAINST CLEAN, DRY VERTICAL SURFACES.
5. LARGE VOIDS WILL BE BRIDGED WITH TOROID TIRE PLUGS, GEOSYNTHETIC FABRIC, AND/OR WIRE MESH SECURED TO TIRES.
6. USE METAL STAPLES TO SECURE GEOSYNTHETIC FABRIC TO TIRES.
7. EXCAVATED MATERIAL AND IMPORTED SOIL FILL WILL BE USED TO COVER PUF IN A 2 FOOT LAYER (MINIMUM) AND MOUNDED TO PROMOTE DRAINAGE AWAY FROM SINKHOLE.
8. USE WATER TO TREAT SOIL FILL FOR COMPACTION. COMPACT SOIL WITH MECHANICAL TAMPER. DO NOT USE WHEELED OR TRACKED EQUIPMENT FOR SOIL COMPACTION. OPERATION AND TURNING OF HEAVY EQUIPMENT OVER THE RECLAIMED OPEN STOPE COULD CAUSE SURFACE COLLAPSE OF OTHER SECTIONS OF THE MINE.
9. REPAIR FENCING AS DESCRIBED IN SHEET 05.
10. INSTALL FEATURE IDENTIFICATION MARKER IN CENTER OF OPEN STOPE, OR IN A LOCATION DIRECTED BY THE AML PROJECT MANAGER. SEE SHEET 2 FOR SPECIFICATIONS.
11. ONLY TOP SOIL REMOVED FROM INSIDE THE COLLAPSED FEATURE SHALL BE USED FROM ANYWHERE ELSE ON SITE, INCLUDING AREAS AROUND THE EDGES OF FEATURE SUB-1.
12. MAXIMUM SLOPE OF SOIL CAP SHALL BE 6:1 AT UPHILL EDGE AND ON CROSS SLOPE EDGES (FROM CENTER). LAND FORM SURFACE OF CAP TO SAME DOWNHILL SLOPE AS NATURAL GRADE. THE MAXIMUM SLOPE AT DOWNHILL EDGE OF FILL MAY BE 4:1.
13. THE SURFACE OF FEATURE SUB-1, ANY SURROUNDING DISTURBED AREA, AND THE DISTURBED GROUND OF THE OVER-LAND ACCESS ROUTE SHALL BE STABILIZED BY APPLICATION OF A SEED MIXTURE AND MULCH. THE RESEEDING SHALL BE EXECUTED AS THE LAST STEP IN THE SAFEGUARD PROCESS, AND MINIMAL FOOT TRAFFIC AND NO EQUIPMENT TRAFFIC SHALL BE ALLOWED AFTER APPLICATION OF THE SEED AND MULCH. RESEEDING DETAILS, INCLUDING SEED MIXTURE, ARE PROVIDED IN THE CONSTRUCTION SPECIFICATIONS.

APPROXIMATE FILL VOLUMES

SALVAGED TOP SOIL \approx 4 CUBIC YARDS
IMPORTED SOIL FILL \approx 25 CUBIC YARDS
PUF (CURED-IN-PLACE) \approx 54 CUBIC YARDS

ENGINEER SEAL



CAUTION - THIS PROJECT REQUIRES CONSTRUCTION WORK IN, AROUND, AND OVER HAZARDOUS AND UNPROTECTED MINE SHAFTS, STOPEs, ADITS, AND OTHER OPENINGS WHICH MAY BE OPEN TO THE SURFACE OR HIDDEN FROM VIEW BY TRASH, DEBRIS, OR THIN AND UNSTABLE LAYERS OF SURFACE MATERIALS OR ROCK. THE CONSTRUCTOR SHALL BE RESPONSIBLE FOR THOROUGHLY INVESTIGATING THE SITE CONDITIONS AND SCHEDULING EQUIPMENT, EQUIPMENT OPERATIONS, PERSONNEL AND SAFETY PROCEDURES TO PREVENT ACCIDENTS AND INJURIES.

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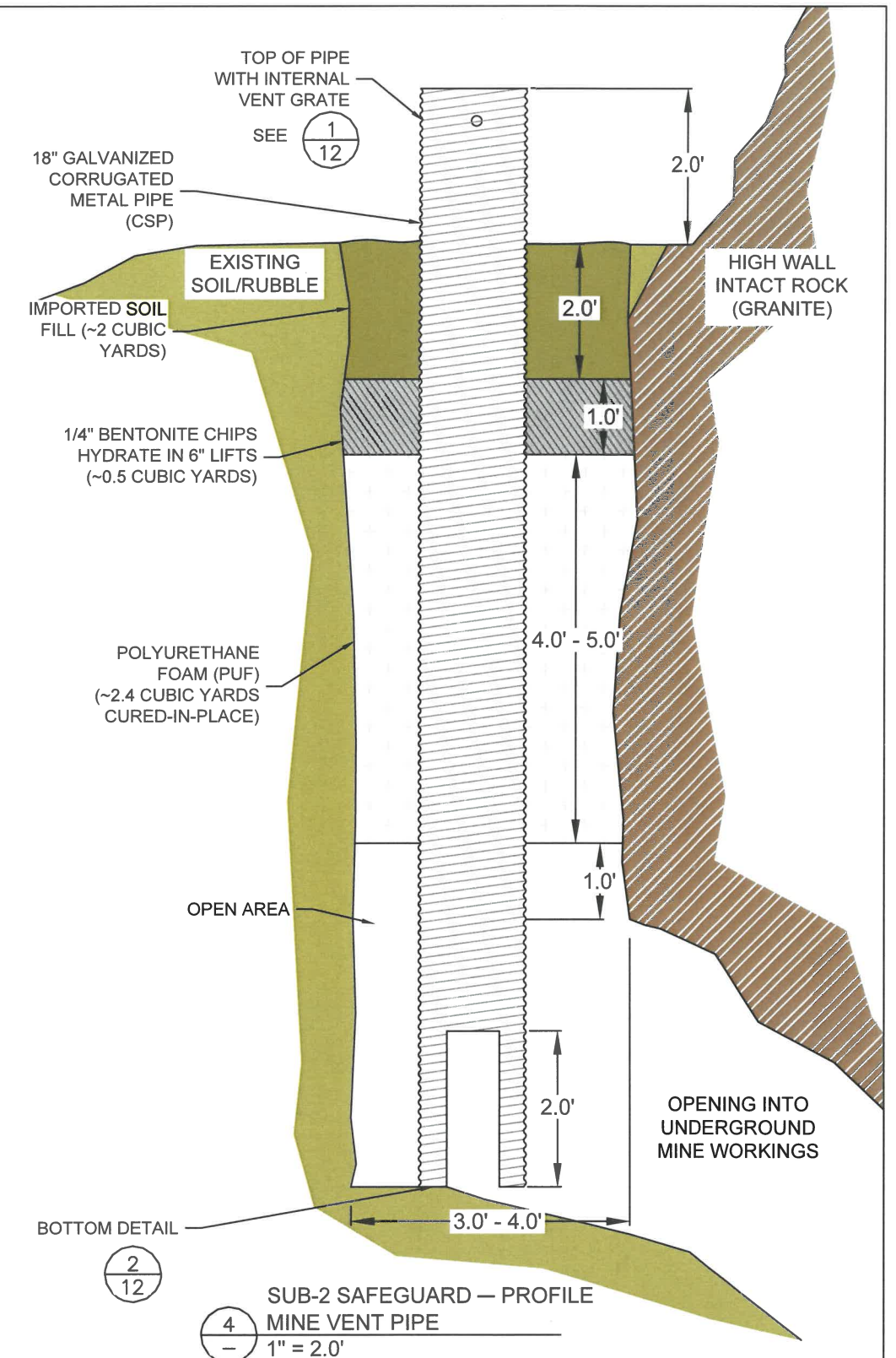
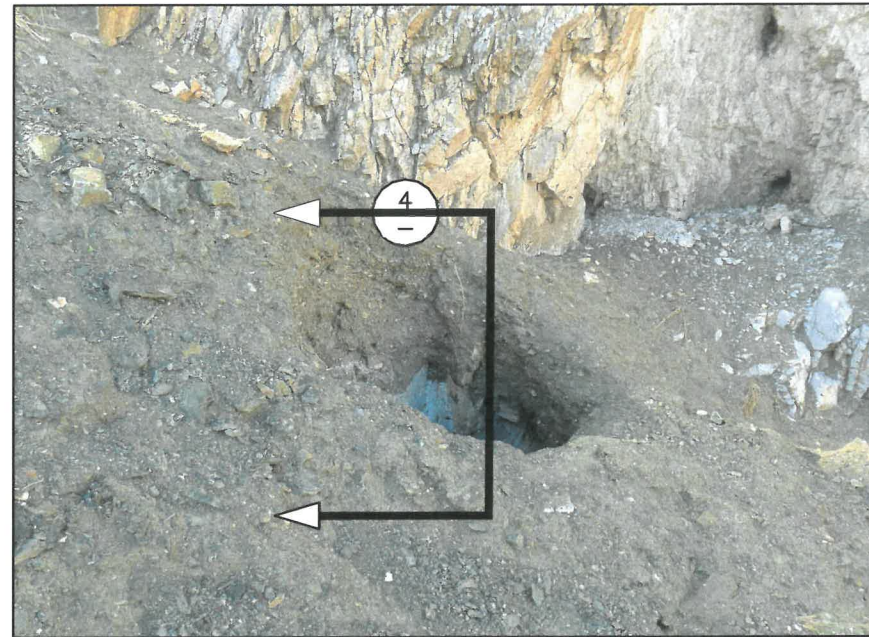
**FEATURE SUB-1, OPEN STOPE
FILL DETAIL**

HARDING PEGMATITE MINE
SAFEGUARD PROJECT - PHASE II
DIXON, NEW MEXICO
PROJECT NO. EMNRD-MMD-2022-02

SHEET NO:
10



SAFEGUARD MEASURES AT FEATURE SUB-2 INCLUDE THE INSTALLATION OF A MINE VENT TO ENHANCE BAT HABITAT IN THE MINE WORKINGS. GENERAL CONSTRUCTION NOTES FOR SUB-2 SAFEGUARD MEASURES ARE PROVIDED ON SHEET 12.



ENGINEER SEAL

JAMES JOSEPH II
NEW MEXICO
16227
06/29/22
LICENSED PROFESSIONAL ENGINEER



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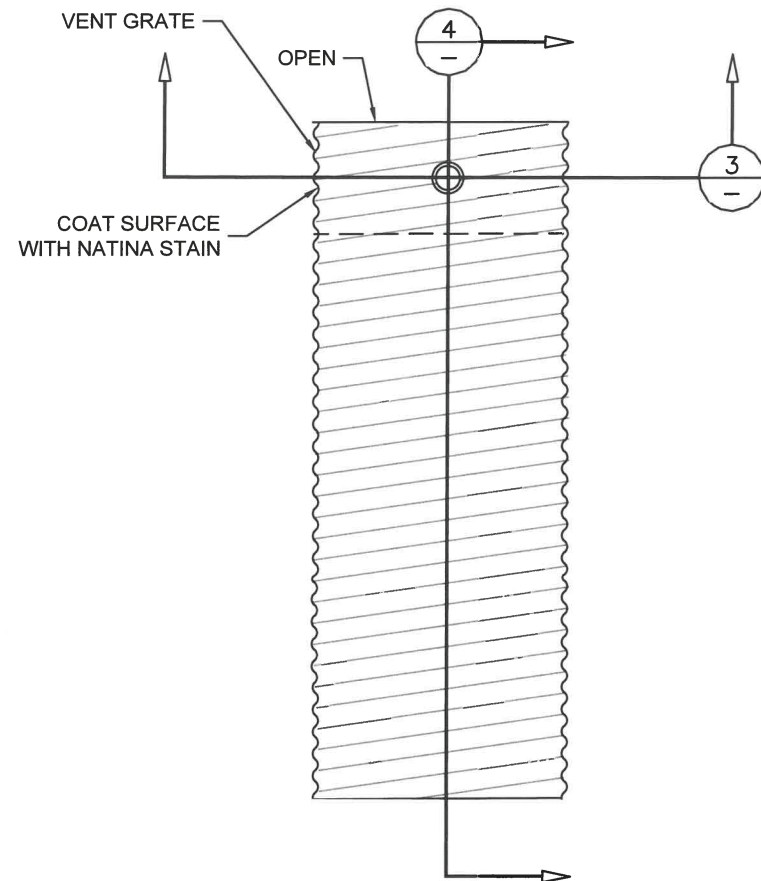
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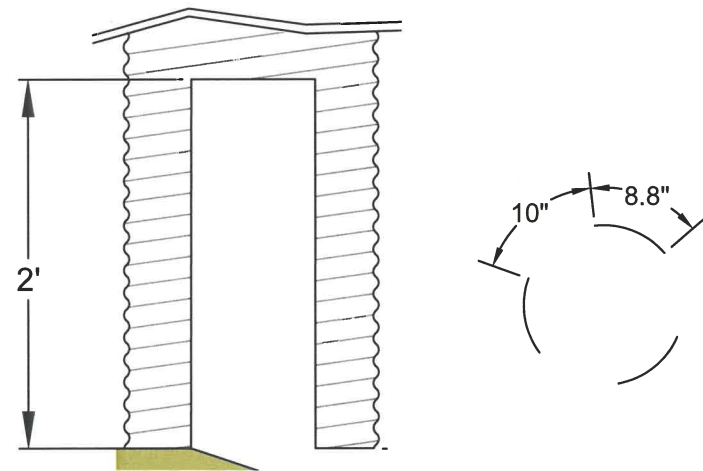
FEATURE SUB-2, EXISTING CONDITIONS AND MINE VENT DETAIL

HARDING PEGMATITE MINE
SAFEGUARD PROJECT - PHASE II
DIXON, NEW MEXICO
PROJECT NO. EMNRD-MMD-2022-02

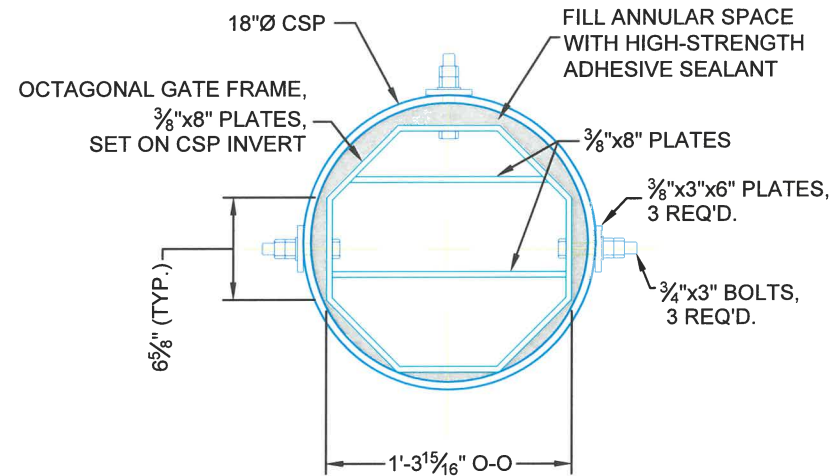
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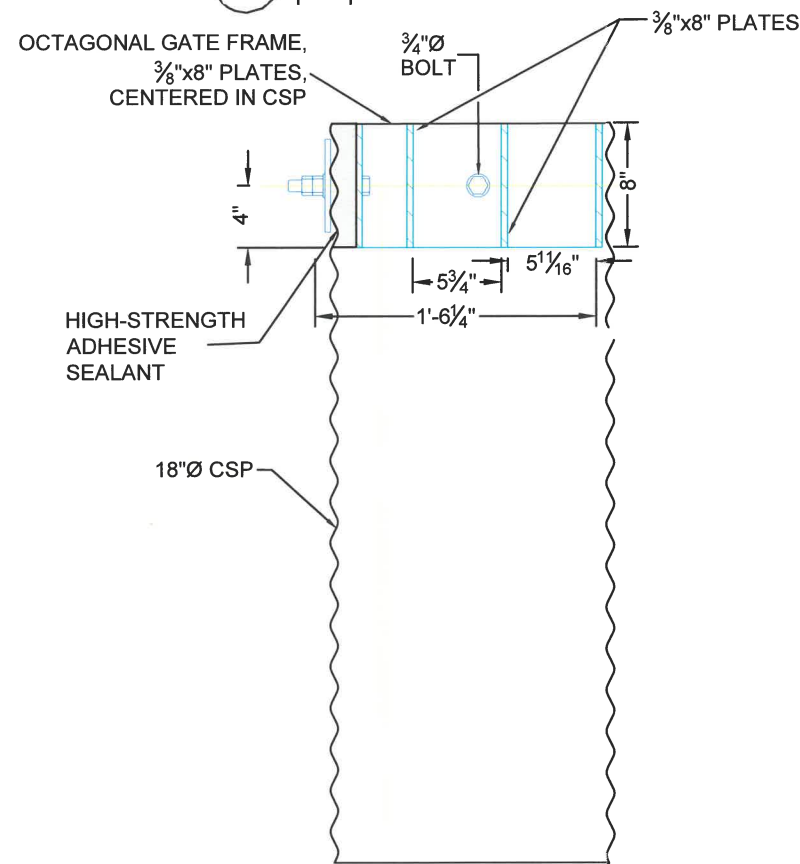
1 TOP OF PIPE WITH INTERNAL VENT GRATE - PROFILE
1" = 1'



2 BOTTOM DETAIL- PROFILE AND SECTION
1" = 1'



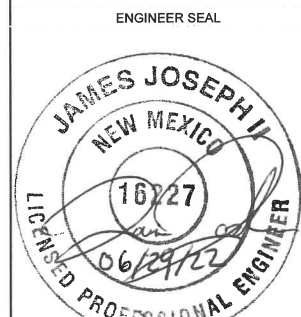
3 VENT GRATE INTERIOR SECTION
1" = 1'



4 VENT GRATE SECTION
1" = 1'

GENERAL NOTES

- CONTRACTOR SHALL VERIFY DEPTHS AND MATERIALS NEEDED PRIOR TO PROCUREMENT OF MATERIALS.
- CENTER THE CORRUGATED STEEL PIPE (CSP) IN THE VERTICAL OPENING, AND PLACE BOTTOM OF THE CSP AGAINST MATERIAL AT THE BASE OF THE OPENING.
- THE TOP CSP PIECE SHALL BE 4 FEET LONG WITH 2 FEET ABOVE THE EXISTING GROUND SURFACE.
- REMOVE BURRS FROM TOP RIM AND NOTCHES CUT IN THE BASE OF THE OF CSP VENT PIPE.
- BRUSH SOIL FROM GRANITE SURFACES IN THE VERTICAL OPENING PRIOR TO PLACING PUF.
- THE CONTRACTOR SHALL SUPPORT THE BOTTOM OF THE PUF PLUG TO PREVENT PUF FROM ENTERING THE MINE OPENING.
- MIX AND PLACE PUF IN ACCORDANCE WITH CONSTRUCTION SPECIFICATIONS. AN ESTIMATE OF 2.4 CUBIC YARDS OF PUF (CURED-IN-PLACE) WILL BE NEEDED.
- PLACE BENTONITE CHIPS AFTER PUF HAS FULLY CURED. AVOID PLACEMENT OF EXCESS PUF. USE BENTONITE PLUG MATERIAL TO MAKE UP SHORTAGES OF PUF RATHER THAN REDUCING BENTONITE PLUG THICKNESS. AN ESTIMATED 6.5 CUBIC FEET OF 1/4-INCH BENTONITE CHIPS IS ANTICIPATED TO BE NEEDED FOR THE BENTONITE PLUG.
- HYDRATE THE BENTONITE WITH CLEAN WATER (NOT AVAILABLE ON SITE) IN 6-INCH LIFTS IN ACCORDANCE WITH RECOMMENDATIONS BY THE BENTONITE VENDOR.
- STEEL PLATES AND SHAPES FOR THE VENT GRATE ASSEMBLY SHALL BE MILD STEEL PLATE. WELD ALL JOINTS. STEEL PLATES, BOLTS, AND NUTS SHALL BE MILD OR STAINLESS STEEL. DOUBLE-NUT ALL BOLTS. ROUND OR CHAMFER ALL EXPOSED EDGES AND CORNERS TO THE VENT GRATE.
- SEALANT USED AROUND THE VENT GRATE SHALL BE SB-190 EVERSEAL HIGH-STRENGTH ADHESIVE SEALANT, OR APPROVED EQUIVALENT. SEALANT SHALL BE GRAY IN COLOR.
- INSTALL FEATURE IDENTIFICATION MARKER ON EAST SIDE OF VENT PIPE, APPROXIMATELY 6-INCHES FROM THE CSP. SEE DETAIL 1 ON SHEET 2.
- PAINT VISIBLE PORTIONS OF CSP WITH NATINA STAIN OR APPROVED EQUIVALENT FOR CAMOUFLAGE. COLOR SHOULD BLEND IN WITH SURROUNDING GEOLOGY AS DIRECTED BY THE AML PROJECT MANAGER.
- PLACE TACK WELD ACROSS BOTH DOUBLE NUTS AND ONTO EXTERNAL BOLT THREADS WHERE VENT GRATE IS BOLTED TO CSP.



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**FEATURE SUB-2 MINE VENT
DETAILS AND NOTES**

**HARDING PEGMATITE MINE
SAFEGUARD PROJECT - PHASE II
DIXON, NEW MEXICO**
PROJECT NO. EMNRD-MMD-2022-02

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12