

P.O. Box 326, Cañon City, CO 81215 angela@envalternatives.com 719-275-8951

May 18, 2020

Tim Cazier Colorado Division of Reclamation, Mining and Safety 1313 Sherman Street, Room 215 Denver, Colorado 80203

RE: Zephyr Gold USA Ltd (Zephry) Dawson Gold Project P-2020-002 Response to Notice of Deficiencies dated May 11, 2020

Dear Mr. Cazier,

Please accept the following information as response to the above referenced correspondence.

Application:

- 1. Item 1.7A includes telephone and fax numbers.
- 2. Item III.5. Godbe Drilling has 20 years of experience performing exploration drilling in rugged mountain terrain. Constructing the platform is a component of the drilling contract. The platforms will be constructed using 12x12 rough cut timbers on 5 ft. centers and 2x12 decking with bracing. The slope of the target area is approximately 20° allowing for effective use of Dewey dags rock bolts to secure the wooden platform to the mountain. The drill rig will be chained to a "deadman" anchor rod that will be set into bedrock. The rig will be chained to the anchor using ratchet binders attached at no less than 3 points. The wooden platform is not intended to support the helicopter. If sufficiently level ground is not in the vicinity, a 10' x 10' platform will be constructed for helicopter landing area. The drill mud container and recirculating water container may be placed on bracing under the working platform. However, should sufficiently level areas be near the platform, the containers may sit directly on the ground. During material loading and unloading, the helicopter will hoover sufficiently high from the rig to be clear of the drilling rig and as such, downwash will be minimized.
- 3. Item III.5
 - a. The pressure rating on the one-inch diameter hose is 1000 psi.
 - b. As part of Zephyr's approved Substitute Water Supply Plan (SWSP), Zephyr will give 24 to 48 hours' notice to the Upper Arkansas Water Conservancy District (UAWCD) before water is pumped from Grape Creek. The UAWCD will then release additional water from DeWeese Reservoir for the day and volumes that Zephyr will pump (plus 13% for ground water losses). This will

ensure that there are no water losses from Grape Creek due to pumping by Zephyr. Average flow rates on Grape Creek are 8500 gallons per minute (gal/min) and during low flow conditions such as 2018 the average flow rates are 1800 gal/min. Average water pumped from Grape Creek during drilling is expected to be 5.6 gal/min. If lost circulation (water is pumped down the drill hole and no water returns to surface due to fractured rock formations and a around water table below the depth of the drill bit, this is what is meant by "lost circulation ") is encountered while drilling it is estimated that up to 13.9 gal/min (20,000 gallons per day) of water may be used. Lost circulation is a drilling situation that is not expected to happen but is a rare event that could potentially happen. In the event that lost circulation is encountered, additional water will be released from DeWeese Reservoir to make up the additional pumped water. The time for water to reach the pumped area from DeWeese Reservoir is 7 to 15 hours depending on flow conditions. It should be noted that the maximum flow rate of 13.9 gal/min is only expected to be for a few hours until natural bentonite clay is added to the water which will plug the fractures in the drill hole and stop the lost circulation.

In summation the additional releases of water from DeWeese Reservoir while pumping will ensure there is no disturbance in the prevailing hydrologic balance. In an emergency situation where lost circulation is encountered there could be several hours where pumping exceeds the water released from DeWeese Reservoir by approximately 8.3 gal/min (13.9 gal/min minus the regular release of 5.6 gal/min). This compares with low flow conditions in Grape Creek with flow rates of 1800 gal/min. If the additional pumping is required, it will amount to approximately 0.5% of the low flow rate for several hours. This has been accepted and approved by the Colorado Division of Water Resources and is included in the SWSP.

- c. The waterline will be tied to rock or secured in place with stakes to prevent lateral movement during to pumping. Given the line will be staked, any lateral movement that may occur would be minimal.
- d. The helicopter will set the pump on the ground near Grape Creek. It will be place in a heavy plastic industrial containment tank with a roof and bermed to secure in place. The pump will be enclosed in sorbent material inside the tank to catch any free liquid inside the containment tank. Double walled fuel barrels will be lowered from the helicopter and plugged into the pump fuel system. The double walled fuel barrels are the first defense against fuel spills. In addition, waddles and a spill kit will be near the pump in case of a spill. Because Grape Creek has a rock bottom in the target reach, very little sediment is anticipated in the drill water. A four chamber circulation tank will be available in the event sediment is pulled from the creek or circulation is lost and water is recycled. If utilized, sediment will be caught in the first and second chambers, placed in 55 gallon drums and hauled out by helicopter. This is not anticipated due to the fractured nature of the geology.
- e. The drill mud tank capacity is 350 gallons or 3200 pounds with an eight-foot diameter and three-foot-high walls. The circulation tank is 1500 gallons with dimensions 10' long x 5' wide x 4' deep.
- Item III.6.B Each hole has the approximate average depth of 1500 feet. The current bond allows for up to 20 holes. Zephyr plans to drill up to three holes in this phase of exploration.

- 5. Item III.6.F Excess water is not anticipated. Clean water will be returned to Grape Creek using a hose with an outfall directly into the stream bed.
- 6. Item III.6.H was increased to < 0.02 acres. The 1000 linear feet of one-inch hose, allowing six inches for surface contact or 0.01 acres.
- 7. Zephyr commits to maintaining a pre and post prospecting photographic record of exploration.
- Item IV.4: Item 5 of the lease with Upper Arkansas Water Conservation District allows Zephyr the "right to recapture, reuse and dispose of such water to its extinction."
- 9. Item IV.6 now includes a description of reclamation for the waterline and walkway paths.
- 10. Item IV.7 indicates mulch will be crimped with hand tools.
- 11. Zephyr was guided by BLM in 2019 to prepare a PoO that reflected all exploration that could possibly be anticipated for the life of Zephyr Gold USA. This guidance resulted in the June 21, 2019 PoO. Upon close study of 43 CFR 3802 and knowing the wildlife mitigation required by CO State Land Board and Fremont County, it came to Zephyr's attention that the proposed exploration in the Wilderness Study Area (WSA) was in fact exempt activity according to 43 CFR 3802. A February 21, 2020 letter to BLM, Zephyr states immediate exploration target will focus on the El Plomo vicinity in the WSA and that the PoO and review process may proceed if exploration extends beyond the current target El Plomo area. BLM concurred with this exemption in a correspondence dated March 25, 2020.
- 12. MSDS are provided for all potential drilling fluid additives. It is anticipated drilling will be accomplished with water only. Additives will be used only if necessary.
- 13. All pathways, whether along the waterline or to the helicopter site where personnel are dropped once each day, will be reclaimed as described in Item IV of the NOI. During final reclamation, the exploration area will be inspected for helicopter downwash disturbance and will be reclaimed as described in Item IV.
- 14. Zephyr is also concerned about unforeseeable schedule disruptions. To that end, exploration will end no later than October 20th to allow for reclamation to be completed before the October 30th deadline.

Thank you for forwarding the comments regarding the 2020 exploration campaign. Zephyr's exploration activities are regulated by the Colorado State Land Board, the US Bureau of Land Management and Fremont County Department of Planning and Zoning. With the submission of the Notice of Intent to Explore, the Division of Reclamation, Mining and Safety will be added to the regulatory oversight.

Each agency approval included mitigation conditions for the concerns mentioned in your comment correspondence. Zephyr is committed to continuing to practice good stewardship of our wildlife and water systems. The specific required mitigation is as follows:

<u>Wildlife Impact</u>: CO Parks and Wildlife submitted comment to CO State Land Board for the Grape Creek-Horseshoe Mountain area in 2019. Zephyr commits to complying with wildlife impact mitigation recommended by CO Parks and Wildlife and CO State Land Board that allows exploration from July 1 thru October 30 of each year and maintaining a 500 ft. setback from Grape Creek.

<u>Hydrologic Balance</u>: The Upper Arkansas Water Conservation District agreed to lease Zephyr 3 acre-feet of Grape Creek water. The required Substitute Water Supply Plan was approved by CO Division of Water Resources on April 13, 2020. Zephyr commits to all conditions in the lease and the SWSP.

<u>Roads</u>: As stated in the CO State Land Board lease, US Bureau of Land Management Notice and Plan of Operations and the Fremont County Conditional Use Permit, exploration in the Wilderness Study Area and CO Section 16 will rely on helicopter transport of equipment and personnel. Roads will NOT be constructed.

<u>BLM WSA and ACEC</u>: Zephyr is committed to abiding by the guidance and conditions of 43 CFR 3802. The March 25, 2020 BLM correspondence accepts the proposed exploration in WSA and state that BLM will monitor activities to ensure compliance.

<u>Core Drilling</u>: Core drilling removes a 1 7/8-inch diameter column of rock. Water is used as a lubricant. Since core is drilled with water and removed from the site, unlike water well drilling, cuttings and dust is minimal and easily contained in a mud tank. Upon completion, the salvaged cuttings, if any, are poured back into the hole from whence they came.

<u>Helicopter Transport</u>: Flight distance from helicopter loading area to the drilling platform is approximately 2 miles. This flight pattern is not over inhabited structures with the staging area approximately ³/₄ mile from the nearest inhabited structure.

Zephyr relies on environmental experts for guidance with regard to mitigating impacts to wildlife and water systems and will continue to reach out to those experts as exploration continues. Exploration will be conducted in concert with regulatory oversight, guidance and recommendations.

Zephyr accepts a Statewide bond and will proceed with converting the currently held bond as directed.

Thank you in advance for your time and attention. Please contact me directly with any questions.

Respectfully submitted,

Angela M. Bellantoni Ph.D.

Cc: Loren Komperdo Will Felderhof Dave Felderhof Stephanie Carter, BLM

MATERIAL SAFETY DATA SHEET COTTON SEED HULLS

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

| TRADE NAME: | COTTON SEED HULLS |
|---------------------------------|--|
| CHEMICAL CLASS: | Cellulose material |
| APPLICATIONS: | Oil well drilling fluid additive. Lost circulation material. |
| EMERGENCY TELEPHONE: | 281-561-1600 |
| SUPPLIER: TELEPHONE: FAX: | Supplied by a Business Unit of M-I L.L.C. P.O. Box 42842, Houston, Texas 77242-2842 See cover sheet for local supplier. 281-561-1509 281-561-7240 |
| CONTACT PERSON: | Sam Hoskin - Manager, Occupational Health |

2. COMPOSITION, INFORMATION ON INGREDIENTS

| INGREDIENT NAME: | CAS No.: | CONTENTS : | EPA RQ: | TPQ: |
|---|----------|------------|---------|------|
| Cotton dust (raw) | | 0-1 % | | |
| Particulates Not Otherwise Classifi- ed (PNOC) | | 99-100 % | | |

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

CAUTION! MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION. Avoid contact with eyes, skin and clothing. Avoid breathing airborne product. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.

This product is a/an This product is a powder. May form explosive dust-air mixtures. Slippery when wet. A nuisance dust.

ACUTE EFFECTS: HEALTH HAZARDS. GENERAL:

Particulates may cause mechanical irritation to the eyes, nose, throat and lungs. Particulate inhalation may lead to pulmonary fibrosis, chronic bronchitis, emphysema and bronchial asthma. Dermatitis and asthma may result from short contact periods.

- **INHALATION:** May be irritating to the respiratory tract if inhaled.
- **INGESTION:** May cause gastric distress, nausea and vomiting if ingested.
- **SKIN:** May be irritating to the skin.
- **EYES:** May be irritating to the eyes.

CHRONIC EFFECTS: SENSITIZATION:

Chronic exposure may cause an allergic response due to allergens or fungi on the dust.

CARCINOGENICITY:

IARC: Not listed. OSHA: Not regulated. NTP: Not listed.

ROUTE OF ENTRY:

Inhalation. Skin and/or eye contact.

TARGET ORGANS:

Respiratory system, lungs. Skin. Eyes.

4. FIRST AID MEASURES

| GENERAL: | Persons seeking medical attention should carry a copy of this MSDS with them. |
|-------------|---|
| INHALATION: | Move the exposed person to fresh air at once. Perform artificial respiration if breathing has stopped. Get medical attention. |
| INGESTION: | Drink a couple of glasses water or milk. Do not give victim anything to drink of he is unconscious. Get medical attention. |
| SKIN: | Wash skin thoroughly with soap and water. Remove contaminated clothing. Get medical attention if any discomfort continues. |
| EYES: | Promptly wash eyes with lots of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues. |

5. FIRE FIGHTING MEASURES

| AUTO IGNITION TEMP. (°F): | N/D |
|--------------------------------|-----|
| FLAMMABILITY LIMIT - LOWER(%): | N/D |
| FLAMMABILITY LIMIT - UPPER(%): | N/D |

EXTINGUISHING MEDIA:

Foam. Water spray, fog or mist.

SPECIAL FIRE FIGHTING PROCEDURES:

No specific fire fighting procedure given.

UNUSUAL FIRE & EXPLOSION HAZARDS:

Dust in high concentrations may form explosive mixtures with air.

HAZARDOUS COMBUSTION PRODUCTS:

Irritating gases/vapors/fumes. Oxides of: Carbon.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

Wear proper personal protective equipment (see MSDS Section 8).

SPILL CLEAN-UP PROCEDURES:

Avoid generating and spreading of dust. Shovel into dry containers. Cover and move the containers. Flush the area with water. Do not contaminate drainage or waterways. Repackage or recycle if possible.

7. HANDLING AND STORAGE

HANDLING PRECAUTIONS:

Avoid handling causing generation of dust. Wear full protective clothing for prolonged exposure and/or high concentrations. Eye wash and emergency shower must be available at the work place. Wash hands often and change clothing when needed. Provide good ventilation. Mechanical ventilation or local exhaust ventilation is required.

STORAGE PRECAUTIONS:

Store at moderate temperatures in dry, well ventilated area. Keep in original container.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

INGREDIENT NAME:

Cotton dust (raw)

ACGIH TLV: OSHA PEL: OTHER: CAS No.: TWA: STEL: TWA: STEL: TWA: STEL: UNITS: 0.2mg/m3





ENGINEERING CONTROLS:

Use appropriate engineering controls such as, exhaust ventilation and process enclosure, to reduce air contamination and keep worker exposure below the applicable limits.

- Supply natural or mechanical ventilation adequate to exhaust airborne product and keep exposures below the VENTILATION: applicable limits.
- **RESPIRATORS:** Use at least a NIOSH-approved N95 half-mask disposable or reuseable particulate respirator. In work environments containing oil mist/aerosol use at least a NIOSH-approved P95 half-mask disposable or reuseable particulate respirator.

PROTECTIVE GLOVES:

Use suitable protective gloves if risk of skin contact.

EYE PROTECTION:

Wear dust resistant safety goggles where there is danger of eye contact.

PROTECTIVE CLOTHING:

Wear appropriate clothing to prevent repeated or prolonged skin contact.

HYGIENIC WORK PRACTICES:

Wash promptly with soap and water if skin becomes contaminated. Change work clothing daily if there is any possibility of contamination.

9. PHYSICAL AND CHEMICAL PROPERTIES

| APPEARANCE/PHYSICAL STATE: |
|----------------------------------|
| COLOR: |
| ODOR: |
| SOLUBILITY DESCRIPTION: |
| DENSITY/SPECIFIC GRAVITY (g/ml): |
| BULK DENSITY: |
| VAPOR DENSITY (air=1): |
| VAPOR PRESSURE: |

Powder, dust. Brown. Odorless or no characteristic odor. Insoluble in water. 0.24 TEMPERATURE (°F): 68 15 lb/ft3; 237 kg/m3 N/A N/A TEMPERATURE (°F):

10. STABILITY AND REACTIVITY

STABILITY: Normally stable.

CONDITIONS TO AVOID:

Avoid heat.

HAZARDOUS POLYMERIZATION: Will not polymerize.

POLYMERIZATION DESCRIPTION: Not relevant.

MATERIALS TO AVOID:

Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS:

No specific hazardous decomposition products noted.

11. TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

No toxicological data is available for this product.

12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION:

Contact M-I Environmental Affairs for ecological information.

N/A

13. DISPOSAL CONSIDERATIONS

WASTE MANAGEMENT:

This product does not meet the criteria of a hazardous waste if discarded in its purchased form. Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. This is because product uses, transformations, mixtures, processes, etc, may render the resulting materials hazardous. Empty containers retain residues. All labeled precautions must be observed.

DISPOSAL METHODS:

Recover and reclaim or recycle, if practical. Should this product become a waste, dispose of in a permitted industrial landfill. Ensure that containers are empty by RCRA criteria prior to disposal in a permitted industrial landfill.

14. TRANSPORT INFORMATION

PRODUCT RQ:

U.S. DOT: U.S. DOT CLASS: Not regulated.

CANADIAN TRANSPORT: TDGR CLASS:

Not regulated.

| Not regulated. | | | | | |
|--|---|---|---|--|--|
| ON | | | | | |
| NTS: CAS No: | TSCA: N/A N/A | CERCLA: No N/A | SARA 302: No N/A | SARA 313: No N/A | DSL(CAN): N/A N/A |
| Not a hazardous | s waste by | U.S. RCRA | criteria. See Se | ction 13. | |
| This Product or its components, if a mixture, is subject to following regulations (Not meant to be all inclusive - selected regulations represented): | | | | egulations (Not | |
| SECTION 313: requirements of Reauthorization | SECTION 313: This product does not contain toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372. | | | | |
| SARA 311 Cate 1: Immediate (A 2. Delayed (Chr | egories: Acute) Heal conic) Heal | Ith Effects. th Effects. | | | |
| The component international ch | s of this pr emical regi | oduct are list istries: | ted on or are ex | empt from the f | following |
| TSCA (U.S.) DSL (Canada) | | | | | |
| This product or its components, if a mixture, is subject to following regulations (Not meant to be all inclusive - selected regulations represented):. Illinois Right-to-Know. Pennsylvania Right-to-Know. | | | | | egulations (Not |
| PROPOSITION California's Safe reproductive to? | l 65: This _l e Drinking xicity, and | oroduct does Water and T for which wa | not contain cho Toxic Enforcem arnings are now | emicals conside ent Act of 1986 v required. | red by the State of as causing cancer or |
| This Material Safety Data Sheet has been prepared in compilance with the Controled Product Regulations. | | | | | |
| Canadian WHM | IIS Classif | ication: Not | a Controlled Pr | oduct. | |
| | ON NTS: CAS No: Not a hazardous This Product or meant to be all SECTION 313: requirements of Reauthorization SARA 311 Cate 1: Immediate (A 2. Delayed (Chr The component international ch TSCA (U.S.) DSL (Canada) This product or meant to be all Illinois Right-to Pennsylvania R PROPOSITION California's Saff reproductive to: This Material S Product Regula Canadian WHM | ON NTS: CAS No: TSCA: N/A N/A N/A N/A N/A N/A N/A N/A | ON NTS: CAS NO: TSCA: CERCLA: N/A No N/A N/A Not a hazardous waste by U.S. RCRA This Product or its components, if a mi meant to be all inclusive - selected reguts SECTION 313: This product does not of requirements of Section 313 of Title II Reauthorization Act of 1986 and 40 CI SARA 311 Categories: 1: Immediate (Acute) Health Effects. 2. Delayed (Chronic) Health Effects. The components of this product are list international chemical registries: TSCA (U.S.) DSL (Canada) This product or its components, if a mi meant to be all inclusive - selected regutilinois Right-to-Know. Pennsylvania Right-to-Know. PROPOSITION 65: This product does California's Safe Drinking Water and T reproductive toxicity, and for which water This Material Safety Data Sheet has be Product Regulations. Canadian WHMIS Classification: Not | ON NTS: MA No No N/A N/A N/A N/A N/A N/A Not a hazardous waste by U.S. RCRA criteria. See See This Product or its components, if a mixture, is subject meant to be all inclusive - selected regulations represe SECTION 313: This product does not contain toxic cl requirements of Section 313 of Title III of the Superfix Reauthorization Act of 1986 and 40 CFR Part 372. SARA 311 Categories: 1: Immediate (Acute) Health Effects. 2. Delayed (Chronic) Health Effects. 2. Delayed (Chronic) Health Effects. The components of this product are listed on or are existernational chemical registries: TSCA (U.S.) DSL (Canada) This product or its components, if a mixture, is subject meant to be all inclusive - selected regulations represeres Illinois Right-to-Know. Pennsylvania Right-to-Know. PROPOSITION 65: This product does not contain che California's Safe Drinking Water and Toxic Enforcem reproductive toxicity, and for which warnings are now This Material Safety Data Sheet has been prepared in Product Regulations. Canadian WHMIS Classification: Not a Controlled Preserverse in the product Regulations. | NTS: CAS No: TSCA: CERCLA: SARA 302: SARA 313: N/A No No No N/A N/A N/A N/A Not a hazardous waste by U.S. RCRA criteria. See Section 13. This Product or its components, if a mixture, is subject to following r meant to be all inclusive - selected regulations represented): SECTION 313: This product does not contain toxic chemical subject requirements of Section 313 of Title III of the Superfund Amendmen Reauthorization Act of 1986 and 40 CFR Part 372. SARA 311 Categories: 1: Immediate (Acute) Health Effects. 2. Delayed (Chronic) Health Effects. 2. Delayed (Chronic) Health Effects. The components of this product are listed on or are exempt from the finternational chemical registries: TSCA (U.S.) DSL (Canada) This product or its components, if a mixture, is subject to following remeant to be all inclusive - selected regulations represented): Illinois Right-to-Know. Pennsylvania Right-to-Know. PROPOSITION 65: This product does not contain chemicals conside California's Safe Drinking Water and Toxic Enforcement Act of 1986 reproductive toxicity, and for which warnings are now required. |

16. OTHER INFORMATION

| NPCA HMIS HAZARD INDEX: |
|-------------------------|
| FLAMMABILITY: |
| REACTIVITY: |

* 1 Slight Hazard 1 Slight Hazard 0 Minimal Hazard

| NPCA HMIS PERS. PROTECT. INDEX: | E - Safety Glasses, Gloves, Dust Respirator |
|---------------------------------|--|
| USER NOTES: | N/A = Not applicable N/D = Not determined |
| INFORMATION SOURCES: | OSHA Permissible Exposure Limits, 29 CFR 1910, Subpart Z, Section 1910.1000, Air Contaminants. |
| | ACGIH Threshold Limit Values and Biological Exposure Indices for Chemical Substances and Physical Agents (latest edition). |
| | Sax's Dangerous Properties of Industrial Materials, 9th ed., Lewis, R.J. Sr., (ed.), VNR, New York, New York, (1997). |
| PREPARED BY: | Sam Hoskin/bb |
| REVISION No./Repl. MSDS of: | 1 / March 1993 |
| | |
| MSDS STATUS: | Approved. |
| DATE: January 4, 1999 | |

DISCLAIMER:

MSDS furnished independent of product sale. While every effort has been made to accurately describe this product, some of the data are obtained from sources beyond our direct supervision. We cannot make any assertions as to its reliability or completeness; therefore, user may rely on it only at user's risk. We have made no effort to censor or conceal deleterious aspects of this product. Since we cannot anticipate or control the conditions under which this information and product may be used, we make no guarantee that the precautions we have suggested will be adequate for all individuals and/or situations. It is the obligation of each user of this product to comply with the requirements of all applicable laws regarding use and disposal of this product. Additional information will be furnished upon request to assist the user; however, no warranty, either expressed or implied, nor liability of any nature with respect to this product or to the data herein is made or incurred hereunder.



WYO-BEN, INC.

MATERIAL SAFETY DATA SHEET



NFPA FIRE HAZARD IDENTIFICATION SYSTEM

| I. PRODUCT IDENTIFICATION | | | | | |
|--|--|--------------------|---|--|--|
| Trade Name(s): GROUT | -WELL [®] DF | | | | |
| Generic Name(s): Wyom | Generic Name(s): Wyoming (Western) Bentonite; Bentonite Clay (CAS No. 1302-78-9) and other proprietary ingredients | | | | |
| Chemical Name(s): Sodiu | um Montmorillonite (CA | S No. 1318-93- | 0) and other proprietary ingredients | | |
| Manufacturer:WYO-BEN, INC.Telephone Numbers:Address:P.O. Box 1979Information:(406) 652-6351Billings, Montana 59103EMERGENCY:(406) 652-6351 | | | | | |
| | II. | HAZARDOUS | S INGREDIENTS | | |
| Ingredient | CAS NO. | % | Hazard | | |
| Crystalline Silica (SiO ₂) as Quartz | 14808-60-7 | See Note | Low concentrations of crystalline silica (SiO_2) in the form of quartz may be present in airborne bentonite dust. See Section VI for discussion of health hazard. | | |
| Note 1: The specific che provided to a tre Note 2: Although the typ the 10 μ respira bentonite source use specific facto | Note 1: The specific chemical identity of this product is being withheld as a trade secret. In the event of a medical emergency it will be provided to a treating medical professional under the provisions of 29 CFR 1910.1200(i). Note 2: Although the typical quartz content of western bentonite is in the range of 2 to 6% most of the quartz particles are larger than the 10 μ respirable threshold size. The actual respirable quartz concentration in airborne bentonite dust will depend upon bentonite source, fineness of product, moisture content of product, local humidity and wind condition at point of use and other use specific factors. | | | | |
| | | III. PHYSI | CAL DATA | | |
| Boiling Point (°F): NA | | | Specific Gravity (H ₂ O=1): 2.45-2.55 | | |
| Vapor Pressure (mm. Hg) | : NA | | Melting Point: Approx. 1450°C | | |
| Vapor Density (Air = 1): | NA | | Evaporation Rate (Butyl Acetate = 1): NA | | |
| Solubility in Water: Insoluble, forms colloidal suspension. pH: 8-10 (5% aqueous suspension) | | | | | |
| Density (at 20° C): 60 lbs | s./cu.ft. as product. | | | | |
| Appearance and Odor: B | luegray to green as moist s | olid, light tan to | gray as dry powder. No odor. | | |
| | IV. | FIRE AND EX | XPLOSION DATA | | |
| Flash Point: NA | Flash Point: NA Flammable Limits: LEL: NA UEL: NA | | | | |
| Special Fire Fighting Procedures: NA | | | | | |
| Unusual Fire and Explosion | on Hazards: None. Produ | ct will not supp | ort combustion. | | |
| Extinguishing Media: None for product. Any media can be used for the packaging. Product becomes slippery when wet. | | | | | |
| V. REACTIVITY | | | | | |
| Stability: Stable | | | | | |
| Hazardous Polymerization: None | | | | | |
| Incompatibility: None | | | | | |
| Hazardous Decomposition Products: None | | | | | |
| NA = Not Applicable ND = Not Determined | | | | | |

VI. HEALTH HAZARD INFORMATION

Routes of Exposure and Effects: Skin: Possible drying resulting in dermatitis. Eves: Mechanical irritant. Inhalation: Acute (short term) exposure to dust levels exceeding the PEL may cause irritation of respiratory tract resulting in a dry cough. Chronic (long term) exposure to airborne bentonite dust containing respirable size ($\leq 10 \mu$) quartz particles, where respirable quartz particle levels are higher than TLV's, may lead to development of silicosis or other respiratory problems. Persistent dry cough and labored breathing upon exertion may be symptomatic. Ingestion: No adverse effects. Permissible Exposure Limits: OSHA PEL ACGIH TLV (for air contaminants) (8hr. TWA) Bentonite as "Particulates not otherwise regulated" (formerly nuisance dust) 15mg/m^3 Total dust ND Respirable dust 5mg/m^3 ND 0.1mg/m^3 0.1mg/m^3 Crystalline Quartz (respirable)

Carcinogenicity: Bentonite is not listed by ACGIH, IARC, NTP or OSHA. IARC, 1997, concludes that there is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica from occupational sources (IARC Class 1), that carcinogenicity was not detected in all industrial circumstances studied and that carcinogenicity may depend on characteristics of the crystalline silica or on external factors affecting its biological activity. NTP classifies respirable crystalline silica as "known to be a human carcinogen" (NTP 9th Report on Carcinogens – 2000). ACGIH classifies crystalline silica, quartz, as a suspected human carcinogen (A2).

| Acute Oral LD ₅₀ : ND | Acute Dermal LD ₅₀ : ND | Aquatic Toxicology LC ₅₀ : ND |
|----------------------------------|------------------------------------|--|
|----------------------------------|------------------------------------|--|

Emergency and First Aid Procedures:

Skin: Wash with soap and water until clean.

Eyes: Flush with water until irritation ceases.

Inhalation: Move to area free from dust. If symptoms of irritation persist contact physician. Inhalation may aggravate existing respiratory illness.

VII. HANDLING AND USE PRECAUTIONS

Steps to be Taken if Material is Released or Spilled: Avoid breathing dust; wear respirator approved for silica bearing dust. Vacuum up to avoid generating airborne dust. Avoid using water. Product slippery when wetted.

Waste Disposal Methods: Product should be disposed of in accordance with applicable local, state and federal regulations.

Handling and Storage Precautions: Use NIOSH/MSHA respirators approved for silica bearing dust when free silica containing airborne bentonite dust levels exceed PEL/TLV's. Clean up spills promptly to avoid making dust. Storage area floors may become slippery if wetted.

VIII. INDUSTRIAL HYGIENE CONTROL MEASURES

Ventilation Requirements: Mechanical, general room ventilation. Use local ventilation to maintain PEL's/TLV's.

Respirator: Use respirators approved by NIOSH/MSHA for silica bearing dust.

Eye Protection: Generally not necessary. Personal preference.

Gloves: Generally not necessary. Personal preference.

Other Protective Clothing or Equipment: None

IX. SPECIAL PRECAUTIONS

Avoid prolonged inhalation of airborne dust.

DEPARTMENT OF TRANSPORTATION HAZARDOUS MATERIAL INFORMATION

| Shipping Name: NA (Not Regulated) | Hazard Class: NA |
|-----------------------------------|----------------------|
| Hazardous Substance: NA | Caution Labeling: NA |

Date Prepared: March 15, 2004

Doc #: 4335-40

All information presented herein is believed to be accurate; however, it is the user's responsibility to determine in advance of need that the information is current and suitable for their circumstances. No warranty or guarantee, expressed or implied is made by WYO-BEN, INC. as to this information, or as to the safety, toxicity or effect of the use of this product.



| MSDS NO. 10094 | Trade Name: POLY-PLUS | k | Revision Date: 09/20/2004 | | |
|--|--|-------------------------------|------------------------------|--|--|
| 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION | | | | | |
| Trade Name: Chemical Family: Product Use: Emergency Telephone (24 h | POLY-PLUS* Mixture Oil well drilling fluid a r.): 281-561-1600 | dditive. Shale Control Agent. | | | |
| Supplied by: | M-I L.L.C. P.O. Box 42842 Houston, TX 77242 www.miswaco.com | | | | |
| Telephone Number: Contact Person: | 281-561-1511 Catherine Miller, Proc | luct Safety Specialist | | | |
| Revision Number: | 4 | | | | |
| HMIS Rating Health: 1 | Flammability: 1 | Physical Hazard: 0 | PPE: J | | |
| HMIS Key: 4=Severe 3=Ser | ious 2=Moderate 1=Slight | 0=Minimal Hazard *Chronic e | offects - See Section 11 See | | |

HMIS Key: 4=Severe, 3=Serious, 2=Moderate, 1=Slight, 0=Minimal Hazard. *Chronic effects - See Section 11. See Section 8 for Personal Protective Equipment recommendations.

2. COMPOSITION/INFORMATION ON INGREDIENTS

| Ingredient | CAS No. | Wt. % | Comments: |
|------------------------|------------|---------|--------------|
| Anionic polyacrylamide | | 20 - 40 | No comments. |
| Petroleum distillates, | 64742-47-8 | 20 - 40 | No comments. |
| hydrotreated light | | | |

3. HAZARDS IDENTIFICATION

| Emergency Overview: | Caution! May cause eye, skin and respiratory tract irritation. Vapors or mists may cause central nervous system (CNS) effects if inhaled. | | | ation. Vapors or mists may |
|--|--|--|----------------|-------------------------------|
| Canadian Classification: UN PIN No: Not regulated | | WHMIS Class: | D2B | |
| Physical Liquid State: | Odor: | Hydrocarbon | Color: | White |
| Potential Health Effects: | | | | |
| Acute Effects | | | | |
| Eye Contact: Skin Contact: | May irritate ey May be irritatir the skin and/o | res. ng to the skin. Prolonged (r dermatitis (inflamation). | or repeated co | ontact may cause defatting of |
| Inhalation: | Overexposure to vapors and mists which may be released at high temperatures may cause central nervous system (CNS) effects and respiratory tract irritation. | | | |
| Ingestion: | May cause gastric distress, nausea and vomiting if ingested. Aspiration can be a hazard if this material is swallowed. | | | |

MSDS NO. 10094

Trade Name: POLY-PLUS* Revision Date: 09/20/2004

Page 2/6

Acute Effects Note: This product may release ammonia or amines when heated or exposed to high pH. Ammonia is a severe eye, skin and respiratory irritant. Ammonia has a very strong odor and can be detected at levels as low as 5 ppm. Many amines are also eye, skin and respiratory irritants.

| Carcinogenicity & Chronic See Secti Effects: | on 11 - Toxicological Information. |
|--|---|
| Routes of Exposure:Eyes. DerTarget Organs/MedicalEyes. Ski | mal (skin) contact. Inhalation. n. Respiratory System. Central Nervous System (CNS). |
| Conditions Aggravated by | |

| | 4. FIRST AID MEASURES | |
|---------------------|--|--|
| Eye Contact: | Promptly wash eyes with lots of water while lifting eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues. | |
| Skin Contact: | Wash skin thoroughly with soap and water. Remove contaminated clothing and launder before reuse. Get medical attention if any discomfort continues. | |
| Inhalation: | Move person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. | |
| Ingestion: | Do not induce vomiting. Dilute with 2 - 3 glasses of water or milk, if conscious. Never give anything by mouth to an unconscious person. Get medical attention. | |
| General Notes: | Persons seeking medical attention should carry a copy of this MSDS with them. | |
| Notes To Physician: | Aspiration may cause severe lung damage. Evacuate stomach in a way which avoids aspiration. | |

5. FIRE FIGHTING MEASURES

Flammable Properties

| Flash Point: F (C): | >200F (93C) |
|---------------------|-------------|
| Flash Point Method: | PMCC |

| Flammable Limits in Air - Lower (%): ND | | |
|---|--|--|
| Flammable Limits in Air - Upper (%): ND | | |
| Autoignition Temperature: F(C) | ND | |
| Flammability Class: | IIIB | |
| Other Flammable Properties: | ND | |
| Extinguishing Media: | Water fog, carbon dioxide, foam, dry chemical. | |

Protection Of Fire-Fighters:

Special Fire-Fighting Procedures: Do not enter fire area without proper personal protective equipment, including NIOSH/MSHA approved self-contained breathing apparatus. Evacuate area and fight fire from a safe distance. Water spray may be used to keep fire-exposed containers cool. Keep water run off out of sewers and waterways.

Hazardous Combustion Products: Ammonia. Oxides of carbon and nitrogen.

6. ACCIDENTAL RELEASE MEASURES Personal Precautions: Use personal protective equipment identified in Section 8. Spill Procedures: Evacuate surrounding area, if necessary. Spilled product is very slippery. Keep personnel removed and upwind of spill. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Shut off leak if it can be done safely. Contain spilled material. Absorb in vermiculite, dry sand or earth. Place into containers for disposal.

MSDS NO. 10094 Environmental Precautions: Trade Name: POLY-PLUS* Revision Date: 09/20/2004

Page 3/6

Do not allow to enter sewer or surface and subsurface waters. Waste must be disposed of in accordance with federal, state and local laws. In the U.S., for products with reportable quanitity (RQ) components - if the RQ is exceeded, report to National Spill Response Office at 1 800 424 8802.

7. HANDLING AND STORAGE

Put on appropriate personal protective equipment. Avoid contact with skin and eyes. Avoid breathing vapors or spray mists. Use only in a well ventilated area. Spilled product is very slippery. Wash thoroughly after handling.

Storage:

Handling:

Store in dry, well-ventilated area. Keep container closed. Keep away from heat, sparks and flames. Store away from incompatibles. Follow safe warehousing practices regarding palletizing, banding, shrink-wrapping and/or stacking.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits (TLV & PEL - 8H TWA):

| Ingredient | CAS No. | Wt. % | ACGIH TLV | OSHA PEL | Other | Notes |
|------------------------|------------|---------|-----------|----------|-------|---------------|
| Anionic polyacrylamide | | 20 - 40 | NA | NA | NA | (1) (6) |
| Petroleum distillates, | 64742-47-8 | 20 - 40 | NA | NA | NA | (3) Oil mist. |
| hydrotreated light | | | | | | |

Notes

(1) Control as an ACGIH particulate not otherwise specified (PNOS): 10 mg/m³ (Inhalable); 3 mg/m³ (Respirable) and an OSHA particulate not otherwise regulated (PNOR): 15 mg/m³ (Total); 5 mg/m³ (Respirable).

(3) For Oil mist, mineral: ACGIH TLV 5 mg/m³, STEL 10 mg/m³; OSHA PEL 5 mg/m³

(6) Ammonia or amines may be released when this component is heated or exposed to high pH. The recommended exposure limits for ammonia are ACGIH TLV 25 ppm and OSHA PEL 50 ppm. No general recommended exposure limit is available for amines. A NIOSH/MSHA approved respirator with ammonia/methylamine cartridges should be used to protect against ammonia or amine inhalation exposure.

Engineering Controls: Local exhaust ventilation as necessary to maintain exposures to within applicable limits.

Personal Protection Equipment

| Eye/Face Protection: | Wear chemical safety goggles. |
|---------------------------------|---|
| Skin Protection: | Wear appropriate clothing to prevent repeated or prolonged skin contact. Wear chemical resistant gloves such as nitrile or neoprene. |
| Respiratory Protection: | If exposed to particulates/aerosols: Use at least a NIOSH-approved N95 half-mask disposable particulate respirator. In work environments containing oil mist/aerosol use at least a NIOSH-approved P95 half-mask disposable or reuseable particulate respirator. If exposed to organic vapors: Use a NIOSH/MSHA-approved organic vapor respirator. CCROV: CCR with organic vapor cartridge. A NIOSH/MSHA approved respirator with ammonia/methylamine cartridges should be used to protect against ammonia or amine inhalation exposure. Refer to Exposure Limits table (Section 8) for component specific respiratory |
| | protection recommendations. |
| General Hygiene Considerations: | Wash promptly with soap and water if skin becomes contaminated. Change work clothing daily if there is any possibility of contamination. |

Trade Name: POLY-PLUS* Revision Date: 09/20/2004

MSDS NO. 10094

9. PHYSICAL AND CHEMICAL PROPERTIES

| Color: | White |
|-----------------------------|-------------------------|
| Odor: | Hydrocarbon |
| Physical State: | Liquid |
| pH: | 6 - 9.5 |
| Specific Gravity (H2O = 1): | ~1 |
| Solubility (Water): | Slightly. |
| Flash Point: F (C): | >200F (93C) |
| Melting/Freezing Point: | 32F (0C) |
| Boiling Point: | 212F (100C) at 760 mmHg |
| Vapor Pressure: | >0.13 at 68F (20C) |
| Vapor Density (Air=1): | ND |
| Evaporation Rate: | ND |
| Odor Threshold(s): | ND |
| | |

| | 10. STABILITY AND REACTIVITY | |
|---------------------------|--|--|
| Chemical Stability: | Stable | |
| Conditions to Avoid: | Keep away from heat, sparks and flame. | |
| Materials to Avoid: | Oxidizers. | |
| Hazardous Decomposition | For thermal decomposition products, see Section 5. | |
| Products: | | |
| Hazardous Polymerization: | Will not occur | |

11. TOXICOLOGICAL INFORMATION

Component Toxicological Data: Any adverse component toxicological effects are listed below. If no effects are listed, no such data were found.

| Ingredient | CAS No. | Acute Data |
|-------------------------------------|------------|--|
| Petroleum distillates, hydrotreated | 64742-47-8 | Oral LD50: >39.9 g/kg (rat); Dermal LD50: 2.0 - 4.0 g/kg |
| light | | (rabbit); Inhalation LC50: >24.1 mg/l/1H (rat) |

Product Toxicological Information:

Do Not Use. Use TXINF019. This product may contain trace amounts (<0.1%) of acrylamide. The International Agency for Research on Cancer (IARC) has designated acrylamide a Group 2A (probably carcinogenic to humans). This designation was based on sufficient evidence in experimental animals for the carcinogenicity of acrylamide (IARC Vol. 60, 1994, p. 389).

The National Toxicology Program (NTP) classifies acrylamide as "reasonably anticipated to be a human carcinogen" based on sufficient evidence of carcinogenicity in experimental animals (10th Annual Report on Carcinogens, 2002). Acrylamide is a possible mutagen (promotes a mutation (change in chemistry of a gene)) (IARC Vol. 60, 1994, p. 389).

12. ECOLOGICAL INFORMATION

| Ingredient | CAS No. | Data |
|--|------------|--|
| Petroleum distillates, hydrotreated light | 64742-47-8 | LC50 48H static: 7500 ug/l (Danio rerio (zebra danio)); LC50 4D static: 5900 ug/l (lepomis macrochirus (bluegill)); LC50 24H static: 3200 ug/l (Oncorhynchus mykiss (rainbow trout)); LC50 48H static: 8800 ug/l (Poecilia reticulata (guppy)) |

Product Ecotoxicity Data:

Contact M-I Environmental Affairs Department for available product ecotoxicity data.

| Biodegration: | ND |
|------------------|----|
| Bioaccumulation: | ND |

Page 4/6

Trade Name: POLY-PLUS*

Revision Date: 09/20/2004

Octanol/Water Partition Coefficient:

MSDS NO. 10094

| | 13. DISPOSAL CONSIDERATIONS |
|-----------------------|---|
| Waste Classification: | ND |
| Waste Management: | Under U.S. Environmental Protection Agency (EPA) Resource Conservation and Recovery Act (RCRA), it is the responsibility of the user to determine at the time of disposal, whether the product meets RCRA criteria for the hazardous waste. This is because product uses, transformations, mixtures, processes, etc., may render the resulting materials hazardous. Empty containers retain residues. All labeled precautions must be observed. |
| Disposal Method: | Recover and reclaim or recycle, if practical. Should this product become a waste, dispose of in a permitted industrial landfill. Ensure that the containers are empty by the RCRA criteria prior to disposal in a permitted industrial landfill. |
| | |

14. TRANSPORT INFORMATION

U.S. DOT Shipping Description:Not regulated for transportation by DOT, TDG, IMDG,
ICAO/IATA.Canada TDG Shipping Description:Not regulated.
Not regulatedIMDG Shipping Description:Not regulated.ICAO/IATA Shipping Description:Not regulated.

15. REGULATORY INFORMATION

U.S. Federal and State Regulations

SARA 311/312 Hazard Catagories: Immediate (acute) health hazard.

ND

SARA 302/304, 313; CERCLA RQ, Note: If no components are listed below, this product is not subject to the referenced California Proposition 65: SARA and CERCLA regulations and is not known to contain a Proposition 65 listed chemical at a level that is expected to pose a significant risk under anticipated use conditions.

International Chemical Inventories

Australia AICS - Components are listed or exempt from listing. Canada DSL - Components are listed or exempt from listing. China Inventory - Components are listed or exempt from listing. European Union EINECS - Components are listed or exempt from listing. Japan METI ENCS - Components are listed or exempt from listing. Korea TCCL ECL - Components are listed or exempt from listing. Philippine PICCS - Components are listed or exempt from listing. U.S. TSCA - Components are listed or exempt from listing. U.S. TSCA - No components are subject to TSCA 12(b) export notification requirements.

Canadian Classification:

Controlled Products Regulations Statement: This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS Class:

Page 5/6

Trade Name: POLY-PLUS* Revision Date: 09/20/2004

Re

Page 6/6

16. OTHER INFORMATION

The following sections have been revised: 15,

NA - Not Applicable, ND - Not Determined.

*A mark of M-I L.L.C.

MSDS NO. 10094

Disclaimer:

MSDS furnished independent of product sale. While every effort has been made to accurately describe this product, some of the data are obtained from sources beyond our direct supervision. We can not make any assertions as to its reliability or completeness; therefore, user may rely on it only at user's risk. We have made no effort to censor or conceal deleterious aspects of this product. Since we cannot anticipate or control the conditions under which this information and product may be used, we make no guartantee that the precautions we have suggested will be adequate for all individuals and/or situations. It is the obligation of each user of this product to comply with the requirements of all applicable laws regarding use and disposal of this product. Additional information will be furnished upon request to assist the user; however, no warranty, either expressed or implied, nor liability of any nature with respect to this product or to the data herein is made or incurred hereunder.

MATERIAL SAFETY DATA SHEET PORTLAND CEMENT TYPE II

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

| TRADE NAME: | PORTLAND CEMENT TYPE II |
|----------------------|--|
| APPLICATIONS: | Oil well drilling fluid additive. |
| EMERGENCY TELEPHONE: | 281-561-1600 |
| SUPPLIER: | Supplied by a Business Unit of M-I L.L.C. P.O. Box 42842, Houston, Texas 77242-2842 See cover sheet for local supplier. |
| TELEPHONE: | 281-561-1509 |
| FAX: | 281-561-7240 |
| CONTACT PERSON: | Sam Hoskin - Manager, Occupational Health |

2. COMPOSITION, INFORMATION ON INGREDIENTS

| INGREDIENT NAME: | CAS No.: | CONTENTS : | EPA RQ: | TPQ: |
|-----------------------------|------------|------------|---------|------|
| Portland Cement | 65997-15-1 | 99-100 % | | |
| Gypsum | 13397-24-5 | 0-1 % | | |
| Silica, crystalline, quartz | 14808-60-7 | 0-1 % | | |

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

CAUTION! MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION. Avoid contact with eyes, skin and clothing. Avoid breathing airborne product. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.

This product is a/an gray to white powder. May form explosive dust-air mixtures. Slippery when wet. A nuisance dust.

ACUTE EFFECTS: HEALTH HAZARDS, GENERAL:

Particulates may cause mechanical irritation to the eyes, nose, throat and lungs. Particulate inhalation may lead to pulmonary fibrosis, chronic bronchitis, emphysema and bronchial asthma. Dermatitis and asthma may result from short contact periods.

- **INHALATION:** May be irritating to the respiratory tract if inhaled.
- **INGESTION:** May cause gastric distress, nausea and vomiting if ingested.
- **SKIN:** May be irritating to the skin.
- **EYES:** May be irritating to the eyes.

CHRONIC EFFECTS:

CARCINOGENICITY:

IARC: Not listed. OSHA: Not regulated. NTP: Not listed.

ATTENTION! CANCER HAZARD. CONTAINS CRYSTALLINE SILICA WHICH CAN CAUSE CANCER. Risk of cancer depends on duration and level of exposure.

IARC Monographs, Vol. 68, 1997, concludes that there is sufficient evidence that inhaled crystalline silica in the form of quartz or cristobalite from occupational sources causes cancer in humans. IARC classification Group 1.

ROUTE OF ENTRY:

Inhalation. Skin and/or eye contact.

TARGET ORGANS:

Respiratory system, lungs. Skin. Eyes.

4. FIRST AID MEASURES

| GENERAL: | Persons seeking medical attention should carry a copy of this MSDS with them. |
|-------------|--|
| INHALATION: | Move the exposed person to fresh air at once. Perform artificial respiration if breathing has stopped. Get medical attention. |
| INGESTION: | Drink a couple of glasses water or milk. Do NOT induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person. Get medical attention. |
| SKIN: | Wash skin thoroughly with soap and water. Remove contaminated clothing. Get medical attention if any discomfort continues. |
| EYES: | Promptly wash eyes with lots of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues. |

5. FIRE FIGHTING MEASURES

| AUTO IGNITION TEMP. (°F): | N/D |
|--------------------------------|-----|
| FLAMMABILITY LIMIT - LOWER(%): | N/D |
| FLAMMABILITY LIMIT - UPPER(%): | N/D |

EXTINGUISHING MEDIA:

Carbon dioxide (CO2). Dry chemicals. Foam. Water spray, fog or mist.

SPECIAL FIRE FIGHTING PROCEDURES:

No specific fire fighting procedure given.

UNUSUAL FIRE & EXPLOSION HAZARDS:

Dust in high concentrations may form explosive mixtures with air.

HAZARDOUS COMBUSTION PRODUCTS:

Irritating gases/vapors/fumes. Oxides of: Carbon.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

Wear proper personal protective equipment (see MSDS Section 8).

SPILL CLEAN-UP PROCEDURES:

Avoid generating and spreading of dust. Shovel into dry containers. Cover and move the containers. Flush the area with water. Do not contaminate drainage or waterways. Repackage or recycle if possible.

7. HANDLING AND STORAGE

HANDLING PRECAUTIONS:

Avoid handling causing generation of dust. Wear full protective clothing for prolonged exposure and/or high concentrations. Eye wash and emergency shower must be available at the work place. Wash hands often and change clothing when needed. Provide good ventilation. Mechanical ventilation or local exhaust ventilation is required.

STORAGE PRECAUTIONS:

Store at moderate temperatures in dry, well ventilated area. Keep in original container.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

| | | OSHA F | PEL: | ACGIH | TLV: | OTHER | | |
|-------------------------------------|------------------------|-------------------|-------|----------------|-------|-------|-------|------------------------|
| INGREDIENT NAME: Portland Cement | CAS No.: 65997-15-1 | TWA: 15 | STEL: | TWA: 10 | STEL: | TWA: | STEL: | UNITS: mg/m3 |
| Gypsum | 13397-24-5 | 15 | | | | | | mg/m3 total dust |
| Silica, crystalline, quartz | 14808-60-7 | * | | 0.1 | | | | mg/m3 resp.dust |

INGREDIENT COMMENTS:

* OSHA PELs for Mineral Dusts containing crystalline silica are 10 mg/m3 / (%SiO2+2) for quartz and 1/2 the calculated quartz value for cristobalite and tridymite.

PROTECTIVE EQUIPMENT:



ENGINEERING CONTROLS:

Use appropriate engineering controls such as, exhaust ventilation and process enclosure, to reduce air contamination and keep worker exposure below the applicable limits.

- **VENTILATION:** Supply natural or mechanical ventilation adequate to exhaust airborne product and keep exposures below the applicable limits.
- **RESPIRATORS:** Use at least a NIOSH-approved N95 half-mask disposable or reuseable particulate respirator. In work environments containing oil mist/aerosol use at least a NIOSH-approved P95 half-mask disposable or reuseable particulate respirator.

PROTECTIVE GLOVES:

Use suitable protective gloves if risk of skin contact.

EYE PROTECTION:

Wear dust resistant safety goggles where there is danger of eye contact.

PROTECTIVE CLOTHING:

Wear appropriate clothing to prevent repeated or prolonged skin contact.

HYGIENIC WORK PRACTICES:

Wash promptly with soap and water if skin becomes contaminated. Change work clothing daily if there is any possibility of contamination.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE: Powder, dust.

COLOR: ODOR: SOLUBILITY DESCRIPTION: VAPOR DENSITY (air=1): VAPOR PRESSURE: Grey. to White. Odorless or no characteristic odor. Slightly soluble in water. N/A N/A TEMPERATURE (°F):

10. STABILITY AND REACTIVITY

STABILITY: Normally stable.

CONDITIONS TO AVOID: N/A

N/A.

HAZARDOUS POLYMERIZATION: Will not polymerize.

POLYMERIZATION DESCRIPTION:

Not relevant.

MATERIALS TO AVOID:

Alkali earth metals.

HAZARDOUS DECOMPOSITION PRODUCTS:

No specific hazardous decomposition products noted.

11. TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

No toxicological data is available for this product.

12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION:

Contact M-I Environmental Affairs for ecological information.

13. DISPOSAL CONSIDERATIONS

WASTE MANAGEMENT:

This product does not meet the criteria of a hazardous waste if discarded in its purchased form. Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. This is because product uses, transformations, mixtures, processes, etc, may render the resulting materials hazardous.

Empty containers retain residues. All labeled precautions must be observed.

DISPOSAL METHODS:

Recover and reclaim or recycle, if practical. Should this product become a waste, dispose of in a permitted industrial landfill. Ensure that containers are empty by RCRA criteria prior to disposal in a permitted industrial landfill.

14. TRANSPORT INFORMATION

PRODUCT RQ:

| U.S. DOT: U.S. DOT CLASS: | Not regulated. |
|------------------------------------|----------------|
| CANADIAN TRANSPORT: TDGR CLASS: | Not regulated. |
| SEA TRANSPORT: IMDG CLASS: | Not regulated. |
| AIR TRANSPORT: ICAO CLASS: | Not regulated. |

15. REGULATORY INFORMATION

| REGULATORY STATUS OF INGREDIENT | S: | | | | | |
|--|---|---|--|---|---|---|
| NAME: | CAS No: | TSCA: | CERCLA: | SARA 302: | SARA 313: | DSL(CAN): |
| Portland Cement | 65997-15-1 | Yes | No | No | No | Yes |
| Gypsum | 13397-24-5 | Yes | No | No | No | Yes |
| Silica, crystalline, quartz | 14808-60-7 | Yes | No | No | No | Yes |
| US FEDERAL REGULATIONS: WASTE CLASSIFICATION: | Not a hazardous v | waste by U | .S. RCRA cr | iteria. See Secti | on 13. | |
| REGULATORY STATUS: | This Product or its components, if a mixture, is subject to following regulations (Not meant to be all inclusive - selected regulations represented): | | | | | |
| | SECTION 313: T requirements of S Act of 1986 and 4 | This production 313 Section 313 40 CFR Pa | et does not co 3 of Title III o art 372. | ontain toxic cher of the Superfund | mical subject to d Amendment a | the reporting nd Reauthorization |
| | SARA 311 Categ 1: Immediate (Ac | ories: ute) Healtl | h Effects. | | | |
| | 2. Delayed (Chronic) Health Effects. The components of this product are listed on or are exempt from the following international chemical registries: TSCA (U.S.) DSL (Canada) | | | | | |
| STATE REGULATIONS: STATE REGULATORY STATUS: | This product or it: be all inclusive - s New Jersey Right Illinois Right-to-F Pennsylvania Rig PROPOSITION 6 of California's Sar reproductive toxic | s compone selected re- t-to-Know. Know. ht-to-Knov 55: This pr fe Drinkin sity, and fo | ents, if a mixt gulations repr w. oduct contain g Water and ' or which warr | ure, is subject to resented):. ns the following Toxic Enforcen nings are now re | o following regu chemical(s) content Act of 1986 equired: Silica, c | ulations (Not meant to nsidered by the State 5 as causing cancer or rystalline |
| CANADIAN REGULATIONS: LABELS FOR SUPPLY: | | | | | | |

REGULATORY STATUS:

This Material Safety Data Sheet has been prepared in compilance with the Controled Product Regulations.

Canadian WHMIS Classification: D2B - Other Toxic Effects: Toxic Material

16. OTHER INFORMATION

| NPCA HMIS HAZARD INDEX: FLAMMABILITY: REACTIVITY: NPCA HMIS PERS. PROTECT. INDEX: | * 1 Slight Hazard 0 Minimal Hazard 0 Minimal Hazard E - Safety Glasses, Gloves, Dust Respirator |
|--|---|
| USER NOTES: | N/A = Not applicable $N/D = Not$ determined |
| INFORMATION SOURCES: | OSHA Permissible Exposure Limits, 29 CFR 1910, Subpart Z, Section 1910.1000, Air Contaminants. ACGIH Threshold Limit Values and Biological Exposure Indices for Chemical Substances and Physical Agents (latest edition). Sax's Dangerous Properties of Industrial Materials, 9th ed., Lewis, R.J. Sr., (ed.), VNR, New York, New York, (1997). Product information provided by the commercial vendor(s). |
| PREPARED BY: | Sam Hoskin |
| REVISION No.: | 0 |
| MSDS STATUS: | Approved. |
| DATE: December 18, 1998 | |

DISCLAIMER:

MSDS furnished independent of product sale. While every effort has been made to accurately describe this product, some of the data are obtained from sources beyond our direct supervision. We cannot make any assertions as to its reliability or completeness; therefore, user may rely on it only at user's risk. We have made no effort to censor or conceal deleterious aspects of this product. Since we cannot anticipate or control the conditions under which this information and product may be used, we make no guarantee that the precautions we have suggested will be adequate for all individuals and/or situations. It is the obligation of each user of this product to comply with the requirements of all applicable laws regarding use and disposal of this product. Additional information will be furnished upon request to assist the user; however, no warranty, either expressed or implied, nor liability of any nature with respect to this product or to the data herein is made or incurred hereunder.

MATERIAL SAFETY DATA SHEET SODA ASH

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

| TRADE NAME: | SODA ASH |
|---------------------------------|--|
| CHEMICAL CLASS: | Sodium carbonate |
| APPLICATIONS: | Oil well drilling fluid additive. Calcium precipitation |
| EMERGENCY TELEPHONE: | 281-561-1600 |
| SUPPLIER: TELEPHONE: FAX: | Supplied by a Business Unit of M-I L.L.C. P.O. Box 42842, Houston, Texas 77242-2842 See cover sheet for local supplier. 281-561-1509 281-561-7240 |
| CONTACT PERSON: | Sam Hoskin - Manager, Occupational Health |

2. COMPOSITION, INFORMATION ON INGREDIENTS

| INGREDIENT NAME: | CAS No.: | CONTENTS : | EPA RQ: | TPQ: |
|------------------|----------|------------|---------|------|
| Sodium carbonate | 497-19-8 | 100 % | | |

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

CAUTION! MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION. Avoid contact with eyes, skin and clothing. Avoid breathing airborne product. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.

amber white powder. Slippery when wet. A nuisance dust.

ACUTE EFFECTS: HEALTH HAZARDS, GENERAL:

Particulates may cause mechanical irritation to the eyes, nose, throat and lungs. Particulate inhalation may lead to pulmonary fibrosis, chronic bronchitis, emphysema and bronchial asthma. Dermatitis and asthma may result from short contact periods.

- **INHALATION:** May be irritating to the respiratory tract if inhaled.
- **INGESTION:** May cause gastric distress, nausea and vomiting if ingested.

SKIN: May be irritating to the skin.

EYES: May be irritating to the eyes.

CHRONIC EFFECTS:

CARCINOGENICITY:

IARC: Not listed. OSHA: Not regulated. NTP: Not listed.

ROUTE OF ENTRY:

Inhalation. Skin and/or eye contact.

TARGET ORGANS:

Respiratory system, lungs. Skin. Eyes.

4. FIRST AID MEASURES

GENERAL:Persons seeking medical attention should carry a copy of this MSDS with them.INHALATION:Move the exposed person to fresh air at once. Perform artificial respiration if breathing has stopped. Get medical attention.INGESTION:Drink a couple of glasses water or milk. Do not give victim anything to drink of he is unconscious. Get medical attention.SKIN:Wash skin thoroughly with soap and water. Remove contaminated clothing. Get medical attention if any discomfort continues.EYES:Promptly wash eyes with lots of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

5. FIRE FIGHTING MEASURES

| AUTO IGNITION TEMP. (°F): | N/D |
|--------------------------------|-----|
| FLAMMABILITY LIMIT - LOWER(%): | N/D |
| FLAMMABILITY LIMIT - UPPER(%): | N/D |

EXTINGUISHING MEDIA:

Carbon dioxide (CO2). Dry chemicals. Foam. Water spray, fog or mist.

SPECIAL FIRE FIGHTING PROCEDURES:

No specific fire fighting procedure given.

UNUSUAL FIRE & EXPLOSION HAZARDS:

No unusual fire or explosion hazards noted.

HAZARDOUS COMBUSTION PRODUCTS:

Irritating gases/vapors/fumes. Oxides of: Carbon. and Sodium.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

Wear proper personal protective equipment (see MSDS Section 8).

SPILL CLEAN-UP PROCEDURES:

Carefully sweep up and put in closed containers. Avoid making dust. Do not contaminate drainage or waterways. Repackage or recycle if possible.

7. HANDLING AND STORAGE

HANDLING PRECAUTIONS:

Avoid handling causing generation of dust. Wear full protective clothing for prolonged exposure and/or high concentrations. Eye wash and emergency shower must be available at the work place. Wash hands often and change clothing when needed. Provide good ventilation. Mechanical ventilation or local exhaust ventilation is required.

STORAGE PRECAUTIONS:

Store at moderate temperatures in dry, well ventilated area. Keep in original container.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

| | | OSH | A PEL: | ACG | IH TLV: | отн | ER: | |
|--------------------------------------|--------------------------|------------------|--------|------------------|---------|------|-------|------------------------------|
| INGREDIENT NAME: Sodium carbonate | CAS No.: 497-19-8 | TWA: 5 | STEL: | TWA: 3 | STEL: | TWA: | STEL: | UNITS: mg/m3 resp.dust |

INGREDIENT COMMENTS:

Exposure limits are for Particulates Not Otherwise Classified (PNOC).

PROTECTIVE EQUIPMENT:



ENGINEERING CONTROLS:

Use appropriate engineering controls such as, exhaust ventilation and process enclosure, to reduce air contamination and keep worker exposure below the applicable limits.

- **VENTILATION:** Supply natural or mechanical ventilation adequate to exhaust airborne product and keep exposures below the applicable limits.
- **RESPIRATORS:** Use at least a NIOSH-approved N95 half-mask disposable or reuseable particulate respirator. In work environments containing oil mist/aerosol use at least a NIOSH-approved P95 half-mask disposable or reuseable particulate respirator.

PROTECTIVE GLOVES:

Use suitable protective gloves if risk of skin contact.

EYE PROTECTION:

Wear dust resistant safety goggles where there is danger of eye contact.

PROTECTIVE CLOTHING:

Wear appropriate clothing to prevent repeated or prolonged skin contact.

HYGIENIC WORK PRACTICES:

Wash promptly with soap and water if skin becomes contaminated. Change work clothing daily if there is any possibility of contamination.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE: COLOR: ODOR: SOLUBILITY DESCRIPTION: MELT./FREEZ. POINT (°F, interval): DENSITY/SPECIFIC GRAVITY (g/ml): BULK DENSITY: VAPOR DENSITY (air=1): VAPOR PRESSURE: pH-VALUE, DILUTED SOLUTION: Powder, dust. White. Odorless or no characteristic odor. Soluble in water. 1564 2.509 TEMPERATURE (°F): 68 48 lb/ft3; 769 kg/m3 N/A N/A TEMPERATURE (°F): 11.4 CONCENTRATION (%,M): 1%

10. STABILITY AND REACTIVITY

STABILITY: Normally stable.

CONDITIONS TO AVOID:

Reacts with hydrated lime to form sodium hydroxide.

HAZARDOUS POLYMERIZATION:

Will not polymerize.

POLYMERIZATION DESCRIPTION:

Not relevant.

MATERIALS TO AVOID:

Strong acids.

HAZARDOUS DECOMPOSITION PRODUCTS:

No specific hazardous decomposition products noted.

11. TOXICOLOGICAL INFORMATION

| Component: | | Sodium carbona | ate | | | |
|--|-----------------------------------|--|-----------------|--------------------|--|--|
| TOXICOLOGICAL DAT. Corrosive effects. Corrosive effects. | A: Eye irritation test. | 24 hours. 24 hours. | Eye. Skin. | Rabbit. Rabbit. | 100 mg - Moderate Irritation 500 mg - Mild Irritaiton | |
| TOXIC DOSE - LD 50: TOXIC CONC LC 50: | | 4090 mg/kg (oral 1 1200 mg/m3/2h (i | rat) nh-mus) | | | |

12. ECOLOGICAL INFORMATION

ACUTE AQUATIC TOXICITY:

This product is approved for use under the U.S. Environmental Protection Agency (EPA) Region IX (California) General NPDES Permit which regulates offshore discharges of drilling fluids. Contact M-I's Environmental Affairs Department for more information.

This product passes the mysid shrimp toxicity test required by the U.S. Environmental Protection Agency (EPA) Region VI (Gulf of Mexico) NPDES Permit, which regulates offshore discharge of drilling fluids, when tested in a standard drilling fluid. Contact M-I's Environmental Affairs Department for more information.

13. DISPOSAL CONSIDERATIONS

WASTE MANAGEMENT:

This product does not meet the criteria of a hazardous waste if discarded in its purchased form. Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. This is because product uses, transformations, mixtures, processes, etc, may render the resulting materials hazardous.

DISPOSAL METHODS:

Recover and reclaim or recycle, if practical. Should this product become a waste, dispose of in a permitted industrial landfill. Ensure that containers are empty by RCRA criteria prior to disposal in a permitted industrial landfill.

14. TRANSPORT INFORMATION

PRODUCT RQ:

N/A

| U.S. DOT: U.S. DOT CLASS: | Not regulated. |
|------------------------------------|----------------|
| CANADIAN TRANSPORT: TDGR CLASS: | Not regulated. |
| SEA TRANSPORT: IMDG CLASS: | Not regulated. |
| AIR TRANSPORT: ICAO CLASS: | Not regulated. |

15. REGULATORY INFORMATION

| REGULATORY STATUS OF INGREDIENT | rs: | | | _ | - | |
|--|---|---|--|---|--|-------------------------------------|
| NAME: | CAS No: | TSCA: | CERCLA: | SARA 302: | SARA 313: | DSL(CAN): |
| Sodium carbonate | 497-19-8 | res | NO | NO | NO | res |
| US FEDERAL REGULATIONS: WASTE CLASSIFICATION: | Not a hazardous v | vaste by U | J.S. RCRA cr | iteria. See Secti | on 13. | |
| REGULATORY STATUS: | This Product or its be all inclusive - s | s compone selected reg | ents, if a mixt gulations repr | ture, is subject to resented): | o following regu | llations (Not meant to |
| | SECTION 313: T requirements of S Act of 1986 and 4 | his produce ction 313 40 CFR Pa | ct does not co 3 of Title III o art 372. | ontain toxic cher of the Superfund | nical subject to l Amendment ar | the reporting nd Reauthorization |
| | SARA 311 Catego 1: Immediate (Ac | ories: ute) Healt | h Effects. | | | |
| | The components of chemical registries TSCA (U.S.) EINECS (Europe DSL (Canada) | of this pro s:) | duct are listed | d on or are exen | npt from the foll | owing international |
| OTATE DECUMATIONO | | | | | | |
| STATE REGULATIONS: STATE REGULATORY STATUS: | This product or its be all inclusive - s | s compone | ents, if a mixt gulations repr | ure, is subject to resented):. | o following regu | lations (Not meant to |
| | None. | | | | | |
| | PROPOSITION 6 California's Safe I reproductive toxic | 55: This pr Drinking V city, and fo | oduct does n Water and To or which war | ot contain chem xic Enforcemen nings are now re | icals considered t Act of 1986 as equired. | by the State of causing cancer or |
| CANADIAN REGULATIONS: LABELS FOR SUPPLY: | | | | | | |
| | | | | | | |
| REGULATORY STATUS: | This Material Safe Regulations. | ety Data S | heet has beer | n prepared in co | mpilance with the | he Controled Product |
| | Canadian WHMIS | S Classific | ation: D2B - | Other Toxic Ef | fects: Toxic Ma | terial |

16. OTHER INFORMATION

| NPCA HMIS HAZARD INDEX: FLAMMABILITY: REACTIVITY: NPCA HMIS PERS. PROTECT. INDEX: | 1 Slight Hazard 1 Slight Hazard 0 Minimal Hazard E - Safety Glasses, Gloves, Dust Respirator |
|--|--|
| USER NOTES: | N/A = Not applicable N/D = Not determined |
| INFORMATION SOURCES: | OSHA Permissible Exposure Limits, 29 CFR 1910, Subpart Z, Section 1910.1000, Air Contaminants. |
| | ACGIH Threshold Limit Values and Biological Exposure Indices for Chemical Substances and Physical Agents (latest edition). |
| | Sax's Dangerous Properties of Industrial Materials, 9th ed., Lewis, R.J. Sr., (ed.), VNR, New York, New York, (1997). Product information provided by the commercial vendor(s). |
| PREPARED BY: | Sam Hoskin/bb |
| REVISION No./Repl. MSDS of: | 2/January 27, 1998 |
| | |
| MSDS STATUS: | Approved. |
| DATE: | June 16, 2000 |

DISCLAIMER:

MSDS furnished independent of product sale. While every effort has been made to accurately describe this product, some of the data are obtained from sources beyond our direct supervision. We cannot make any assertions as to its reliability or completeness; therefore, user may rely on it only at user's risk. We have made no effort to censor or conceal deleterious aspects of this product. Since we cannot anticipate or control the conditions under which this information and product may be used, we make no guarantee that the precautions we have suggested will be adequate for all individuals and/or situations. It is the obligation of each user of this product to comply with the requirements of all applicable laws regarding use and disposal of this product. Additional information will be furnished upon request to assist the user; however, no warranty, either expressed or implied, nor liability of any nature with respect to this product or to the data herein is made or incurred hereunder.



COLORADO Division of Reclamation, Mining and Safety Department of Natural Resources

1313 Sherman Street, Room 215 Denver, CO 80203

Form 2 (Public File) NOTICE OF INTENT TO CONDUCT PROSPECTING OPERATIONS FOR HARD ROCK/METAL MINES

CHECK ONE:

| There is an NOI Number Already Assigned to this Operation (Please reference the file number assigned to this operation) | NOI # P | | |
|--|---------|---|--|
| New NOI | | | |
| Modification to an Existing NOI (Provide for Modifications to an existing NOI) | NOI# P- | - | |

GENERAL OPERATION INFORMATION

Type or print clearly, in the space provided, ALL information described below.

| I. | GENERAL INFORMATION | |
|------------------------|------------------------------------|--|
| 1. | DATE NOI RECEIVED BY THE DIVISION: | |
| | | |
| | | |
| | | |
| | | |
| 2. | PROJECT NAME: | |
| | | |
| 3. | PROSPECTOR: | PERSON MLRB SHOULD CONTACT: |
| 3. | PROSPECTOR: | PERSON MLRB SHOULD CONTACT: |
| 3. Na | PROSPECTOR: | PERSON MLRB SHOULD CONTACT: Name |
| 3. Na | PROSPECTOR: | PERSON MLRB SHOULD CONTACT: Name |
| 3. Na | PROSPECTOR: me | PERSON MLRB SHOULD CONTACT: Name Title |
| 3. Na Tit | PROSPECTOR: me | PERSON MLRB SHOULD CONTACT: Name Title |



| Street | Street |
|--|---|
| P.O. Box | P.O. Box |
| City, State, Zip | City, State, Zip |
| | |
| Telephone | Telephone |
| () | () |
| 4. APPLICATION FEE: \$86. (NOIs require a or it cannot be processed by the Division). 5. LOCATION INFORMATION: County: | an \$86 fee which must accompany this notice |
| Principal Meridian (check one): 6 th (Colorado) 10 th (New Mexic Section (write number) TOWN RANGE E W QUARTER SECTION (check one): | co) Ute NSHIP N S |
| NE NW SE SW | |
| QUARTER/QUARTER SECTION (check one): | |
| NE NW SE SW | |
| GENERAL DESCRIPTION: (the number of mil | es and direction to the nearest town and the |

GENERAL DESCRIPTION: (the number of miles and direction to the nearest town and the approximate elevation):

NOTE: Supply longitude and latitude or UTM coordinates if lands have not been surveyed or as supplemental information to this NOI. GPS measurements will be acceptable for this purpose:

| Lat: | | X: | |
|--------------------|------------|--------------|-------------------------|
| Long: | | Y: | |
| 6. LAND OWNERSHIP: | | | |
| Private | Public Do | main (BLM) | National Forest (USFS) |
| State | State Sove | ereign Lands | Other (please describe) |
| | | | |

If prospecting is located on BLM or USFS land the remaining section must be completed, otherwise go to section II Maps & Drawings

7. PROSPECTING ON BUREAU OF LAND MANAGEMENT (BLM) LAND AND U.S. FOREST SERVICE (USFS) LAND

The Division and the BLM/USFS have entered into cooperative agreements that eliminate the need for a prospector to post a financial warranty with each agency and allow them to coordinate the review of the NOI in order to minimize administrative processing time and effort.

A. CLAIMANT:

| Name | | | | |
|------------------|---|---|--|--|
| Address | | | | |
| City, State, Zip | | | | |
| Telephone | (|) | | |
| Fax | (|) | | |

Form 2 – Public File

B. SITE/CLAIM INFORMATION:

List names, serial numbers and provide legal description to nearest quarter-quarter section of all sites or claims (attach additional page, if necessary).

| NAME | SERIAL NUMBER | LEGAL DESCRIPTION | |
|--|-----------------------------|---|----------------------------|
| | | | |
| | | | |
| | | <u> </u> | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| C. LOCATION MAP: A | ttach a USGS 7.5 minute | quad, or similar map of adequa | ate scale, which |
| D. Are prospect sites | (e.g., drill holes, trench | | |
| locations, etc.) stal | xed on the ground? | Yes No | |
| E. Specify the Land Ma | anagement Agency, Add | ress and Telephone Number: | |
| Agency | | | |
| Address | | | |
| Auuress | | | |
| City, State, Zip | | | |
| Telenhone | | | |
| relephone | | | |
| | | | |
| F. The prospector is USFS. Processing | of the NOI will not begin | hat the NOI has been sent to until the prospector has subr | the BLM or the |
| acceptable to the D | Division that the NOI was | s sent to the BLM or USFS. Che | ck one: |
| Evidence of notif | fication is attached to th | is NOI for BLM Land | |
| | | | |
| Evidence of notif | fication is attached to the | is NOI for USFS Land. | |
| Other proof of no | otice is attached to this N | 101 | |
| Form 2 – Public File | | | Page 4 of 14 |

II. MAPS & DRAWINGS

An accurate topographic base map showing the location of the proposed project must be submitted with this notice. The prospector may submit a U.S.G.S. 7.5 minute quadrangle, or similar map of adequate scale that:

- 1. Identifies the proposed prospecting site(s) or activity areas involving surface disturbance. Activity areas include all drill holes, mud pits, excavations, trenches, adits, shafts, tunnels, rock dumps, stockpiles, impoundments and prospecting roads, and
- 2. Includes sufficient detail to identify and locate known prospecting features and facilities that may be affected and those that are not anticipated to be affected. This includes the location of all drill holes, mud pits, excavations, trenches, adits, shafts, tunnels, rock dumps, stockpiles, impoundments and prospecting roads. Color photographs, adequately labeled (including date, orientation and location), of the prospecting site may be used to fulfill this requirement if included with the NOI submittal.

III. PROJECT DESCRIPTION

| 1. | Mineral(s) and/or Resource(s) being Investigated: | | | | | |
|---|---|--|------------|---------------------------|-----|----------------|
| 2. | Estimated dates of commencement and completion: | | | Commencemen Completion | nt: | / / |
| 3. | 3. Amount of material (specify units) to be extracted, moved or proposed to be moved: | | | | | Units |
| Identify the type or method of prospecting proposed and quantity (place an "X") | | | | | | |
| | Cuts | | Pits | | | Trenches |
| | Shafts | | Tunnels | | | Adits |
| | Declines | | Air Drilli | ng | | Fluid Drilling |
| | Drilling and Blasting | | | | | |

Form 2 – Public File

5. Describe proposed surface excavation or other land disturbance, including roads, pits, trenches, waste piles, drill pads and collar areas of underground workings, ponds, etc.

6. Proposed Disturbance (approximate) Describe the proposed drilling to be conducted, including anticipated number of holes, diameter, depth, location, etc. Submit additional pages if necessary:

| A. | Dril | l Pads: |
|----|------|---------|
|----|------|---------|

| Ouantity | Average Width (ft) | Average Length (ft) | |
|---|-------------------------------|-------------------------------------|--|
| B. Drill Holes: | | | |
| Quantity | Depth (ft) | Diameter (in) | |
| C. Mud Pits | | | |
| Quantity | Average Ave Width (ft) Len | rage Average gth (ft) Depth (ft) | |
| D. Described proposed underground work, including reopening of old workin advancement of adits or shafts, trenches, pits, cuts, rock dumps, or other types disturbance, describe type, quantity and general dimensions: | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| E. | Other | Disturbances | (please | describe) | l |
|----|-------|--------------|---------|-----------|---|
|----|-------|--------------|---------|-----------|---|

| F. Indicate Chemicals and Fuels used or stored on site. List type, quantity and method to store. | | | | | |
|--|------------------------------|--------------------|-------------|--|--|
| | | | | | |
| | | | | | |
| | | | | | |
| G. New Roads: Significantly Upgraded Roads | Length (ft): Length (ft): | | Width (ft): | | |
| Are culverts or other c | rossings proposed? If sc | , please describe: | | | |
| | | | | | |
| H. Total project area to be disturbed (acres) | | | | | |
| I. Describe the equipment to be used for the prospecting operations: | | | | | |
| i. Describe the equipment to be used for the prospecting operations: | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

J. Describe and locate any structures to be constructed (i.e. stockpiles, ponds, impoundments):

K. Describe anticipated relationship to surface water and groundwater (proximity to streams, penetration of ground water aquifers):

IV. OPERATION AND RECLAMATION MEASURES:

- 1. The Board suggests that a photographic record of the pre-prospecting and post-prospecting conditions be kept by the prospector. These photos should be taken from the same location and by the same method to clearly show the pre-prospecting condition of the land and the reclamation efforts. Upon completion of reclamation and request for bond or surety release, the Board may consider the photos as evidence of adequate reclamation, and thus, be able to act more quickly on the request for release.
- 2. Provide a description of the native vegetation of the area to be disturbed, including tree, shrub, and grass communities of the area. Color photographs, sufficient to adequately represent the ecology of the site and adequately labeled (including date, orientation and location), may be used in lieu of a written description. Based on the quality of the photographs, the Division may require additional detail.

Form 2 – Public File

3. Describe the estimated topsoil depth and how topsoil will be salvaged, stockpiled and redistributed for the re-establishment of vegetation. Specify approximate topsoil redistribution depth:

4. Describe how drill holes will be plugged (refer to Rule 5.4 of the Rules for required abandonment procedures):

5. Describe how portals, adits, shafts, ponds, excavations, or other disturbances will be reclaimed (refer to Rule 3 and Rule 5 for specific reclamation performance standards). You may wish to contact the Division for closure specifications.

Form 2 – Public File

Page 9 of 14

6. Describe how roads will be reclaimed or returned to their pre-prospecting (or better) condition:

| List the seed mixture to be used in the re-establishment seed mixture calculation to obtain PLS/acre. For as mixtures and rates, contact the local NRCS if on priva- land or State Land Board if on state land. A. Plant name and seeding rate: | t of vegetation. See the attached sistance with formulating seed te land, BLM/USFS if on public |
|--|---|
| Plant Name | Seeding Rate (PLS/Acre) |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

B. Describe the method for seed bed preparation, and application method for grass/forb seeding:

V. TERMS AND CONDITIONS FOR PROSPECTING OPERATIONS:

- Reclamation measures shall be fulfilled in a timely manner and completed within five (5) years of completion of prospecting activities.
- 2. The prospecting operations described in this Notice will be conducted in such a manner as to minimize surface disturbances. In addition to the measures required in Rule 5, precautions to be taken include:
 - A. Confinement of operations to areas near existing roads or trails, where practicable. Existing roads which are to remain as permanent roads after prospecting activities are completed shall be left in a condition equal to or better than the pre-prospecting condition;
 - B. Drilling shall be conducted in such a way as to prevent cuttings and fluids from directly entering any dry or flowing stream channel. Drill cuttings must be spread to a depth no greater than one-half (1/2) inch or buried in an approved disposal pit;
 - C. Proper and timely abandonment of drill holes upon completion of drilling;
 - D. Reclamation of affected lands upon completion of operations or phases of an operation;,
 - E. Backfilling and revegetating any pits to blend in with the surrounding land surface;

- F. Safeguarding mine entries, trenches and excavations from unauthorized entry at all times;
- G. Disposal of any trash, scrap metal, wood, machinery, and buildings;
- H. Control of noxious weeds within the area affected by the prospector
- 3. The prospecting operations shall be conducted in such a manner as to comply with all applicable local, state and federal laws and regulations including applicable state and federal air and water quality laws and regulations.
- 4. The prospecting operations shall be conducted so as to minimize adverse effects upon wildlife to include covering of open drill holes until properly plugged.
- 5. During the prospecting operations, the operator will perform the necessary stabilization and reclamation work to ensure those areas affected by prospecting activities are erosionally and geotechnically stable.
- 6. All prospecting operations shall be in compliance with the Colorado Mined Land Reclamation Act, as amended (34-32-101 et seq. C.R.S.), and all rules and regulations currently in effect or promulgated pursuant thereto. See 2 CCR 407-1, Mined Land Reclamation Board Hardrock /Metal Mining Rules.

VI. ADDITIONAL TERMS AND CONDITIONS FOR PROSPECTING ON BLM/USFS LANDS

- 1. The prospector will supply a copy of this NOI to the appropriate BLM and/or USFS office.
- 2. The prospector authorizes the MLRB to discuss the information in this Notice of Intent with the BLM and/or USFS.
- 3. If on BLM land, the prospector will complete reclamation to the standards described in 43 CFR 3809.1-3 (d) and implement reasonable measures to prevent unnecessary or undue degradation of lands during operations.

VII. FINANCIAL WARRANTY

A financial warranty must be provided for the cost of reclamation of the disturbance described in this Notice. The prospector can either file a "One Site Prospecting Financial Warranty" or a "Statewide Financial Warranty." **The financial warranty must be submitted and approved by the Division prior to entry upon lands for the purpose of prospecting.**

A One-Site Prospecting Financial Warranty is usually filed by individuals or companies where prospecting activities are limited to a single area. It must be filed in the amount of \$2,000 per acre for land to be disturbed, or such other amount as determined by the Division, based on the projected costs of reclamation. A Statewide Financial Warranty is usually filed by companies with multiple prospecting sites. It must be filed in an amount equal to the estimated cost of reclamation per acre of affected land for all anticipated sites statewide. (You may increase the statewide bond at any time in order to cover additional or expanded prospecting activities.)

VIII. SIGNATURE REQUIREMENT

Please place your initials on the line provided:

I hereby verify that the foregoing information is true and accurate and commit to the reclamation of the aforementioned prospecting site as required by the Colorado Mined Reclamation Act and the rules as specified in the Hard Rock/Metal Mining Rules and Regulations and this NOI form.



I have enclosed the required permit fee.

I authorize the Division to contact and copy the BLM and/or USFS on any correspondence related to the prospecting operation, if the prospecting operation is located on federal public land.



I accept and agree to comply with the foregoing terms and conditions and with all of the provisions of Rules 3 and 5, and C.R.S. 34-32-101.

I hereby certify that concurrent with submittal of this NOI to the Division, I have sent notice to the Boards of County Commissioners in the counties where the proposed activities will occur. This notice also indicated that non-confidential information regarding the proposed activities will be available for review at the Division's website.

This form has been approved by the Mined Land Reclamation Board pursuant to section 34-32-113, C.R.S., of the Mined Land Reclamation Act. Any alteration or modification of this form shall result in voiding any NOI issued on the altered or modified form and subject the operator to cease and desist orders and civil penalties for operating without a NOI pursuant to section 34-32-123, C.R.S.

I, the undersigned, being the NOI holder or the person authorized to sign on behalf of the NOI holder, declare that the information given in this NOI form is true and correct.

SIGNATURES MUST BE IN BLUE INK

| Signed and dated this | 23 | day of | March , | 2020 | |
|--|--------|--------|-----------------|--------|--|
| - | (date) | | (month) | (year) | |
| Signature of NOI holder or person authorized to sign:A | | | | | |
| Name (typed or printed): | | C | David Felderhof | | |
| Title/Position: | | F | President | | |

M:\min\oss\slb\MineralsForms\ProspectForm2 30 Aug 2017



Cazier - DNR, Tim <tim.cazier@state.co.us>

P-2020-002 Response to NOD

Angela Bellantoni <angela@envalternatives.com> Mon, May 18, 2020 at 4:10 PM To: "tim.cazier@state.co.us" <tim.cazier@state.co.us", Stephanie Carter <sscarter@blm.gov> Cc: LOREN KOMPERDO <l.komperdo@shaw.ca>, Will Felderhof <will@votixcorp.com>, David Felderhof <david@zephyrminerals.com>

Dear Mr. Cazier,

Thank you for the comments and request for further detail.

Dr. Angela M. Bellantoni

Environmental Alternatives Inc.

PO. Box 326

Cañon City, CO 81215

719-275-8951

New email: angela@envalternatives.com

www.envalternatives.com

NOD Response P-2020-02.pdf 4562K View as HTML Scan and download