

MR
WHL

STATE OF COLORADO

DIVISION OF RECLAMATION, MINING AND SAFETY
Department of Natural Resources

1313 Sherman St., Room 215
Denver, Colorado 80203
Phone: (303) 866-3567
FAX: (303) 832-8106

AM04

CONSTRUCTION MATERIALS REGULAR (112) OPERATION RECLAMATION PERMIT APPLICATION FORM



RECEIVED

NOV 3 0 2015

DIVISION OF RECLAMATION
MINING AND SAFETY

CHECK ONE: ☐ There is a File Number Already Assigned to this Operation

Permit # M - - - - (Please reference the file number currently assigned to this operation)

☐

New Application (Rule 1.4.5)

☒

Amendment Application (Rule 1.10)

☐

Conversion Application (Rule 1.11)

Permit # M 1979 -059 - (provide for Amendments and Conversions of existing permits)

The application for a Construction Materials Regular 112 Operation Reclamation Permit contains three major parts: (1) the application form; (2) Exhibits A-S, Addendum 1, any sections of Exhibit 6.5 (Geotechnical Stability Exhibit; and (3) the application fee. When you submit your application, be sure to include one (1) complete signed and notarized ORIGINAL and one (1) copy of the completed application form, two (2) copies of Exhibits A-S, Addendum 1, appropriate sections of 6.5 (Geotechnical Stability Exhibit, and a check for the application fee described under Section (4) below. Exhibits should **NOT** be bound or in a 3-ring binder; maps should be folded to 8 1/2" X 11" or 8 1/2" X 14" size. To expedite processing, please provide the information in the format and order described in this form.

GENERAL OPERATION INFORMATION

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

1. Applicant/operator or company name (name to be used on permit): Coulson Excavating Company, Inc.

1.1 Type of organization (corporation, partnership, etc.): Corporation

2. Operation name (pit, mine or site name): Brownwood Pit

3. Permitted acreage (new or existing site): 148.7 permitted acres

3.1 Change in acreage (+) 9.2 acres

3.2 Total acreage in Permit area 157.9 acres

4. Fees:

| | | |
|--|------------|--------------------|
| 4.1 New Application | \$2,696.00 | application fee |
| 4.2 New Quarry Application | \$3,342.00 | quarry application |
| 4.4 Amendment Fee | \$2,229.00 | amendment fee |
| 4.5 Conversion to 112 operation (set by statute) | \$2,696.00 | conversion fee |

5. Primary commodity(s) to be mined: SAND GRAVEL

5.1 Incidental commodity(s) to be mined: 1. - lbs/Tons/yr 2. / lbs/Tons/yr
3. / lbs/Tons/yr 4. / lbs/Tons/yr 5. / lbs/Tons/yr

5.2 Anticipated end use of primary commodity(s) to be mined: Construction Materials

5.3 Anticipated end use of incidental commodity(s) to be mined:

✓ Compliance
✓ NO Violations

6. Name of owner of subsurface rights of affected land: See Exhibit O
If 2 or more owners, "refer to Exhibit O".

7. Name of owner of surface of affected land: See Exhibit O

8. Type of mining operation: ☒ Surface ☐ Underground

9. Location Information: The center of the area where the majority of mining will occur:

COUNTY: Larimer

PRINCIPAL MERIDIAN (check one): ☒ 6th (Colorado) ☐ 10th (New Mexico) ☐ Ute

SECTION (write number): S 19

TOWNSHIP (write number and check direction): T 2 ☒ North ☐ South

RANGE (write number and check direction): R 68 ☐ East ☒ West

QUARTER SECTION (check one): ☐ NE ☐ NW ☒ SE ☐ SW

QUARTER/QUARTER SECTION (check one): ☐ NE ☐ NW ☐ SE ☐ SW

GENERAL DESCRIPTION: (the number of miles and direction from the nearest town and the approximate elevation): 3/4 of a mile south east of the City of Loveland. Elevation ~4,890ft

10. Primary Mine Entrance Location (report in either Latitude/Longitude OR UTM):

Latitude/Longitude:

Example: (N) 39° 44' 12.98"
(W) 104° 59' 3.87"

Latitude (N): deg 40 min 22 sec 42.32 (2 decimal places)

Longitude (W): deg 105 min 02 sec 41.36 (2 decimal places)

OR

Example: (N) 39.73691°
(W) -104.98449°

Latitude (N) _____ (5 decimal places)

Longitude(W) _____ (5 decimal places)

OR

Universal Transverse Mercator (UTM)

Example: 201336.3 E NAD27 Zone 13
4398351.2 N

UTM Datum (specify NAD27, NAD83 or WGS 84) Nad 83 Zone 13

Easting _____

Northing _____

11. Correspondence Information:

APPLICANT/OPERATOR (name, address, and phone of name to be used on permit)

Contact's Name: Ken Coulson Title: President
Company Name: Coulson Excavating Company, Inc.
Street/P.O. Box: 1309 N. County Rd 13 P.O. Box: _____
City: Loveland
State: Colorado Zip Code: 80538
Telephone Number: (970) - 667-2178
Fax Number: (970) - 667-2193

PERMITTING CONTACT (if different from applicant/operator above)

Contact's Name: Peter Wayland Title: President
Company Name: Weiland, Inc.
Street/P.O. Box: _____ P.O. Box: 18087
City: Boulder
State: Colorado Zip Code: 80308
Telephone Number: (303) - 443-9521
Fax Number: () -

INSPECTION CONTACT

Contact's Name: Ken Coulson Title: President
Company Name: Coulson Excavating Company, Inc.
Street/P.O. Box: 3609 N. County Rd 13 P.O. Box: _____
City: Loveland
State: Colorado Zip Code: 80538
Telephone Number: (970) - 667-2178
Fax Number: (970) - 667-2193

CC: STATE OR FEDERAL LANDOWNER (if any)

Agency: _____
Street: _____
City: _____
State: _____ Zip Code: _____
Telephone Number: () -

CC: STATE OR FEDERAL LANDOWNER (if any)

Agency: _____
Street: _____
City: _____
State: _____ Zip Code: _____
Telephone Number: () -

12. **Primary future (Post-mining) land use (check one):**

- | | | |
|---|--|--|
| <input type="checkbox"/> Cropland(CR) | <input type="checkbox"/> Pastureland(PL) | <input type="checkbox"/> General Agriculture(GA) |
| <input type="checkbox"/> Rangeland(RL) | <input type="checkbox"/> Forestry(FR) | <input type="checkbox"/> Wildlife Habitat(WL) |
| <input type="checkbox"/> Residential(RS) | <input type="checkbox"/> Recreation(RC) | <input type="checkbox"/> Industrial/Commercial(IC) |
| <input checked="" type="checkbox"/> Developed Water Resources(WR) | | <input type="checkbox"/> Solid Waste Disposal(WD) |

13. **Primary present land use (check one):**

- | | | |
|--|--|---|
| <input type="checkbox"/> Cropland(CR) | <input type="checkbox"/> Pastureland(PL) | <input type="checkbox"/> General Agriculture(GA) |
| <input type="checkbox"/> Rangeland(RL) | <input type="checkbox"/> Forestry(FR) | <input type="checkbox"/> Wildlife Habitat(WL) |
| <input type="checkbox"/> Residential(RS) | <input type="checkbox"/> Recreation(RC) | <input checked="" type="checkbox"/> Industrial/Commercial(IC) |
| <input type="checkbox"/> Developed Water Resources(WR) | | |

14. **Method of Mining:** Briefly explain mining method (e.g. truck/shovel):
Mining has been completed

15. **On Site Processing:** ☒ Crushing/Screening

13.1 Briefly explain mining method (e.g. truck/shovel):

List any designated chemicals or acid-producing materials to be used or stored within permit area:

16. **Description of Amendment or Conversion:**

If you are amending or converting an existing operation, provide a brief narrative describing the proposed change(s).

The Amendment application revises the post mining land use to Developed Water Resource and updates the reclamation plan to include a residential structure and clay lined ponds.

Maps and Exhibits:

Two (2) complete, unbound application packages must be submitted. One complete application package consists of a signed application form and the set of maps and exhibits referenced below as Exhibits A-S, Addendum 1, and the Geotechnical Stability Exhibit. Each exhibit within the application must be presented as a separate section. Begin each exhibit on a new page. Pages should be numbered consecutively for ease of reference. If separate documents are used as appendices, please reference these by name in the exhibit.

With each of the two (2) signed application forms, you must submit a corresponding set of the maps and exhibits as described in the following references to Rule 6.4, 6.5, and 1.6.2(1)(b):

| | |
|------------------|--|
| EXHIBIT A | Legal Description |
| EXHIBIT B | Index Map |
| EXHIBIT C | Pre-Mining and Mining Plan Map(s) of Affected Lands |
| EXHIBIT D | Mining Plan |
| EXHIBIT E | Reclamation Plan |
| EXHIBIT F | Reclamation Plan Map |
| EXHIBIT G | Water Information |
| EXHIBIT H | Wildlife Information |
| EXHIBIT I | Soils Information |
| EXHIBIT J | Vegetation Information |
| EXHIBIT K | Climate Information |
| EXHIBIT L | Reclamation Costs |
| EXHIBIT M | Other Permits and Licenses |
| EXHIBIT N | Source of Legal Right-To-Enter |
| EXHIBIT O | Owners of Record of Affected Land (Surface Area) and Owners of Substance to be Mined |
| EXHIBIT P | Municipalities Within Two Miles |
| EXHIBIT Q | Proof of Mailing of Notices to County Commissioners and Conservation District |
| EXHIBIT R | Proof of Filing with County Clerk or Recorder |
| EXHIBIT S | Permanent Man-Made Structures |
| Rule 1.6.2(1)(b) | ADDENDUM 1 - Notice Requirements (sample enclosed) |
| Rule 6.5 | Geotechnical Stability Exhibit (any required sections) |

The instructions for preparing Exhibits A-S, Addendum 1, and Geotechnical Stability Exhibit are specified under Rule 6.4 and 6.5 and Rule 1.6.2(1)(b) of the Rules and Regulations. If you have any questions on preparing the Exhibits or content of the information required, or would like to schedule a pre-application meeting you may contact the Office at 303-866-3567.

Responsibilities as a Permittee:

Upon application approval and permit issuance, this application becomes a legally binding document. Therefore, there are a number of important requirements which you, as a permittee, should fully understand. These requirements are listed below. Please read and initial each requirement, in the space provided, to acknowledge that you understand your obligations. If you do not understand these obligations then please contact this Office for a full explanation.

- kc 1. Your obligation to reclaim the site is not limited to the amount of the financial warranty. You assume legal liability for all reasonable expenses which the Board or the Office may incur to reclaim the affected lands associated with your mining operation in the event your permit is revoked and financial warranty is forfeited;

Kc 2. The Board may suspend or revoke this permit, or assess a civil penalty, upon a finding that the permittee violated the terms or conditions of this permit, the Act, the Mineral Rules and Regulations, or that information contained in the application or your permit misrepresent important material facts;

Kc 3. If your mining and reclamation operations affect areas beyond the boundaries of an approved permit boundary, substantial civil penalties, to you as permittee can result;

Kc 4. Any modification to the approved mining and reclamation plan from those described in your approved application requires you to submit a permit modification and obtain approval from the Board or Office;

Kc 5. It is your responsibility to notify the Office of any changes in your address or phone number;

Kc 6. Upon permit issuance and prior to beginning on-site mining activity, you must post a sign at the entrance of the mine site, which shall be clearly visible from the access road, with the following information (Rule 3.1.12):

a. the name of the operator;

b. a statement that a reclamation permit for the operation has been issued by the Colorado Mined Land Reclamation Board; and,

c. the permit number.

Kc 7. The boundaries of the permit boundary area must be marked by monuments or other markers that are clearly visible and adequate to delineate such boundaries prior to site disturbance.

Kc 8. It is a provision of this permit that the operations will be conducted in accordance with the terms and conditions listed in your application, as well as with the provisions of the Act and the Construction Material Rules and Regulations in effect at the time the permit is issued.

Kc 9. Annually, on the anniversary date of permit issuance, you must submit an annual fee as specified by Statute, and an annual report which includes a map describing the acreage affected and the acreage reclaimed to date (if there are changes from the previous year), any monitoring required by the Reclamation Plan to be submitted annually on the anniversary date of the permit approval. Annual fees are for the previous year a permit is held. For example, a permit with the anniversary date of July 1, 1995, the annual fee is for the period of July 1, 1994 through June 30, 1995. Failure to submit your annual fee and report by the permit anniversary date may result in a civil penalty, revocation of your permit, and forfeiture of your financial warranty. It is your responsibility, as the permittee, to continue to pay your annual fee to the Office until the Board releases you from your total reclamation responsibility.

Kc 10. For joint venture/partnership operators: the signing representative is authorized to sign this document and a power of attorney (provided by the partner(s)) authorizing the signature of the representative is attached to this application.

NOTE TO COMMENTORS/OBJECTORS:

It is likely there will be additions, changes, and deletions to this document prior to final decision by the Office. Therefore, if you have any comments or concerns you must contact the applicant or the Office prior to the decision date so that you will know what changes may have been made to the application document.

The Office is not allowed to consider comments, unless they are written, and received prior to the end of the public comment period. You should contact the applicant for the final date of the public comment period.

If you have questions about the Mined Land Reclamation Board and Office's review and decision or appeals process, you may contact the Office at (303) 866-3567.

Certification:

As an authorized representative of the applicant, I hereby certify that the operation described has met the minimum requirements of the following terms and conditions:

1. To the best of my knowledge, all significant, valuable and permanent man-made structure(s) in existence at the time this application is filed, and located within 200 feet of the proposed affected area have been identified in this application (Section 34-32.5-115(4)(e), C.R.S.).
2. No mining operation will be located on lands where such operations are prohibited by law (Section 34-32.5-115(4)(f), C.R.S.;
3. As the applicant/operator, I do not have any extraction/exploration operations in the State of Colorado currently in violation of the provisions of the Colorado Land Reclamation Act for the Extraction of Construction Materials (Section 34-32.5-120, C.R.S.) as determined through a Board finding.
4. I understand that statements in the application are being made under penalty of perjury and that false statements made herein are punishable as a Class 1 misdemeanor pursuant to Section 18-8-503, C.R.S.

This form has been approved by the Mined Land Reclamation Board pursuant to section 34-32.5-112, C.R.S., of the Colorado Land Reclamation Act for the Extraction of Construction Materials. Any alteration or modification of this form shall result in voiding any permit issued on the altered or modified form and subject the operator to cease and desist orders and civil penalties for operating without a permit pursuant to section 34-32.5-123, C.R.S.

Signed and dated this 30 day of NOV., 2015.

Coulson Excavating Co., Inc

Applicant/Operator or Company Name

If Corporation Attest (Seal)

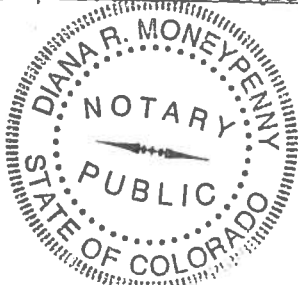
Signed: Ken Coulson

Signed: William Schuch
Corporate Secretary or Equivalent VICE PRESIDENT
Town/City/County Clerk

Title: President

State of Colorado)
) ss.
County of LARIMER)

The foregoing instrument was acknowledged before me this 30th day of November, 2015, by Kenneth Coulson as PRESIDENT of Coulson Excavating Co. Inc



Diana Money Penny
Notary Public

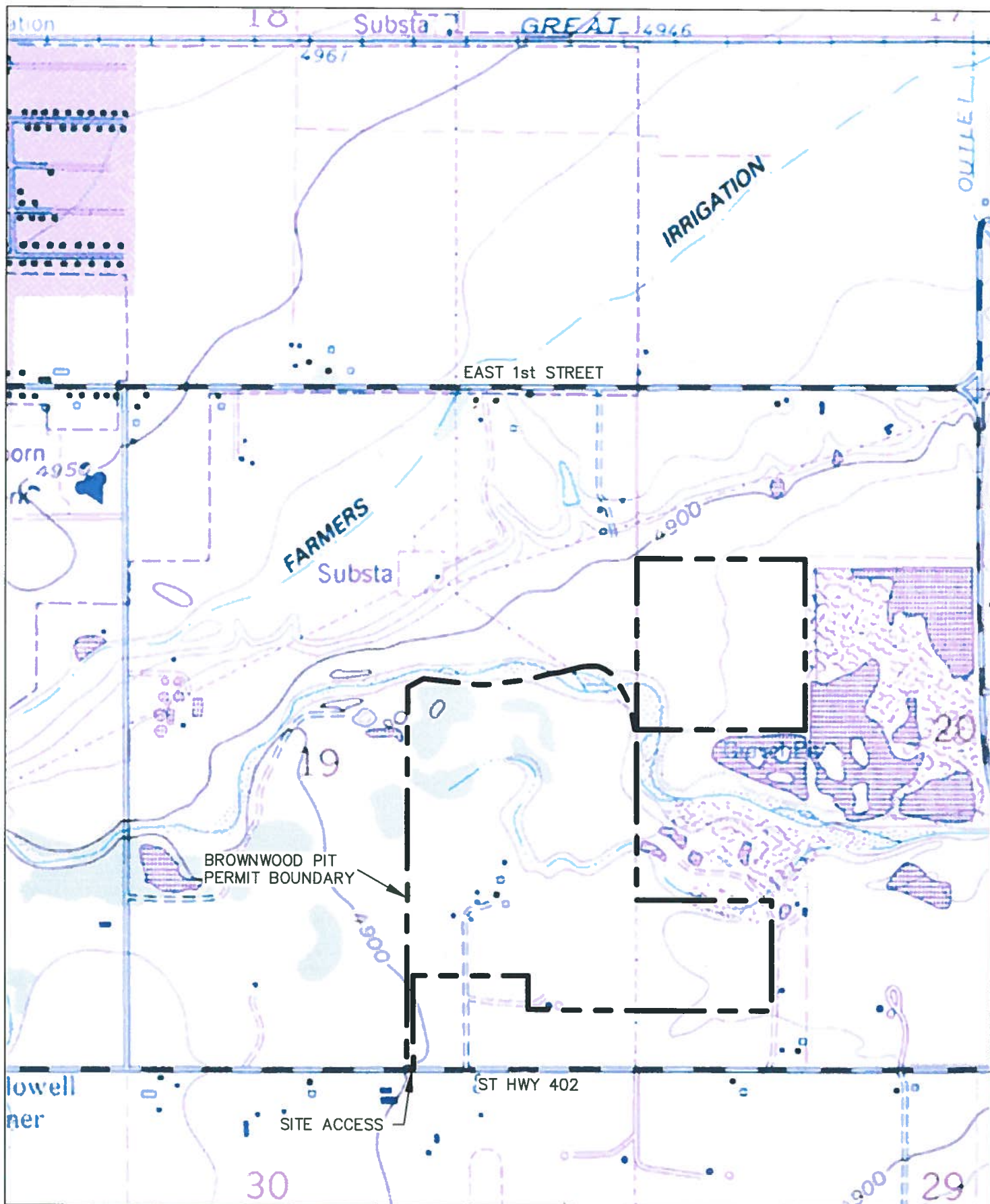
My Commission expires: May 20, 2018

SIGNATURES MUST BE IN BLUE INK

You must post sufficient Notices at the location of the proposed mine site to clearly identify the site as the location of a

6.4.1 Exhibit A – Legal Description

The permit area occurs in the SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Section 19, and the NW $\frac{1}{4}$ and the SW $\frac{1}{4}$ of Section 20, Township 2 North, Range 68 West of the 6th pm. The Street address for the site is 2165 SE 14th Street, Loveland, CO 80538 and the latitude, longitude coordinates for the site access are 40.3783591 N, 105.0449163 W (Nad 83)



1PO BOX 18087
BOULDER, CO 80308
ph 303-443-9521

SITE LOCATION MAP

BROWNWOOD PIT M-1979-059

EXHIBIT B

1"=1000'

SECTIONS 19 & 20, T5N, R68W
USGS 7.5' QUAD LOVELAND, CO

NOTICE

This site is the location of a proposed construction materials operation. Coulson Excavating Company, Inc. whose address and phone number is: 3609 North County Rd 13, Loveland, CO 80538 970-667-2178 has applied for a Reclamation permit with the Colorado Mined Land Reclamation Board. Anyone wishing to comment on the application may view the application at the Larimer County Clerk and Recorder's office, 200 West Oak Street, Fort Collins, CO 80522, and should send comments prior to the end of the public comment period to the Division of Reclamation, Mining and Safety, 1313 Sherman, St, Room 215, Denver, Colorado 80203.

Certification:

I, PETER WAYLAND, hereby certify that I posted a sign containing the above notice for the proposed permit area known as the Brownwood Pit (M-1979-059), on 11/30/15.

Peter Wayland
SIGNATURE

11/30/15
DATE

Attachment 6.4.5 A
Brownwood North East Reservoir Backfill Specification

A portion of the south boundary of the proposed Brownwood North East Reservoir (BNER) will be backfilled with fines which settle out from the outfall of a sand and gravel wash plant. The feed material for the wash plant comes from offsite sand & gravel mining operations in the local area which, mine virgin sand & gravel deposits. The wash plant location and outfall are shown in Exhibit F. Per Rule 3.1.5(9), the following specifications are given:

- (a) The location of the activity is near the south boundary of the proposed BNER as shown in Exhibit F in the SE $\frac{1}{4}$ of Section 19, T2N, R 68W.
- (b) The approximate volume of backfill material is expected to be 5,000-10,000 yd³
- (c) A signed affidavit certifying the material is clean and inert has been enclosed on page 2.
- (d) The material will be backfilled beginning approximately in 2015 and last through 2017.
- (e) The backfilled material will allow for balancing the earthwork volumes required for the grading plan for the BNER reservoir as shown in Exhibit F and thereby allowing for the storage of water as a developed water resource.
- (f) This material will be placed by allowing settling of fine sediment from the wash plant discharge. This process, by which sediment settles out of suspension from slowing water is a similar fluvial processes by which the surrounding land was formed in the geologic past by the Big Thompson River. Following sedimentation, the area will be dewatered and the sediment will be allowed to dry and settle to form stable ground. Additional compaction of the area will occur by operating machinery over the area to achieve final grading topsoil placement and seeding.

AFFIDAVIT

I, Kenneth Coulson do hereby certify that all material imported to feed the wash plant which discharges fine fill material at the Brownwood Pit is clean inert.

Signed  Date 11-30-15

6.4.3 Exhibit C – Pre-mining and Mining Plan Map(s) of Affected Lands

Mining has been completed and therefore, there is no change to the existing Exhibit C

6.4.4 Exhibit D – Mining Plan

Mining has been completed and therefore, there is no change to Exhibit D.

6.4.5 Exhibit E – Reclamation Plan

Summary

Mining is currently completed and the site is undergoing reclamation. The site will be reclaimed to developed water resource, residential, industrial and agricultural. Reclamation is complete for the south east area including construction of the Brownwood South East Reservoir, which was lined with clay and has passed the clay liner leakage test with the Division 1 State Engineer's Office (see enclosed letter). The area in the northeast (Pfeiff property additional) has also been clay lined and is pending a liner leaked test. This area has well established native vegetation. South and east of the residential house and horse barns, the lands have either not been mined or have been backfilled and reclaimed to irrigated pasture/hay fields. The west half of the site is currently being used for operations of a Hot Mix Asphalt Plant as well as saleable materials processing and inventory. This area is zoned industrial with Larimer County and will continue to be used as such following surety release from the Division of Reclamation Mining & Safety (DRMS). Remaining Reclamation earthwork includes backfilling a portion of the Brownwood North East Reservoir (BNER) and constructing a compacted clay liner.

Table E-1 Reclamation Earthwork Summary

| <u>ITEM</u> | <u>VOLUMES</u> | | <u>LENGTH</u> | | <u>AREAS</u> | |
|---|----------------|-----------------|---------------|----|--------------|-----------------|
| Clay Liner | 25,000 | yd ³ | | | | |
| Reservoir Floor Area | | | | | 38,023 | yd ² |
| Reservoir Floor Area | | | | | 7.86 | ac |
| Reservoir Floor Depth of Excavation | | | 4 | ft | | |
| Backfill Area | | | | | 2.4 | ac |
| Total Backfill Volume | 30,000 | yd ³ | | | | |
| Topsoil / Revegetation Replacement Area | | | | | 7.61 | ac |
| Topsoil Replacement Depth | | | 1 | ft | | |
| Topsoil Replacement Volume | 12,250 | yd ³ | | | | |

6.4.5 Exhibit E – Reclamation Plan

Reclamation Earthwork/Compacted Clay Liner Construction

A summary table of reclamation earthwork volumes, areas and lengths is given above in Table E-1. Prior to reservoir construction the wet plant will be shut down and sedimentation from the plant outfall will cease. Dewatering of the existing pond will then be completed, which will be accomplished by pumping to the river directly from the pond. After the pond is pumped down significantly, a sump/sediment pond will be dug to facilitate the further lowering of the water table. The area shown in Exhibit F as the area to be backfilled with wash plant fines will be graded as shown. Sufficient soil density / stability will occur as a result of the sedimentation process combined with the compactive effort of machinery movement during grading. Approximately 2 ft of silt will then be removed from the pond floor and placed in the backfill area shown in Exhibit F. This material shall be placed in approximately 1 ft lifts at 90% optimum moisture content (+3%) and compacted to no less than 90% dry density.

Following backfilling of the south portion of the reservoir, construction of the compacted clay liner will begin. The backfilling operation will have removed the upper to 2 ft of silt at the reservoir bottom thereby exposing the weathered claystone material. This weathered claystone is thought to be a suitable borrow material for the construction of the compacted clay liner based on geotechnical data from other nearby pits. In total, approximately 2 ft of weathered shale will be excavated from the reservoir floor for a total volume of approximately 25,000 yd³.

Prior to building the liner, the keyway surrounding the perimeter of the excavation will be excavated to the approximate dimensions shown in Exhibit F, Sheet-2. The weathered claystone borrow material on the reservoir floor will then be disked in preparation for moisture conditioning. Once the borrow material is within the moisture specification (0 to +3% of optimum moisture content), the compacted clay liner will then be constructed by placing 8" lifts followed by compaction efforts to bring each lift to 95% standard proctor maximum dry density.

Topsoil Replacement / Revegetation

Topsoil will be replaced to an approximate depth of 1 ft for the areas shown in as topsoil/revegetation areas in Exhibit F Sheet 1. An existing topsoil stockpile in excess of 40,000 yd³ occurs just west of the south half of the BNER and will be used for replacement. It is estimated that 12,250 yd³ will be required to achieve a topsoil depth of 1 ft.

Seeding and Fertilizing

The proposed seeding areas are shown on Exhibit F – Sheet-1. The recommended seeding method is by drill and seeding rates assume this method. The species composition of the seed mixture recommended for reclamation is shown in Table E-3 below.

6.4.5 Exhibit E – Reclamation Plan

Table E-3. Recommended Seed Mixture

| SPECIES (VARIETY) | RATE – PURE LIVE SEED (PLS) LBS/AC | NATIVE/ INTRODUCE D | W/C SEASON |
|------------------------------------|---|------------------------------------|-----------------------|
| Thickspike wheatgrass (Critana) | 8.0 to 10.0 | Native | Cool |
| Sideoats grama (Vaughn) | 5.0 to 7.0 | Native | Warm |
| Switchgrass (Nebraska-28) | 4.0 to 6.0 | Native | Warm |
| Alfalfa (Nomad) | 3.0 to 5.0 | Introduced | NA |
| TOTAL | 20.0 to 28.0 | | |

Based on this seed mixture, an application rate of approximately 20.0 to 28.0 lbs PLS/ac will be used. Topsoil should be disked prior to seeding. It is recommended that fertilizer be utilized for reclamation. A standard application of fertilizer will be used and applied at a rate of 250 lbs/ac as shown in Table E-4.

Table E-4. Fertilizer Application

| FERTILIZER | STANDARD RATE LBS/ACRE |
|---|---------------------------------------|
| Diammonium phosphate (18-46-0) (46-53% available P ₂ O ₅ with 18-21% N) | 250 |

Fertilizer will not be used near the edge of the reservoir, since the possibility of nitrate contamination in the pond water exists. The total disturbed area to be seeded is approximately 8.21 acres. The total area to be fertilized is approximately 8.21 acres. Seeding and fertilizing will be completed after the overburden and topsoil is replaced, smoothed to conform to the existing topography and disked. Optimal periods of seeding are in the fall (after November 1st) or in the spring from late March up to April 30th. Mulching will not be completed as the quality soils and availability of water should facilitate the rapid establishment of perennial grasses.

Following revegetation, weed management strategies will be implemented to facilitate and achieve native grassland. Years 1 thru 5 following revegetation will include an aggressive mowing program to prevent the growth and establishment of weeds, specifically, eight noxious weeds including: Canada thistle (*Cirsium arvense*), Dalmation toadflax (*Linaria dalmatica*), diffuse knapweed (*Centaurea diffusa*), leafy spurge (*Euphorbia esula*), musk thistle (*Carduus nutans*), Russian knapweed (*Centaurea repens*), spotted knapweed (*Centaurea maculosa*) and Yellow toadflax (*Linaria vulgaris*) as mandated by Colorado State Law (35-

6.4.5 Exhibit E – Reclamation Plan

5.5CRS1990, 1996). If needed, herbicide application will be applied as needed to further control these weeds. Herbicides will also be used to control salt cedar (*Tamarix* spp.) if it becomes established in the reclaimed area. Table E-5 presents recommended herbicides, application rate, and time of application for each of the 9 species. It may be necessary to replant treated areas.

Table E-5 Recommended Herbicide Application Table

| <i>Weed Species</i> | <i>Herbicide</i> | <i>Application Rate</i> | <i>Application Time</i> |
|---------------------|---------------------------------|-------------------------|---|
| Canada thistle | Curtail | 2-3 qt/ac | October or 1 mo after last mowing |
| | Clopyralid | 2/3 - 1 pint/ac | Spring or fall, during rosette to bud growth stages in spring |
| | 2,4-D | 1lb ai/ac | Spring prebud to early early bud growth stages |
| | picloram | 1lb ai/ac | Spring prebud to early early bud growth stages |
| | | | |
| Dalmation toadflax | picloram | 0.5 - 1 lb ai/ac | Fall |
| | picloram + 2,4-D | | Pre-bloom or fall |
| | | | |
| Diffuse knapweed | Tordon | 1 pint/ac | Spring rosette to early-bolt growth stages |
| | Banvel/Vanquish/Clarity + 2,4-D | 0.5 + 1 qt/ac | Spring rosette to early-bolt growth stages |
| | Curtail | 2-3 qt/ac | Spring rosette to early-bolt growth stages |
| | Transline | 2/3 - 1 pint/ac | Spring rosette to early-bolt growth stages |
| | | | |
| Leafy spurge | Tordon | 1 qt/ac | Fall 1month after last mowing |
| | Tordon + 2,4-D | 0.5 - 0.75 + 1 qt/ac | Fall 1month after last mowing |
| | Vanquish/Clarity | 1 qt/ac | Fall 1month after last mowing |
| | | | |
| Musk thistle | Curtail | 0.25 lb ai/ac | Spring 10-14 days before bolting |
| | dicamba | 1 lb ai/ac | Spring 10-14 days before bolting |

6.4.5 Exhibit E – Reclamation Plan

| | | | |
|---|-----------------------|---------------|--|
| | picloram | 0.25 lb ai/ac | Fall, apply to rosettes when other plants are dormant |
| | | | |
| Russian knapweed | Curtail | | Fall on dormant plants, need to reseed during following year |
| | picloram | 1 lb ai/ac | Anytime |
| | | | |
| Spotted knapweed | picloram | 1 lb ai/ac | Anytime |
| | dicamba or 2,4-D | 1 lb ai/ac | |
| | | | |
| Yellow toadflax | picloram or dicamba | 1 lb ai/ac | Spring during flowering |
| | | | |
| Saltcedar | imazapyr | | Late summer early fall foliar application |
| | imazapyr or triclopyr | | To resprouted stems |
| | imazapyr or triclopyr | | To perimeters of cut stems immediately after cutting |
| | | | |
| Sources: Colorado Natural Areas Program. 2000. Creating an Integrated Weed Management Plan. | | | |
| http://parks.state.co.us/cnap , and Colorado State University Cooperative Extension. No date. | | | |
| Weed Management for Small Rural Acreages. No. 3.106. http://www.ext.colostate.edu/PUBS/Natres/03106.html | | | |
| | | | |
| | | | |

6.4.7 Exhibit G - Water Information

- (1) The operation will affect groundwater systems, however through execution of the temporary Substitute Water Supply Plan (SWSP), there will not be a net change to tributary groundwater flow to the Big Thompson River.

A well permit has been issued for the site, which required a 600 ft tributary well spacing statement. The 600 ft well spacing statement found no tributary groundwater wells occurring within 600 ft of the Brownwood Pit. The closest tributary groundwater well occurs approximately 2,200 ft south of the Brownwood North east reservoir site (See Exhibit G – Figure 1).

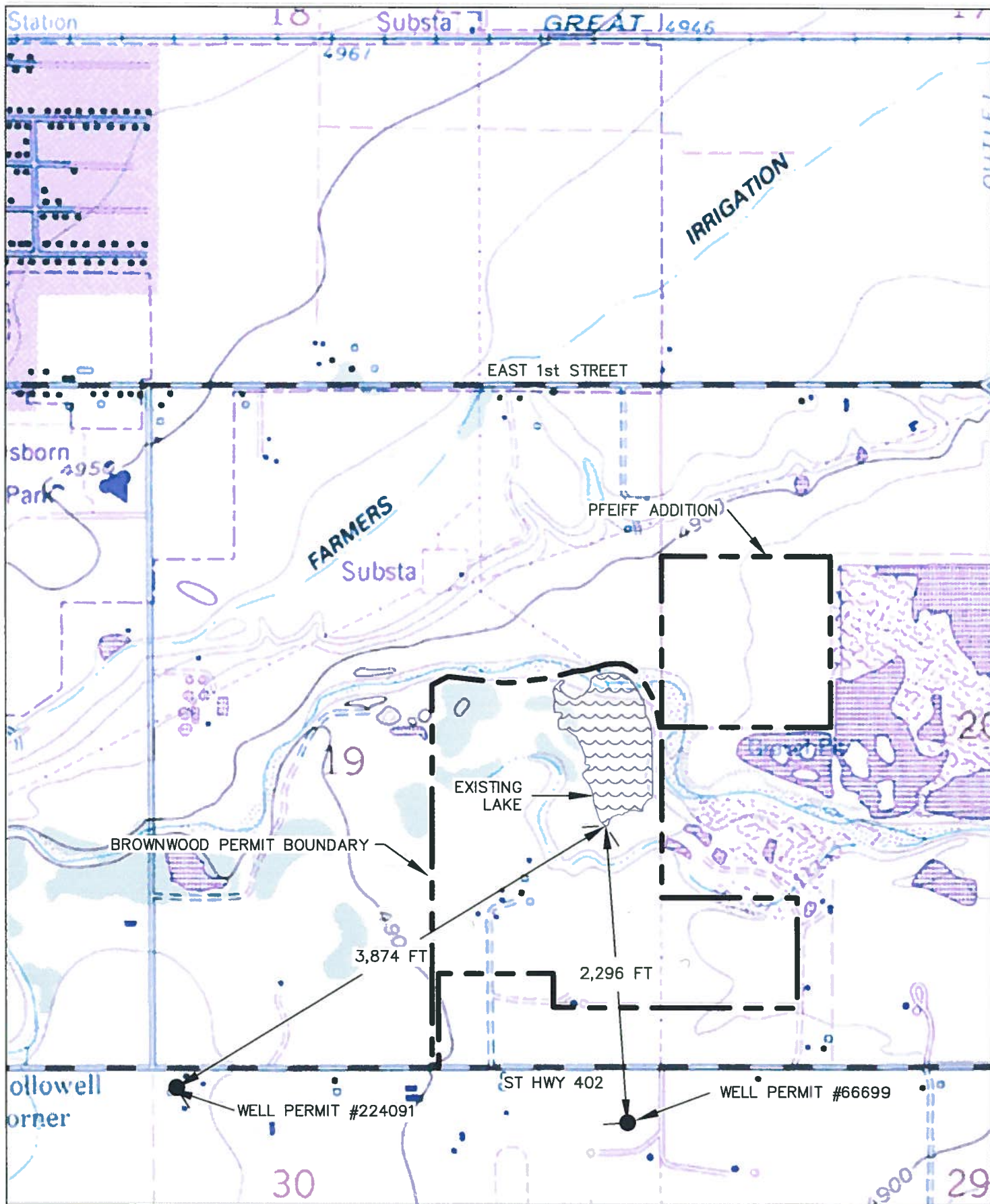
Groundwater modeling conducted for a similar site on the Big Thompson River (Flying W Pit M-2005-004), has shown that the radius of influence of drawdown extends approximately 1,200 ft for a pump rate of 1,040 GPM. It is therefore, unlikely that a well 2,200 ft away would experience any drawdown from pumping at the Brownwood Pit.

Furthermore, the Brownwood South East reservoir, which occurs at a closer distance to the surrounding wells, was dewatered from 2006 until 2012 without negatively impacting any water wells in the area. It is therefore, unlikely that any wells surrounding the Brownwood site would be impacted by drawdown. The applicant will however, in the unlikely event that dewatering is proven to directly impact the ability of surrounding tributary groundwater wells to pump a full supply of water in accordance with their historical volumes and permitted uses, provide the following mitigation measures:

- a) Modify existing wells to operate under lower groundwater conditions. This could include re-drilling existing wells to a deeper depths or lowering the pumps. All work would be done at the operator's expense with the exception of replacing equipment that was non-functioning prior to mining.
 - b) If existing wells cannot be repaired, the Operator will drill a new well for the owner to replace the damaged well. The new well will produce water of the same quantity and quality to support the historic use
 - c) The Operator will provide an alternate source of water to support the historic well water use during mine dewatering.
 - d) If it is determined that lining the Brownwood North east Reservoir creates mounding or shadowing impacts to surrounding structures or water resources, a subsurface drain will be installed to transport water from mounding areas to shadowing areas.
- (2) (a) Surface water structures are shown in Exhibit F, Reclamation Plan Map
- (c) A stormwater management plan has been prepared for the site which identifies BMP's to prevent pollution to surface waters due to stormwater runoff.
- (3) Currently, the project will consumes approximately 14.84 acre-ft / year due to evaporative loss of 12.8 acres of exposed groundwater. Final reclamation will remove all exposed groundwater through construction of a compacted clay liner.

6.4.7 Exhibit G - Water Information

- (4) The replacement source for all depletions to the Big Thompson River is fully consumable water rights leased from the City of Loveland.
- (5) The applicant has applied for and received a NPDES Stormwater Discharge Permit. The permit number is COG50466



1PO BOX 18087
BOULDER, CO 80308
ph 303-443-9521

GROUNDWATER WELLS MAP

BROWNWOOD PIT M-1979-059

EXHIBIT G - FIGURE 1

1"=1000'

SECTION 19, T5N, R68W

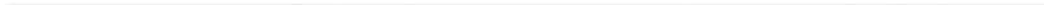
USGS 7.5' QUAD: LOVELAND, CO

6.4.8 Exhibit H – Wildlife Information

No change to the existing Exhibit H

6.4.9 Exhibit I – Soils Information

No change to the existing Exhibit I



6.4.10 Exhibit J – Vegetation

No change to the existing Exhibit J

6.4.11 Exhibit K – Climate Information

No change to the existing Exhibit K

6.4.12 Exhibit L – Reclamation Costs

No change to the existing Exhibit L

6.4.13 Exhibit M – Other Permits and Licenses

NPDES Stormwater Discharge Permit: #COG50466

Air Pollution Control Division Construction Permit: 08LR1042

State Engineers Office Well Permit / SWSP: 78727F, WDID 0402546

6.4.14 Exhibit N – Source of Legal Right to Enter

No change to the existing Exhibit N

6.4.15 Exhibit O – Owner (s) of Record of Affected Land (Surface Area) and Owners of Substance to be Mined

The Current owners of the surface and substance to be mined are Richard Coulson, Kathryn Coulson. The Pfeiff addition is currently owned by Pfeiff Farm LLLP (1/2) and Evelyn Pfeiff Family Trust (1/2)

6.4.16 Exhibit P – Municipalities Within Two Miles

No change to the existing Exhibit P

6.4.17 Exhibit Q - Proof of Mailing of Notices to Board of County Commissioners and Soil Conservation District

Larimer County Commissioners
Larimer County Courthouse
Second Floor
200 West Oak St
Ft. Collins, CO 80522

Big Thompson Conservation District
PO Box 441
Berthoud, CO 80513

6.4.17 Exhibit Q - Proof of Mailing of Notices to Board of County Commissioners and Soil Conservation District

Larimer County Commissioners
Larimer County Courthouse
Second Floor
200 West Oak St
Ft. Collins, CO 80522

Big Thompson Conservation District
PO Box 441
Berthoud, CO 80513

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Domestic Mail Only

For delivery information, visit our website at www.usps.com.

OFFICIAL USE

2015 0640 0001 5692 3232

| | |
|--|---------------|
| Certified Mail Fee | \$3.45 |
| Extra Services & Fees (check box, add fee as appropriate) | |
| <input type="checkbox"/> Return Receipt (hardcopy) | \$2.80 |
| <input type="checkbox"/> Return Receipt (electronic) | \$0.00 |
| <input type="checkbox"/> Certified Mail Restricted Delivery | \$0.00 |
| <input type="checkbox"/> Adult Signature Required | N/A |
| <input type="checkbox"/> Adult Signature Restricted Delivery | N/A |
| Postage | \$0.49 |
| Total Postage and Fees | \$6.74 |

0134
04
11/30/2015

Big Thompson Soil Conservation District
PO Box 441
Berthoud, CO 80513

See for Instructions

NOTICE OF FILING APPLICATION
FOR COLORADO MINED LAND RECLAMATION PERMIT
FOR REGULAR (112) CONSTRUCTION MATERIALS EXTRACTION OPERATION

NOTICE TO THE BOARD OF COUNTY COMMISSIONERS
Larimer COUNTY

Coulson Excavating Company, Inc. (the "Applicant/Operator") has applied for a Regular (112) reclamation permit from the Colorado Mined Land Reclamation Board (the "Board") to conduct the extraction of construction materials operations in Larimer County. The attached information is being provided to notify you of the location and nature of the proposed operation. The entire application is on file with the Division of Reclamation, Mining, and Safety (the "Division") and the local county clerk and recorder.

The applicant/operator proposes to reclaim the affected land to Developed Water Resource use. Pursuant to Section 34-32.5-116(4)(m), C.R.S., the Board may confer with the local Board of County Commissioners before approving of the post-mining land use. Accordingly, the Board would appreciate your comments on the proposed operation. Please note that, in order to preserve your right to a hearing before the Board on this application, you must submit written comments on the application within twenty (20) days of the date of last publication of notice pursuant to Section 34-32.5-112(10), C.R.S.

6.4.18 Exhibit R – Proof of Filing with County Clerk and Recorder

Received by Craig Dorn
11-30-15 CD

STATE OF COLORADO

DIVISION OF RECLAMATION, MINING AND SAFETY
Department of Natural Resources

1313 Sherman St., Room 215
Denver, Colorado 80203
Phone: (303) 866-3567
FAX: (303) 832-8106



CONSTRUCTION MATERIALS REGULAR (112) OPERATION RECLAMATION PERMIT APPLICATION FORM

CHECK ONE: ☐ There is a File Number Already Assigned to this Operation

Permit # M - - - - (Please reference the file number currently assigned to this operation)

☐ New Application (Rule 1.4.5)

☒ Amendment Application (Rule 1.10)

☐ Conversion Application (Rule 1.11)

Permit # M 1979 -059 - (provide for Amendments and Conversions of existing permits)

The application for a Construction Materials Regular 112 Operation Reclamation Permit contains three major parts: (1) the application form; (2) Exhibits A-S, Addendum 1, any sections of Exhibit 6.5 (Geotechnical Stability Exhibit); and (3) the application fee. When you submit your application, be sure to include one (1) complete signed and notarized ORIGINAL and one (1) copy of the completed application form, two (2) copies of Exhibits A-S, Addendum 1, appropriate sections of 6.5 (Geotechnical Stability Exhibit, and a check for the application fee described under Section (4) below. Exhibits should NOT be bound or in a 3-ring binder; maps should be folded to 8 1/2" X 11" or 8 1/2" X 14" size. To expedite processing, please provide the information in the format and order described in this form.

6.4.19 Exhibit S – Permanent Man-Made Structures

No Change to Exhibit S