Braun

Braun Environmental, Inc.

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January 22, 2024 SENT VIA EMAIL

Elliott Russell
Colorado Division of Reclamation, Mining and Safety (DRMS)
1313 Sherman, Room 215
Denver Colorado 80203

RE: Response to January 11, 2024 Adequacy Review, Glen Johnson No 1 Permit M-1982-044

Dear Mr. Russell;

Attached are responses to your two comments. As we had discussed during our December 12th phone call, we are in agreement with both, and I have included the CDOT highway permit number so it is in the record.

In regards to explosives, while Mr. Pester is not intending to do any bench-type blasting, it is very likely that he will need to break a boulder or remove a stubborn rock from time to time. For this he will hire a Colorado licensed blasting contractor. As the use of explosives for non-mine tied blasting in Colorado is wholly regulated under Mahesh Albuquerque and his crew at the Colorado Division of Oil and Public Safety (DOPS). The regulation is 7 C.C.R. 1101-9 – *Explosives Regulations of the Colorado State Division of Oil and Public Safety*. In addressing your Comment Number 1, regarding damage to offsite areas, the issue is covered in 7C.C.R 1101-9, Chapter VI.6.10 of that regulation, which was specifically written to meet the potential blast damage objective. Per your instructions, we have filled in form "Key Elements of a Blasting Plan" form and have used the DOPS regulations where applicable. The completed form is attached.

We are pretty close to having succeeded in getting this permit finished last year, and I will plan on getting to the next one.

Thanks for the discussion and help last week,

Sincerely,
BRAUN ENVIRONMENTAL, INC.

C. A. Braun, P.E., CPG, REC
enc.
CAB/rl

Responses to

Division of Mining Reclamation and Safety (DRMS) Adequacy Review Letter Dated Jan 11, 2024

By C. A. Braun
January 22, 2024

EXHIBIT C - Mining Plan (Rule 6.3.3)

Comment 1 As no blasting plan was submitted in response to Item #8, the operation will not be authorized for blasting activities at this time. Please acknowledge this. In the future, the Operator may submit a revision to the permit to incorporate a Blasting Plan into the Exhibit C Mining Plan in accordance with Rule 6.3.3(p) by demonstrating that offsite areas will not be adversely affected by blasting.

Response: In specific response, an engineering study has been performed and on-site areas have been deemed stable and there are no off-site structures located within 500 feet that might be affected. The mine has no plans for bench-type blasting at this time and the site has no mine-tied blasting permit nor is it anticipated that one will be obtained. However on occasion, for the type of rock that is being mined, it is likely that it will become necessary to break up a large boulder or remove some hard rock. One option for breaking that rock is by blasting, and for that task the operator would hire the outside services of a Colorado licensed contracting blaster. Contracting blasters in the State of Colorado are licensed and regulated under the Colorado Division of Oil and Public Safety (DOPS), administered by Mahesh Albuquerque and his crew located downtown on 17th Street. DOPS, and the contractors they regulate follow 7 C.C.R. 1101-9, – (*Explosives Regulations of the Colorado State Division of Oil and Public Safety*). Those regulations include licensing procedures, storage and transport of blasting materials, and they detail the procedures and safety methods that their licensed blaster must use. The potential hazard you refer to in your comment is related to ground motion, and overpressure. The DOPS regulations, in Chapter VI. Section 6.10, specifically addresses that issue and provides accepted methods of monitoring, and controlling ground motion and overpressure (air blast). In regards to the items under II.f in your form, it is not possible to be more specific. Every load must be carefully chosen by the blaster based on the specific circumstances and purpose. Deviation could result in failure of the blast, and could jeopardize the safety of persons performing the work. The DRMS blasting plan sheet you have provided has been filled out incorporating the applicable DOPS regulations and is attached.

EXHIBIT F – List of Other Permits and Licenses Required (Rule 6.3.6)

Comment 2 As required by Rule 6.3.6, Exhibit F identifies which other permits, licenses, and approvals that are held or will be sought in order to conduct the proposed mining and reclamation operations. Please acknowledge that a CDOT access permit is needed for the operation to access Highway 24.

Response: As was discussed via phone calls last year between you, Mr. Pester and myself, a CDOT access has already been in place for many years. In fact a couple of months ago, CDOT performed their standard maintenance and repairs to this intersection. It is acknowledged that an access permit is needed and the permit number is 223080.

Key Elements of a Blasting Plan for
Johnson Site 1, Teller County, Colorado
January 22, 2024

I. Blast Schedule Notification:

a. Name, address & phone number of Operator

Glen Johnson Site 1

Craig Pester

116 Homestead Drive

Woodland Park, Colorado 80863

Any blasting that might be performed will be done on a contract basis using a licensed blaster.

* **Note: The agency in that regulates and oversees Contract Blasters in Colorado is the Colorado Division of Oil and Public Safety (DOPS), and under 7 C.C.R. 1101-9 –" *Explosives Regulations of the Colorado State Division of Oil and Public Safety*."**

b. Identify where blasting will occur;

Within permit boundary

c. Day(s) and time(s) of blasting;

There is no scheduled blasting. Surface blasting operations shall be conducted during periods of daylight, when the blast area is clearly visible. Blasting operations conducted after periods of daylight shall be approved by the Director of the Division of Oil and Public Safety and local law enforcement agency prior to each blast. Approval shall only be granted if such approval serves the safety of the general public (Chapter VI 6.1.E)*.

d. Methods used to control access;

Blasters conducting blasting operations shall take every reasonable precaution, including but not limited to warning signals, flags and barricades to insure the safety of the general public and workers (Chapter VI 6.1.D)*

e. Outline warning signals (e.g., sirens, horns, etc.);

When blasting is done in populated or residential areas or in close proximity to a structure, railway, or highway or any other installation that may be damaged the following precautions shall be taken: (1) The blast shall be covered before firing with a mat or material that is capable of preventing fragments from being thrown; (2) The blast shall be loaded in compliance with the Table of Scaled Distance or be monitored by a seismograph; and (3) All persons within the blast area shall be given reasonable notification prior to blasting operations and informed as to the type of warning signal that will be given prior to the blast (Chapter VI 6.1.C)*.

f. Schedule distribution (who is notified: e.g., workers, residents, local governments, etc.).

There is no blasting schedule. The blaster shall perform all required notification to and obtain all required permits from local jurisdictions or authorities, including, but not limited to, the County Sheriff, local fire districts and fire departments before beginning blasting operations (Chapter VI 6.1.F)*.

II. Pre-Blast Surveys – where agreed to and approved by structure owners:

a. Generally for structures within one half mile of the blast area;

There are no structures within 500 feet of the blasting area. In conjunction with 7 C.C.R. 1101-9 , the licensed blaster will use Option 2 of the Blasting Vibration and Air-over Pressure Standards using the Scaled Distance column of Table 6.10A (Chapter VI 6.10)*.

b. Establish a pre-blasting record of existing structure(s) condition;

There are no nearby structures, and no charges will large enough to have any effect on the nearest structured located greater than 500 feet away. See II.a above.

c. ID structures or contents sensitive to blasting.

No sensitive structures are nearby.

III. Blast Plan:

a. Limits on ground vibration;

Following table provided by DRMS, as applicable per 7C.C.R 1101-9

(2) Maximum peak particle velocity. (i) The maximum ground vibration shall not exceed the following limits at the location of any dwelling, public building, school, church, or community or institutional building outside the permit area.

Distance (D) from the blasting site (feet)	Maximum allowable peak particle velocity (Vmax) for ground vibration (in/sec) 1/	Scaled-distance factor to be applied without seismic monitoring 2/
0 to 300	1.25	50
301 to 5,000	1.00	55
5,001 and beyond	0.75	65

b. Limits on airblast;

Following table provided by DRMS, as applicable per 7C.C.R 1101-9

(b) Airblast - (1) Limits. (i) Airblast shall not exceed the minimum limits listed below at the location of any dwelling, public building, school, church, or community or institutional building outside the permit area, except as provided in paragraph (e) of this section.

Lower Frequency Limit of Measuring system, in Hz.	Max. Level in dB (±3dB)
1 Hz or lower--flat response<1>.....	134 peak
2 Hz or lower--flat response.....	133 peak
6 Hz or lower--flat response.....	129 peak
C-weighted --slow response<1>.....	105 peak dBC

c. Methods used to control adverse effects of blasting;

Pit stability calculations have been performed and no adverse effects are anticipated.

d. Description of monitoring systems to be used and where to be set up;

No monitoring systems were required (see response to II.a above)

e. Blasting protocol/procedure;

The protocol and procedure will be determined by the contracted licensed blaster in accordance with (Chapter VI 6.2) *.

f. Anticipated typical blast design (this information can have a range so as not to require a specific design for each blast:

i. Blast purpose – what product is expected (e.g., riprap, crushed aggregate, etc.);

Product produced from the site ranges from road-base to gravel to boulders.

ii. Number, spacing, diameter and depth of holes;

The spacing, diameter and depth of each hole will vary and will need to be determined on a case by case basis by the licensed contract blaster.

iii. Type and amount of stemming material;

The type and amount of stemming will depend on the depth of each hole and will need to be determined on a case by case basis by the licensed contract blaster.

iv. Blasting agent and amount per hole; and

The type and amount of stemming can vary of each hole depending on depth of hole, the diameter of hole, and rock competency, and will need to be determined on a case by case basis by the licensed contract blaster.

v. Type of delay detonator and delay periods expected.

The detonator and type will vary based on application, and will need to be determined on a case by case basis by the licensed contract blaster.

g. Location(s) of blast monitoring.

No active blast monitoring will be used nor will it be necessary. See response to II.a above.

IV. Commit to Generating and Filing a Blast Report - The DRMS requires all Operators using explosives to complete a blasting report for each shot. The report must be retained by the Operator for at least 3 years and be available for inspection by the DRMS on demand. The record shall contain the following data, but should not be submitted as part of the Blasting Plan:

a. Location date and time of blast;

b. Name, signature and license number of blaster-in-charge;

c. Identification, direction and distance in feet from the nearest blast hole to the nearest potentially affected structure, such as any dwelling, school, church, or community or institutional building either:

i. Not located in the permit area; or

ii. Not owned nor leased by the person who conducts the mining operations.

d. Weather conditions, including: temperature, wind direction, and approximate velocity;

e. Type of material blasted;

f. Sketches of the blast pattern including number of holes, burden spacing, and delay pattern. Sketches shall also show decking, if holes are decked to achieve different delay times within a hole;

The licensed blaster shall use the standard Colorado Division of Oil and Public Safety (DOPS) has a form and a record is be kept in conformance with their regulations (VI 6.1.U.). A copy of the report format produced by the Colorado Division of Oil and Public Safety is attached, and it appears that DRMS has copied some paragraphs from those regulations.

EXPLOSIVES BLAST REPORT

PROJECT: _____ **DATE:** _____ **EXACT TIME:** _____

ADDRESS (EXACT LOCATION): _____

CONTRACTOR: _____ **WEATHER:** _____

INDENTIFICATION OF NEAREST STRUCTURES IN VIBRATION SENSITIVE AREA: (DIRECTION, DISTANCE IN FEET, AND DESCRIPTION):

_____

_____

_____

TYPES OF EXPLOSIVES USED	TYPE OF MATERIAL BLASTED	NO. OF HOLES DETONATED	DEPTH OF HOLE	DIAMETER OF HOLES	BURDEN / SPACING
AMOUNT OF EXPLOSIVES PER HOLE OR CHARGE	**TOTAL AMOUNT OF EXPLOSIVES**	**TYPE OF STEMMING**	**HEIGHT OF STEMMING**	**TYPE OF DELAY**	**DELAY PERIOD**

MAXIMUM AMOUNT OF EXPLOSIVES AND HOLES DETONATED WITHIN 8 MILLISECONDS	METHOD OF FIRING / TYPE OF CIRCUIT
EXPLOSIVES: **HOLES:**	

WERE MATS OR OTHER PROTECTION USED? **YES** ☐ **NO** ☐

WERE SEISMIC READINGS TAKEN? **YES** ☐ **NO** ☐ **IF YES, ATTACH READINGS TO BLAST REPORT**

RESULTS:

COMMENTS:

BLASTER IN CHARGE:

SIGNATURE: **TYPE I PERMIT NUMBER:**

_____ _____

PRINTED NAME: **DATE:**

_____ _____

STATE OF COLORADO

Russell - DNR, Elliott <elliott.russell@state.co.us>

Adequacy Review #2 AM2 M1982044

Art Braun <braunenv@msn.com> Mon, Jan 22, 2024 at 10:30 AM
To: "Elliott Russell (DNR-DRMS)" <elliott.russell@state.co.us>
Cc: CRAIG PESTER <cprepair72@aol.com>

Elliott,

As discussed, the CDOT comment was easy to address, but it took a little more thought on the blasting. As the contract blasters all come under the Colorado Division of Oil and Public Safety (DOPS) regulations, we specifically used paragraphs within the regulation to address the lines in your form. I have attached a cover letter, responses to your comments , a completed blasting form, and the DOPS- produced blast report form as one pdf file.

Thanks again for helping the client get through this decision. It took a little more effort on all of our part, but I think this will work the best for both sides.

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