

Environment, Inc.

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FOUNDER

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303-423-7297
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July 15, 2019

Mr. Jared Ebert
Division of Reclamation, Mining & Safety
1313 Sherman St., Suite 215
Denver, CO 80203

Dear Mr. Ebert;

RE: Albert Frei and Sons, Inc. - AFS-Bennett Pit
M-2001-038 - Adequacy Response 02 & 03

RECEIVED

JUL 15 2019

DIVISION OF RECLAMATION
MINING AND SAFETY

On behalf of my client Albert Frei and Sons, Inc, I am responding to your second adequacy review letter dated June 20, 2019 and the question ask in the Geotechnical Review of July 1, 2019. I have included the new review points that need to be addressed in the order presented so the clarification questions and answers will be in this document for easy reference.

Rule 6.4.5, Exhibit F – Reclamation Plan

7. b. **DRMS Response:** Please clarify your statement that the mine is not operated as an inert fill facility? The Division assumes you mean the primary purpose of the operation is not to be an inert fill facility, and that this will be secondary to the mining operation.

You are correct. The intent is to only accept inert material at the mine until all mining and stockpiled materials are removed. At that time the mine will be closed to accepting Inert Materials, and reclamation will be completed using the material on site at that time.

Rule 6.4.8, Exhibit H – Wildlife Information

16. b. **DRMS Response:** The Division received a comment letter from Colorado Parks and Wildlife (CPW) on April 16, 2019. Their comment letter indicates a prairie dog colony was discovered within the project area with the potential for presence of burrowing owls. CPW stated that if any earthmoving will begin between March 15th and October 31st, a burrowing owl survey should be performed. As these raptors are classified as a State Threatened species, please commit to conducting a burrowing owls survey if earthwork will occur between the dates noted by CPW and commit to retaining copies of the results of these surveys. If burrowing owls are found please indicate what protective actions will be taken.

After reading the CPW letter more thoroughly, Ms. Crystal Chick says " If prairie dog colonies are present,...". There are no prairie dog colonies on the permit area since none were noted in the ERO wildlife analysis nor have I personally observed any in the numerous visits I have made to the

mine. In the future if any are observed Albert Frei and Sons, Inc. will follow Mrs. Chick's recommendations.

Rule 6.4.12, Exhibit L – Reclamation Costs

17. b. **DRMS Response:** Will AFS retain enough native material either in a bank or stockpiled state to grade the mined slopes to the proposed 3H:1V ratio? Or, will AFS rely on the importation of fill to provide for the volume of material needed to backfill the mine slopes? If so, please include an estimate of the volume of material the Division would have to import at the point of worst case disturbance to backfill and grade the proposed 3300 foot highwall. Also please include a cost the Division would incur from purchasing this material.

Yes, AFS has enough native material and there are adequate quantities of overburden, clay lenses and unusable sand (dirt) generated as mining progresses to complete the sloping of the 3300 feet. Importing of materials will not be needed nor will it need to be purchased.

Rule 6.4.19, Exhibit S – Permanent Man-made Structures

18. a ii. **DRMS Response:** The structure agreement for David A and Joyce E Lincoln did not include their three-strand barbed wire fence. Please submit a revised and properly executed structure agreement for this structure or provide an appropriate engineering evaluation demonstrating the mining operation will not affect this structure.

Attached is a copy of the new Structure agreement from Mr. & Mrs. Lincoln that includes their fences. Mr. Frei has delivered a second copy of the agreement to the Copeland Trust for their reconsideration. If we receive a signed agreement it will be provided for the file.

The Division is currently reviewing the engineering evaluation submitted for the structures owned by The Robert and Alethea Copeland Revocable Living Trust. Any adequacy issues identified will be forwarded to you as soon as possible.

See responses below to Mr. Hays review on the engineering evaluation for the Copeland structures.

Additional Adequacy Review Issues

1. A detailed inert fill plan was submitted and approved with TR01. However, it is unclear how the applicant insures the off-site material backfilled into the pits is clean and inert as defined by Rule 1.1(20). Please explain how the applicant will monitor, document and verify the material brought to the site meets the definition of inert material as defined by Rule 1.1(20). Please include the following:

In the approved TR01, the original operator had personal contact with the parties delivering the loads and received assurances it met the definition of inert materials. There are no records for the material delivered under the Lincoln ownership. Since Albert Frei and Sons, Inc. took the mine over they use the same method used at their permitted Certificate of Designation sites in western Adams County. Attached is an Addendum to the Inert Fill Plan discussing the items you suggest below. It contains a description of the process used to determine any load of inert material delivered to the mine meets the definition in Rule 1.1(20) and address points a., b. and c. below.

- a. A monitoring plan describing how each load of inert material will be inspected to verify it is inert.
- b. A load log/tracking plan that documents:
 - i. the type and amount of material backfilled into the pit
 - ii. the source of this material
 - iii. date, time and location of backfilling activity

The date and time will be collected. It will be placed somewhere along the west mine boundary.

- iv. Signed certification statement that the material is clean and inert as defined by Rule 1.1(20)
- c. Record keeping plan
 - i. The applicant will need to document they have inspected every load brought to the site and commit to retaining the load logs discussed above.
 - ii. Please commit to submitting these records for the Division's review with the annual report.

AFS will commit to providing electronic copies of the inert fill load tickets to the Division of Mining, Reclamation and Safety at annual report plan.

2. The adequacy response letter alludes that on occasion, fill material brought to the mine is found not to meet the definition of inert material and that AFS isolates this material and if the entity that brought the material returns to the facility they are required to remove it (AFS adequacy response letter June 17, 2019, page 12). Please explain what happens to this material in the event the entity does not return to the facility, how has/does AFS dispose of this material?

The policy is, that IF improper material is delivered as Inert and when dumped, it is found that it does not meet that definition it is immediately loaded back into the vehicle that delivered it for proper disposal. The delivering party has signed an affidavit that it is Inert Material, where it came from, how much was delivered and accepts responsibility for taking it back if it does not meet inspection. To

date we have never had a problem with it being removed. If on the other hand we find it buried in the load when it is moved and the offending party does not return, our policy is to hire a truck to haul the material to a landfill for proper disposal and the company that delivered the material is banned from ever dumping at the mine in the future. Only a limited number of clientele are allowed to deliver inert materials so we have control of who and what gets dumped.

3. The applicant is now proposing a 60 acre affected land limit in lieu of conducting a phased mining plan approach or for bonding for the maximum area to be mined at the site. Please explain how AFS will monitor their total affected land acreage? AFS will need to submit and receive approval of the proposed technical revision to increase the bond coverage area and submit any necessary bond increase prior to affecting land in excess of 60 acres.

AFS plans to have the permit area flown once every 2 years until mining is complete to keep up with the progression of mining. This photo will be used to update the map filed with the annual report. A GPS unit will be used to measure the disturbed areas in the mine. This gives us accurate information needed to answer the annual report questions. If we need to disturb more than 60 acres a Technical Revision will be filed prior to reaching that point to determine if the bond is adequate for the proposed increase.

4. Page 7 of your adequacy response letter and revised page 15 of Exhibit G discusses a water monitoring plan to be implemented to collect baseline water level and quality data should AFS desire to excavate into the groundwater table in the future with the possibility of lining portions of the pit excavation. AFS will need to submit and receive approval of an amendment application, not a Technical Revision to revise the reclamation plan for a portion of the site to be reclaimed as a lined water reservoir. Regarding the baseline water monitoring plan, AFS will need to submit well completion records for each of the monitoring wells. For baseline water quality sampling, DRMS typically requires five quarters of water quality data prior to disturbance below the groundwater table. The applicant is encouraged to work with the Division in advance to establish which water quality parameters should be collected.

Albert Frei and Sons, Inc. understands they will need an Amendment prior to lining a portion of the mine or mine into the groundwater table. Frei will collect 5 quarterly water quality samples prior to disturbing below the water table. At this time AFS plans to sample groundwater in one of the down gradient groundwater monitoring wells and analyze it for VOC using EPA Method 8260 and 8-RARA Metals using EPA Method 6020 and 7471. Analysis requested will be using laboratory standard turn around times. A copy of the analysis will be supplied to the Division when it is received. Copies of the completion records are attached for the 4 wells installed along the south end of the mine.

Geotechnical review responses (Peter Hays)

1. On Page 4 of the Mining Plan revised on June 14, 2019, the Application states, "Along the affected lands/permit line the mining setback will be 25 feet. The exception to this is along the

south permit line. In this area due to structures adjacent to the permit. In this area a working face setback of 70 feet stacked from Permit line. North of this line the working face will be worked approximately $\frac{1}{2}$:1 but when mining reached this setback line mining will be done on the final 3:1 grade."

Please explain how the Applicant intends to mine from the 70 feet offset to the final 25 feet offset at the final 3H:1V slope when the toe of the permanent slope will have already been excavated.

This was my mistake, instead of "mining" I should have used "graded". AFS intends to place overburden, reject rock and inert materials along the base of the face in this area and then cut/ fill the 70 foot wide area to create the final slope over the fill. Any excess material would then be processed. If no fill material is available, the cut/fill method will provide enough material to create the 3:1 slope. My calculations show that without fill, the 70 foot setback with a 55 foot height, the upper portion of the cut will contain approximately 36.3 yds per linear foot and the bottom will require approximately 33.75 yards per linear foot of fill.

Based on Section B - 3H to 1V Reclaimed Slope for Fence cross-section provided in the geotechnical analysis the Division recommends the Applicant begin mining along the south boundary at a 3H:1V slope at the toe of permanent slope - 202 feet from the fence/property line.

While this is a practical way to do the slopes it is to our advantage to mine vertical and backfill the slopes. The amount of reject material and overburden on the site allow us to place that unusable material in the slope areas. By placing it along the mines perimeter that needs sloping, AFS can maximize the amount of material being removed from the mine. If, the fill is not available then, AFS may implement the plan to mine the final slope at a rate of 3h:1v.

2. On Page 1 of the geotechnical stability exhibit, the Applicant states the friction angle for alluvial sands is 42° based on previous studies. The Division typically uses a friction angle of 37° for generalized material properties for alluvial sand. Please provide the Division with the previous studies or site specific material property tests to justify the use of a 42° friction angle in the geotechnical analysis.

The previous studies are from past experience and from a number that Allan Sorenson suggested in the past. This 42° friction angles lies midway along the angles show on the supplied table that is an excerpt from Rock Slopes: Design, Excavation and Stabilization, Publication No. FHA-TS-89-045, for Dense sand. There is no scientific reason for the number I chose. The 37° is acceptable to AFS and I will begin to use that angle in the future if no site specific information is available.

3. On Page 1 of the geotechnical stability exhibit, the Applicant states as mining approaches the perimeter of the mine a 25 foot mining setback will be staked from the permit line to establish

the mining limit. An additional safety setback line of 25 feet will be staked from the mining setback line to establish the limit that mining with vertical face will stop. Please explain how the Applicant intends to mine the area between the 25 feet setback from the permit line and 25 feet safety setback.

This extra 25 foot setback would not be mined. It is there to leave enough room for shaping the top of the final slope and so there is room to spread the soil stored along the setback down the slope. In effect the material from the upper parts would be pushed down the slope to supplement the fill to create the final grades.

4. One Pages 2 and 3 of the geotechnical stability exhibit, the Applicant states the second cross section was a calculation to confirm that the 3:1 slope would be in the guidelines and the safety factor was calculated to be $FS = \tan 42^\circ / \tan 17.1^\circ = 3.93$. The factor of safety listed on Sheet 2 of 2 of the exhibit is 2.93 for the same slope. Please review the safety factor value within both exhibits and explain the discrepancy.

Review of the calculation on Page 2 for $FS = \tan 42^\circ / \tan 17.1^\circ = 3.93$ is incorrect it should be $FS = \tan 42^\circ / \tan 17.1^\circ = 2.93$. This matches Section B on sheet 2 of 2 and was a typo on my part.

Revised Exhibits and other items attached

- Copy of the competition report for 4 monitoring wells
- Addendum to Inert Fill Plan
- Lincoln updated structure agreement
- Proof of Placement of responses to adequacy Reviews 02 and 03 with Adams County Clerk's office

If you have more questions or need more information please call me at (303) 423-7297.

Sincerely,



Stevan L. O'Brian
Environment, Inc.

cc Albert Frei and Sons, Inc.
Jared Ebert - via e-mail
Adams County Clerk
file

[illegible]

[illegible]

[illegible]

[illegible]

Addendum to Inert Fill Plan as approved on 10/9/2015

Inspection and Control Policy

This policy is intended to assure that all Inert Material delivered to the mine for use in reclamation meets the definition of acceptable material under Division of Mining, Reclamation and Safety Rule 1.1(20). The control begins as the material enters the permit area. Albert Frei and Sons, Inc. employees at the mine have been trained to recognize inert material and unacceptable inert materials as defined in the rule and are instructed to not allow it to be dumped if there is any questionable material in the load.

Monitoring Plan

As material is delivered to the mine the truck must stop at the scale house for inspection and screening. Employees check the load to see that it meets the permit guidelines. After the inspection a load delivery ticket is filled in and signed by the driver, and allowed to be placed in a designated area as long as it meets the acceptance criteria. After the truck is unloaded, and the equipment operator finds any unacceptable materials, they will segregate it to be returned, loaded back on to the customer's truck for disposal at site permitted for the materials. The complete inspection of the load is done prior to the load being combined with other inert fill on site. Notes are made on the ticket of the offending customer if trash or unacceptable materials are in the load so it can be discussed with them and appropriate actions can be taken. This way we have control over anyone who abuses our trust since they will not be allowed to use the facility in the future unless the problem is corrected.

Unacceptable Materials

- Organic materials like wood, branches, leaves, grass clippings, compost
- Malodorous materials apparently impacted by sewage, gasoline, or diesel
- Mixtures of pipe (metal or clay) fragments or transite piping
- Significant staining, iron stains, oily stains
- Debris of metal flashing, fencing or other non-earthen materials
- Garbage or trash
- Mixtures of potash, fly ash, bottom ash or non-earth powders

Acceptable Materials

Inert earthen solids composed of any of the following and as defined in the Division of Mining, Reclamation and Safety Rule 1.1(20) policy:

- Earth, dirt or soil
- Rock, gravel or brick
- Hardened asphalt or asphalt fragments
- Road base material
- Utility trench materials
- Concrete and concrete fragments (unstained)
- Concrete masonry units (construction block or decorative block) and fragments
- Daylighting muds (uncontaminated water and earthen materials)
- Directional utility boring muds (uncontaminated water and earthen materials)

Load log/tracking plan documentation

A load ticket for the delivered inert material contains information on

1. The Date and time the load was delivered.
2. The type and amount of material delivered to be backfilled into the pit.
3. The source of this material and address of origin
4. Each ticket has this statement - *“I certify that my load DOES NOT contain hazardous materials, garbage, wood, organic material or other unacceptable materials”*.
5. Signature line that certifies the material is clean and inert.

Record keeping plan

On a daily basis the load tickets will be transfer from the mine office to the company headquarters where they will be retained in the company records in electronic form and submitted to the Division of Mining, Reclamation and Safety (State) with annual reports. Load tickets will be kept at the corporate office in Henderson Colorado for inspection upon request.

PERMITTEE/STRUCTURE OWNER AGREEMENT

State of Colorado, Mined Land Reclamation (MLR) law requires the permit applicant (operator/permittee) to agree to reimburse the owner of any permanent man-made structure(s) within 200 feet of the AFS-Bennett Pit (M-2001-038) permitted mining area, for damage done to the structure(s) as a result of the permitted operation.

Albert Frei and Sons, Inc. believes David A and Joyce E Lincoln own the following structure(s), located within 200 feet of the permitted mining area: Barn#, Out building# and fences

Albert Frei and Sons, Inc., agrees to reimburse you for any damage done to the listed structures as a result of the mining operation. Your acknowledging signature and a notary seal in the spaces provided below shall satisfy the MLR law requirement. Albert Frei and Sons, Inc. certifies this agreement as follows:

CERTIFICATION: The applicant Albert Frei and Sons, Inc. represented by Albert Frei, Jr., as the President, does hereby certify that David A and Joyce E Lincoln shall be compensated for any damage from the proposed mining operation to the above listed structure(s) located within 200 feet of the permitted mining area described in the MLR Permit for the AFS - Bennett Pit.

NOTARY FOR PERMIT APPLICANT

ACKNOWLEDGED BY:

Permit Applicant: Albert Frei and Sons, Inc. P.O. Box 700, Henderson, CO 80640

Representative: Albert Frei, Jr. phone 303-289-1837

Signature: [Signature]

Date: 6/26/19

STATE OF Colorado)
) ss
COUNTY OF Adams)

The foregoing was acknowledged before me this 26 day of June, 2019, by Albert Frei, Jr. as the President of Albert Frei and Sons, Inc.

Notary Public: [Signature]

My Commission Expires: 02-15-2020

NOTARY FOR STRUCTURE OWNER(s)

ACKNOWLEDGED BY:

Structure Owner(s): David A and Joyce E Lincoln

Contact name (print):

Signature: [Signature]

Date: 6/26/19

Contact name (print):

DAVID LINCOLN

Signature: Joyce E. Lincoln

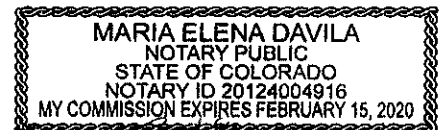
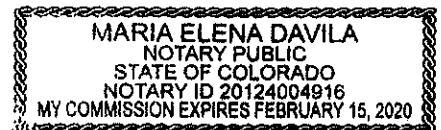
Date: 6-26-19

STATE OF Colorado)
) ss
COUNTY OF Adams)

The foregoing was acknowledged before me this 26 day of June, 2019, by

Notary Public: [Signature]

My Commission Expires: 02-15-2020



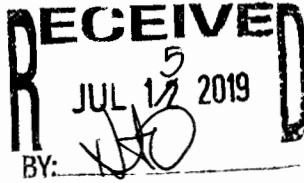
Environment, Inc.

LARRY E. O'BRIAN
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STEVAN L. O'BRIAN
PRESIDENT

7985 VANCE DRIVE, SUITE 205A
ARVADA, COLORADO 80003
303-423-7297
FAX 303-423-7599

July 15, 2019



Adams County Clerk and Recorder
450 S. 4th Ave.
Brighton, Colorado 80601

Re: Adequacy response 02 & 03 packet
Albert Frei and Sons, Inc. - Bennett Pit

Dear Sir/Madam:

We are delivering to you here with a copy of the adequacy responses 02 & 03 for the AFS-Bennett Pit M-2001-038 that is operated by Albert Frei and Sons, Inc. It should be placed with the application packet delivered to you on February 12, 2019

This copy of the adequacy packet is delivered to you pursuant to 34-32.5-112(9)(a), Colorado Revised Statutes 1995, as amended, which states in part:

.... the applicant shall place a copy of such application for public inspection at the office of the Board and Office of the County Clerk and Recorder of the county in which the affected land is located.

This packet must be kept with the original book for public review until the permit has been approved by the Division. We will contact you once it is and make arrangements to pickup this copy.

Please acknowledge receipt of the copy of the permit application by signing in the appropriate space provided below and returning one copy of this letter to the person delivering the book. This will be submitted to the Division of Reclamation, Mining & Safety to prove the application book was delivered to your office.

Yours truly,
ENVIRONMENT, INC.

A handwritten signature in black ink, appearing to read "Stevan L. O'Brian".

Stevan L. O'Brian

enclosure

RECEIVED THIS ____ DAY OF _____, 2019 one
copy of an MLRB adequacy responses for above mine.

Adams County Clerk and Recorder

By _____