



Fremont County

MAY 13 2024

Planning & Zoning

May 13, 2024

Director Dan Victoria
Department of Planning and Zoning
Fremont County
615 Macon Avenue
Cañon City, CO 81212

RE: Holcim (US) Inc. CUP 02-003 Red Creek Quarry
Application for Major Modification

Dear Director Victoria,

Please accept this application on behalf of Holcim (US) Inc. to modify the above referenced Conditional Use Permit (CUP). Holcim intends to increase the CUP boundary to include 219.72 acres for the Materials Transport and Access Corridor (MTAC) between the cement plant and Red Creek Quarry (RCQ) and to change the intended use CUP 02-003 from exploration to mining.

Bear Creek Quarry (BCQ) is the current limestone and sandstone source for cement production at the Holcim plant east of Florence, CO. BCQ is reaching the end of its life. Red Creek Quarry includes six contiguous land sections: two sections in Fremont County and four sections in Pueblo County. RCQ will be the new limestone and sandstone source and will provide material to the plant for approximately 100 years.

On March 14, 2014, Colorado Division of Reclamation, Mining and Safety (DRMS) approved an amendment to Holcim's Portland Limestone Quarries (M-1977-344) that added RCQ and MTAC to the existing 112 Permit.

The following application Exhibits require explanation or clarification:

- Holcim respectfully requests a waiver of a Landscaping Plan.
- Exhibit 3.6 Drainage Plan attachments are not printed but rather provided in a flash drive only.
- At the time of this application submission, the specific equipment that will be used to develop the mine and support facility is unknown. Holcim commits to providing the county registrations for SMM equipment prior to commencement of development.
- The Lighting Plan and Utility Plan are incorporated into the Exhibit 3.17 Site Plan.
- The Fire Protection Plan was emailed to Chief Ritter (ffpdchief@yahoo.com) on May 1, 2024 along with the a project map and Exhibit 1.1 Operation Description. At the time of this application submission, a response has not been received.

Please feel free to reach out to me directly with any questions.

Respectfully submitted,

Angela M. Bellantoni

Angela M. Bellantoni Ph.D.

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FREMONT COUNTY

DEPARTMENT OF PLANNING AND ZONING

615 MACON AVENUE, ROOM 210, CAÑON CITY, COLORADO, 81212

Telephone 719-276-7360 / Facsimile 719-276-7374

Email: Planning@fremontco.com

LAND USE APPLICATION

SPECIAL REVIEW USE, CONDITIONAL USE PERMIT, COMMERCIAL DEVELOPMENT PLAN

It is recommended that the applicant schedule an appointment with a Department of Planning & Zoning Representative prior to application preparation and submittal to discuss the project as currently planned and future project proposals.

Project Name: Red Creek Quarry formerly Ranch Land Rock Pit #1 CUP 02-3

Site Address: Sections 24 and 25, Township 20 South, Range 68 West, of the 6th Principal Meridian, Fremont County, CO

Applicant(s)

Name(s) Holcim (US) Inc., Hamza Mekhfi, Plant Manager

Address 3500 US Highway 120, Florence, CO 81226

Phone (719) 288-1424 Fax _____

Email hamza.mekhfi@holcim.com

Owner(s)

Name(s) Holcim (US) Inc. Hamza Mekhfi

Address 6211 Ann Arbor Road, Dundee, MI 48131

Phone (719) 288-1424 Fax _____

Email hamza.mekhfi@holcim.com

Authorized Representative / Agent / Consultant (if other than owner)

Name(s) Angela Bellantoni, Ph.D. of Environmental Alternatives Inc.

Address P.O. Box 326, Cañon City, CO 81212

Phone (719) 275-8951 Fax _____

Email angela@envalternatives.com

Type of Application / Application Fee (There maybe additional fees for publications or professional reviews):

Special Review Use Permit \$1,800 Major Modification to existing permit \$500

Conditional Use Permit \$1,750 Major Modification to existing permit \$500

Commercial Development Plan \$1750 Major Modification \$500

The applicant shall provide **one (1) original document, and an electronic copy (either CD or flash/thumb drive) of the application, site plan (2 COPIES)** and all of its attachments (*copies of deeds, contracts, leases etcetera are acceptable*) at the time of application submittal along with the **application fee** set as per Resolution of the Board. Submittals shall be made to the Department no later than 3:00 pm on the submittal deadline date.

Fremont County

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Planning & Zoning

Process & Requirements Overview

Any application which is not complete or does not include all minimum submittal requirements will be rejected by the Fremont County Department of Planning and Zoning (Department). Further, any application that is inadequate or incomplete, may be subject to postponement of placement on an agenda of the Fremont County Planning Commission (Commission), pending receipt of an adequate and complete application.

Upon receipt of a complete application, the Department will review the application and all attachments and prepare a Department Submittal Deficiency and Comment Letter (D & C Letter), which will state the submittal deficiencies which must be addressed by the applicant, Department comments and/or questions about the application, and the number of revised application packets to be supplied to the Department for placement on an agenda of the Commission. An additional full application fee may be charged to the applicant, as per Resolution approved by the Board of County Commissioners (Board), if all deficiencies as per the initial D & C Letter are not adequately addressed or provided. Each subsequent D & C Letter, based on resubmitted items, will result in another full application fee. All such fees shall be paid along with the deficiency submittal, prior to any further review of the application.

The Department, Commission, and/or Board may require additional information at any time during the application process as may be deemed necessary for thorough consideration of the application and to enable an informed final decision.

Any Land Use application for that has been submitted after the use requiring the permit has been established on the property may be subject to a penalty fee in addition to the set application fee for such permit. The penalty fee shall be equal to the initial application fee for the Land Use Application. As with all land use applications payment of associated fees do not ensure approval of the application.

If the application is approved by the Board with contingencies the contingencies shall be completed to the Department within six (6) months of the approval date, or the approval shall be deemed rescinded and the application expired, after which, re-submittal of the application, including fees, and procedural requirements, will be required.

In approving an application for Land Use, the Board may require higher standards for development than required by the Fremont County Zoning Resolution (FCZR).

Modifications, major or minor, to the Land Use Permit as approved, shall be accomplished in compliance with requirements of the Fremont County Zoning Resolution.

Applicants shall pay all application fees to the Fremont County Treasurer's Office. Upon receipt of a complete application, a Department representative will provide the applicant with a payment check list to present to the Treasurer's Office with payment.

Site & Development

(Section 1)

1. Describe the proposed type of operation to include days & hours of operation, number of employees, & machinery:
Red Creek Quarry will operate during daylight hours, 8-10 hours/day, 5 days a week. Approximately 27 employees will work at the quarry. Employees and equipment currently working the Bear Creek Quarry will operate Red Creek Quarry. Please refer to Exhibit 1.1 DRMS Exhibit DL Mining Plan for specific mine development details, mining operation and equipment
2. Property address or schedule number: 99912030
3. Have the mineral interests been severed from the subject property? YES NO
 - a. If yes (severed) who is the mineral interest owner? _____
4. Is the property currently developed? YES NO
5. Existing types & sizes of structures: No existing structures.
6. Proposed types & sizes of structures: 11,535 ft² metal maintenance shop/office/facilities with concrete floor.
7. Lot Coverage (indicate percent or square footage): Existing 0 Proposed < 0.0000002%
8. FCZR Citing 4.1.3.2 Property size (acres or square footage) 1,492 acres
9. Amount of the property the use will encumber: 1,492 acres
10. Zone District: Agricultural Forestry Land Use Mining
11. Please indicate the zone district & current land use for adjoining properties:
 - a. Northerly: (ZD) Agricultural Forestry Land Use: Ranching
 - b. Easterly: (ZD) Pueblo County Land Use: Mining
 - c. Westerly: (ZD) Agricultural Forestry Land Use: Ranching
 - d. Southerly: (ZD) Agricultural Forestry Land Use: Ranching
12. Master Plan – Planning District of property: Plains Planning District
(please refer to Chapter four and planning district of the Fremont County Master Plan)
13. Name(s) and type(s) of road(s) the property is accessed from:
Hwy 120 is access to Holcim Plant with interior road, MTAC, to Red Creek Quarry.
14. Is access through adjacent properties? YES NO If yes, is access legally established through:
 Deed of record Recorded Plat Court Order (Documentation shall be provided)
15. Estimated Traffic Count 54 existing (per day) Number of access points 1
16. Is access from or within five-hundred feet (500') of a Colorado Department of Transportation Controlled Road:
 YES NO (If yes, CDOT approval/comments shall be required)Existing Hwy 120 access to Holcim Plant will be used.
17. Does the property lie adjacent to or within three (3) miles of any municipal boundary lines (city/town limits)?
YES NO Municipality Name(s) Florence, CO
18. Does the property lie within the boundaries or within ¼ of a mile of any service district?

YES NO Entity Name(s) Upper Arkansas Water Conservation District, Florence Fire District

19. Requested duration of proposed use: _____ Life of use Estimated life of use years 100

20. Is temporary cessation proposed: YES NO Duration: _____

21. Is buffering required: YES NO (Contractor yards, Junk yards, Automobile graveyards, & Vehicle impoundment yards **require** buffering per FCZR 5.17.15)

22. Is landscaping proposed: YES NO a waiver is requested

23. Total parking spaces 20 standard size 20 compact 0 ADA 0
(Standard 9' X 18') (Compact 7' X 15') (Please refer to section 5.3 & 5.4 of the FCZR)

24. Will the parking area include lighting? YES NO

25. Parking area surface type: Gravel Thickness: 4 inches

26. Is a loading/unloading area proposed? YES NO Size: _____ Thickness: _____

27. Will hazardous materials be stored on site? YES NO Diesel fuel in a double walled tank

28. Will noxious weed control measures be included in the scope of the project? YES NO

29. Will any equipment meeting the Colorado Revised Statute definition of Special Mobile Machinery be stored or used onsite? YES NO

30. Mark all services and facilities necessary to accommodate the proposed use in addition to Fire Protection, Emergency Medical Response, & Law Enforcement:

Roadway Maintenance Hospital Park & Recreation

Airport Search & Rescue Schools Library

31. Utility Provider information: Please provide the name of provider below:

a) **Water:** Water well and bottled water.

b) **Sanitation:** Septic vault

c) **Electrical:** Black Hills

d) **Telephone:** Cellular Provider

e) **Refuse:** Waste Management

f) **Irrigation Water:** NA

g) **Natural Gas/Propane:** Mile High Propane

h) **Cable Television:** NA

Impact Analysis
(Section 2)

1. Dust and erosion control measures:
Holcim quarries operate under a Title V Air Permit No. 98FR0895 from the Air Pollution Control Division of CO Department of Public Health and Environment.
Holcim operates under a NPDES general permit COR500000 that will be provided to the county upon approval from WQCD of CDPHE.
2. Noise control measures:
Mining and hauling activities are sufficiently distant from private property development and public recreational areas to not necessitate implementation of noise control measures.
3. Odor control measures:
Nuisance odors are not anticipated.
4. Visual impact control measures:
Mining and hauling activities are sufficiently distant from public roads and private property owners/development to not necessitate construction of visual impact control measures.
5. Wildlife/plant habitat protection measures:
Please refer to Exhibit 2.5-1 Wildlife Information and Exhibit 2.5-2 Vegetation information
6. Water quality and/or water way(s) protection measures:
Exhibit 2.6-1 is Exhibit G from Holcim's CO DRMS 112 permit application that includes the protection measures that will be implemented.
7. Safety measures to protect adjacent properties, residents, & agricultural operations:
Perimeter berms and/or fences will be constructed along all mining and hauling development to protect the livestock and wildlife.
8. Measures to protect and/or preserve archaeologically or historically significant sites:
In the event archaeological or historical artifacts are encountered, activity will stop and the appropriate agency will be notified.
9. Measures to limit or control offsite discernable vibrations:
Blasting will be a regular practice during mining. Buildings and structures are at sufficient distances from blasting sites that vibrations will not be discernible. The Blasting Plan approved by DRMS is provided herein as Exhibit 2.9-1.

**Required Submittals Attachments
(Section 3)**

1. Current Deed of Record
2. Water supply documentation: Public water source requires documentation evidencing ability to provide service. Wells require documentation of a well permit and/or documentation that the existing well is adequate for the proposed use
3. Fremont County's Colorado Division of Water Resources Information Form
4. Sanitation Documentation: Public sewer shall require documentation evidencing ability to provide service. Onsite Waste Water System (OWTS) shall require a percolation test and report and a design plan from a certified engineer. Existing OWTS systems shall require documentation that the existing system is adequate for the proposed use
5. Refuse Plan: Shall address the storage, collection, and disposal of refuse. It shall also document screening of refuse receptacles/areas. (Refuse plans require approval by the Fremont County Environmental Health Dept.)
6. Drainage Plan: Must contain all required items under FCZR 5.10 (Drainage plans require approval by the County Engineer).
7. Landscaping Plan or justification for waiver request.
8. Lighting Plan or justification for waiver request
9. Noxious Weed Control Plan or justification for waiver request. (Plans and waiver requests require approval by the Fremont County Noxious Weed Manager)
10. List of owners and mailing address for all properties located within a five-hundred (500') foot radius of the subject property
11. County Roadway Impact Analysis Form (If accessed off a county road)
12. Colorado Department of Transportation Access Permit (If accessed off a CDOT controlled road)
13. Statement indicating how the proposed use complies with "Goals Objectives, and Implementation Strategies" of the Fremont County Master Plan District
14. Statement indicating how the proposed use will be in harmony and compatible with surrounding land uses and development in the area and/or measures that can be taken to make it in harmony & compatible.
15. Fire protection plan addressing method of fire protection, location of hydrants or other means of protection. If located within a fire protection district the plan shall be approved by the District.
16. A detailed utility plan showing the proposed or existing location of all utilities.
17. Site Plan drawn to professional standards (3 hard copies 18" x 24" or 24" x 36")
18. Submittals and exhibits should be clearly identified with section and/or question number located on the bottom right hand corner, or otherwise tabbed or marked.

If Applicable Submittals

19. CDOT Notification form of Proposed Land Use and comments (if access is from or within 500' of a CDOT controlled road)
20. Mineral Interest Notification and certified mailing receipt. Notification & Mailing shall be completed within 30 days prior to the scheduled Planning Commission Meeting. (this is only required if the minerals interests are severed)
21. Copies of all local, state and federal licenses and/or status of applications.
22. In circumstances of Corporate Ownership, documentation evidencing whom is eligible to execute documents on behalf of the corporation
23. In circumstances where the applicant is not the owner written authorization from the owner specifying the extent to which the representation is authorized
24. In circumstances where a consultant is making application on behalf of the owner, written authorization from the owner specifying the extent to which the representation is authorized
25. In circumstances where the property owner of record is not involved in the operation or application, documentation indicating right to occupy and use the property shall be provided. (lease or similar document)
26. Buffering Plan (If required)
27. Current registration for SMM equipment or documentation that equipment is on tax rolls associated with the property, to include list of machinery.
28. List of Hazardous materials stored and/or used on site, to include location of storage and management practices
29. Copies of mining and reclamation plans (CUP's)
30. Required information set forth in FCRZ 8.13.17.1 (Airports)
31. Required information set forth in FCRZ 8.13.17.2 (Adult Uses)
32. Required information set forth in FCRZ 8.13.17.3 (Kennels)
33. Required information set forth in FCRZ 8.13.17.4 (Antennas & Towers)

Site Plan Drawing Requirements

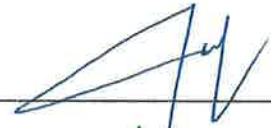

- a. Drawing Size: Minimum sheet size 18" x 24" to a maximum sheet size of 24" x 36";
- b. Written and graphic scale with minimum of 1" = 200' max 1" = 50';
- c. Appropriate title (SPECIAL REVIEW USE PERMIT, CONDITIONAL USE PERMIT, COMMERCIAL DEVELOPMENT PLAN FOR {name});
- d. Appropriate subtitle (brief description of the proposed use);
- e. Boundary drawing of the property with bearings and dimensions illustrating the legal description;
- f. Legal description of the property;
- g. Acreage or square footage of the subject property;
- h. Zoning classification of the subject property;
- i. Zoning classification of the adjoining properties;
- j. North Arrow;
- k. Vicinity map locating the subject property in relation to surrounding areas;
- l. Table indicating relationship between proposed and existing construction to remain on the property
- m. Minimum lot size, maximum lot coverage, maximum building height, minimum lot width, minimum setback requirements (Front, Two sides, & Rear)
- n. Size and shape of all existing & proposed structures: each structure shall be labeled/noted as existing or proposed. Dimensions from at least two property lines shall be noted;
- o. Location of all parking areas to include size, dimensions, surface type & thickness, type of space (ADA, Standard, Compact) and a table specifying the minimum numbers of spaces required for each category;
- p. Location of loading areas to include size, dimensions surface type & thickness;
- q. Labeled access points including interior roadways with dimensions, surface type & thickness, circulation pattern, and dimensions from property lines;
- r. Any proposed pedestrian areas & walkways to include dimensions, surface type & thickness;
- s. Location and dimensions of refuse areas;
- t. Identification and location of all drainageway, drainage facilities, including FEMA flood areas, to include dimensions from property lines;
- u. Location, height & type of lighting for parking and off-loading areas;
- v. Location, type, and size of all on-site identification signage (table may be used);
- w. All easements (existing & proposed) to include dimensions from property lines (beginning, end, & centerline) width, and if they are to be vacated or relocated;
- x. Significant natural features;
- y. Soil types
- z. Open space areas
- aa. Legend identifying symbols and/or lines

By signing this Application, the Applicant, or the agent / representative / consultant acting with due authorization on behalf of the Applicant, hereby certifies that all information contained in the application and any attachments to the Application, is true and correct to the best of the Applicant's knowledge and belief.

The Applicant understands that required private or public improvements imposed as a contingency of approval for the application may be required as a part of the approval process.

Fremont County hereby advises the Applicant that if any material information contained herein is determined to be misleading, inaccurate or false, the Board of County Commissioners may take any and all reasonable and appropriate steps to declare null and void, any actions of the Board regarding the Application.

Signing this Application is a declaration by the applicant that all plans, drawings and commitments submitted with or contained within this Application are or will be in conformance with the requirements of the Fremont County Zoning Resolution.

<u>Hamza Mekhfi</u>		<u>March 28, 2024</u>	Applicant
Printed Name	Applicant Signature	Date	
<u>Hamza Mekhfi</u>		<u>March 28, 2024</u>	Owner
Printed Name	Owner Signature	Date	

Section 3 Submittal Exhibits

- Exhibit 3.1 Current Deed of Record
- Exhibit 3.2 Water Supply
- Exhibit 3.3 CO Division of Water Resources Information Form
- Exhibit 3.4 Refuse Plan
- Exhibit 3.6 Drainage Plan
- Exhibit 3.8 Lighting Plan
- Exhibit 3.9 Noxious Weed Control Plan
- Exhibit 3.10 Owners within 500 ft.
- Exhibit 3.11 Roadway Impact Analysis Form
- Exhibit 3.13 Master Plan Compliance
- Exhibit 3.14 Surrounding Land Use Compatibility
- Exhibit 3.15 Fire Protection Plan
- Exhibit 3.16 Utility Plan
- Exhibit 3.17 Site Plan
- Exhibit 3.17y NRCS Soil Survey
- Exhibit 3.22 Corporate Ownership
- Exhibit 3.24 Owner Authorization to Consultant
- Exhibit 3.28 Hazardous Materials List
- Exhibit 3.29 DRMS Reclamation Plan



CUP Exhibit 1.1 Description of Proposed Operation

CO DRMS 112 Permit Exhibit D: Mining Plan (Rule 6.4.4)

Section 2.4

A limestone quarry and four (4) generations of cement plants have been operating east of Florence, CO since the late 1890's. The current plant facility (Plant No. 4) increased production in 2001. About 3,200,000 tons of limestone are required per year to supply the current plant. Sandstone is supplied from a smaller quarry established into the floor of the limestone quarry and is extracted at an annual rate of approximately 120,000 tons. Other raw materials are purchased.

The purpose of this Conditional Use Permit major modification application is to increase the permit area boundary to include both Sections 24 and 25 for a new limestone resource to be known as Red Creek Quarry (RCQ).

2.4.1 Mine Progression

Mining will commence in the northwest corner of the resource area and progress south and east through the resource over the course of approximately 100 years. The mine plan is set up in 10-year blocks based on plant capacity (Figure 2.4.1-1). During Years 0 to 10, mining will be initiated in the west side of the property with extraction progressing north in Section 24 and south into Section 25 in Fremont County simultaneously. Anticipated acres affected each 10-year period is provided in Table 2.4.1-1.

Table 2.4.1-1 Acres Affected Per 10 Years

CUT NO.	AREA (ACRES)
Development	18
0 to 10 years	216
10 to 20 years	269
20 to 30 years	240
30 to 40 years	478
40 to 50 years	679
50 to 60 years	276
60 to 70 years	334
70 to 80 years	273
80 to 90 years	101
90 to 100 years	191
TOTAL	3,074

In Years 0 to 10, initial mine development will occur within 18 acres to provide a cleared area for construction of the shop and office building, utilities, MTAC and secondary crusher. It is anticipated to take up to two years to complete the infrastructure development. Upon completion of development, mining will continue in Sections 24 and 25 for the remaining eight years on approximately 216 acres. Codell sandstone will be mined in this area to a depth of 15 feet, crushed and transported to the plant.

In Years 10 to 20, mining will continue in the northwest corner of Section 24, depleting the limestone in this area by Year 20. Mining will also continue south into Section 25 during Years 10 to 20.

Approximately 269 acres will be mined in Sections 24 and 25 during this period, including continued extraction of Codell sandstone in Section 24.

At the end of year 20, contemporaneous reclamation will begin in Section 24. As mining progresses into the east portion of Section 25, overburden may be hauled to Section 24 for rebuilding slopes to 3H:1V. Reclamation will continue similarly as mining progresses into the Pueblo County sections.

In Years 20 to 30 mining will continue in Section 25 moving east across the resource. This period will experience the highest strip ratio as the thickness of the overburden will be the thickest throughout the deposit. Extraction from the top 15 feet of the Codell sandstone will continue in Section 25 once sufficient acres of limestone have been removed to expose the top of the Codell sandstone. Phase reclamation will continue in Section 24 and the area used for sandstone extraction in Section 24 will be backfilled and reclaimed. Approximately 240 acres will be affected during this period.

In Years 30 to 40 mining will continue in an easterly direction. Extraction from the top 15 feet of the Codell sandstone will continue in Section 25. It is estimated that the limestone in Section 25 will be depleted during the last half of this 10-year period and mining will continue moving eastward into Sections 19 and 30 in Pueblo County. Approximate affected acreage during this 10-year period is 478 acres.

During Years 40 to 100 (approximate life of mine) mining progression is speculative at best. Mining will continue eastward through the deposit in similar manner as described above including contemporaneous reclamation in mined out areas.

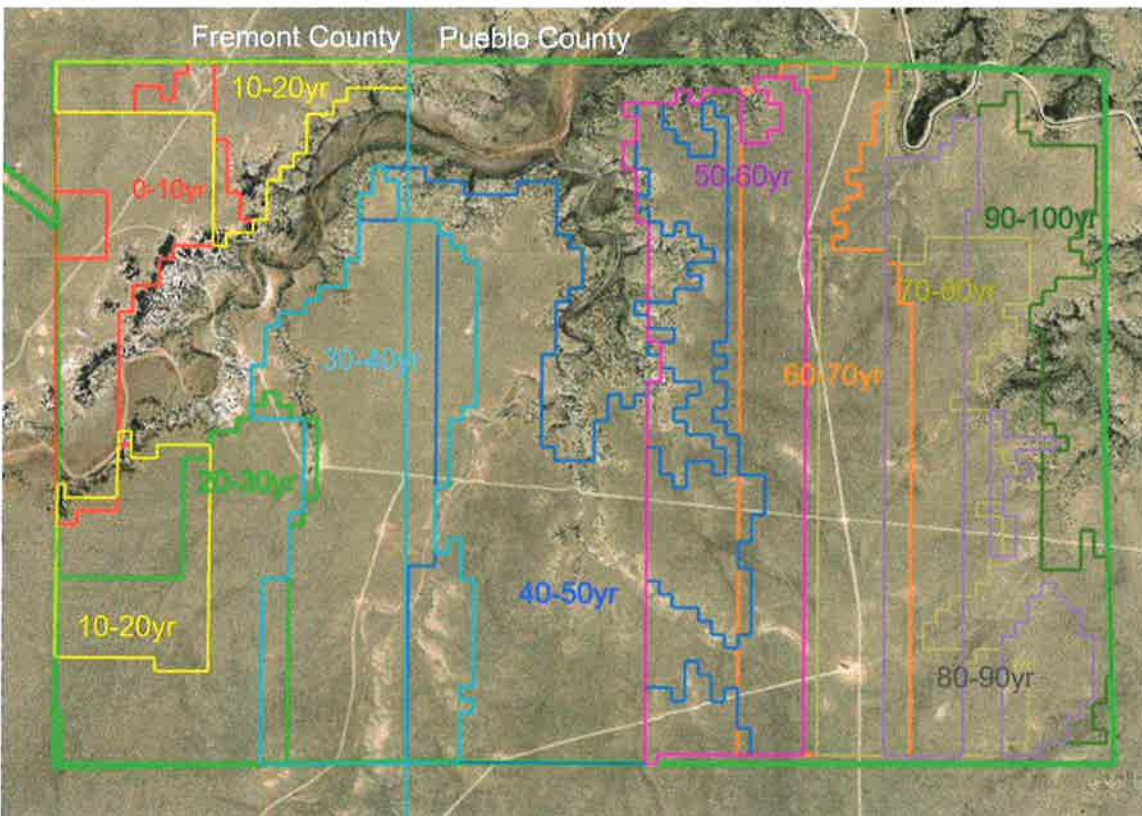


Figure 2.4.1-1 Mine Plan Blocks

2.4.2 Mine Infrastructure Development

The mine will develop as two distinct development projects. MTAC from the plant to RCQ. Once safe access is available for contractors, vendors and employees, development of the mine infrastructure will begin including fencing and RCQ mine buildings and utilities.

2.4.2.1 Material Transport and Access Corridor

MTAC will include an access road for employees and vendors and the planned overland conveyor system. The corridor will extend from the plant to RCQ or approximately 6.7 miles. The conveyor and a maintenance road will lie inside a chain link fence. The access road will lie west of the conveyor fence.

The gravel access road will be 40-foot-wide to allow safe passage of both employees and equipment in both directions. The road will be constructed with road base as the sub grade and 8 inches of gravel. The road will have 10-foot-wide graded shoulders.

The conveyor will be constructed as the road is being constructed. The conveyor will be an overland system with 13 elevated wildlife crossings. The wildlife crossings will be constructed over shallow natural ravines or dry stream beds. The elevated section will span approximately 95 feet, reaching an elevated height of 10 feet 9 inches, allowing the safe passage of wildlife along MTAC. The conveyor will be supported by steel supports on precast concrete pads set on the graded and leveled ground surface every 9 feet.

The conveyor system and conveyor service road will be enclosed by a 6-foot-high chain link fence to prevent wildlife from coming in contact with the moving conveyor. The fence will end as the conveyor begins to elevate for the wildlife crossings and recommence as the conveyor elevation drops to within 6 feet of the ground surface. The fence will have security gates on each end of the overland stretches of conveyor.

2.4.2.2 Red Creek Quarry Infrastructure Development

RCQ development will include building a shop/office building, installing a sanitation vault, grading areas for equipment and vehicle storage and an area for the secondary crusher in the northwest corner of Section 24. The area will be prepared by drilling, blasting and excavating material from a 1,000 feet by 800 feet area using a bulldozer, a loader and off-road haul trucks.

The quarry shop and offices will be located in a 184-foot by 70-foot metal building constructed on a concrete slab. The concrete slab will be reinforced with rebar and will be 8 inches thick in the warehouse, 4 inches thick in the office and 12 inches thick in the shop. The shop building will have electricity from the area provider, a septic vault engineered for up to 25 employees and a water well for sanitation and equipment maintenance needs. Equipment will be maintained and repaired in the shop. The shop will include wash bays and floor drains that discharge into an oil/water separator. Diesel fuel will be stored on site in a 20,000-gallon double walled above ground fuel tank with concrete wall crash protection structure.

2.4.3 Mine Development

Mining will occur as a conventional open pit mine utilizing drilling, blasting, loading, and hauling equipment. Limestone for the plant will be transported from the blasted working faces by excavators to potentially two in-pit mobile crushers located in the vicinity of the working face. This initial crushing will produce 8-inch minus material. The 8-inch minus material will be conveyed to the secondary crusher in the northwest corner of Section 24. The secondary crusher will reduce the feedstock to 4-inch minus +/- 0.5 inch that will be transported by conveyor approximately 5.7 miles to the blending hall for further processing.

Plant growth material will be salvaged and stockpiled during all site development and mining activities. Up to two feet of plant growth material will be ripped and pushed into a temporary stockpile. Haul trucks will transport the material to the property boundary and planned quarry area for construction of a 10-foot-high perimeter berm. In the event plant growth material will not be used in reclamation within one year, it will be seeded with a temporary seed mix to stabilize the surface until the material is needed in final reclamation.

During initial mine development, a temporary stockpile will be located in the northwest corner of Section 24 (Figure 2.4.3-1). The temporary stockpiles will be 1,200 feet by 800 feet with a total capacity of 3.1M tons. It will be constructed in separate stockpiles of overburden and limestone. Once sufficient mine floor is mined out, the overburden stockpile material will be pushed into the quarry as backfill for slopes. The anticipated life of the temporary stockpiles is less than 20 years.

The limestone mine will develop as a surface mine with benches and a perimeter berm (Figure 2.4.3-2). Limestone will be mined by cutting benches with a vertical face of 36 feet and a bench of 20 feet. The depth of limestone is approximately 140 feet deep with Codell sandstone below the limestone deposit. The crest of the mine bench will be 150 to 200 feet within the permit boundary. A 10-foot berm will be constructed of overburden approximately 100 feet from the crest of the limestone bench.

The sandstone mine will be an open pit mine in the floor of the limestone mine. After extracting the limestone, a sandstone pit will be developed in the Codell. Sandstone will be mined from two 23-acre locations along the west boundary; one in each Section. Sandstone will be mined to a depth of 15 feet as a typical open pit mine using backhoes and haul trucks. The slopes of the sandstone pit will be 3H:1V.

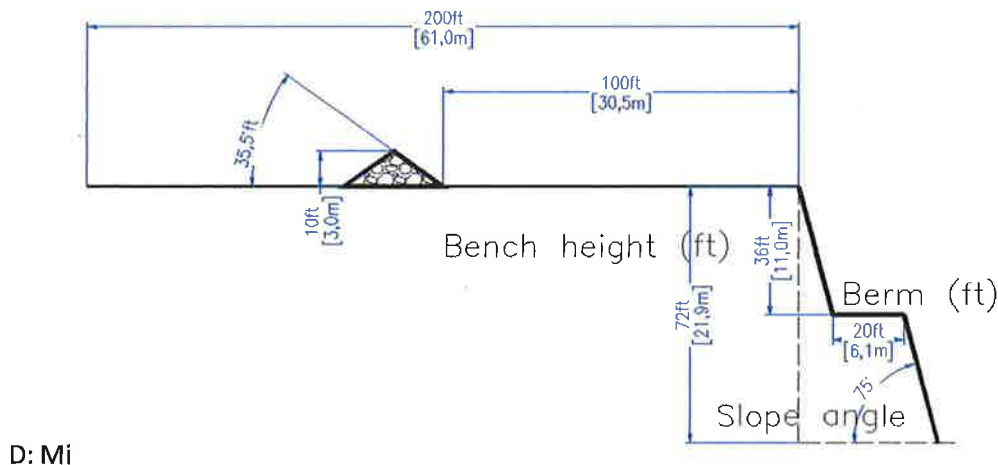


Figure 2.4.3-2 Limestone bench mining cross section

Daily mining activity will be performed by diesel fueled loaders, a dozer, motor grader, three 100-ton off-road haul trucks, a 20,000-gallon water truck, and electric backhoes. Once the plant growth material is salvaged and the mine area is leveled, the mine area will be drilled in preparation for blasting at depths based on the geologic stratigraphy of overburden, translime, Fort Hays limestone and Codell sandstone. The drilling patterns are described in the Blasting Plan (Appendix 4.1). The blasted material is segregate as overburden and limestone. Overburden is hauled to the waste dump area and stockpiled for use during final reclamation to rebuild slopes and bring up the elevation of the mine floor or it will be used to construct the perimeter berm.

Limestone is processed twice in the RCQ, prior to being conveyed to the BCQ. Electric backhoes will feed one of two electric primary jaw crushers (each rated at 650 tons per hour [tph]) located near the working face. The crushed limestone will be conveyed to the electric secondary cone or impact crusher

(rated at 1200 tph) located in the vicinity of the shop and office building. The final product conveyed to the cement plant will be approximately 4.5-inch minus. Conveyor belts leaving RCQ will be equipped with a gamma-metrics cross belt analyzer system to provide real-time chemical analysis of the material transported to the plant.

2.4.4 Blasting Operations

Blasting will occur daily, Monday thru Friday, to yield limestone volumes that provide sufficient quantities of overburden and produce limestone quantities to support plant production. Blasting will conform with Bureau of Alcohol Tobacco, Firearms and Explosives regulations and monitored for seismic control as described in the Blasting Plan (CUP Exhibit 2.9-1). Blasting is performed by a blasting contractor, licensed in CO. At distances of 5,000 feet or greater, the peak particle acceleration will not exceed 1.00 in/sec². The nearest structure is the Minnequa Canal located within 500 feet of the permit boundary but more than two miles from Sections 24 and 25 in Fremont County. At this distance, ground vibration will not exceed 1.00 in/sec² thus having no negative impacts to existing structures.

2.4.5 Existing Structures

Existing structures within the affected area boundary include ranch fences, cattle watering infrastructure and electricity transmission lines. Ranch fences will be removed that are within the affected area. The cattle watering infrastructure, water pipe and troughs, will be dismantled and removed from the affected area. The water supply line to the cattle troughs will be capped at the permit boundary. Holcim will maintain a 25-foot radius setback from electricity transmission lines on the native ground elevation. In the quarry, the top mine bench will be setback 25 feet from the base of the pole with setback in the quarry floor up to 165 feet due to 1H:1V bench slope.

Exhibit 2.5-1 Wildlife Information

CO DRMS 112 Permit Exhibit H: Wildlife Information (Rule 6.4.8)

Section 2.8

Wildlife information was obtained for the proposed permit area from two wildlife database sources: Colorado's Conservation Data Explorer (CODEX) and US Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC). CODEX includes a 1-mile buffer area around the subject area. The IPaC requested search area of interest was larger than actual parcels and extends the area of interest to include migration paths, for example, since species move and change location based on seasons. The proposed permit area was surveyed for wildlife habitat, presence and evidence of presence from August 8-10, 2023.

Three IPaC reports were generated for areas that included the Mining Permit and Affected Area Boundary on July 20, 2023. The following species listed under the Endangered Species Act were identified as potentially being in the area:

- Gray wolf, *Canis lupus* – Endangered
- Eastern Black Rail, *Laterallus jamaicensis ssp jamaicensis* - Threatened
- Greenback Cutthroat Trout, *Oncorhynchus clarkia stomias* – Threatened
- Monarch Butterfly, *Danaus plexippus* – Candidate

No critical habitats for any listed species occur in the area.

Both Bald and Golden eagles are listed as potentially being within the area, but neither are listed federally as a Bird of Conservation Concern.

Three CODEX reports were requested for the Mining Permit and Affected Area Boundary. One report is for RCQ, where the mining will take place, and the others are for the MTAC. CODEX lists species that have a regulatory status that have been confirmed as documented to occur within one mile of a project area as well as potential species based on models, range maps and unconfirmed records. A CODEX Project Review Report was produced on July 20, 2023 and the following species were identified by CODEX as documented within a mile of the Mining Permit and Affected Area Boundary:

- Bald Eagle – Special Concern
- Southern redbelly dace – State endangered

Species with a status of State endangered, threatened or a species of special concern identified as potentially occurring within the Mining Permit and Affected Area Boundary by CODEX include:

- Black-footed ferret – State endangered
- Burrowing owl - State threatened
- Mountain plover – Special concern
- Black-tailed prairie dog - special concern
- Colorado checkered whiptail – special concern

None of the species identified as being federally or state listed as endangered, threatened or of special concern were observed within the Mining Permit and Affected Area Boundary. The absence of observation does not guarantee a species is not present, however. Therefore, each of those species is

discussed below relative to its potential for being present within the Mining Permit and Affected Area Boundary.

2.8.1 Gray wolf

The USFWS states in the IPaC report that gray wolves would only be present in Colorado as lone, dispersing wolves. Colorado is completely outside of the current range map for gray wolves (USFWS 2023a).

The likelihood of gray wolves being present within the Mining Permit and Affected Area Boundary is very low.

2.8.2 Eastern Black Rail

Colorado Parks and Wildlife documented in 2016 that the species is found in dense emergent vegetation, with a mix of new and residual growth. Also, Colorado-based research (USFWS 2023b) defined black rail habitat as emergent marsh wetlands that consisted of cattails and other wetland species, like hardstem bulrush (*Schoenoplectus acutus*).

The Mining Permit and Affected Area Boundary is within the known range of the Eastern black rail. However, very little, if any, habitat for this species can be found within the Mining Permit and Affected Area Boundary. While there are emergent wetland plant species found in the area, they are located in and along Red Creek and not in any emergent marshes. The overstory habitat favored by Eastern black rails is absent in these areas as well.

Therefore, the likelihood of Eastern black rails being present within the Mining Permit and Affected Area Boundary is very low.

2.8.3 Greenback Cutthroat Trout

Greenback cutthroat trout are cold water fish belonging to the trout, salmon and whitefish family. This species inhabits cold water streams and cold-water lakes with adequate stream spawning habitat present during spring. In general, trout require different habitat types for different life stages: juvenile (protective cover and low velocity flow, in side channels and small tributaries); spawning (riffles with clean gravels); over-winter (deep water with low velocity flow and protective cover); and adult (juxtaposition of slow water areas for resting and fast water areas for feeding, with protective cover from boulders, logs, overhanging vegetation or undercut banks). Both water quality and quantity are important. Greenbacks, like other cutthroat trout, generally require clear, cold, well-oxygenated water.

The range of the greenback cutthroat trout does not extend into Fremont County, but the range does fall within Pueblo County, through which the Arkansas River flows. The only waterbody of any substantial size within the Mining Permit and Affected Area Boundary is Red Creek. Red Creek in this area does not have enough water flow to support greenback cutthroat trout nor do the habitats exist in Red Creek that are needed to support the different life stages of the species, as described above.

Therefore, the likelihood of Greenback cutthroat trout being present within the Mining Permit and Affected Area Boundary is extremely low.

2.8.4 Monarch Butterfly

The monarch butterfly is not listed as an endangered or threatened species yet and is therefore not afforded the protections of the Endangered Species Act. However, a few milkweed plants of three different species (zyzotes, broadleaf and narrowleaf) were observed during the vegetation surveys. Therefore, it is possible that monarch butterflies could be present within the Mining Permit and Affected Area Boundary, but it is unlikely that they would be present in any large numbers. The Western Monarch

Milkweed Mapper, which relies on citizen science data, has milkweed locations recorded in the area north of Lake Pueblo State Park and east of Florence, CO, but no recorded sightings of monarch butterflies. The closest monarch butterfly sightings were recorded in Canon City and in the northern area of Pueblo.

2.8.5 Bald and Golden Eagles

According to the online Cornell Lab of Ornithology eBird map (<https://ebird.org/map>), both bald and golden eagles are abundant along the Arkansas River and its tributaries, including Hardscrabble Creek which is to the north and east of the Mining Permit and Affected Area Boundary. Numerous sightings have also been reported along Route 96 which is the closest road south of the Mining Permit and Affected Area Boundary.

Therefore, it is highly likely that Bald and Golden eagles may be present within the Mining Permit and Affected Area Boundary. However, there are very few areas that would be suitable for eagles to build nests, so the project area would likely be a hunting ground for the eagles rather than support any breeding pairs.

2.8.6 Southern redbelly dace

The southern redbelly dace is an energetic, schooling fish that inhabits clear, cool waters in small to medium streams in the Mississippi, Ohio and Missouri river drainages. Their populations are widely scattered across the Great Plains, but most of their population range occurs to the east. In the western part of their range, southern redbelly dace are restricted to rather small, scattered populations near the headwaters of tributaries of larger rivers like the Missouri, Kansas and Arkansas rivers. They are restricted to relatively small regions where the cold water from springs and headwater streams creates similar conditions to the last glacial retreat from the Great Plains Region. The optimal habitat for dace is clear, cool streams which are fed by groundwater with heavy vegetation for cover and gravel or sand substrate. Southern redbelly dace require clean gravel substrates for reproduction and feeding. They rely on their sight to feed and recognize brilliant color patterns of potential mates during spawning.

While Red Creek is a tributary to the Arkansas River, the creek is intermittently fed by connection to the groundwater along its length within the Mining Permit and Affected Area Boundary. It is possible that Southern redbelly dace could occur within Red Creek, but with the lack of consistent flow within the Mining Permit and Affected Area Boundary portion of the creek, it is unlikely that they would occur in that portion given the lack of clear stream flow and heavy riparian vegetation.

2.8.7 Black-tailed prairie dog and associated species (Black-footed ferret, Burrowing owl)

Black-tailed prairie dogs are found within the area that borders the Mining Permit and Affected Area Boundary. Prairie dogs were observed a good distance off to the west of Transect 17 of the vegetation survey. In Colorado, it is unlawful to capture, transport, and relocate black-tailed prairie dogs from one site to another suitable site without a permit from Colorado Parks and Wildlife.

The burrowing owl and the black-footed ferret are species closely associated with, and dependent on, black-tailed prairie dogs. The black-footed ferret was extirpated from this area but there are release sites in the vicinity.

As of this report, there are no black-tailed prairie dogs, burrowing owls or black-footed ferrets within the Mining Permit and Affected Area Boundary.

2.8.8 Mountain plover

The mountain plover nests in flat, dry landscapes characterized by very short, sparse vegetation (preferably less than 3 inches), with at least 30% bare ground and a slope less than 5 degrees (less than 2 degrees optimal). A conspicuous object (e.g., manure pile, clump of vegetation, rock) is usually found

near nest sites. In Colorado, the mountain plover is commonly associated with heavily grazed blue grama (*Bouteloua gracilis*) or buffalograss (*Buchloe dactyloides*) on the eastern plains. The mountain plover is strongly associated with black-tailed prairie dog towns in some parts of its breeding range. The mountain plover feeds almost exclusively on invertebrates. Grasshoppers and beetles have been reported as the most common prey.

According to the online Cornell Lab of Ornithology eBird map (<https://ebird.org/map>), the most recent sighting of mountain plovers near the Mining Permit and Affected Area Boundary was in 2014. Older sightings range from 1975 to 2010.

The habitat within the Mining Permit and Affected Area Boundary could potentially support mountain plovers, particularly in the vicinity of the known black-tailed prairie dogs if mountain plovers nest away from the colonies. Mountain plovers, while listed as a State species of special concern, are not afforded any legal protection beyond requiring a permit to capture or handle.

2.8.9 Colorado checkered whiptail

The native range of the Colorado checkered whiptail is restricted to the Arkansas River drainage of southeastern Colorado. Colorado checkered whiptails occupy a native range restricted to the Arkansas River drainage and its tributaries in southeastern Colorado. Occupied habitat includes canyons, the vicinity of hillsides, rivers, arroyos, and creeks, as well as heavily altered habitats with slopes. This lizard often is encountered in areas of Ponderosa pine, Gambel's oak, pinyon-juniper woodland, and shrublands and grasslands with rabbitbrush, cholla, and yucca. Colorado Checkered Whiptails forage opportunistically, and the most common food items for adults are grasshoppers and termites, while spiders and leafhoppers were the primary food items for young lizards.

Within the Mining Permit and Affected Area Boundary there are areas of habitat suitable for Colorado checkered whiptails but a large percentage of the habitat in the area is not their preferred habitat. Colorado checkered whiptails are a State species of special concern and are not afforded any legal protection beyond requiring a permit to capture or handle.

2.8.10 Wildlife Impact Mitigation Measures

Colorado Parks and Wildlife (CPW) was invited to conduct a site visit on October 19, 2023. The visit included review of project maps, explanation of mine development and contemporaneous reclamation. Upon receipt of CPW's November 14, 2023, comment letter, Holcim requested a follow up virtual meeting to discuss CPW's recommendations. Ms. Cassidy English, CPW's SE Region Land Use Coordinator, represented CPW during the virtual meeting. Ms. English clarified that the recommendations were just that, recommendations, as opposed to mitigation directives. The following wildlife impact mitigation measures will be implemented to minimize and avoid impacts to wildlife.

Contemporaneous reclamation is the primary mitigation measure that will minimize impacts to wildlife. Approximately 10% of the proposed permit area, or 450 acres, will be impacted at any one time. This will preserve approximately 4000 acres for wildlife habitat and winter range.

2.8.10.1 Raptors

Raptor nests were not observed within the Mining Permit and Affected Area Boundary on August 8, 2023. However, there is a potential for foraging raptors, such as bald and golden eagles, to be present outside the Mining Permit and Affected Area Boundary. Holcim will conduct raptor surveys to identify areas with raptor nests prior to commencing surface disturbances. If nesting areas are identified, the best management practices outlined in the *Colorado Parks and Wildlife Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors* (CPW, 2020) guidance will be implemented.



2.8.10.2 Prairie Dogs

Prairie dogs were not observed within the Mining Permit and Affected Area Boundary on December 17, 2023. However, prairie dogs were observed to the west of MTAC indicating the possibility for prairie dog colonies to develop within the Mining Permit and Affected Area Boundary in the future. Burrowing owls utilize abandoned prairie dog burrows. Holcim will conduct surveys of burrows within the current mining operation phase in accordance with the *CPW Recommended Survey Protocol and Actions to Protect Nesting Burrowing Owls (CPW, 2021)*. If nesting burrowing owls are identified, the best management practices outlined in the *Colorado Parks and Wildlife Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors (CPW, 2020)* guidance will be implemented.

2.8.10.3 Aquatic Habitat

The Mining Permit and Affected Area Boundary includes several drainages along the MTAC and within the RCQ area. Holcim will implement erosion and sediment control best management practices (BMPs) to prevent sedimentation of aquatic habitats.

Exhibit 2.5-2 Vegetation Information

CO DRMS 112 Permit Exhibit J: Vegetation Information (Rule 6.4.10) Section 2.10

Table 2.10-1 was prepared from the NRCS soil survey database. The vegetation listed is expected and typical vegetation for the soil type. Also provided is the average annual production of vegetation in pounds per acre.

The vegetation survey was conducted from August 8-10, 2023, within the various soil type areas found within the Mining Permit and Affected Area Boundary. Sample locations were chosen to include at least one transect within each soil type located within the Mining Permit and Affected Area Boundary. At each location, a 100-ft transect was measured and marked with pin flags. The overall percentage covered within the area was visually estimated. The five most dominant plants within one foot of the transect were identified and any other notable species in the vicinity were also recorded.

For a majority of the transects, tumbleweed and blue grama were the most abundant plant species observed. Differences in abundance and diversity of plant species appears to be driven by the amount of available water, with the driest areas having more tree cholla, prickly pear and yucca while areas closer to water sources were dominated by sedges, a variety of grasses and invasive saltcedars. The areas closer to drainage areas generally have more trees, shrubs and flowering plants as opposed to areas dominated by tumbleweed and cacti. The entire area is subject to cattle grazing with no area except for one transect atop a hill absent of cattle tracks and manure. Plants present are well adapted to the presence of cattle. Based on CODEX report, no rare plants were observed.

Fremont Weed Control Officer Brittany Pierce visited the Fremont County parcels on September 28, 2020. The Integrated Weed Management Plan is provided in Appendix 4.10. Noxious weed Species observed during the vegetation field survey that are on the Colorado Department of Agriculture's Noxious Weeds list (<https://ag.colorado.gov/conservation/noxious-weeds/species-id>) included saltcedar (List B), Russian olive (List B) and common mullein (List C). List B includes species for which the continued spread in Colorado should be halted. List C includes species for which local agencies have authority to decide management strategies for elimination. There were no List A species observed, which include species that have newly arrived and/or are less common in Colorado but still need to be eradicated. Saltcedar was abundant within and in the vicinity of Transects 10 and 11, which were located along Red Creek. This area is also where Russian olive was observed and was in an area uphill of but in a tributary drainage of Red Creek. Common mullein was only observed in one location, Transect 5, in an area near to the middle of Parcel 3 of the Mining Permit and Affected Area Boundary.

Table 2.10-1 Soils and Vegetation Data

Map Unit Symbol	Map Unit Name	Vegetation	Average annual production of air-dry vegetation in pounds per acre
3	Aquic Ustifluvents	western wheatgrass, inland saltgrass, alkali sacaton, sand dropseed, little bluestem, sedges, big bluestem, willows and scattered areas of cottonwood	1500
48	Kim loam	short grasses, of which blue grama predominates.	800
52	Kim-Cascajo complex	Kim soil vegetation and sideoats grama, blue grama, little bluestem, needleandthread and Indian ricegrass.	750
66 MvC	Manvel	blue grama, galleta, western wheatgrass, cactus, and needlegrass.	800
83 PmE	Penrose-Minnequa complex	blue grama, western wheatgrass, winterfat, blue grama, pricklypear, broom snakeweed and red threeawn.	800
84 PrF	Penrose-Midway-Rock outcrop complex	sideoats grama, blue grama, Scribner needlegrass, Indian ricegrass and stands of oneseed juniper or Rocky Mountain juniper	60
92	Riverwash	blue grama, wester wheatgrass, needleandthread and prairie junegrass	1200
129	Wilid silt loam aka Wiley silt loam	blue grama, galleta, sand dropseed, and western wheatgrass.	800
LM	Las Animas fine sandy loam	willow, cottonwood, and a variety of water tolerant grasses.	Unavailable
WM	Minnequa-Wilid silt loams	blue grama, western wheatgrass, winterfat, galleta, sand dropseed,	800

Within the Red Creek drainage are seeps and springs flowing from fractures within the rock outcrop. Minimal water flow was observed in alluvial sediments above the seep location indicating minor flow within Red Creek independent of the identified seeps.

The surface water flow disappears into the creek sediments and Red Creek is dry at the boundary of the Site. Drainages south and east of Red Creek show signs of intermittent to no surface water flow. Upland areas on the site are grasslands with gentle slopes, few outcrops, and sparse shrubs and trees compared to the Red Creek drainage.

Another feature on the Site is the Minnequa canal, owned by Rocky Mountain Steel Mills. The canal flows across the RCQ property along the northeast corner, diverting water from the Arkansas River at Florence for irrigation purposes and municipal/domestic use. The canal is fully fenced and is siphoned under Red Creek, just north of the Site property boundary.

2.7.2 U.S. Army Corp of Engineers

Holcim engaged BC to begin the preliminary jurisdictional determination (PJD) for the Red Creek Quarry parcel in Fall 2019. BC personnel conducted a field reconnaissance at the Site on May 28, 2019 to observe and document conditions of the property, specifically related to the surface water drainages on the Site. The location of the sites visited are shown in Figure 2.7.2-1. A second field visit was conducted on October 1, 2019, with Joshua Carpenter, regulatory staff with the United States Army Corps of Engineers (USACE), Albuquerque District, Pueblo Regulatory office to review the site conditions and discuss potential jurisdictional resources. Based on these two field visits, BC submitted a preliminary jurisdictional determination (PJD) request to the USACE; on May 21, 2020, the USACE issued the initial PJD letter stating they concurred with the BC assessment. The USACE-approved PJD provided Holcim with the information necessary to start planning for mining operations and the disturbance footprint given the locations of jurisdictional resources.

Based on the need for better defining the limits of ephemeral tributaries to Red Creek on the site, a second field reconnaissance was conducted by BC on December 3, 2020. Initially, the first limits between upland non-jurisdictional drainages and ephemeral tributaries were delineated using the dirt road that runs east-west across the property as the basis for the distinction between jurisdictional and non-jurisdictional resources. As such, a second, initial PJD form was submitted to U.S. Army Corps of Engineers (USACE) on January 8, 2021, with the revised stream field review. The revised USACE PJD approval from the USACE was received on November 10, 2022.

A desktop evaluation of the aquatic resources along the MTAC began in September of 2023 for a PJD associated with this footprint. The corridor evaluation identified drainages within the MTAC that could be jurisdictional based on the observations made with aerial photos, topographic maps, and other readily available desktop data. The MTAC PJD form will be submitted to the USACE upon application completion.

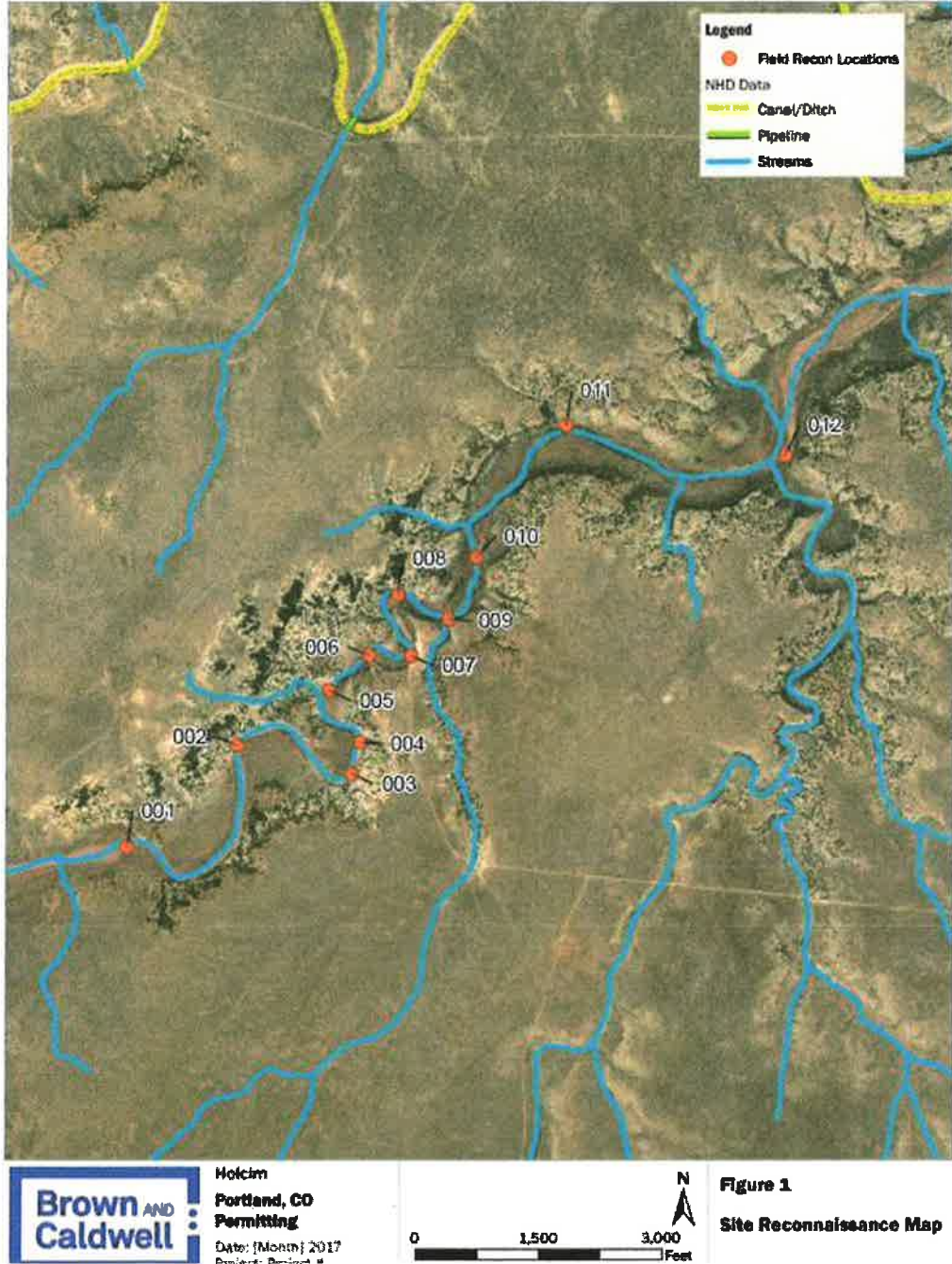


Figure 2.7.2-1: 2019 Site Reconnaissance Map

2.7.3 Site Investigations and Characterization

Five groundwater monitoring wells were installed both to the north and south of Red Creek in November 2021. The objective of the well locations was to assess the groundwater elevations near the surface water seeps observed in the Red Creek drainage. The wells were located upstream and downstream of the seep and within approximately 400 feet of the Red Creek canyon edge. Wells were spaced to ensure the data collected from each well was spatially distributed in order to characterize the hydrologic

properties of the water bearing units (Figure 2.7.3-1). Wells 2N and 2S were completed in two different lithologies (Fort Hayes Limestone and Codell sandstone) and are in close proximity to each other in order to monitor the hydrologic conditions in both formations.

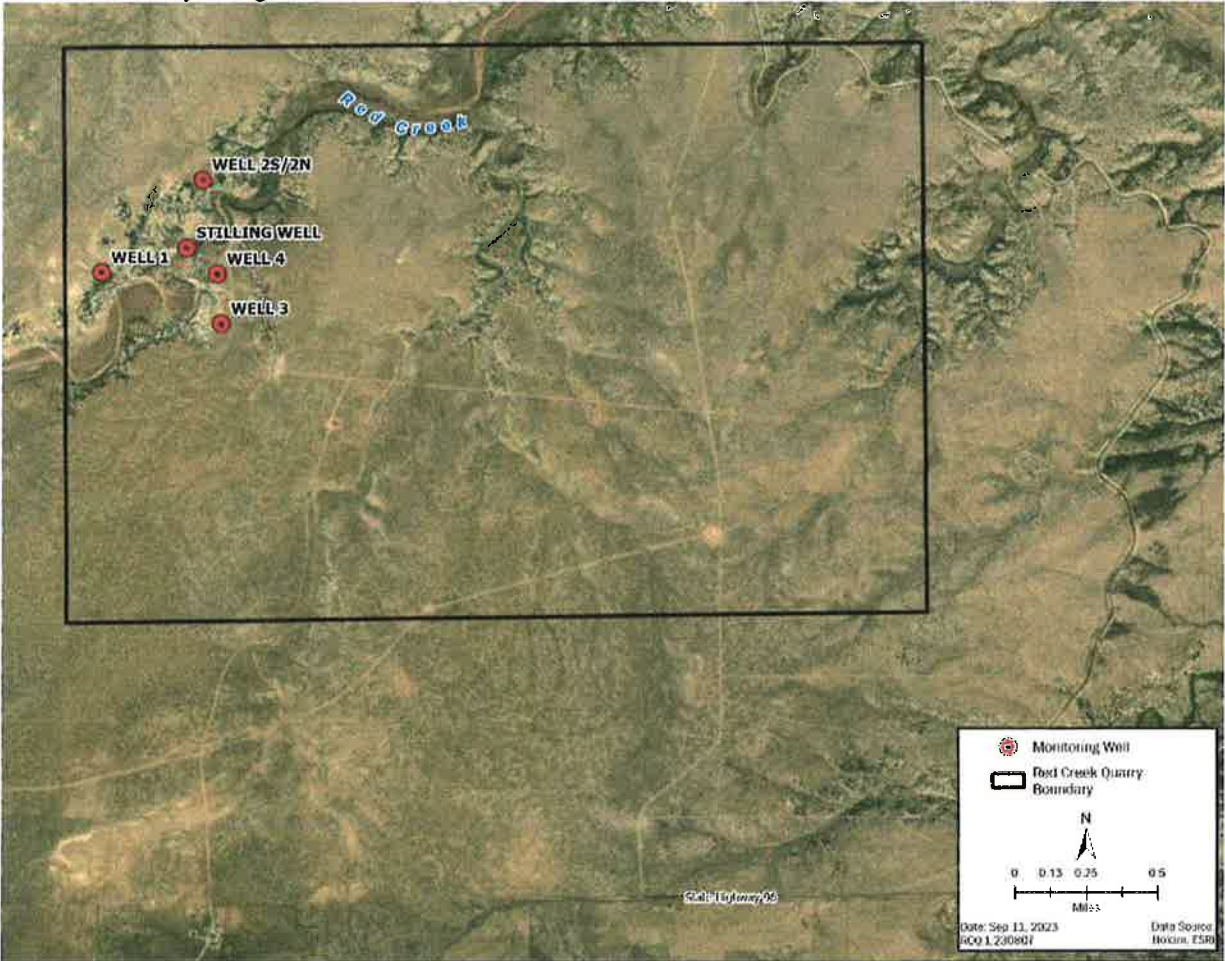


Figure 2.7.3-1: Groundwater Well Location Map

A stilling well was installed along the north side of Red Creek to measure water levels within the saturated alluvium of the creek bed as a proxy measurement of the creek water elevation (Figure 2.7.3-1). The stilling well was drilled using an auger to advance a hole to approximately five feet below ground surface. A five-foot polyvinylchloride (PVC) slotted screen with an end capped was placed into the hole then sand was backfilled in the wellbore up to the surface.

Transducers were installed after development operations in Well 1, Well 2N, Well 2S, Well 3, Well 4, and the Stilling Well to continuously monitor the groundwater levels. Immediately prior to transducer installation, a depth-to water measurement was collected to establish a value between transducer measurement and elevation. Coordinate and elevation data were collected by Holcim for each well casing and adjacent ground surface using survey equipment.

A surface water flow monitoring station consisting of a ramp flume designed to measure flow between 0.1 to 3.5 cubic feet per second (cfs) was installed in August 2022. The location of the flume was selected based on a visual reconnaissance of the stream and the proximity to the surface water seeps.

The Sampling and Analysis Plan (SAP) was implemented during the baseline monitoring and sampling activities. This SAP is designed to collect data to assess potential water resource impacts from mining

operations conducted at the RCQ. Constituent loading to surface water and groundwater could occur during mining operations from stormwater runoff or groundwater seepage into mine pits. The SAP establishes methods that will obtain accurate and defensible data by following site-specific and standard operating procedures (SOP). The SAP will be implemented for all water monitoring and sampling activities during the life of RCQ.

In conjunction with the SAP, the Quality Assurance Project Plan (QAPP) was developed and implemented during the baseline investigation. The QAPP describes quality assurance/quality control (QA/QC) procedures that will be followed during implementation of the surface water and groundwater data collection. QA is a management function and refers to the systematic planning of procedures, methods, and standards to ensure that data generated by the testing program are suitable for their intended use. QC is process-oriented and focuses on error identification and verification that data meet the established standards. The standards contained in the QAPP will be used for verification and validation of data generated by field personnel and laboratory subcontractors. The QAPP is intended to serve as a guide to field personnel and laboratory subcontractors for QC activities during the monitoring and reporting phases of this project. Specific details for sampling and analyses are provided in the RCQ Baseline Monitoring SAP and SOPs.

2.7.3.1 Groundwater and Surface Water Baseline Study

In a pre-application meeting, DRMS stated five quarterly monitoring events would be required to compile the necessary data to establish baseline water quality. Brown and Caldwell conducted a multi-year baseline investigation to document and characterize the hydrologic system at the RQC quarry site to evaluate if the proposed mining operations will result in the interception of groundwater, and to determine what if any, hydrologic connection may exist between groundwater and the Red Creek perennial surface water.

Field activities conducted as part of this investigation included installation of five groundwater monitoring wells, installation of pressure transducers to collect water level data, and the collection of groundwater samples for laboratory analysis. Additional field activities included the installation of a ramp flume and stilling well transducer, visual observation and documentation of surface flow locations, and the collection of surface water samples for laboratory analysis. Groundwater modeling was conducted in support of mine permitting activities to evaluate potential groundwater impacts from planned mining operations at the RCQ. The groundwater modeling report is provided under separate cover.

The results of the five quarterly surface and groundwater monitoring events identified several naturally occurring analytes present at concentrations above regulated water quality standards, including selenium, uranium, radon, and sulfate. Several groundwater and surface water studies conducted by others also found elevated concentrations of these analytes within the same lithological units and similar surface water bodies in Colorado.

Water quality data suggests the source of the surface water within the perennial section of Red Creek is groundwater based on the similarities of major ion and metal concentrations. Surface water concentrations of major ions tend to fall within the ranges observed in samples collected from the groundwater wells. Variations in the water composition of the surface water samples indicate the influence of creek bed sediments, evaporation, precipitation, and multiple groundwater seeps or springs contribute to the water quality and flow in Red Creek.

The baseline study will be extended for four additional calendar quarters in 2024. Due to groundwater and surface water constituent exceedances identified during the five-quarter baseline study, the study will continue in the 2024 calendar year. This will provide additional data that will assist in determining seasonal or weather event related impacts to water quality. Monitoring will recommence in March of 2024 with the analytical suite reduced to exclude constituents that were below detection levels and/or did not

have a water quality standard (Table 2.7.3.1-1). The resulting addendum to the Baseline Study will be submitted to the Division within 60 days of the last day of Q4 2024.

2.7.3.2 Groundwater Modeling

Groundwater flow modeling (Modflow) was performed on Red Creek to estimate the potential rates of groundwater entering the RCQ. In addition, the model was used to estimate potential mining impacts to Red Creek. The site conceptual model was built on available data in the area and information obtained from the existing Holcim mine plan Leapfrog model. The site-specific Leapfrog geologic model includes the base Codell Sandstone, overlying Fort Hayes Limestone, and additional overlying sediments. The contact between the Codell and Fort Hayes dips toward the north across the site. Groundwater occurs primarily within the Codell Sandstone and within the lower portion of the Fort Hayes limestone in localized areas. Sediments overlying the Fort Hayes are generally unsaturated.

Based on conservatively high potential impacts to the Codell, it was determined that the rate of groundwater entering the quarry may increase from Mine Plan Block 0-10 through Mine Plan Block 20-30. Following Mine Plan Block 20-30 the pit floor elevations are above the interpolated water table and are therefore dry. The evaluation of mining impacts to Red Creek suggested no significant influence on the creek.

The model results discussed represent a simplistic assessment for mining influence on groundwater in RCQ. To improve and extend model predictions beyond Mine Plan Block 20-30, additional groundwater monitor wells will be installed throughout the site as mining progresses into Year 20-30 block.

2.7.4 Potential Mining Impacts to Water Quality and Quantity

Based on groundwater modeling, mining will not impact water quantity in Red Creek. To be protective of water quality, Holcim will implement a surface and groundwater monitoring plan.

2.7.4.1 Monitoring Plan

Surface and groundwater monitoring will continue on a semi-annual basis between the end of the baseline study and commencement of mine development in Section 24. The analytical suite will be the reduced suite approved by the Division for the 2024 sampling events. Sampling and monitoring will occur during the second calendar quarter (April thru June) and fourth calendar quarter (October thru December) each year. Reporting will occur no more than 30 days after the end of the sampling quarter. The second calendar quarter report will be submitted by August 1 of each year. The fourth calendar quarter report will be submitted by February 1st of the following year.

Surface and groundwater monitoring will recommence on a quarterly basis two calendar quarters prior to mine development in Section 24. The analytical suite will include analytes listed in Tables 2.7.4.1-1 and 2.7.4.1-2 below. Monitoring reports will be submitted to the Division within 30 days of the last day of the monitoring quarter. Any changes to the monitoring program will be submitted to the Division as a request for a Technical Revision.

Groundwater locations will include Well 1 that lies north of Red Creek, and Wells 3 and 4 that lie south of Red Creek. Two wells will be monitored south of Red Creek because the groundwater shows natural variation in water quality as observed during the baseline water quality program. Surface water will be sampled at the seep and at SW RC2. SW RC2 is the furthest east location thus it is the most downgradient surface water location. Groundwater level data will be collected using the installed pressure transducers during the interim monitoring program. Red Creek flow data will be collected at the flume using the installed pressure transducer. Transducer data will be downloaded and reviewed quarterly.

The following analytical suite for surface and groundwater samples is proposed based on the results of the Baseline Study (Tables 2.7.4.1-1 and 2.7.4.1-2). The analyte lists are the same for surface and



groundwater to be able to evaluate the connection between the water quality for both types of water. After three years of monitoring, Holcim will submit a Technical Revision requesting a reduction of the analytical suite for those constituents with concentrations that are consistently below instrument detection limits or below regulatory standards.

In the event of a water quality exceedance, Holcim will notify the appropriate regulatory agency and implement an Adaptive Management Plan (AMP) strategy. An AMP strategy allows for the inclusion of knowledge gained and adaptation of mitigation measures as mining operations evolve. The basic AMP process includes the following steps:

1. Identify source of exceedance and operational uncertainties;
2. Quantify impacts;
3. Evaluate strategies and mitigation implementation; and
4. Monitor the performance.

Table 2.7.4.1-1 Surface Water Analyte Lists

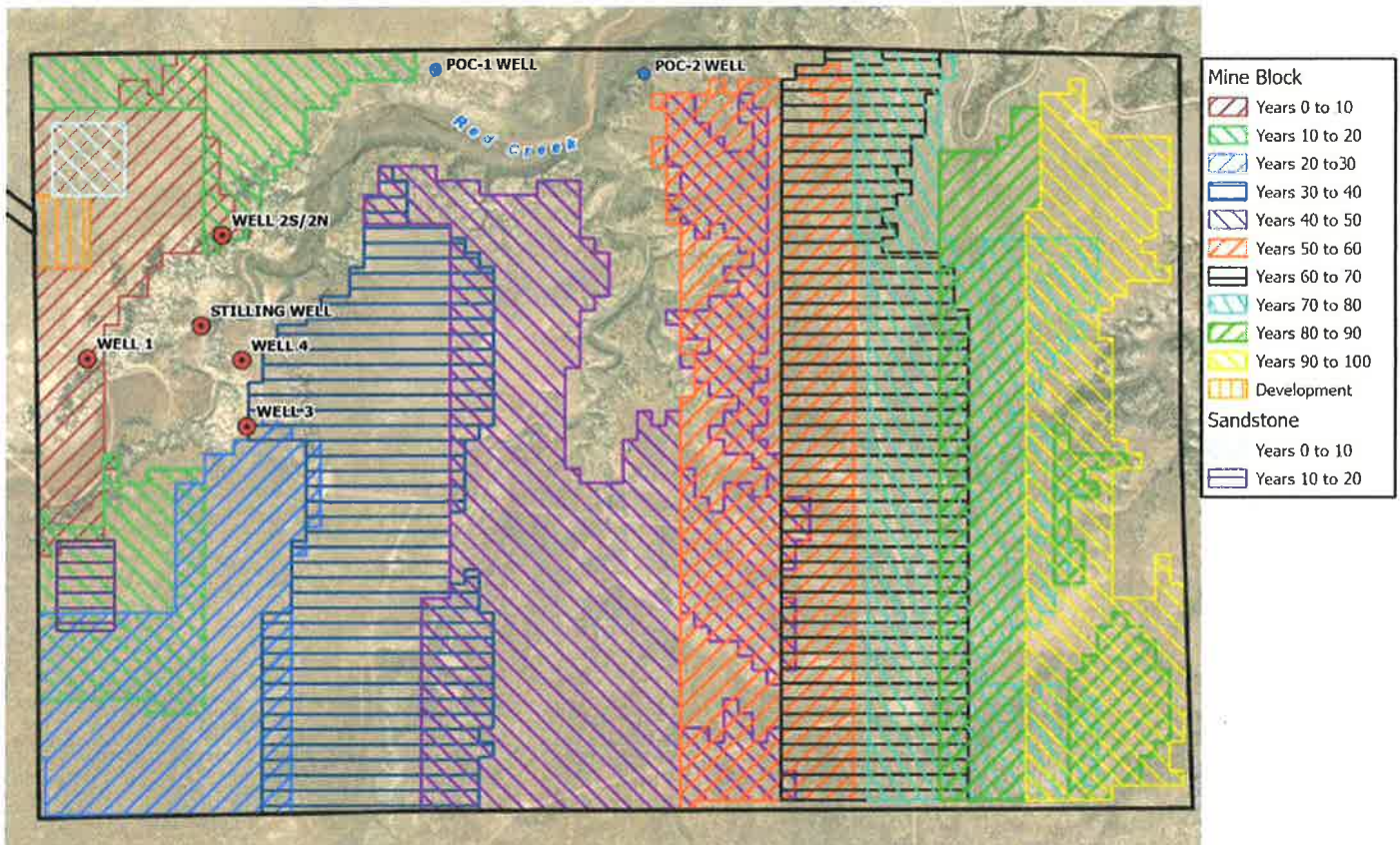
Surface Water Samples				
Analyte	Fraction	Method	Method Detection Limit (mg/l)	WQCC Surface Water Regulation 32 (µg/L)
Inorganic				
Nitrate	Dissolved	E300.0	0.006	100,000
Nitrite	Dissolved	E300.0	0.003	500
Phosphorus	Dissolved	E365.1	0.008	110
Sulfate	Dissolved	E300.0	0.4	-
Sulfide	Dissolved	SM4500-S2	0.35	2
Metals and Metalloids				
Aluminum	Dissolved	200.8	0.02	-
Antimony	Dissolved	200.8	0.0001	-
Arsenic	Total and Dissolved	200.8	0.0005	340
Barium	Dissolved	200.7	0.002	-
Beryllium	Dissolved	200.7	0.0013	-
Boron	Dissolved	200.7	0.0074	-
Cadmium	Dissolved	200.8	0.00005	2.03
Chromium	Dissolved	200.8	0.0005	-
Chromium III	Total and Dissolved	SM3500-CR B	0.009	231
Chromium VI	Dissolved	SM3500-CR B	0.009	11
Cobalt	Dissolved	200.7	0.0023	-
Copper	Dissolved	200.7	0.0023	29.3
Iron	Dissolved	200.7	0.0031	-
Lead	Dissolved	200.8	0.00013	10.9
Manganese	Dissolved	200.8	0.0004	2,618
Mercury	Total	245.1		-
Molybdenum	Total	200.8	0.00025	-
Nickel	Dissolved	200.8	0.001	168
Selenium	Dissolved	200.8	0.0003	4.6
Silver	Dissolved	200.8	0.000025	3.5
Thallium	Dissolved	200.8	0.00005	-
Uranium	Dissolved	200.8	0.00005	6,915
Vanadium	Dissolved	200.7	0.0007	428
Zinc	Dissolved	200.8	0.0025	-
Radiological				
Gross Alpha Particle Activity	Total			-
Other				
Oil and grease	Total	E1664A	3	-
TDS	Total	SM2540C	5	-
TSS	Total	SM2450D	2.5	-

Table 2.7.4.1-2 Groundwater Analyte Lists

Groundwater Samples				
Analyte	Fraction	Method	Method Detection Limit (mg/l)	WQCC Groundwater Regulation 41 (µg/L)
<i>Inorganic</i>				
Nitrate	Dissolved	E300.0	0.006	10
Nitrite	Dissolved	E300.0	0.003	1
Phosphorus	Dissolved	E365.1	0.008	-
Sulfate	Dissolved	E300.0	0.4	250
Sulfide	Dissolved	SM4500-S2	0.35	-
<i>Metals and Metalloids</i>				
Aluminum	Dissolved	200.8	0.02	5,000
Antimony	Dissolved	200.8	0.0001	6
Arsenic	Dissolved	200.8	0.0005	10
Barium	Dissolved	200.7	0.002	2,000
Beryllium	Dissolved	200.7	0.0013	4
Boron	Dissolved	200.7	0.0074	750
Cadmium	Dissolved	200.8	0.00005	5
Chromium	Dissolved	200.8	0.0005	100
Chromium +3	Dissolved	SM3500-CR B	0.009	-
Chromium +6	Dissolved	SM3500-CR B	0.009	-
Cobalt	Dissolved	200.7	0.0023	50
Copper	Dissolved	200.7	0.0023	200
Iron	Dissolved	200.7	0.0031	300
Lead	Dissolved	200.8	0.00013	-
Manganese	Dissolved	200.8	0.0004	50
Mercury	Dissolved	245.1		2
Molybdenum	Dissolved	200.8	0.00025	210
Nickel	Dissolved	200.8	0.001	100
Selenium	Dissolved	200.8	0.0003	20
Silver	Dissolved	200.8	0.000025	50
Thallium	Dissolved	200.8	0.00005	2
Uranium	Dissolved	200.8	0.00005	16.8
Vanadium	Dissolved	200.7	0.0007	100
Zinc	Dissolved	200.8	0.0025	2,000
<i>Radiological</i>				
Gross Alpha Particle Activity	Total	E900.0	-	15
<i>Other</i>				
Oil and grease	Total	E1664A	3	-
TDS	Total	SM2540C	5	-
TSS	Total	SM2450D	2.5	-

2.7.4.2 Points of Compliance

Two wells that will be used as Points of Compliance (POC) will be constructed along the banks of Red Creek and within the north permit boundary. Point of Compliance Well #1 (POC-1) will be constructed prior to commencement of mine development in Section 24. Point of Compliance Well #2 (POC-2) will be constructed one year prior to activity in Mine Block Years 20 – 30. Figure 2.7.4.2-1 shows the location of the wells to be downgradient from mining activity and in an area within the permit boundary that will not be disturbed during the life of the mine. Mine development is not anticipated for up to 18 months. Holcim



commits to submitting a Technical Revision regarding construction of POC-1 within 90 days of any disturbance within Section 24

Figure 2.7.4.2-1: Approximate location of the future POC well



CUP Exhibit 2.9-1

Red Creek Project Blasting Plan

**Red Creek Project
Blasting Plan
Portland Plant, Holcim US**

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1. Introduction

This blasting plan describe the procedures and conditions that Holcim US Inc. - Red Creek Project will use for blasting limestone and overburden material. The limestone will be used at the Portland Cement Plant for the production of cement.

Blasting activities will follow the general guidance and specifications in this plan.

2. Situation and objectives

The objectives of this report are:

- To present the Blasting Plan for the Red Creek Project.
- This plan provides guidelines and general conditions for all blasting activities that may occur at the Red Creek Project site.

3. Blast Schedule Notification

3.1 Name, address & phone number of Operator

Hamza Mekhfi, Plant Manager

Holcim US - Portland Plant

3500 State Hwy 120 Florence, CO 81226

719-288-1443, Fax 719-784-3470

3.2 Identify where blasting will occur

Red Creek Quarry is comprised of six USGS Sections with a surface area total of approximately 3,851.05 acres. The geologic layers include, Fort Hays and Translime limestone with Golden Shale and Smokey Hill overburden/waste rock.

For the report, the design blast was 50 holes, but it could be more or less in the daily work. The area is 0.109 acres

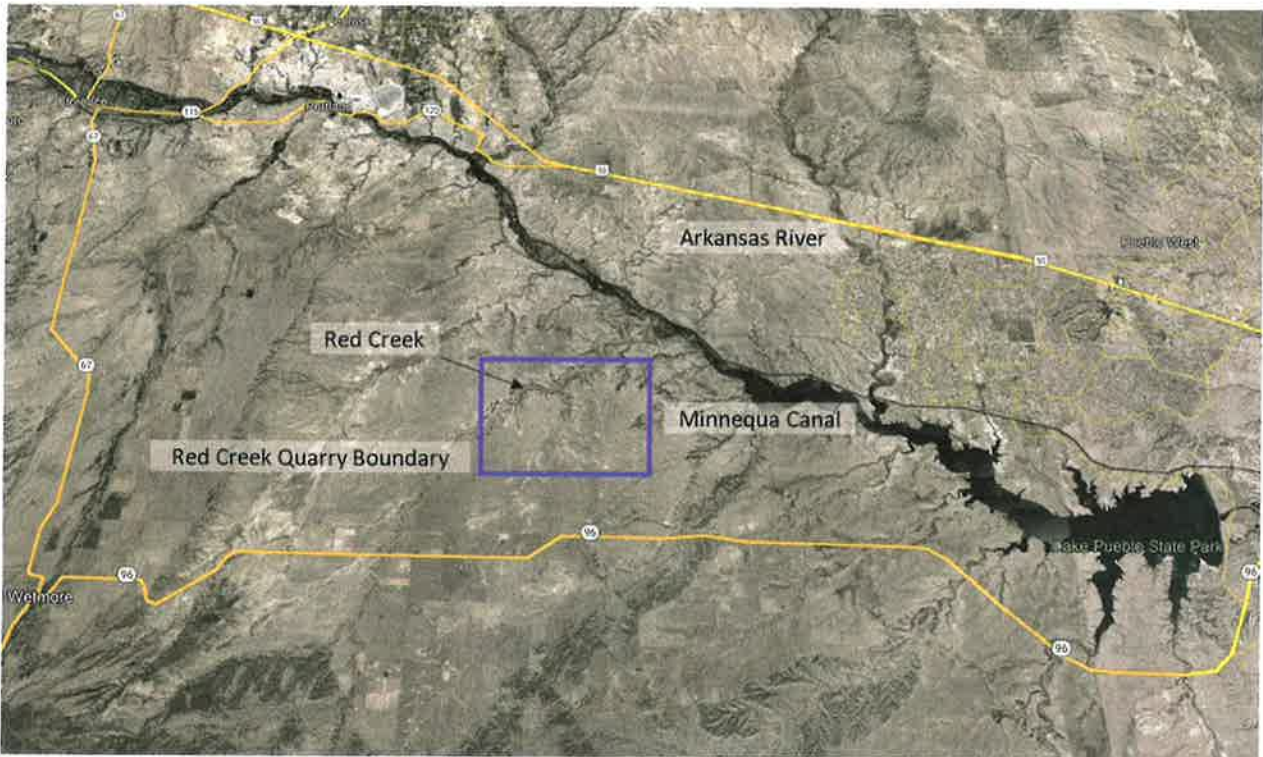


Figure 1. Location of the mining permit project.

3.3 Day(s) and time(s) of blasting

The Cement Plant operates 24/7 - 365 days per year. In order to meet production needs of the plant the Quarry will need to operate 5 to 7 days/week with blasting operations carried out 5 days/week. Monday to Friday.

3.4 Methods used to control access

The access has been control by:

- The quarry area will have a fence or a berm established between the property boundary and the Quarry crest..
- Access to the Quarry is selective on the entrance, the visitors and contractor must comply with Holcim Safety Standards which include - MSHA, Safety Site Specific Induction, H&S Standards, PPE, etc.)
- Applying the Standard Recommended Practices for Drilling and Blasting operations (Holcim)

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

- The Quarry must install safety signs for blasting operations along the perimeter of the quarry site.
- Signs, cones, or barricades shall be placed at the entrance to the Blast Site to prevent unauthorized entry.
- An audible blast siren warning shall be given just prior to each blast.
- Safety signs will be placed around the blasting area.
- Signs at the entrance of the Quarry will establish Designated Entry and Hold Points for Quarry.
- Signs at the entrance of the Quarry will indicate the date and time of the blast.

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

- The Quarry crew is notified of blasting operations at the start of the morning shift and the status is posted on the Entrance Safety sign.
- Regarding any neighbors, the mining area does not have any neighbors within one-half mile of the blasting area, see the Figure 2.

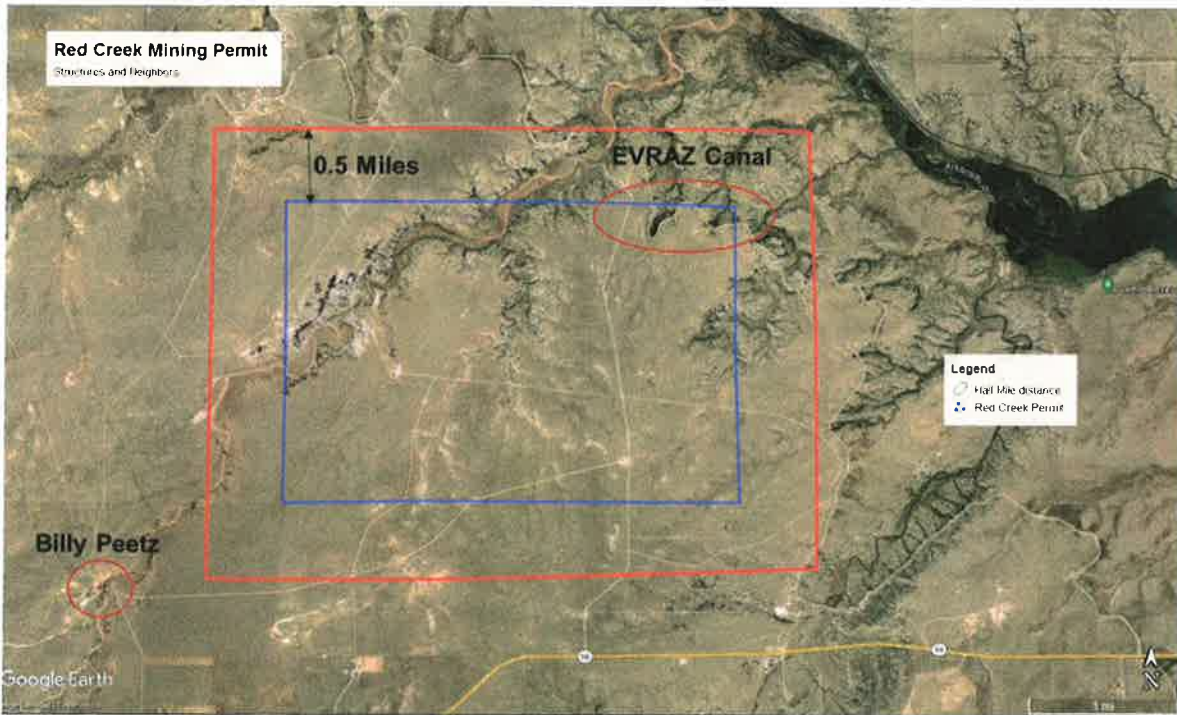


Figure 2. Structures and neighbors one half mile distance from the mining permit.

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

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

The only structure within the permit area is the Minnequa Canal (EVRAZ Company) in the NE of the area. The Canal is outside the permit boundary by more than 200 ft. Canal owners will be notified when blasting is proposed within one-half mile of the canal.

4.2 Establish a pre-blasting record of existing structure(s) condition

The mining plan shows that the Quarry will be in the NE area (EVRAZ canal) by year 60. Holcim will track and record activities in the vicinity of the Minnequa Canal structure as the mining face approaches to the canal

4.3 Identify structures or contents sensitive to blasting.

Minnequa Canal

5. Blast Plan

5.1 Limits on ground vibration

The maximum ground vibration shall be established in accordance with the maximum peak-particle-velocity limit by the scaled-distance equation and the blasting-level chart. A seismographic record shall be provided for each blast.

- Maximum peak-particle velocity.

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 blasting site, in feet	Maximum allowable peak particle velocity (V max) for ground vibration, inches/second 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

Table 1. Scaled distance factor (Source from Office of Surface Mining Reclamation and Enforcement)

¹Ground vibration shall be measured as particle velocity. Particle velocity shall be recorded in three mutually perpendicular directions. The maximum allowable peak particle velocity shall apply to each of the three measurements.

²Applicable to the scaled-distance equation

Scaled-distance equation

The scaled-distance equation,

$W = (D/D_s)^2$, to determine the allowable charge weight of explosives to be detonated in any 8-millisecond period without seismic monitoring; where

W= the maximum weight of explosives, in pounds;

D= the distance, in feet, from the blasting site to the nearest protected structure

Ds = the scaled-distance factor

- Blasting-level chart.

Holcim may use the ground-vibration limits in Figure 3 to determine the maximum allowable ground vibration.

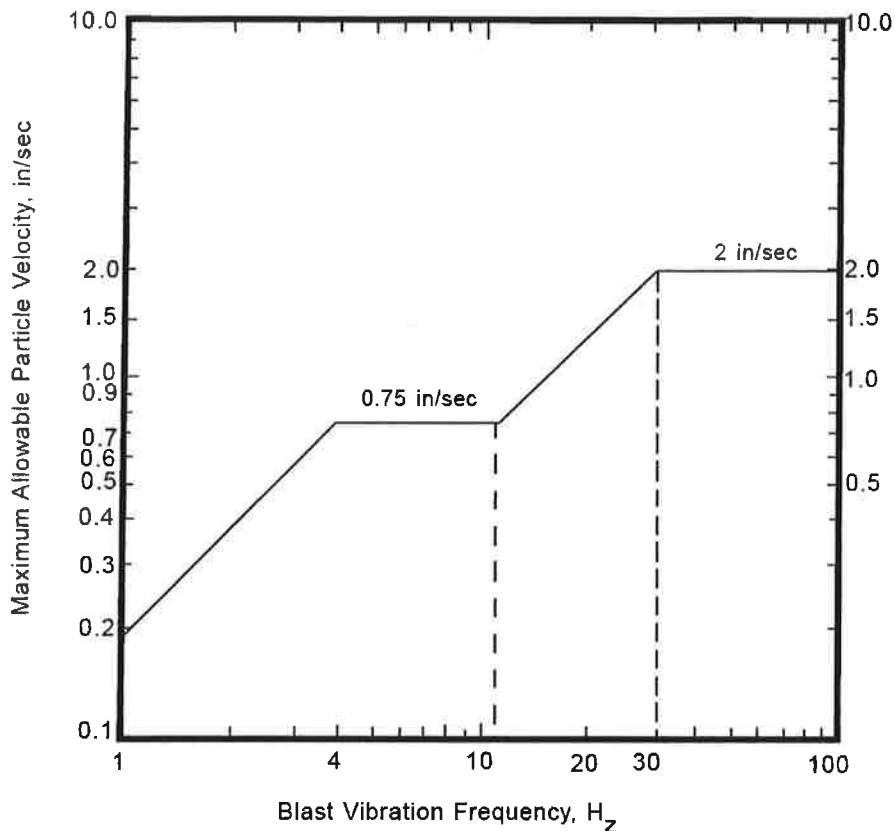


Figure 3. Alternative blasting level criteria. (Source Modified from figure B-1. Bureau of Mines R18507)

5.2 Limits on airblast

Air overpressure shall not exceed the maximum limit of 136 decibel (0.124 Kpa) at the location of any building or structures within one half mile of the blast area.

5.3 Methods used to control adverse effects of blasting

For the adverse control effects of blasting, we propose the recommendations from ISEE, International Society of Explosives Engineers:

Flyrock Control Issues	
Issue	Comment
Explosive Column Length	Column length should never be longer than design to such and extend that estimated maximum flyrock projections can exceed ½ to 2/3 of the distance to sensitive receivers.
Explosives Loaded density	Loaded density should not be significantly higher than design-through incorrect gassing of emulsion product, errors in the size high density base charges, reduction in size of air decks, or the use of larger diameter cartridge products than was proposed in the design (where an air deck is specified, but the hole is full of water, then calculations of effective density should ignore the air/ware/deck)
Stemming columns	Stemming columns must be continuous, and bridging of the stemming columns must be avoided - best achieved through the use of uncontaminated, well-graded aggregate material, and loaded so as to avoid bridging
Protocols for exception reporting	Errors will happen, and adjustments to procedures can be made providing that the error is reported and tools are available to provide reliable estimates of worst-case outcomes.

Table 2. Flyrock control issues.

Factors Within The Blaster-In-Charge's Control that influence Ground Vibrations			
Factor	Influence On Ground Vibration		
	Significant	Moderate	Insignificant
Charge-weight/delay	X		
Delay Interval	X		
Burden and Spacing		X	
Stemming amount			X
Stemming type			X
Charge length and diameter			X
Borehole accuracy		X	
Direction of initiation		X	
Charge-weight per blast			X
Charge depth			X
Exposed detonating cord			X
Charge confinement	X		

Table 3. Factors within the blaster-in-charge's control that influence ground vibrations.

Factors Outside The Blaster-In-Charge's Control That Influence Vibrations			
Factor	Significant	Moderate	Insignificant
Surface terrain (topography)			X
Type of rock		X	
Depth to grade or ore (overburden)	X		
Weather conditions			X

Table 4. Factors outside the blaster-in-charge's control that influence vibrations.

Procedures to reduce Ground Vibrations Regarding Blast Design Factors	
Design Factor	Procedure
Reduce charge-weight/delay	Reduce the charge-weight/delay in a manner consistent with acceptable fragmentation and square root scaling. Consider using smaller boreholes or explosive deck in a new blast design.
Explosives selection	Select explosives based on their physical properties, performance characteristics and sensitivities. Be aware of any limitations and precautions recommended by product manufacturers for sensitivities that may cause sympathetic detonations between boreholes or between chargers within a single borehole.
Initiation system selection	Select initiation systems for more accurate and precise firing times. Electronic initiation systems are used in critical vibration environmental locations.
Delay timing strategies and intervals	Change or modify the direction of initiation, especially for pre-split lines.
	Maximize internal relief by using one to two free faces to blast, by either increasing or decreasing delay times while maintaining desired muckpile shape and degree of fragmentation.
	Use signature waveform analysis to determine timing intervals for destructive interference.
Blast Designs	Adjust blast designs to accommodate smaller charges while maintaining the same powder (energy) factor. This includes, hole diameter and depth, spacing, burden, explosive type, and possible use of separate decks in each hole.

Table 5. Procedures to Procedures to reduce Ground Vibrations Regarding Blast Design Factors.

Procedure To Reduce Ground Vibrations Regarding Blast Implementation Factors	
Field Factor	Procedure
Drilling Accuracy	Ensure good control over drilling so that the planned burden and spacing are those actually achieved by the driller. Good drilling control with also help to reduce the subgrade drilling, and may make it possible to reduce the total charge/borehole.
Loading Accuracy	Review the drill logs. Properly load boreholes according to the information provided on the drill log. Borehole irregularities that may cause overloading include fracture zones, rubble zones, voids and caverns.
Confinement	Eliminate buffer blasting and make sure that the toe is cleared of broken rock.
Quality Control	Review the quality control procedures to ensure that the blast plan is properly implemented.

Table 6. Procedure to reduce ground vibrations regarding blast implementation factors

Factors Within The Blaster-In-Charge's Control that influence Air Overpressure			
Factor	Influence On Air Overpressure		
	Significant	Moderate	Insignificant
Charge-weight/delay	X		
Delay Interval		X	
Burden and Spacing	X		
Stemming amount	X		
Stemming type	X		
Charge length and diameter			X
Borehole accuracy	X		
Direction of initiation	X		
Charge-weight per blast			X
Charge depth	X		
Exposed detonating cord	X		
Charge confinement	X		

Table 7. Factors within the blaster-in-charge's control that influence air overpressure

Factors Beyond The Blaster-In-Charge's Control That Influence Air Overpressure			
Factor	Significant	Moderate	Insignificant
Surface terrain (topography)		X	
Type of rock			X
Depth to grade or ore (overburden)		X	
Weather conditions	X		

Table 7. Factors beyond the blaster-in-charge's control that influence air overpressure.

Procedures Regarding Blast Design Factors To Reduce Air Overpressure	
Design Factor	Procedure
Charge-weight/delay	Determine charge weight per delay consistent with the distance to nearby protected structures according to cube root scaling and the type of blasting. Consider using smaller boreholes or explosive decks in a new blast design.
Delay interval and direction of initiation	Delay time between adjacent boreholes should exceed 1 millisecond for each 0.304 meter (1 foot) to avoid reinforcement of overpressure energy in the direction of initiation.
Burden and spacing	Adjust blast pattern layout commensurate to borehole diameter to achieve the powder factor appropriate to the rock type. This includes burden and spacing, hole depth, explosive type, and the uses separate decks in each hole. Large charges close to and open face may cause rapid face displacements and generate and elevated air pressure rate.

Table 8. Procedures regarding blast design factors to reduce air overpressure.

Procedures Regarding Blast Implementation Factors To Reduce Air Overpressure	
Factor	Procedure
Drilling Accuracy	Ensure good control over drilling so that the planned and spacing are those actually achieved by the driller. Good drilling control will also help to reduce the subgrade drilling, and may make it possible to reduce the total charge per hole.
Preblast Inspection	<ul style="list-style-type: none"> Review the drill logs for the borehole conditions and drilling accuracy. The drill penetration rate will identify clay-filled seams, highly fractured zones or other zones of weakness. Check the free faces for excessive fracturing from back break and the presence of mud seams or voids. Load the front row or boreholes according to maintain sufficient burdens to minimize the potential generation of gas release or excessive throw. Ensure that design burdens are maintained for the entire length of the borehole. Check each borehole for incline and drift prior to loading.
Loading	<ul style="list-style-type: none"> Load boreholes properly according to the information provided on the drill log. Borehole irregularities that may cause overloading include fracture zones, rubble zones, voids and caverns. Deck through all fracture zones and voids to avoid overloading boreholes.
Stemming	<ul style="list-style-type: none"> Use sufficient stemming commensurate with the burden to eliminate blowouts at the hole collar and generation of a stemming release pulse. The stemming length should be at least 0.7 times the burden. Use competent stemming material appropriate for the drill hole diameter. Stemming material with good size and angularity promotes high-friction sidewall forces that will withstand detonation pressures and will resist ejection. Fine stemming (dust) or light weight stemming materials do not bind or lock well are more likely to be eject.
Expose detonation cord	Cover exposed detonation cord trunk lines when blasting near structures and consider using non-detonation cord initiation systems.
Weather Condition	<ul style="list-style-type: none"> Schedule blasting to avoid adverse conditions. Use the internet or contact or contact local airports to get up-to date information. To avoid the temperature inversions that may be present on windless mornings, schedule blasting in the afternoon when inversions are least like to persist. When wind directions are unfavorable, if convenient, delay blasting until the wind direction is away from structures or the wind velocities decrease.
Quality Control	Review the quality control procedures to ensure that the blast plan is properly implemented.

Table 9. Procedures regarding blast implementation factors to Reduce air overpressure.

5.4 Description of monitoring systems to be used and where to be set up

Ground Vibrations and Air Over Pressure.

For monitoring Ground Vibrations and Air Overpressure, the Quarry will utilize seismographs:
 “Blasting seismographs are equipped to monitor ground vibration and air over pressure.

Fly Rock and Blasting Evaluation

Holcim will film all the blasts with the objective/purpose of identifying potential flyrock and to evaluate the blasting events.

5.5 Blasting protocol/procedure

In the Appendix 1 is the SOP for blasting in the Bear Creek Quarry will to the Red Creek Quarry.

5.6 Anticipated typical blast design

For the blast design, Holcim will use the current blast design in Bear Creek Quarry, the Geology of Red Creek, and the Red Creek Geotechnical Assessment.

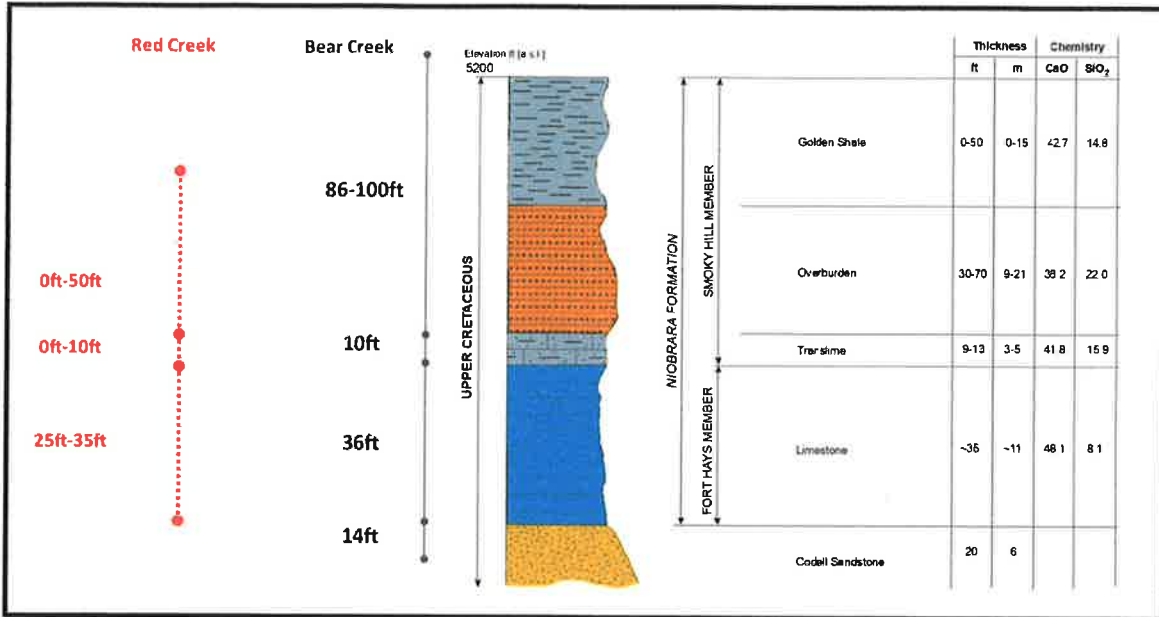


Figure 4. Stratigraphic Column

5.6.1 Blast purpose

Limestone (Fort Hays, Translime) fragmentation is expected a less than four feet in size, and overburden (Smokey Hill and Golden Shale) less than five feet in size. See figure 4

5.6.2 Number, spacing, diameter and depth of holes

For the standard blast design for Limestone and overburden, the results are:

Fort Hays and Translime:

Number of holes: 50

Burden: 16 ft.

Spacing: 19.7 ft.

Diameter: 5.5 inches

Depth of the holes: 48.2 ft.

Smokey Hill and Golden Shale

Number of holes: 50

Burden: 16 ft.

Spacing: 20.1 ft.

Diameter: 5.5 inches

Depth of the holes: 48.9 ft.

See Appendix 2. Fort Hays & Translime Bench and Smokey Hill & Golden Shale Bench blast Design.

5.6.3 Type and amount of stemming material

The material used for stemming is a screening rock; the amount per hole is 0.085 tons by 11.2 ft. of the hole and the size of the stemming Dh/20, approx. 0.2750 inch.

5.6.4 Blasting agent and amount per hole

The explosive agent used is Bulk ANFO and a Blended ANFO + Slurry. The use of ANFO or Blend is dictated by the presence of wet holes. The amount of blasting agent used per hole is estimated at 305 lb (Fort Hays and Translime), and 334 lb (Smokey Hill and Golden Shale)

5.6.5 Type of delay detonator and delay periods expected

The quarry operation will utilize an Electronic detonating System; currently, the Bear Creek Quarry uses an electronic detonating system. The planned delay per hole is 8 and 16 milliseconds per hole.

5.6.6 Location(s) of blast monitoring.

The only structure in the area is the Minnequa Canal (EVRAZ Company) in the NE of the mining area and outside of the permit boundary. Holcim will monitor the canal when mining is within 0.5 mile of the Canal.

6. Commit to Generating and Filing a Blast Report

The red Creek Quarry must complete a blasting report for each shot. The report must be retained for at least 3 years and be available for inspection by the DRMS on demand.

The record shall contain the following data:

- 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
- g. Diameter and depth of holes
- h. Types of explosives used
- i. Total weight of explosives used per hole and maximum weight of explosives used per 8-millisecond period
- j. Initiation system
- k. Type and length of stemming
- l. Mats or other protections used
- m. Type of delay detonator and delay periods used
- n. Number of persons in the blasting crew
- o. Seismographic records where required including:
 - i. Type of instrument sensitivity and the calibration signal of the gain setting or certification of annual calibration

- ii. Exact location of instrument, the blast date and time, and the instrument distance from the blast
- iii. Name of the person and firm taking the reading
- iv. Name of the person and firm analyzing the seismographic record
- v. The vibration level recorded

7. Blasting best practices

After detonation, shock waves and gas pressure cause dynamic stresses around a blast hole with seismic waves propagating away from it, and produces elastic deformation in the rock mass. Some adverse effects from blast are ground vibration, air pressure (airblast), dust, fumes, and flyrocks.

Geological conditions, quantity of explosives detonated at any given time, charge confinement, blasting design, and delay intervals will influence blasting vibrations, and ground movement. Portland Plant had implemented a ground vibration monitoring system at Bear Creek Quarry (BCQ), with several near field (200-250ft) and far field (father than 350ft) seismographs, it allows Quarry personal to assess compliance with regulations, prevent damage to structures, quarry walls, final walls stability, and identify any critical information to protect nearby structures, also minimize liability claims.

BCQ criteria to analyze ground motion are peak particle velocity (PPV – inches/sec) and dominant frequency (Hz), they are widely accepted measurements for potentially damaging to structures and control walls stability in the quarries. Red Creek Quarry (RCQ) will follow, and will improve best practices from BCQ. Monitoring will be a key piece to define and adjust drilling, blasting, blast design parameters with rock mass properties on it.

At Red Creek Quarry (RCQ) Smokey Hill Member, Fort Hays Member, and Codell sandstone can be considered as hard and blocky rock mass; most of materials can be classified as rock Type 3 “fair” rock strength (25Mpa- 50Mpa). Design configuration allows 36ft bench high, 20ft berm width, 75° slope angle, and 52° overall slope at final 150ft high wall. “SRK, Red Creek Geotechnical Assessment Report”.

There are several controlled blasting techniques to improve the stability of the final slope face, and minimize damage. It is possible combine them as geologic conditions, mass rock properties, and drilling-blasting settings allows desired results. Next list:

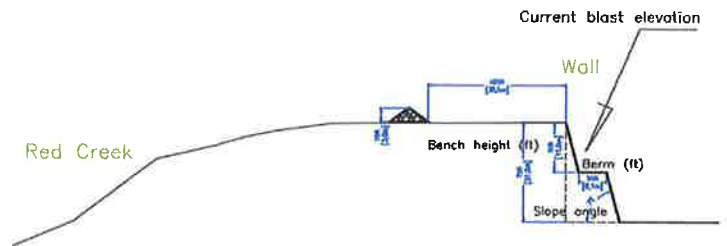
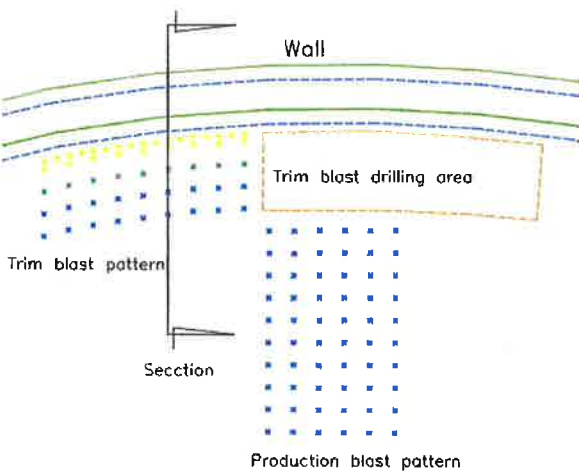
- Line drilling
- Trim blasting
- Buffer blasting
- Smooth wall blasting
- Air decking
- Presplitting

RCQ will evaluate Trim blast and Modified production blast (combination of more favorable techniques at RCQ). Both methods goal is to reduce damage to Red Creek canyon and final quarry walls. Developing RCQ will require drilling, blasting, loading, and hauling of almost 3Mio t of limestone and waste to temporary stockpiles. It will open up an area to establish Quarry offices, shop, secondary crusher and starting point for convey system. Thus, monitoring system will collect and assess any concern related to

minimize ground vibration at future RCQ facilities (offices, quarry shop, secondary crusher, convey system), track rock mass properties, emplace near field and far field seismograph locations. Define blasting criteria (PPV, Frequency ranges) for production blast, trim blast, and modified production blast. To identify better technique for production and critical areas such as close to Red Creek Canyon.

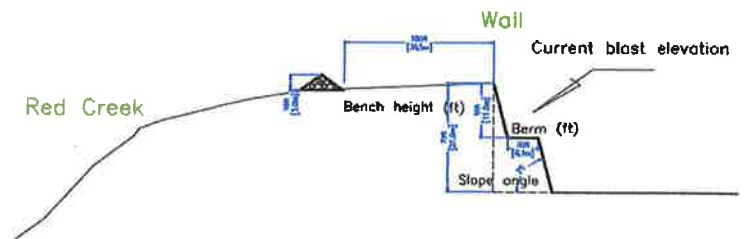
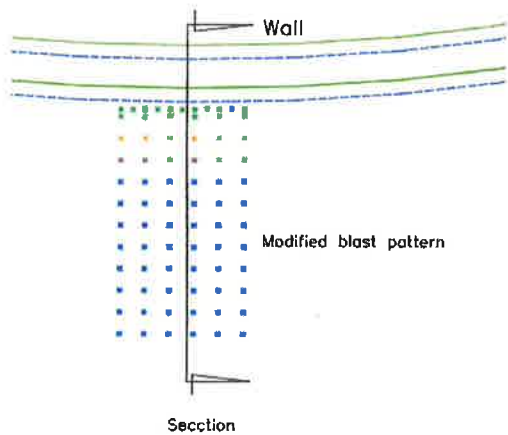
As reference, the following is an explanation of both techniques. Blast size, number of holes per row, blast design, burden – spacing, blast fragmentation will be refine during the Developing stage.

- Trim blasting, Compare with a production blast are smaller in number of holes and tonnage, the fully relieved face allows material to move away, and prevent blast energy from damaging the final wall. Graph show blast patterns, production blast with a free face perpendicular to Red Creek Canyon, after it is blast and clean expose a free face for trim blast to minimize vibrations directed into the wall.



Section, showing final slope design and Red Creek. Crest final quarry wall to berm 100ft

- Modified production blast pattern. It could combines pre splitting, air decking, reduced charge weights near the final quarry wall by thirty to sixty percent, holes in colors close to the wall could be loaded with less explosives. Thus, this blast pattern reduces the overall energy of the blast and minimize impacts over the final quarry wall.



Section, showing final slope design and Red Creek. Crest final quarry wall to berm 100ft


RCQ will follow State, Federal, and international regulations, guidelines to improve its internal procedures.

Prepared by: **Oscar Mancera**
Quarry Manager, Portland Plant

Reviewed by: **Michael B. Toelle**
Manager Raw Materials and Quarries
Holcim US - Manufacturing Support Organization

Appendix 1

SOP for blasting

	<u>Originating Department:</u> QUARRY		<u>Classification:</u> Work Instruction/SOP	<u>E</u>	<u>Q</u>	<u>H&S</u>
	<u>Date Issued:</u> 8/1/22	<u>Revision Date:</u> 03/8/2023	<u>Control Number:</u> PD.	Y	Y	Y
<u>Prepared By:</u> Jeffrey Hauser <u>Title:</u> Quarry Supervisor	<u>Approved By:</u> Oscar Mancera <u>Title:</u> Quarry Manager		<u>HAC Number:</u>			
<u>Distribution:</u> PD.16\200 Quarry						
<u>Subject:</u> Drill And Blasting SOP						
Page 1						

Quarry Drilling and Blasting Procedures

PURPOSE:

The purpose of these Standard Operating Procedures is to describe policies and procedures that will reduce the potential of accidents while enhancing the productivity, cost effectiveness of the drilling, and blasting at Holcim.

Definitions:

Blast Area: The area of a blast within the influence of the loading operations for a given shot. This area will be determined by the Blaster-in-Charge at the start of each blasting shift.

Safety Zone: Area established by lead blaster that keeps personnel and equipment out of harms way during the initiation of the shot.

Holcim Responsibilities:

- Define what bench and location is to be laid out according to quarry manager/supervisor.



Originating Department: QUARRY	Classification: Work Instruction/SOP	E	Q	H&S
		Y	Y	Y
Date Issued: 8/1/22	Revision Date: 03/8/2023	HAC Number:		
Prepared By: Jeffrey Hauser Title: Quarry Supervisor	Approved By: Oscar Mancera Title: Quarry Manager	Page 2		
Distribution: Hi:Quarry;Safety;Procedures_SOP				
Subject: Drill And Blasting SOP				

- Drill Pattern with available equipment.
- Communicate any safety concerns to contractor during drilling and blasting operations.
- Communicate the needs of company to contractor along with estimated blast schedule.
- Provide personnel when available for road blocks.
- Assist in misfires.

Drilling:

- Quarry manager/supervisor will communicate what location needs to be laid out for a drill pattern.
- Work place exam will be conducted at beginning of each shift.
- Make sure pattern area is suitable for layout i.e. (prep floor, move berms).
- Receive pattern sheet from contractor once laid out.
- Operate drill to produce bore hole for blast to appropriate depth and size of hole.
- If on Full Face/limestone bench collect cutting samples for lab analyses.
- Remove drill from pattern once finished and place completed drill pattern sheet in appropriate drop box for contractor.

Blasting:

- Once pattern is finished the quarry manager/supervisor will inform contractor pattern is ready to be loaded and blasted.



Originating Department: QUARRY	Classification: Work Instruction/SOP	E	Q	H&S
Date Issued: 8/1/22	Revision Date: 03/8/2023	Y	Y	Y
Prepared By: Jeffrey Hauser Title: Quarry Supervisor	Approved By: Oscar Mancera Title: Quarry Manager	HAC Number:		
Distribution: H:Quarry; Safety:Procedures_SOP				
Subject: Drill And Blasting SOP				
Page 3				

- During the planned day of a blast, the quarry manager/supervisor will confirm at the beginning of the shift that the blast pattern will be loaded and shot at approx. 12:30 or lunchtime.
- If the contractor is unable to detonate the blast at 12:30 another agreed time will be put into place.
- Approximately one hour before detonation of a blast, the quarry manager/supervisor will ask what road blocks will be needed and at what time to determine the safety zone.
- Once agreed on what road blocks will be needed the quarry manager/supervisor will assign personnel to road blocks
- Quarry personnel will communicate to the contractor that they have agreed on the road blocks in place and they are blocked off.
- Road block personnel will inform contractor when and what equipment leaves the area.
- Quarry personnel will follow and answer Lead Blasters commands.
- Once the contractor lead blaster calls for all clear after the blast, then the quarry operators may leave road block assignments and quarry activity may resume.

Misfires:

- In case of a misfire or other site hazard the all clear signal is not to be sounded
- If a misfire is encountered, a minimum wait period of 15 minutes will be enforced for NONEL initiation systems and 30 minutes for electronic initiation systems prior to investigating the misfire
- The blast security area will be maintained with warning signs posted and adjusted for the hazard.



Originating Department: QUARRY	Classification: Work Instruction/SOP	E	Q	H&S
Date Issued: 8/1/22	Revision Date: 03/8/2023	Y	Y	Y
Prepared By: Jeffrey Hauser Title: Quarry Supervisor	Approved By: Oscar Mancera Title: Quarry Manager	HAC Number:		
Distribution: HI:Quarry;Safety;Procedures_SOP		Page 1		
Subject: Drill And Blasting SOP				

- Any misfire or hazardous condition must be reported to Quarry Management prior to any work occurring. This includes connecting the misfire and re-initiation attempts
- Complete the misfire checklist.

Misfires can be handled in one of three ways:

1. Re-priming or reconnecting surface lines and re-shooting unfired holes
This can only be done if:
 - A. Proper burden is present in the front of unfired holes or
 - B. Sufficient material can be placed in front of free face to replace robbed burden
 - C. The blast safety zone can be extended to a size capable of containing any increase in rock throw as a result of robbed burden
2. Removing the primer elements from un-shot holes
This requires the removal of stemming material by:
 - The use of air pressure only on electronic and nonel detonators (as long as an anti-static line is used)
 - Mechanically removing overburden and stemming to access the explosive column
 - Flushing the stemming material with water



Originating Department: QUARRY	Classification: Work Instruction/SOP	E	Q	H&S
		Y	Y	Y
Date Issued: 8/1/22	Revision Date: 03/8/2023	Control Number: PD		
Prepared By: Jeffrey Hauser Title: Quarry Supervisor	Approved By: Oscar Mancera Title: Quarry Manager	Page 4		
Distribution: H:Quarry;Safety;Procedures_SOP				
Subject: Drill And Blasting SOP				

- Once the stemming is removed the product can be flushed with water pressure to the point the primers can be safely removed
- Care must be taken not to pull to hard on primer down lines
- Recovered caps or boosters must be returned to magazines in an approved vehicle or used on site in a safe manner
- When mucking operations commence on materials from unfired holes, special precautions should be taken during mucking. A blaster will be present until all material associated with unfired holes has been removed.
- All unfired detonators and other explosive products will be inspected for safety and returned to the magazine in an approved vehicle.

Appendix 2
Fort Hays & Translime bench and Smoky Hill & Golden Shale bench blast Design

BLAST DESIGN
Fort Hays & Translime Bench

Rows	Kr
One or Two holes	1
Third and subsequent rows ie- buffer blasts	0.9

Bedding Orientation	Kd
Bedding steeply deeping into cut	1.18
Bedding steeply deeping into face	0.95
Other cases of deposition	1

Geologic Structure	Ks
Heavily cracked. Frequent weak joins, weakly cement layers.	1.3
Thin well-cemented layers with tigth joins	1.1
Massive intact rock	0.95

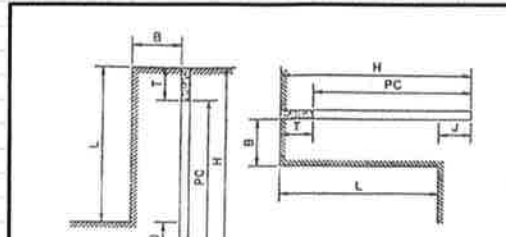


Figure 6-1 Symbols for Blast Design

where:

- B = Burden
- T = Stemming
- J = Subdrilling
- L = Bench height
- H = Blasthole depth
- PC = Powder column length

CHARGE CALCULATIONS

				0.3048		
Type of rock	Fort Hays +Translime					
Rock Strength (weak=1, Strong =13)	10					
Bench Heigth	L	14.0	m	46	ft	
Bench width	A	100.0	m	328.1	ft	
Diameter of Explosive	De	140	mm	5.50	inch	
Boottom charge	Spartan 400G Booster 40/Cs	400	g	0.99	lb	
Weight of column charge	Lb	12.26	Kg/m	8.24	lb/ft	
Relative bulk strength (ANFO=100)	Stv	100		100		
Specific Gravity of the Rock	SGr	2.28	t/m ³	0.065	t/ft ³	
Correction for number of rows	Kr	1		1		
Correction for bedding orientation	Kd	0.95	t/m ³	1.18		
Correction for Geologic Structure	Ks	1.3		1.3		
Density rock stemming		1.63		0.046	t/ft ³	
Max Burden (Anfo)	B	$0,008 \times Dex(Stv/SGr)^{1/3}$	3.9	m	12.9	ft
Geologic correction factors	B"	$B * Kr * Kd * Ks$	4.9		16.0	
Stemming	T	$0,7 * B"$	3.4		11.2	
Subdrilling	J	$0.3 * B"$	0.0	m	0.0	ft
Stiffness ratio		$L/B"$	2.9		2.9	
Blasthole depth	H	$1.05 * (L+J)$	14.7	m	48.2	ft
Spacing	S	$(L+7 * B)/8$	6.0		19.7	
No of holes per row	No	A/S	16.6		16.6	
Heigth of bottom charge	hb	$1.3 * B"$	5.1	m	16.8	ft
Bottom charge	Qb	$hb * Lb$	62.8	Kg	138.5	Lb
Booster	lp		0.80	Kg	0.45	Lb
Heigth of column charge	hp	$H - (hb+T)$	6.17	m	20.24	ft
Column charge	Qp	$hp * Lp$	75.65	Kg	166.77	Lb
Total Charge weight per hole	Qt	$Qb + Qp + lp$	139.28	Kg	305.74	Lb
Powder Factor	q	$Qt * No / (B" * L * A)$	0.340	Kg/m ³	0.021	Lb/ft ³
			0.149	Kg /t	0.327	Lb/t
Specific perforation	b	$No * H / (B" * L * A)$	0.036	m/m ³	0.003	ft/ft ³
			0.016	m/t	0.052	ft/t
Specific consume stemming			0.00009	t stemming/t		

BLAST DESIGN
Smoky Hill & Golden Shale
Bench

Rows	Kr
One or Two holes	1
Third and subsequent rows ie- buffer blasts	0.9

Bedding Orientation	Kd
Bedding steeply deeping into cut	1.18
Bedding steeply deeping into face	0.95
Other cases of deposition	1

Geologic Structure	Ks
Heavily cracked, Frequent weak joins, weakly cement layers.	1.3
Thin well-cemented layers with tigth joins	1.1
Massive intact rock	0.95

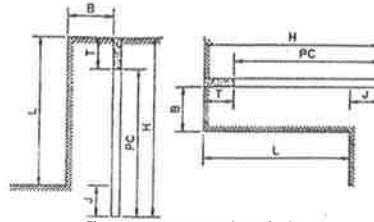


Figure 8-1 Symbols for Blast Design

where

- B = Burden
- T = Stemming
- J = Subdrilling
- L = Bench height
- H = Blasthole depth
- PC = Powder column length

CHARGE CALCULATIONS

Type of rock	Smoky Hill + Golden Shale				0.3048	
Rock Strength (weak=1, Strong =13)	7					
Bench Heigth	L	15.0	m	49	ft	
Bench width	A	100.0	m	984	ft	
Diameter of Explosive	De	140	mm	5.50	inch	
Bootom charge	Spartan 400G Booster 40/Cs	400	g	0.99	lb	
Weight of column charge	Lb	12.26	Kg/m	8.24	lb/ft	
Relative bulk strength (ANFO=100)	Stv	100		100		
Specific Gravity of the Rock	SGr	2.28	t/m ³	0.065	t/ft ³	
Correction for number of rows	Kr	1		1		
Correction for bedding orientation	Kd	0.95	t/m ³	1.18		
Correction for Geologic Structure	Ks	1.3		1.3		
Density rock stemming		1.63		0.046	t/ft ³	
Max Burden (Anfo)	B	$0,008 \times Dex \times (Stv/SGr)^{1/3}$	3.9	m	12.9	ft
Geologic correction factors	B''	$B'' \times Kr \times Kd \times Ks$	4.9		16.0	
Stemming	T	$0,7 \times B''$	3.4		11.2	
Subdrilling	J	$0,3 \times B''$	0.0	m	0.0	ft
Stiffness ratio		L/B''	3.1		3.1	
Blasthole depth	H	$1,05 \times (L+J)$	15.8	m	51.7	ft
Spacing	S	$(L+7 \times B)/8$	6.1		20.1	
No of holes per row	No	A/S	16.3		48.9	
Heigh of bottom charge	hb	$1,3 \times B''$	5.1	m	16.8	ft
Bottom charge	Qb	$hb \times Lb$	62.8	Kg	138.5	Lb
Booster	Ip		0.80	Kg	0.45	Lb
Heigh of column charge	hp	$H - (hb+T)$	7.22	m	23.68	ft
Column charge	Qp	$hp \times Lp$	88.52	Kg	195.16	Lb
Total Charge weight per hole	Qt	$Qb + Qp + Ip$	152.15	Kg	334.12	Lb
Powder Factor	q	$Qb \times No / (B'' \times L \times A)$	0.340	Kg/m ³	0.021	Lb/ft ³
			0.149	Kg / t	0.327	Lb/t
Specific perforation	b	$No \times H / (B'' \times L \times A)$	0.035	m/m ³	0.003	ft/ft ³
Specific consume stemming			0.00008	t	0.051	ft/t
				stemming/t		



CUP Exhibit 3.1 Current Deed of Record

EASEMENT AGREEMENT

THIS EASEMENT AGREEMENT (this "Agreement"), is made and entered into as of this 29th day of September, 2011, by and between **Ranch Land, LLC**, a Colorado limited liability company ("Grantor"), and **HOLCIM (US) INC.**, a Delaware corporation ("Grantee").

WITNESSETH:

WHEREAS, Grantor is the owner of that certain real property located in the County of Fremont and the County of Pueblo, Colorado, as shown on Exhibit A attached hereto and made a part hereof ("Grantor's Property"); and

WHEREAS, Grantee is the owner of that certain real property located in the County of Fremont and the County of Pueblo, Colorado, as shown on Exhibit B attached hereto and made a part hereof ("Grantee's Property" and Parcels, 1, 2 and 3 shown on Exhibit B are referred to herein as "Parcel 1," "Parcel 2" and "Parcel 3" respectively); and

WHEREAS, Grantee desires to use certain roads located on Grantor's Property for access to Grantee's Property which roads and access points are shown on Exhibit C attached hereto and made a part hereof (the "Access Easement Areas"); and

WHEREAS, Grantor has agreed to grant to Grantee access easements on the terms and conditions set forth herein.

NOW, THEREFORE, for and in consideration of One Dollar (\$1.00) and for other good and valuable considerations, the receipt and adequacy of which are hereby acknowledged, Grantor and Grantee do hereby agree as follows:

1. **Grant of Easement.** Grantor hereby grants, bargains, sells and conveys to Grantee and its permitted successor and assigns, the right, privilege and perpetual non-exclusive easement to enter upon the Access Easement Areas (the "Easement") for the purpose of accessing Grantee's Property.

2. **Use of Access Easement Area.**

(a) **Generally.** Grantor retains all other rights related to Grantor's Property and may use it for any purpose, it being understood that Grantee's activities upon and use of the Access Easement Areas: (i) shall not unreasonably interfere with Grantor's operations or use of Grantor's Property and (ii) shall comply with all applicable laws, rules, regulations, ordinances, codes and permits of any governmental authority (whether now existing or hereafter issued, enacted or arising).

(b) **Specific Restrictions.** Grantee shall use the Access Easement Areas only for ingress and egress purposes related to the mining of raw materials, the general maintenance and care of Grantee's Property, and other purposes reasonably incidental thereto. Grantee shall maintain the roads in the Access Easement Areas and repair any damage caused by its use of roads in the

Access Easement Areas; provided that Grantee's maintenance obligation shall be proportional to its use of such roads. Additionally, Grantee shall use only the access road designated as "Heavy Access" on Exhibit C for heavy equipment; any upgrades to, or widening of, such road required by Grantee shall be made by Grantee at its sole cost and expense. Grantee will re-grade and seed (with native vegetation) any portion of the Access Easement Areas disturbed in connection with the widening or upgrading of such road.

3. **Easement Runs with the Land.** The Easement granted in this Agreement shall run with the land and shall be binding upon Grantor and Grantor's successors and assigns.

4. **Indemnification; Insurance.** Grantee shall indemnify and hold harmless Grantor from and against any and all claims, demands, actions, penalties, fines, losses, costs, assessments or other liabilities (collectively, "Losses") arising out of or resulting from Grantee's access to or use of the Access Easement Area, or arising out of or resulting from Grantee's breach of this Agreement, in each case, whether occurring on the Access Easement Area or elsewhere. Grantee shall maintain commercial general liability insurance in an aggregate amount of not less than Two Million Dollars (\$2,000,000) and may satisfy this requirement by obtaining the appropriate endorsement to any master policy of liability insurance that Grantee may maintain. Grantor shall be named as an additional insured under this policy and shall be entitled to 30 days' prior written notice if Grantee cancels such coverage. Grantee shall also maintain the statutorily required limits of worker's compensation and employer liability insurance coverage. Grantee shall provide to Grantor a certificate of insurance evidencing the foregoing insurance coverages before any entry on the Access Easement Area by Grantee.

5. **Enforcement.** Should it become necessary for either party to this Agreement to bring suit to enforce any provision hereof or to enforce its rights upon a breach of any of the covenants or obligations contained herein by the other party, the prevailing party in such action, shall be entitled to recover from the non-prevailing party, in addition to any damages or other relief granted as a result of such litigation, all costs and expenses of such litigation and reasonable attorneys' fees (including court costs and costs of appeal). In addition to the rights and remedies provided herein, none of which is exclusive, each party shall have any other right or remedy allowed at law or in equity, by statute or otherwise, including without limitation, the right to enjoin any breach or threatened breach by the other party of any covenant, agreement, term or condition of this Agreement and the right of specific performance.

6. **Notices.** All notices given hereunder shall be in writing and shall be sent by personal delivery, by recognized overnight courier service, or by U.S. Mail, certified mail return receipt requested, to the following addresses: (a) if to the Grantor at 3925 Hill Circle, Colorado Springs, Colorado 80904, and (b) if to the Grantee at 6211 Ann Arbor Road, P.O. Box 122, Dundee, Michigan 48131, Attention: Legal Department. Either Grantor or Grantee may change its address for notice by notifying the other party of such change of address in a manner provided in this paragraph.

7. **Governing Law.** This Agreement shall be governed by and construed in accordance with the laws of the State of Colorado without regard to conflict of law provisions.

8. **General Provisions.** Grantor and Grantee hereby represent and warrant to one another that each has the right, power, authority and ability to execute this Agreement and to perform all of the obligations imposed on it hereunder. Grantor specifically makes no representation as to the suitability of the Access Easement Area for its intended purposes;

Grantee accepts the Access Easement Areas "AS-IS" without any representations of Grantor. This Agreement may only be modified or amended upon the mutual consent of the parties hereto. The headings in this Agreement are for convenience only and do not constitute a part of this Agreement and should not be used in construing this Agreement. This Agreement constitutes the entire Agreement between the parties with respect to the subject matter thereof and all prior understandings and agreements, oral or written, concerning the same subject matter, are hereby merged into this Agreement and extinguished hereby. The invalidity or unenforceability of any particular provision of this Agreement shall not affect the other provisions hereof, and this Agreement shall be construed in all respects as if such invalid or unenforceable provisions were omitted. This Agreement may be executed in counterparts, and all counterparts so executed shall constitute one agreement binding on each party hereto, notwithstanding that all parties are not signatory to the same counterpart.

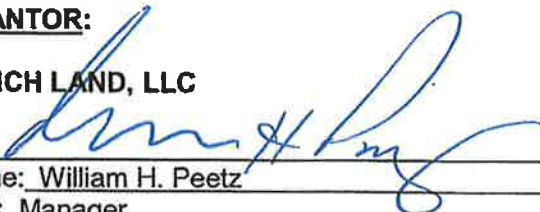
[Signature Page Follows.]

A handwritten signature in black ink, located in the bottom right corner of the page. The signature is cursive and appears to be the initials "ML".

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

GRANTOR:

RANCH LAND, LLC

By: 
Name: William H. Peetz
Title: Manager

GRANTEE:

HOLCIM (US) INC.

By: _____
Name: Jeffrey Ouhl
Title: Senior Vice President, Manufacturing

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

GRANTOR:

RANCH LAND, LLC

By: _____
Name: William H. Peetz
Title: Manager

GRANTEE:

HOLCIM (US) INC.

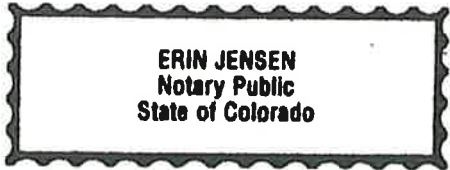
By:  _____
Name: Jeffrey Ouhl
Title: Senior Vice President, Manufacturing

State of Colorado)

County of El Paso)

On this 20th day of September, 2011, before me personally appeared William H. Peetz to me personally known, who, being by me duly sworn, did say that he is the manager of RANCH LAND, LLC, a Colorado limited liability company, and that said instrument was signed on behalf of said company by authority of its manager; and said manager acknowledged said instrument to be the free act and deed of said company.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal in the County and State aforesaid, the day and year first above written.



[Signature]
My term expires 2/3/15 Notary Public.

State of _____)

County of _____)

On this ____ day of September, 2011, before me personally appeared Jeffrey Ouhl to me personally known, who, being by me duly sworn, did say that he is the Senior Vice President, Manufacturing of HOLCIM (US) INC., a Delaware corporation, and that said instrument was signed on behalf of said corporation by authority of its Board of Directors; and said officer acknowledged said instrument to be the free act and deed of said corporation.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal in the County and State aforesaid, the day and year first above written.

My term expires _____ Notary Public

State of _____)

County of _____)

On this ____ day of September, 2011, before me personally appeared William H. Peetz to me personally known, who, being by me duly sworn, did say that he is the manager of RANCH LAND, LLC, a Colorado limited liability company, and that said instrument was signed on behalf of said company by authority of its manager; and said manager acknowledged said instrument to be the free act and deed of said company.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal in the County and State aforesaid, the day and year first above written.

Notary Public.
My term expires

State of Missouri)

County of Ste. Genevieve

On this 27th day of September, 2011, before me personally appeared Jeffrey Ouhl to me personally known, who, being by me duly sworn, did say that he is the Senior Vice President, Manufacturing of HOLCIM (US) INC., a Delaware corporation, and that said instrument was signed on behalf of said corporation by authority of its Board of Directors; and said officer acknowledged said instrument to be the free act and deed of said corporation.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal in the County and State aforesaid, the day and year first above written.

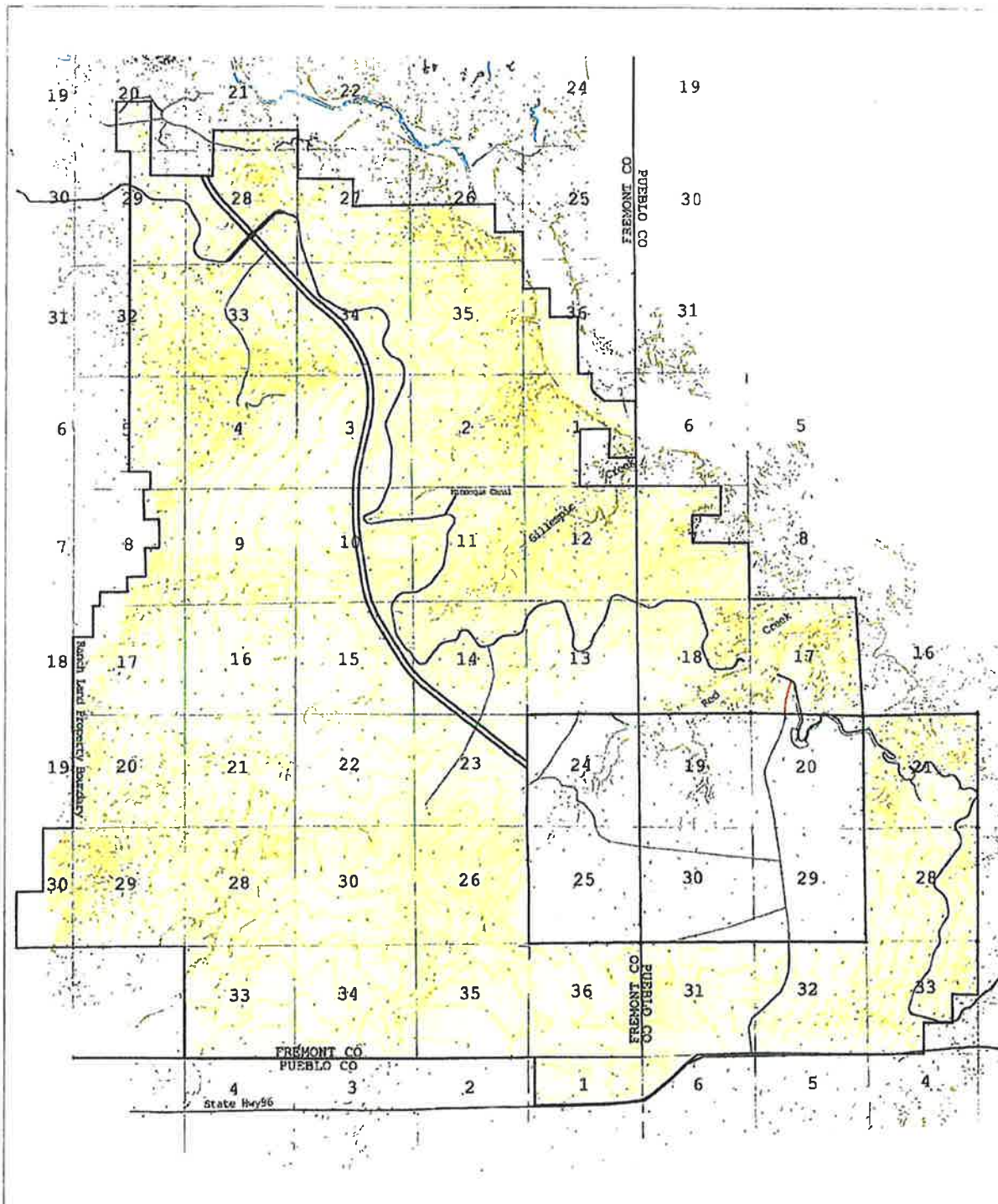
LISA M SCHWENT
Notary Public - Notary Seal
State of Missouri
Commissioned for Ste. Genevieve County
My Commission Expires: January 01, 2013
Commission Number: 09407756

Lisa M. Schwent
Notary Public
My term expires January 01, 2013

[Handwritten signature]

EXHIBIT A
Grantor's Property

at



Ranch Land LLC Property


		DRAWN JRL CHECKED SCALE Not To Scale
EXHIBIT A Ranch Land, LLC Property Map		
ISSUE 9/20/2011	STATE PLANE COORDINATES <small>CO.D. CENTRAL ZONE, NAD83 NAVD80, GCS11 96</small>	

EXHIBIT B
Grantee's Property

Parcel 1:

A parcel of land located within the Southeast one-quarter of Section 20, the Southwest one-quarter of Section 21, the Northwest one-quarter of the Northwest one-quarter of Section 28 and the Northeast one-quarter of Section 29, all within T19S, R68W of the 6th P.M., County of Fremont, State of Colorado and being more particularly described in metes and bounds as follows:

Beginning at a point in the Northwest one-quarter of the Southeast one-quarter of Section 20, T19S, R68W of the 6th P.M., from which point the Southwest corner of said Section 20 bears S56°56'25"W, a distance of 4345.43 feet, said point also being on the South line of that 5 acre parcel described at Reception No. 717745, Fremont County records;

thence along the South line of said 5 acre parcel, N89°09'51" E, a distance of 311.28 feet, to a point at the Southeast corner of said 5 acre parcel;

thence along the East line of said parcel, N00°41'38"W, a distance of 332.20 feet, to a point on the North line of the Southeast one-quarter of Section 20;

thence along said North line, N89°09'19"E, a distance of 1354.43 feet, to a point at the Northeast corner of the Southeast one-quarter of said Section 20;

thence N89°31'25"E, along the North line of the Southwest one-quarter of Section 21, a distance of 1320.78 feet, to a point at the Northeast corner of the Northwest one-quarter of the Southwest one-quarter of Section 21;

thence along the East line of said Northwest one-quarter of the Southwest one-quarter of Section 21, S00°03'45"E, a distance of 1327.17 feet to a point at the Southeast corner of said Northwest one-quarter of the Southwest one-quarter of Section 21;

thence departing said line, S00°50'44"W, a distance of 2506.27 feet to a point within the Northwest one quarter of the Northwest one-quarter of Section 28, from which point the Northwest corner of Section 28 bears N47°47'59"W, a distance of 1730.92 feet;

thence N89°41'57"W, a distance of 2964.86 feet, to a point within the Northeast one-quarter of Section 29;

thence N00°18'03"E, a distance of 3450.02 feet to the Point of Beginning of this description.

Said parcel contains 258.28 acres, more or less.

Parcel 2:

A strip of land located within Section 28, the Northeast one-quarter of the Northeast one-quarter of Section 33, Section 34, T19S, R68W of the 6th P.M. and Section 3, Section 10, the Southwest one-quarter of Section 14, the East one-half of Section 15 and the North one-half of Section 23, T20S, R68W of the 6th P.M., County of Fremont, State of Colorado and being more or less particularly described as lying 125.00 feet on each side of the following described centerline.

Beginning at point within said Section 28 from which the Northwest corner of Section 28 bears N36°48'18"W, a distance of 1449.43 feet;

thence S27°05'30"E, a distance of 113.81 feet to a point at the beginning of a curve to the left, said curve having a radius of 5682.00 feet, a central angle of 16°50'42" and a chord bearing of S 35°30'51"E; thence along said curve, Southeasterly an arc distance of 1670.52 feet;

thence S 43°56'12"E, a distance of 5704.94 feet to a point at the beginning of a curve to the left, said curve having a radius of 3875.50 feet; a central angle of 07°22'29" and a chord bearing of S 47°37'27"E; thence along said curve, Southeasterly an arc distance of 498.84 feet;

thence S 51°18'41"E, a distance of 850.39 feet to a point at the beginning of a curve to the right, said curve having a radius of 5017.00 feet; a central angle of 61°48'57" and a chord bearing of S20°24'13"E;

thence along said curve Southeasterly an arc distance of 5412.78 feet to a point at the beginning of a curve to the right, said curve having a radius of 12013.00 feet, a central angle of 02°55'07" and a chord bearing of S 11°57'49"W; thence along said curve Southwesterly an arc distance of 611.94 feet;

thence S 13°25'22"W, a distance of 1182.22 feet to a point at the beginning of a curve to the left, said curve having a radius of 7160.00 feet; a central angle of 13°07'12" and a chord bearing of S06°51'46"W; thence along said curve Southerly an arc distance of 1639.55 feet;

thence S 00°18'10"W, a distance of 1167.38 feet, to a point at the beginning of a curve to the left, said curve having a radius of 4943.00 feet; a central angle of 08°58'53" and a chord bearing of S 04°11'16"E; thence along said curve Southerly an arc distance of 774.84 feet;

thence S 08°40'43"E, a distance of 2273.99 feet to a point at the beginning of a curve to the left, said curve having a radius of 5030.00 feet; a central angle of 23°12'03" and a chord bearing of S20°16'44"E; thence along said curve Southeasterly an arc distance of 2036.81 feet;

thence S 31°52'46"E, a distance of 2080.29 feet to a point at the beginning of a curve to the left, said curve having a radius of 5100.00 feet; a central angle of 20°42'32" and a chord bearing of S 42°14'02"E; thence along said curve Southeasterly an arc distance of 1843.33 feet;

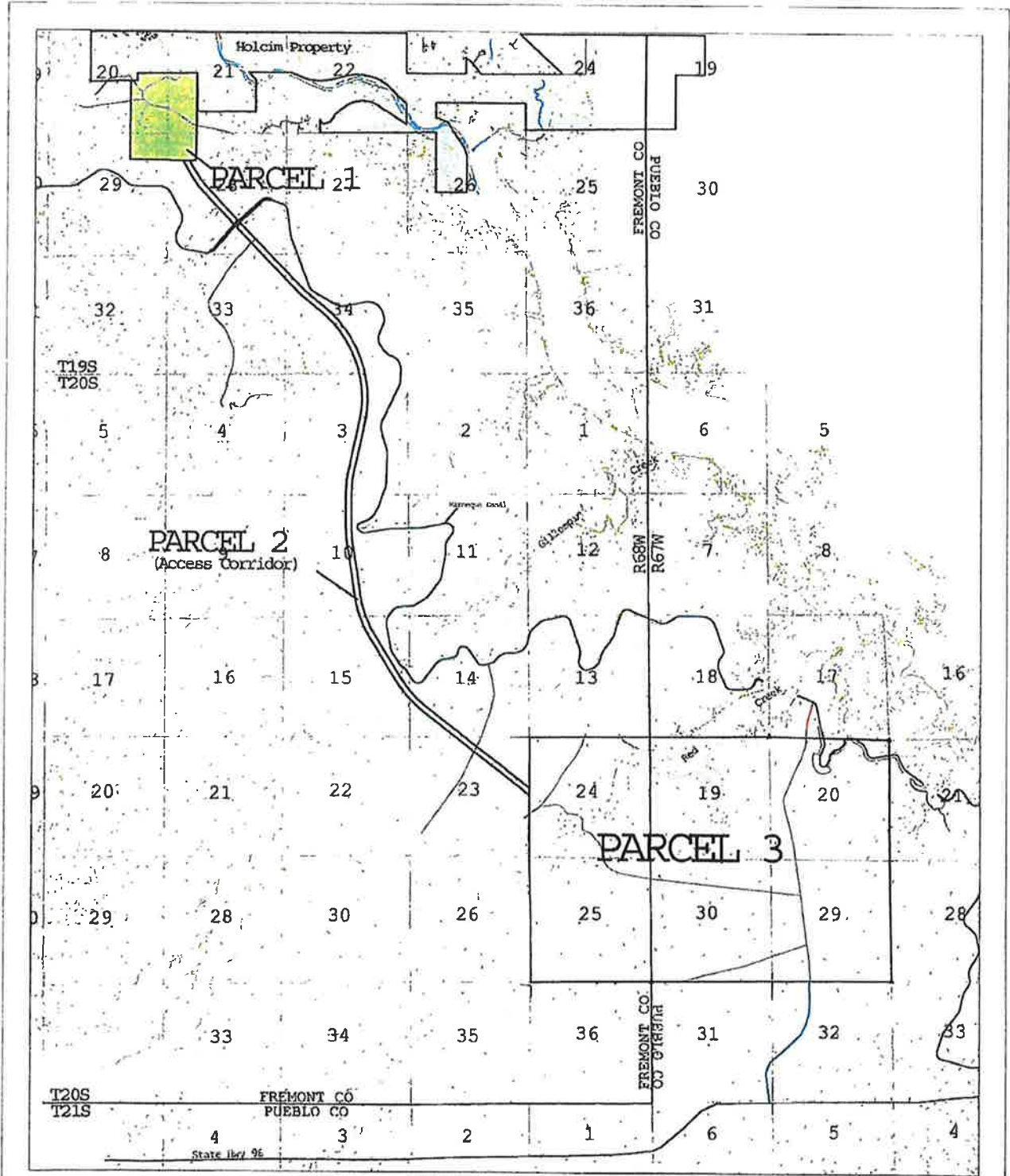
thence S 52°35'18"E, a distance of 5789.81 feet to a point on the East line of the Northeast one-quarter of Section 23, T20S, R68W, 6th P.M., from which point the Northeast corner of said Section 23 bears N00°05'49"W, a distance 2341.06 feet, said point being the Point of Terminus of this description.

Said parcel contains 193.13 acres, more or less.

Parcel 3:

Section 19, Section 20, Section 29, and Section 30, T20S, R67W of the 6th P.M., County of Pueblo, State of Colorado, together with Section 24 and Section 25, T20S, R68W of the 6th P.M., County of Fremont, State of Colorado.

Said parcel contains 3851.05 acres, more or less.



- Holcim Portland Plant Property
- Holcim Property - Parcel 1
- Holcim Property - Parcel 2
- Holcim Property - Parcel 3


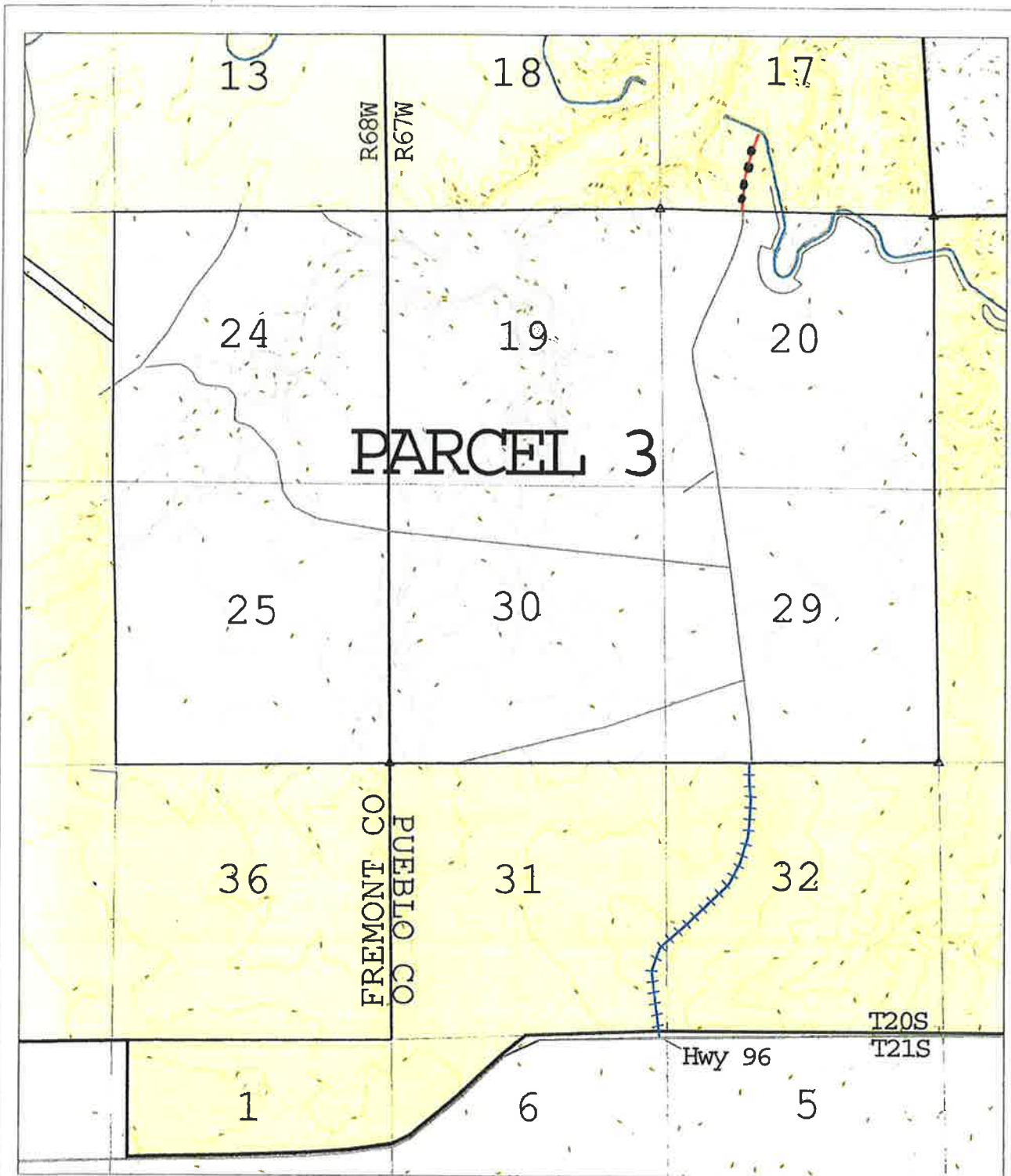
		EXHIBIT B Holcim Property Map STATE PLANE COORDINATES <small>CO.0 CENTRAL ZONE, NAD83, NAVD83, GLOID 56</small>	DRAWN: JRL CHECKED: B
ISSUED: 9/20/2011	SCALE: Not To Scale		

EXHIBIT C
Access Easement Areas





- Holcim Property - Parcel 2
- Holcim Property - Parcel 3
- Ranch Land LLC Property
- Holcim Access Road
- Holcim Access Road Heavy Equipment Access

ISSUE
8/17/2011



Exhibit C
Holcim Access Roads

DRAWN	JRL
CHECKED	
SCALE	Not To Scale

CUP Exhibit 3.2 Water Supply

CO DRMS 112 Permit Exhibit G: Water Information (Rule 6.4.7)

Section 2.7.5 Mine Water Source and Uses.

Water will be needed at the RCQ Mine Site for both dust suppression and sanitary purposes. Holcim has anticipated the need for two groundwater wells to provide the supply for these uses. Well siting will occur in 2024 and applications for well permits will be submitted to the Division of Water Resources once the well locations have been selected. It is anticipated that these wells will be installed in 2025. The replacement supplies for potential depletions in 2025 will continue to be a long-term lease of fully consumable water from Pueblo Board of Water Works (PBWW), which is currently being used to cover depletions at the BCQ, pursuant to the Holcim augmentation plan decreed in Case No. 16CW3102. Terms of the water lease provide for up to 175 acre-feet per year of replacement water to cover depletions from both the Holcim Bear Creek Quarry and the Holcim Wetlands SWSP/16CW3102 Decree on an annual basis. The lease also provides Holcim the option to renew through December 2039. The request for Substitute Water Supply Plan is provided in its entirety in Exhibit 3.2-1. An approval from Division of Water Resources (DWR) will be obtained prior to exposing groundwater.



CUP Exhibit 3.3 CO Division of Water Resources Information Form

FREMONT COUNTY'S
COLORADO DIVISION OF WATER RESOURCES
INFORMATION FORM FOR
SPECIAL USE, ZONING, AND OTHER LAND USE ACTIONS

The Fremont County Department of Planning & Zoning (Department) is required to submit proposed land use actions to the State Engineer's Office (SEO) at the Colorado Division of Water Resources (DWR). The SEO is responsible for providing an opinion regarding material injury likely to occur to decreed water rights by virtue of diversion of water necessary or proposed to be used to supply the proposed land use action.

This DWR Information Form must be filled out completely and accurately to ensure that the submittal to the DWR regarding this proposed land use action includes the necessary information required by that agency. The DWR has 21 days to respond to County submittals. Incomplete submittals will be returned to the County for additional information and then must be resubmitted to the DWR.

Please note that the DWR timeframe for review may not coincide with the County deadlines or meetings, and if the DWR requires additional information, further delays may occur.

Attachments can be made to this application to provide expanded narrative for any application item including supportive documentation or evidence for provided application item answers. Please indicate at the application item that there is an attachment and label it as an exhibit with the application item number, a period and the number of the attachment for that item (*as an example, the first attached document providing evidence in support of the answer given at application item number 8 would be marked - Exhibit DWR-8.1, the fifth attached document supporting the narrative provided for application item 8 would be marked - Exhibit DWR-8.5*). Exhibit numbers should be placed in the lower right hand area of the exhibit.

1. Name of proposed project: Red Creek Quarry formerly Ranch Land Rock Pit #1 CUP 02-3
2. Provide a map of proposed improvements with an identified location that includes a quarter-quarter, section, township, range and principle meridian (PLSS).
3. Legal description of subject property: Sections 24 and 25 T20S, R68W in Fremont County
west of the 6th P.M.

4. What is the size of the existing parcel? 1500 Acres --- Square feet
5. What are the proposed uses of the subject property?
 Residential Only
 Commercial
 Commercial and Residential
6. What are the current uses of water on this parcel?
 - a. Are there any established uses that require water? Yes --- No

- b. Number of existing homes: 0
 If one or more, date this use was established: _____
- c. Home lawn / garden irrigation: Yes --- No
 If yes, amount: _____ Acres --- Square feet
 Date this use was established: _____
- d. Livestock watering: Yes --- No
 If yes, commercial or non-commercial livestock? *(Circle one)*
 If yes, date this use was established: Historic Clevenger Ranch
- e. Other uses: _____
 Dates established: _____

7. What will be the proposed uses of water for this parcel?

- a. Number of proposed homes (including the home above if it will remain): 0
- b. Lawn / garden watering, amount: 0 Acres --- Square feet
- c. Livestock watering: Yes --- No
 If yes, commercial or non-commercial livestock? *(Circle one)*
- d. Number of Employees per day: 27 Number of days open per year: 365
- e. Number of Customers per day: 0 Number of days open per year: 0
- f. Bed / Breakfast Customers per day: 0 Number of days open per year: 0
- g. Describe other water needs: _____
Water will be used for dust suppression on quarry roads and sanitation water for employees.

8. Source of water for the uses described above: *(If more than one source is utilized for parcel, describe which sources will supply which proposed uses)* _____

Holcim will submit for a commercial well permit upon approval of the CUP modification.

- a. Is Municipal water available to parcel: Yes --- No
- b. Is water available to parcel from an independent water district? Yes --- No

c. Are the uses described above proposed to be provided water by a municipality?

Yes -- No

Name of provider: _____

d. Is water hauled: Yes --- No

e. Is there an existing permitted well?: Yes --- No

If yes, permit number: _____

f. Is there a Substitute Water Supply Plan? (*Substitute water supply plans provide water users a mechanism to replace out-of-priority depletions on an interim basis.*)

Yes --- No **Please refer to Exhibit 8-1 DRMS Exhibit G Water**

If yes, name of plan: **Information Section 2.7.5 Mine Water Source and Uses**

g. Is there an unregistered well? Yes --- No

h. Is there a Surface Spring? Yes --- No

If yes, Court Adjudication Number and Spring Name: **Case No. 16CW3102**

9. What is the Waste Water Method?

Municipal

Septic with Leach Field

Closed Vault, Waste Water hauled to: _____

By signing this form, the Applicant, or the agent / representative acting with due authorization on behalf of the Applicant, hereby certifies that all information contained in the form and any attachments to the form, is true and correct to the best of Applicant's knowledge and belief.

Fremont County hereby advises Applicant that if any material information contained herein is determined to be misleading, inaccurate or false, the Board of Commissioners may take any and all reasonable and appropriate steps to declare actions of the Department regarding the Application to be null and void.

Signing this form is a declaration by the Applicant to conform to all plans, drawings, and commitments submitted with or contained within this form, provided that the same is in conformance with the Fremont County Zoning Resolution.

Hamza Mekhfi
Applicant Printed Name

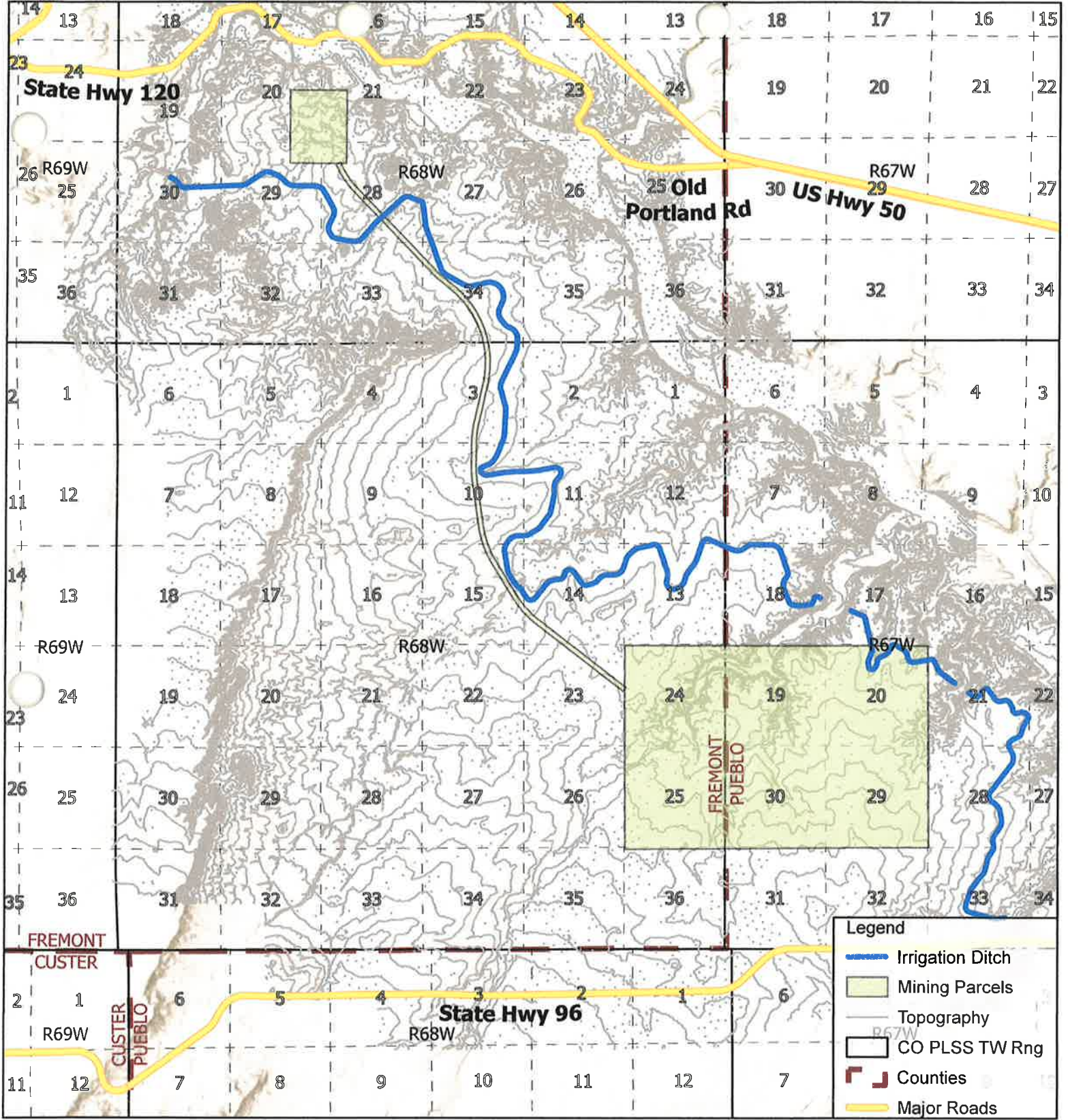
Signature

March 28, 2024
Date

Hamza Mekhfi
Property Owner Printed Name
(If different from applicant)

Signature

March 28, 2024
Date



HOLCIM

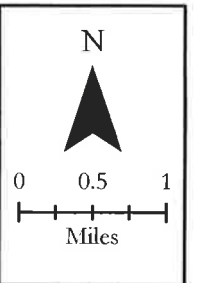
View map showing land to be utilized by the new Red Creek Quarry mine and relevant boundaries to the surrounding area.

Exhibit C1 - Pre-Mining Map

Esri, NASA, NGA, USGS
 Spatial Reference
 Name: NAD 1983 UTM Zone 13N
 GCS: GCS North American 1983

User: SBecker

7/13/2023



CO DWR Exhibit 8-1

2.7 Exhibit G: Water Information (Rule 6.4.7)

2.7.5 Mine Water Source and Uses

Water will be needed at the RCQ Mine Site for both dust suppression and sanitary purposes. Holcim has anticipated the need for two groundwater wells to provide the supply for these uses. Well siting will occur in 2024 and applications for well permits will be submitted to the Division of Water Resources once the well locations have been selected. It is anticipated that these wells will be installed in 2025. The replacement supplies for potential depletions in 2025 will continue to be a long-term lease of fully consumable water from Pueblo Board of Water Works (PBWW), which is currently being used to cover depletions at the BCQ, pursuant to the Holcim augmentation plan decreed in Case No. 16CW3102. Terms of the water lease provide for up to 175 acre-feet per year of replacement water to cover depletions from both the Holcim Bear Creek Quarry and the Holcim Wetlands SWSP/16CW3102 Decree on an annual basis. The lease also provides Holcim the option to renew through December 2039. The request for Substitute Water Supply Plan is provided in its entirety in Appendix 4.7. An approval from Division of Water Resources (DWR) will be obtained prior to exposing groundwater.

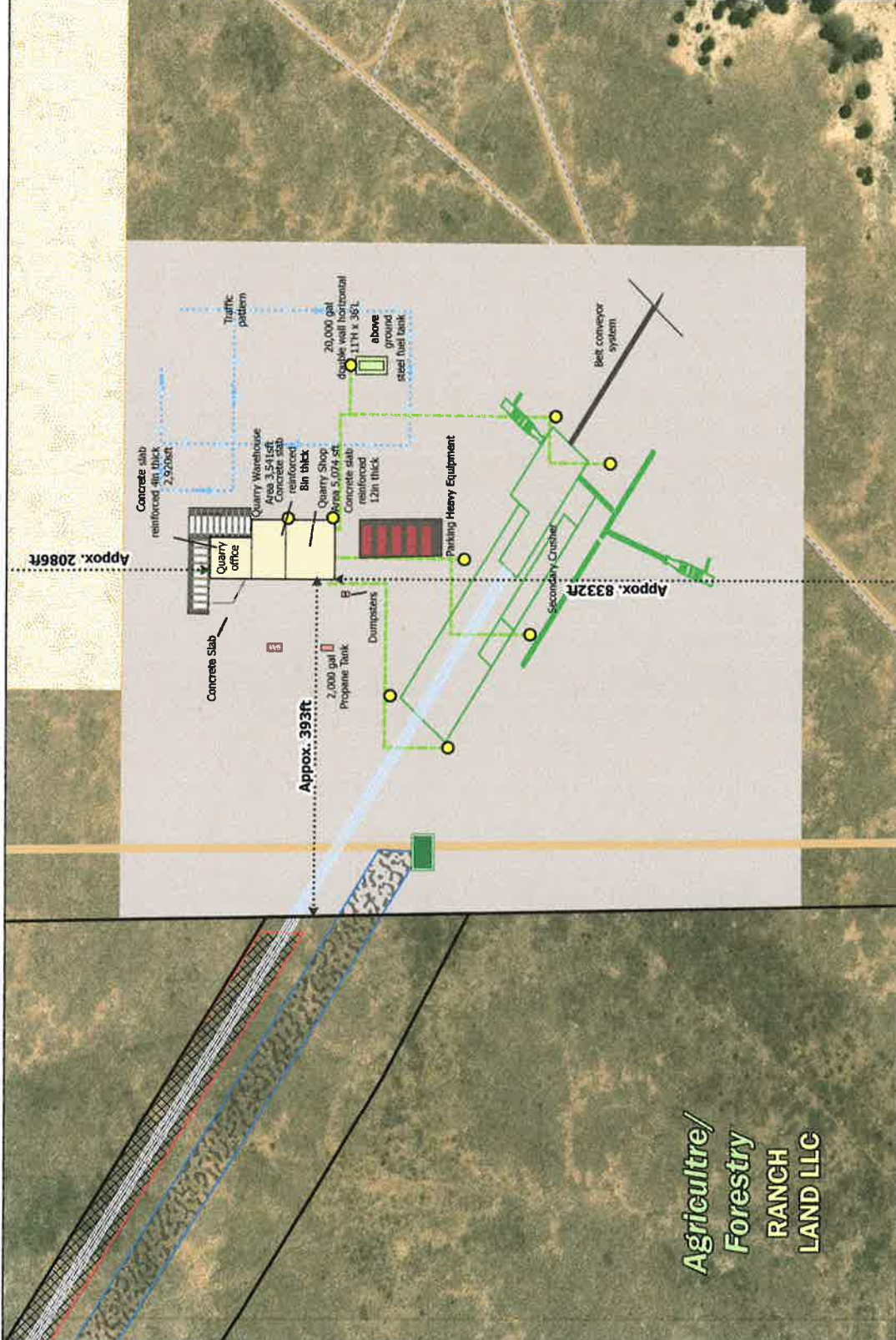
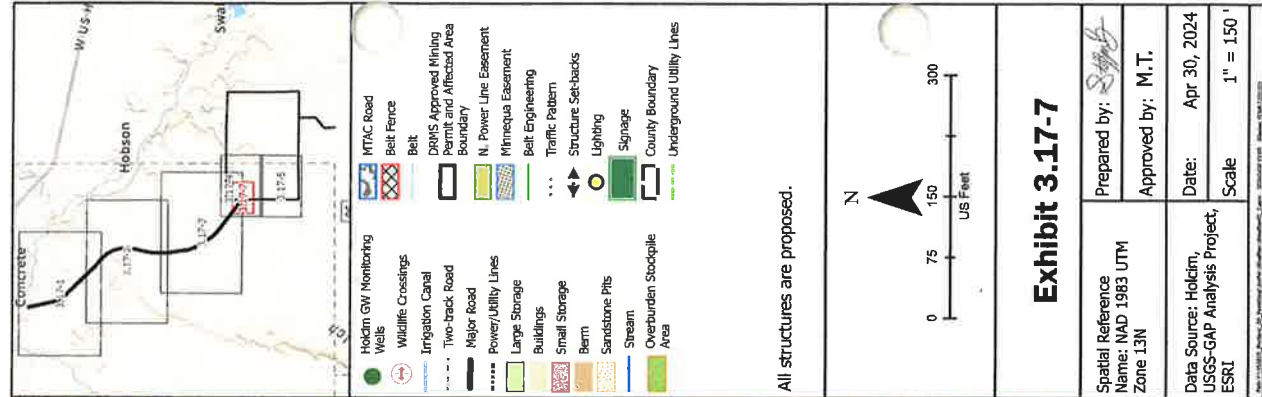
2.7.5.1 Dust Suppression

Water needed for dust suppression is dependent on the amount of product mined and the mining operations. Holcim will be utilizing a more efficient mining process that reduces equipment impacts and dust. Dust suppression systems will also be installed on the conveyor system that transports mined product to the cement plant. Dust suppression projections for the BCQ estimated a maximum use of 70 acre-feet per year. However, the RCQ would likely only need 60% of that amount, or approximately 40 acre-feet per year once mining begins.

Dust suppression needs during construction are difficult to estimate. Therefore, water pumped from the wells for this use will be measured and reported, but are not expected to exceed 20 acre-feet per year. Dust suppression uses will be considered 100% consumptive.

2.7.5.2 Sanitary Needs

Typical water use at the BCQ and Cement Plant for domestic needs (bathrooms, kitchen) are on the order of 30 acre-feet per year for 25 staff. The RCQ site will have approximately 25 staff, and so these uses are estimated to be only 1 to 2 acre-feet per year (based on typical per capita usage). These uses are 10% consumptive, with the remaining water returning to the groundwater system through a septic vault system.



All structures are proposed.

Exhibit 3.17-7

Spatial Reference Name: NAD 1983 UTM Zone 13N	Prepared by: <i>Stacy B.</i>
Data Source: Holcim, USGS-GAP Analysis Project, ESRI	Approved by: M.T.
Scale: 1" = 150'	Date: Apr 30, 2024

Conditional Use Permit for Holcim Red Creek Quarry (Ranch Land Rock Pit #1) Site Plan



Agriculture/
Forestry
RANCH
LAND LLC



CUP Exhibit 3.4 Refuse Plan

Waste Management services the cement plant facility weekly and will provide waste collection service to RCQ. Waste dumpsters will be placed outside the maintenance/office building. Waste collection trucks will access RCQ through the Hwy 93 access road in Pueblo County. Waste collection service will be provided weekly.

CUP Exhibit 3.6 Drainage Plan



1527 Cole Boulevard, Suite 300
Lakewood, CO 80401

T: 303.239.5400

Technical Memorandum

Prepared for: Holcim US, Inc.

Project Title: Red Creek Quarry Permitting

Project No.: 160041

Technical Memorandum

Subject: Red Creek Quarry and Materials Transport and Access Corridor Drainage Plan

Date: May 10, 2024

To: Michael Toelle, Raw Materials and Quarries Manager, Holcim US, Inc.

From: Kelly Donahue, Brown and Caldwell

Copy to: Dan Victoria, Director, Fremont County Department of Planning and Zoning

Julio Villon, Project Manager, Holcim US, Inc.

Prepared by: _____
Adam Gutta, P.E., Senior Associate Engineer

Reviewed by: Mary Jay V. Martens
Mary Jay Martens, P.E., Principal Engineer



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Section 1: Introduction

Brown and Caldwell developed this drainage plan on behalf of Holcim US, Inc. (Holcim) to support the Red Creek Quarry (RCQ) permitting project for the RCQ and Material Transport and Access Corridor (MTAC) sites (herein referred to as Site). This drainage plan is intended to support a conditional use permit application submitted to Fremont County. It includes calculations of peak flow rates of stormwater runoff around proposed RCQ infrastructure within Fremont County and at waterway crossings along the MTAC. It also presents culvert geometry and sizing to safely convey runoff across the MTAC.

This drainage plan includes preliminary design for the structures described herein. It assumes that Fremont County takes jurisdiction and will review design of the ephemeral crossings (i.e., drainage channels that are normally dry except during precipitation events). The design of several structures will be developed as part of a United State Army Corp of Engineer (USACE) Nationwide Permit Application. A copy of the USACE Nationwide Permit Application will be made available to Fremont County.

The scope of this drainage plan includes:

- Identifying existing and proposed hydrologic and hydraulic conditions within RCQ and along the MTAC.
- Calculating peak flow rates in the northwest corner of the RCQ around proposed infrastructure.
- Calculating peak flow rates at waterway crossings identified along the MTAC.
- Calculating culvert geometry and sizing to safely convey runoff across the MTAC.
- Designing a typical culvert out protection rip rap basin and apron.
- Summarizing findings and conclusions.

Section 2: Project Overview and Site Description

The RCQ will be a new limestone quarry that provides material to the Portland cement plant site located at 3500 State Hwy 120, east of Florence, CO. RCQ is located on Holcim property on the USGS Hobson and Florence SE Quadrangles, Colorado. The quarry property comprises approximately 3,851 acres in total, located in both Fremont County and Pueblo County. The 250-foot (ft)-wide MTAC, encompassing approximately 222 acres in Fremont County, connects RCQ to the Portland plant site. Approximately 1,722 acres are in Fremont County and subject of the conditional use application. The Site boundary is depicted on Exhibit 3.17 maps, and topography for the Site is depicted on Figures 1.

The topography at RCQ and along the MTAC is generally flat with some local relief along surface water drainages with shale, limestone, and sandstone outcrops. The topography of the region upgradient (upstream) of the RCQ and MTAC has a gentle slope to the north and east and a steep sloped ridge west and south of the MTAC. The overall gradient slopes downward to the northeast toward Red Creek and the Arkansas River. Within the Red Creek drainage, sequences of erosion and deposition resulted in multiple alluvial stream terraces covered in varying degrees of vegetation.

Existing structures within RCQ and along the MTAC include barbed wire fences, electrical distribution lines, ranch roads, and the Minnequa Canal and associated cattle watering conveyance systems that deliver water to cattle troughs. The MTAC runs northwest along a similar alignment of the Minnequa Canal and crosses it at one location.

Fremont County zoning in the area is Agricultural Forestry. This zone district is described in the Fremont County Zoning Resolution as a “Non-urban area established primarily for the purpose of efficiently using land to conserve forest resources, protect the natural environment and preserve uninhabited areas, and to allow

for farming and ranching activities.” Mining is permitted as a Conditional Use in Section 4.1 pg. 4-4.1.8 (Fremont County, Department of Planning and Zoning 2020).

Activities associated with the mining project include surface mining, material sizing, material conveyance from the quarry to the cement plant, and reclamation. The mine plan considers both Fremont County and Pueblo County parcels, developing the mine in 10-year mine blocks for an expected life of mine of 100 years. Mine infrastructure will be located in the northeast corner of Section 24 in Fremont County for the life of the mine. Mining will commence in the northwest corner of RCQ and progress south and east over the course of approximately 100 years. The MTAC from the plant to RCQ and the Hwy 96 access to RCQ will be developed first. Once safe access is available for contractors, vendors, and employees, development of the mine infrastructure, including fencing and RCQ mine buildings and utilities, will begin. The MTAC will include an access road for employees and vendors and the planned overland conveyor system. The corridor will extend from the plant to RCQ, or approximately 6.7 miles. The gravel access road will be approximately 40 ft wide to allow safe passage of both employees and equipment in both directions.

Section 3: Hydrologic Evaluation

3.1 Basin Hydrology

The RCQ and MTAC are within the Arkansas River basin; a high-altitude, semi-arid hydrologic basin of approximately 5,200 square miles that extends from Leadville to Pueblo, CO (USGS, 1984). The Arkansas River basin is the headwaters of the Arkansas River and the source of much of the surface water used in southeastern Colorado. The Site is located within the Upper Arkansas subbasin, Hydrologic Unit Code 11020002.

RCQ and the MTAC are generally in areas of minimum flood hazard, with three exceptions, based on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel of the surrounding area. The exceptions are Red Creek within RCQ, Ritchie Gulch (Crossing 2B and 2C), and Willow Spring Creek. The locations of Ritchie Gulch and Willow Spring are identified on Exhibit 3.17-maps and Figure 2. The FEMA FIRM panels of RCQ and the MTAC are included as Attachment C.

There are no USGS flow monitoring stations along any of the surface water drainages within the project-proposed mining boundaries nor along the MTAC. Red Creek flows northeast through the RCQ and into the Arkansas River approximately 2 miles northeast of the Site. Within the Red Creek drainage are seeps and springs flowing from fractures within the rock outcrop. Minimal water flow was observed in alluvial sediments above the seep location, which indicates minor flow within Red Creek independent of the identified seeps.

The surface water flow disappears into the creek sediments, and Red Creek is dry at the Site's boundary. Drainages south and east of Red Creek show signs of intermittent to no surface water flow. Upland areas on the Site are grasslands with gentle slopes, few outcrops, and sparse shrubs and trees compared to the Red Creek drainage.

The existing streams crossing the MTAC are a mix of channels with sustained surface water and ephemeral streams and gulches that are normally dry unless conveying stormwater runoff.

3.1 Hydrologic Analysis

This section summarizes the methods and assumptions used to estimate peak flows to be used in the hydraulic culvert sizing analysis.



Mining infrastructure is proposed to be constructed in the northwest corner of RCQ property, adjacent to and partially overlapping an existing stormwater channel. This channel is included for analysis and is proposed to be diverted around the infrastructure and rejoined with the natural channel near the northern property line. The Red Creek channel will not be altered by mining operations nor contribute flow to the reclaimed pits.

Surface water in the vicinity of the MTAC flows into Arkansas River tributaries, which cross the MTAC at several locations. Waterway crossings considered for analysis in this drainage plan are shown on Figure 2. These were selected based on the available topography information and USGS maps of streams and drainages. Stormwater runoff that collects along the MTAC from surface flows or smaller drainages, including stormwater flowing in rills from shallow concentrated flows, will be intercepted by and re-directed along the edge of the MTAC access road in a shallow channel and directed into the next downstream culvert.

Based on field observations and a review of the Site topography, it was determined that several of the waterway crossings include multiple distinct flow channels. Where this is the case, the contributing drainage areas are separated into sub-areas (e.g., 2A, 2B, and 2C). Grading and drainage improvements (e.g., construction of rip rap-lined flow channels) will be conducted to direct stormwater flows into the culverts.

3.1.1 Precipitation

Design precipitation depths were taken from the National Oceanic and Atmospheric Administration (NOAA) Precipitation Frequency Data Server website based on the NOAA Atlas 14, Volume 8 Version 2.0, Location: Penrose, Colorado, USA. The point precipitation frequency estimate from NOAA is included in Attachment A.

Precipitation depths to be analyzed were selected based on the Colorado Department of Transportation (CDOT) design guidance and the Fremont County Department of Planning and Zoning Subdivision Regulations. The 25-year, 24-hour storm was selected for design of MTAC crossings based on the CDOT hydrology design guidance for drainage features crossing a rural two-lane road. The 100-year, 6-hour Soil Conservation Service (SCS) storm was selected for design around quarry facilities based on the Fremont County Department of Planning and Zoning Subdivision Regulations to convey runoff from this storm type without damage to permanent facilities and structures. Although RCQ and the MTAC are not subdivisions, conveying runoff from the 100-year, 6-hour SCS storm was included in the analysis to understand the potential for overtopping the MTAC access road.

The precipitation depths from NOAA Atlas 25-year, 24-hour and 100-year, 6-hour SCS Type II storm events—hereafter referred to as the 25-year and 100-year design storms, respectively—were selected for hydrologic analysis. The 25-year and 100-year design storm precipitation depths for the area are 3.01 and 3.49 inches, respectively, at the time of this drainage plan.

3.1.2 Drainage Areas, Time of Concentration, Soil Groups

One location was selected for analysis within the RCQ boundary where an existing channel will be diverted around proposed infrastructure. Along the MTAC, 23 locations were selected for analysis at waterway crossing locations. The locations are depicted on Figure 2.

The contribution drainage areas for each location were delineated using the USGS web application StreamStats in conjunction with topography of the surrounding area provided by Holcim. Surface topography of the RCQ infrastructure and the MTAC is included on Figure 1 and Exhibit 3.17 maps.

The time of concentration for each drainage area was generated by StreamStats. These values were used to analyze existing conditions. This project does not alter the time of concentration of the upstream contribution drainage areas (e.g., through conversion of permeable into impermeable surfaces).

The hydrologic soil groups (HSG) within RCQ and the MTAC property are included on Exhibit 3.17Y maps. The HSGs of the upstream drainage areas were generated by StreamStats. Curve Numbers associated with

brush in fair condition were selected based on fieldwork observations made by Brown and Caldwell; 56 for HSG A and B, 70 for HSG C, and 77 for HSG D.

The StreamStats reports for each drainage area—including the location, time of concentration, and HSGs and composite Curve Number—are provided in Attachment B and summarized in Table 1.

Table 1. Summary of Drainage Area Hydrology Inputs

Location Identifier	Area (acres)	Time of Concentration (minutes)	Composite Curve Number
RQC NW Corner	55	128	71
Crossing 1	230	145	69
Crossing 2A	831	60	68
Crossing 2B	10,340	383	68
Crossing 2C	345	185	65
Crossing 3	128	114	66
Crossing 4	33	63	67
Crossing 5	237	115	69
Crossing 6A	29	59	71
Crossing 6B	1,164	189	67
Crossing 6C	35	94	70
Crossing 7	749	153	66
Crossing 8	160	76	68
Crossing 9	96	56	67
Crossing 10	27	53	66
Crossing 11	26	30	62
Crossing 12	23	38	59
Crossing 13	134	50	62
Crossing 14	218	66	64
Crossing 15	141	118	56
Crossing 16	2,560	275	63
Crossing 17	24	45	67
Crossing 18	134	93	64
Crossing 19	826	98	70



3.1.3 Peak Flow Rates

The peak flow rates for the design storms were calculated using the hydrologic modeling software, HydroCAD. The HydroCAD model report is provided in Attachment C. Peak flows are summarized in Table 2.

Table 2. Summary of Peak Flow Rates							
25-year 24-hour Storm (cfs)							
RQC NW Corner	Crossing 1	Crossing 2A	Crossing 2B	Crossing 2C	Crossing 3	Crossing 4	Crossing 5
10.5	35.0	218.1	715.8	30.4	17.4	7.7	42.5
Crossing 6A	Crossing 6B	Crossing 6C	Crossing 7	Crossing 8	Crossing 9	Crossing 10	Crossing 11
10.2	123.9	7.8	91.0	35.6	24.0	6.3	5.2
Crossing 12	Crossing 13	Crossing 14	Crossing 15	Crossing 16	Crossing 17	Crossing 18	Crossing 19
2.5	20.2	35.3	196.7	143.1	6.9	17.2	196.4
100-year 24-hour Storm (cfs)							
RQC NW Corner	Crossing 1	Crossing 2A	Crossing 2B	Crossing 2C	Crossing 3	Crossing 4	Crossing 5
22.2	81.0	539.7	1,620.0	78.2	44.9	19.4	100.0
Crossing 6A	Crossing 6B	Crossing 6C	Crossing 7	Crossing 8	Crossing 9	Crossing 10	Crossing 11
22.7	298.8	17.9	222.8	86.5	61.0	16.6	16.5
Crossing 12	Crossing 13	Crossing 14	Crossing 15	Crossing 16	Crossing 17	Crossing 18	Crossing 19
10.4	64.3	100.4	437.0	383.6	17.9	48.0	436.4

cfs = cubic feet per second

Section 4: Hydraulic Design Considerations

This section discusses the upstream drainage conditions and current stormwater management practices, as well as the design of structures, including a diversion channel, culvert, and rip rap, to safely convey peak flow from the design storms.

4.1 Upstream Drainage Conditions and Stormwater Management

Upstream drainage conditions include natural infiltration and overland flow from predominantly open land into tributaries of the Arkansas River. Existing structures near the RCQ and along the MTAC include earthen stock pond embankments, a sand borrow pit, access roads (dirt roads), the Minnequa Canal, stream siphons under the Minnequa Canal, and access road bridges over the Minnequa Canal.

Stormwater run-off from the upstream drainage areas described in Section 3 will be managed as described herein to prevent damage to the RCQ, the MTAC, and upstream and downstream structures and features. Stormwater management will include construction of a diversion channel in the northwest corner of RCQ to divert flow around the proposed infrastructure in that area, and construction of culverts at strategic locations to convey flow across the MTAC. The design of the diversion channel, culverts, and rip rap outlet protection are included in this plan. The corresponding earthwork and restoration required to construct the stormwater management features (e.g., surface grading, subgrade preparation, etc.) is not included in this plan.



4.2 RCQ Diversion Channel

This section describes the proposed diversion channel to collect and convey stormwater flows around the proposed RCQ infrastructure. Proposed infrastructure in the northwest corner of RCQ includes a material staging area (also referred to as the waste dump area), a material processing unit (crusher), conveyor equipment, and associated support facilities (e.g., gravel parking area, office). Grading will be performed to shed water away from new infrastructure into the new diversion channel. The new infrastructure will not significantly change the quantity of impervious area and does not change the time of concentration in this area.

Existing stormwater flow through this area follows an existing shallow channel that is typically dry. The contribution drainage area and peak flow rates were summarized previously in Section 3.

A stormwater channel will be constructed to divert stormwater from the upstream drainage area and to collect stormwater runoff from the proposed infrastructure. Site grading will route the stormwater around the proposed infrastructure. Channel sizing was conducted using Manning’s equation for open channel flow and the following assumptions:

- Channel is trapezoidal with 2H:1V side slopes.
- Channel is lined with rip rap with a Manning’s n value of 0.035.
- The bottom width and depth of the channel are 3 ft and 2 ft, respectively.
- The channel will have a minimum slope of 0.5 percent.
- Channel is designed to convey the 25-year design storm at 50 percent or less of total channel depth.
- Channel is designed to convey the 100-year design storm with a minimum of 0.5 ft of freeboard.

Table 3 summarizes the channel flow capacity, depth, and velocity during the design storms.

Table 3. Red Creek Quarry Stormwater Channel						
Full-Flow Flow Capacity (cfs)	Flow Depth to Convey 25-Year Design Storm (ft)	Freeboard During 25-Year Design Storm (ft)	Flow Depth to Convey 100-Year Design Storm (ft)	Flow Velocity During 100-Year Design Storm (fps)	Freeboard During 100-Year Design Storm (ft)	Design Criteria Met?
46.9	1	1	1.4	2.8	0.65	Yes

cfs = cubic feet per second

fps = feet per second



4.3 MTAC Culverts

This section describes the selection of culvert geometry and sizing to be installed along the MTAC to convey stormwater. The upstream and downstream channels beyond MTAC limits were not assessed as part of this drainage plan and are assumed to be stable. Hydraulic sizing of the culverts was conducted to convey the design storm peak flows without causing damage to upstream and downstream features. The culvert geometry and sizing presented in this drainage plan is based on the hydrologic analysis described above and the assumptions described below, and is intended to show that culverts along the MTAC are technically viable. The final design and selection of the culvert sizing, based on channel headwater and tailwater characteristics, will be conducted separately.

Figure 6 depicts drainage areas and significant waterway crossings along the MTAC. Hydraulic sizing for the MTAC culverts was conducted using the HY-8 Culvert Hydraulic Analysis program (HY-8) developed by the Federal Highway Administration (FHWA). Preliminary design assumptions include:

- This drainage plan is preliminary; tailwater conditions are assumed to be free-draining such that culvert flow capacity will not be limited by tailwater. This assumption limits this drainage plan to hydraulic design and sizing of the culverts to safely convey the design storms. The design will be further developed as described in Section 1, including design of the culverts as wildlife crossings.
 - To use HY-8, the tailwater channel is assumed to be trapezoidal with 2H:1V side slopes (based on field observations), to be sufficiently wide and deep to convey the design storm, to have an average channel slope of 0.5 percent, and to have a Manning’s roughness value of 0.02.
- The culverts are assumed to be either concrete pipes or rectangular concrete boxes (refer to Table 4) with a minimum slope of 0 percent (i.e., installed level). Manning’s roughness values for the culverts used the base value in HY-8 for concrete of 0.012.

Table 4. MTAC Culvert Type, Dimensions, and Design Storm Headwater Depth

Crossing Identification	Material Type and Shape	Dimension(s) (width x height or diameter) (ft)	Minimum Slope (ft/ft)	25-year Design Storm Headwater Depth (ft)	100-year Design Storm Headwater Depth (ft)
RCQ Channel	Concrete Pipe	3	0	1.5	2.3
Crossing 1	Concrete Box	4 x 4	0	2.3	3.7
Crossing 2A	Concrete Box	10 x 8	0	4.2	7.0
Crossing 2B	Twin Concrete Boxes	Two 12 x 10	0	5.3	8.6
Crossing 2C	Concrete Box	4 x 4	0	2.1	3.7
Crossing 3	Concrete Pipe, 2 Barrels	3	0	1.5	2.3
Crossing 4	Concrete Pipe	3	0	1.3	2.0
Crossing 5	Concrete Box	6 x 4	0	2.0	3.3
Crossing 6A	Concrete Pipe	3	0	1.5	2.2
Crossing 6B	Concrete Box	8 x 6	0	3.4	5.6
Crossing 6C	Concrete Pipe	3	0	1.3	1.9
Crossing 7	Concrete Box	8 x 6	0	2.8	4.6
Crossing 8	Concrete Box	6 x 4	0	1.8	3.0
Crossing 9	Concrete Box	4 x 4	0	1.8	3.0
Crossing 10	Concrete Pipe	3	0	1.2	1.9
Crossing 11	Concrete Pipe	3	0	1.1	1.8



Table 4. MTAC Culvert Type, Dimensions, and Design Storm Headwater Depth

Crossing Identification	Material Type and Shape	Dimension(s) (width x height or diameter) (ft)	Minimum Slope (ft/ft)	25-year Design Storm Headwater Depth (ft)	100-year Design Storm Headwater Depth (ft)
Crossing 12	Concrete Pipe	3	0	0.8	1.4
Crossing 13	Concrete Pipe, 2 Barrels	3	0	1.6	2.7
Crossing 14	Concrete Box	6 x 4	0	1.8	3.2
Crossing 15	Concrete Box	10 x 8	0	4.0	6.3
Crossing 16	Concrete Box	10 x 8	0	3.3	5.7
Crossing 17	Concrete Pipe	3	0	1.3	1.9
Crossing 18	Concrete Pipe, 2 Barrels	3	0	1.4	2.5
Crossing 19	Concrete Box	10 x 8	0	3.9	6.3

ft/ft = feet per foot

Culvert sizes were selected to convey the 25-year design storm with headwater less than 66 percent (two-thirds full) of the culvert height and to convey the 100-year design storm without headwater above the top of the culvert inlet. Table 4 provides a summary of the proposed culvert sizing.

4.4 Rip Rap

This section describes rip rap sizing to protect the RCQ diversion channel and MTAC culverts from erosion.

4.4.1 RCQ Channel Rip Rap Lining

Rip rap sizing for the RCQ diversion channel was conducted to determine stone sizing in shallow-slope channels using the method as described in the USACE publication Hydraulic Design of Flood Control Channels. The flow depth and velocity associated with the 100-year design storm calculated in Section 4.2 was used. This calculation method indicates that rip rap with a D₃₀ size (i.e., rip rap size of which 30 percent is finer by weight) greater than 1 inch is sufficient to prevent erosion. A minimum D₃₀ size of 2 inches installed to a minimum thickness of 6 inches is recommended for this channel.

4.4.2 MTAC Culvert Rip Rap Protection

This drainage plan assumes that rip rap will be placed at the culvert inlets and that rip rap basins will be used to protect against scour/erosion. The HY-8 program includes analysis of rip rap basins. This analysis was used to confirm that a technically sound and economically feasible rip rap basin was viable for each culvert.

Design of the rip rap inlet and outlet protection for one of the ephemeral crossings, Crossing 2C, is included with this drainage plan. As noted in Section 1, the design of the remaining structures will be developed as part of a USACE Nationwide Permit Application.

Rip rap sizing was conducted using the FHWA Hydraulic Engineering Circular No. 14, Third Edition, Hydraulic Design of Energy Dissipators for Culverts and Channels (FHWA, 2006). The culvert type and dimensions from the culvert sizing in Section 4.3 and the HY-8 tailwater information included in Attachment D were used for rip rap sizing.

Table 5 summarizes the rip rap sizing and dimensions for the inlet protection and outlet basin. A typical detail for the rip rap inlet protection and outlet basin is shown in Figure 3.



Table 5. MTAC Rip Rap Sizing for Culvert Inlet and Outlet Protection

Crossing Identification, Culvert Type and Dimension	Minimum Rip Rap Size (Inch)	Dissipation Pool Depth (in)	Dissipation Pool Length (ft)	Apron Length (ft)	Total Basin Length (ft)	Basin Width at End of Apron (ft)
Crossing 2C, Concrete Box 4 ft wide x 4 ft tall	D ₅₀ = 2	3	12	4	16	28

Section 5: Conclusion

The proposed culverts and outlet protection for the project will be protective of upstream and downstream drainage conditions and will appropriately convey runoff from the design storms. The primary change to the existing drainage conditions includes the addition of culvert crossings to convey stormwater across the MTAC.

The proposed grading and drainage features have been designed according to the methods and assumptions described herein. The hydrologic analysis inputs (drainage area, time of concentration, hydraulic soil groups, composite curve number) and peak flows are included in Attachment D. The HY-8 culvert analysis reports for the crossings are provided in Attachment E, and the shape and dimensions for each culvert is summarized in Table 4.

References

- Federal Highway Administration. 2006, "Hydraulic Engineering Circular No. 14, Third Edition, Hydraulic Design of Energy Dissipators for Culverts and Channels."
- Fremont County, Department of Planning and Zoning. 2020, "Zoning Resolution" Cañon City, Colorado: Fremont County, May 26."
- United States Army Corp of Engineers, Engineering Manual 1110-2-1601. 1994, "Engineering and Design, Hydraulic Design of Flood Control Channels."



Figures

Figure 1. Materials Transport and Access Corridor U.S. Geological Survey Topography

Figure 2. Red Creek Quarry and Materials Transport and Access Corridor Waterway Crossings

Figure 3. Typical Rip Rap Inlet and Outlet Protection Detail



CUP Exhibit 3.9 Noxious Weed Control Plan



FREMONT COUNTY WEED MANAGEMENT

201 N 6th St, Room 118
Cañon City, CO 81212
719-276-7317
brittany.pierce@fremontco.com

Integrated Weed Management Plan

Project Name: Ranch Land Pit #1/Red Creek Major Mod **DATE** 09/28/2020

Address (or location of property): Sections 24 & 25 of T20S, R68W, Fremont County, CO

List of Noxious Weeds and Control Plan:

Noxious Weeds Present Control Measures:

Reference "Guideline for Weed Management Plans April 2015"

State Law requires all landowners to manage noxious weed on their property. The following weeds under Colorado Noxious Weed Act, if present, are considered a threat to the economic and environmental value of our state lands. These listed under the Noxious Weed Act shall be managed under the provisions of this article. The following species under this act that have been identified in this county and should be managed in the appropriate manner as mandated throughout the term of the permit and thereafter.

"List A" species - These are rare noxious weed species that are subject to eradication upon confirmed identification during any interval of reclamation to the site. Such List A species confirmed in Fremont County may include, but are not limited to:

*Myrtle Spurge, *Japanese Knotweed, *Giant Reed, *Elongated Mustard

"List B" species - These are noxious weed species distributed throughout the State of Colorado and are subject to eradication, containment, or suppression in order to halt continued spread. Species identified within Fremont County may include, but are not limited to:

Absinth Wormwood, Black Henbane, Bouncingbet, *Bull Thistle, *Canada Thistle, Common Teasel, *Dalmatian Toadflax, Dame's Rocket, *Diffuse Knapweed, Eurasian Watermilfoil, *Hoary Cress, *Houdstongue, Hybrid Knapweed, Hybrid Toadflax, Jointed Goatgrass, *Leafy Spurge, *Musk Thistle, Oxeye Daisy, Perennial Pepperweed, *Russian Knapweed, Russian-olive, *Salt Cedar, Scentless Chamomile, Scotch Thistle, *Spotted Knapweed, *Yellow Toadflax.

"List C" species - Are well-established noxious weed species and are widespread throughout the State for which control is only recommended. Common species in Fremont County include, but are not limited to:

Chicory, Common Burdock, Common Mullein, Downy Brome, Field Bindweed, Halogeton, Johnsongrass, Perennial Sowthistle, Poison Hemlock, Puncturevine, Redstem Filaree

Identification and treatment can be conducted through Fremont County Weed Management or a recommended partnering agency. Please see Fremont County Weed Control's booklet, "Guideline for Weed Management Plans" for more details such as herbicide rates and specifics about weed control methods.

Fremont County Weed Management is operated by Qualified Licensed Applicators under the Department of Agriculture. Any management or treatment involving chemical treatment should be carried out as indicated on the label. The label is the law. Any information on management planning or about receiving cost share that is available to the public, can be discussed with the department to confirm eligibility.

*These weed species receive priority for cost share funding.

Other Required Action: The vicinity of the proposed planning area is a known location for noxious weed infestations of tamarisk (salt cedar), Russian olive, Canada thistle and hoary cress species. Other noxious species could present themselves on site during any point of time and should also be addressed as stated in the Control Plan. In the event any 'List A' or large populations of 'List B' species are observed, a site visit would be recommended during peak growing season to discuss further management plans. In order to do this, please consider all factors in choosing a time (such as weather, presence of actively growing plants, and operation plans or activities). Any additional questions or concerns in completing this management plan please contact Fremont County Weed Management to discuss available options. (719-276-7317)

Michael B. Joell
Applicant Signature

07/21/2023
Date

Michael B. Joell
Owner/Manager Signature

07/21/2023
Date

Brittany Pierce

Brittany Pierce
Fremont County Weed Management Representative

September, 28 2020
Date



CUP Exhibit 3.10 Owners within 500 ft.

Parcel Number	Owner	Owner's Address	Parcel Address
99924557	Ranch Land LLC	9990 East Cactus Scottsdale, AZ 85260 and 3925 Hill Circle Colorado Springs, CO 80904	NA
393700000005	CF&I Steel LP	PO Box 316 Pueblo, CO 81002	NA Minnequa Canal



CUP Exhibit 3.11 Roadway Impact Analysis Form



Fremont County Department of Planning and Zoning Roadway Impact Analysis Form

This form shall be used in conjunction with any applications submitted in accordance with Section 8 of the Fremont County Zoning Resolution and or Section VI of the Fremont County Subdivision Regulations. This form is considered a minimum application submittal item and shall be required to be provided at the time of application submittal. This form is intended to provide the minimum items that must be addressed in the roadway impact analysis. The form can be expanded or attachments can be made to further address the roadway impact of the proposed use. **If the estimated average daily traffic increase is less than thirty (30) vehicle trips per day (one trip to be considered as a single or one-direction vehicle movement with either the origin or the destination [exiting or entering] inside the subject property) as per the Institute of Transportation Engineers, Trip Generation Handbook, Second Edition or subsequent editions for the entire development, as estimated by the project engineer, then a Roadway Impact Analysis will not be required to be completed by an engineer. In such situations other minimum items shall be addressed by the applicant.**

1. Project Name Red Creek Quarry formerly Ranch Land Rock Pit #1 CUP 02-3

2. Type of application:

- | | |
|---|--|
| <input type="checkbox"/> Zone Change #1
<input type="checkbox"/> Zone Change #2 – Use Designation Plan
<input type="checkbox"/> Zone Change #2 – Final Development Plan
<input type="checkbox"/> Commercial Development Plan
<input type="checkbox"/> Commercial Development Modification
<input type="checkbox"/> Expansion of an existing Business or Industrial Use | <input type="checkbox"/> Special Review Use Permit
<input checked="" type="checkbox"/> Conditional Use Permit
<input type="checkbox"/> Temporary Use Permit
<input type="checkbox"/> Change of Use of Property
<input type="checkbox"/> Subdivision Preliminary Plan |
|---|--|

3. Engineer: 3 Rocks Engineering Address: 430 Main Street
 City: Canon City State: CO Zip Code: 81212
 Telephone #: (719)430-5333 Facsimile #: () Email ronn@3rocksenineering.com

4. Provide a detailed description of the proposed use: _____
Red Creek Quarry (RCQ) will the be limestone source for the cement plant whens Bear Creek
Quarry is mined out. RCQ will be accessed by an interior Materials Transport and Access
Corridor on private property between the cement plant and RCQ. Mining and equipment will be
consistent with Holcim's current operation.

5. Provide the estimated average daily traffic to be generated by the proposed use(s), using the Institute of Transportation Engineers, Trip Generation Handbook, Second Edition or subsequent editions. The estimated volumes of traffic to be generated by the proposed use(s) shall include as a minimum, the average weekday traffic volume and the peak-hour (*morning and afternoon*) traffic volumes. Specify the number of trips in each category. **(one trip to be considered as a single or one-direction vehicle movement with either the origin or the destination [exiting or entering] inside the subject property)** **No new daily traffic will be generated.**
 Residential: 0 daily, _____ peak-hour am, _____ peak-hour pm _____
 Employee: 0 daily, _____ peak-hour am, _____ peak-hour pm _____

Red Creek Quarry is a new limestone source that will be operated by Holcim; by Holcim employees. No new traffic trips will be generated by this project as personnel from Bear Creek Quarry will operate Red Creek Quarry. All personnel and equipment will use the plant access on Hwy 120.

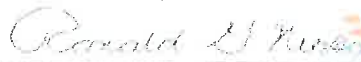
Customer: 0 daily, _____ peak-hour am, _____ peak-hour pm

Truck generated by the proposed use: 0 daily, _____ peak-hour am, _____ peak-hour pm

Delivery - required by the use: 0 daily, _____ peak-hour am, _____ peak-hour pm

Total Vehicle Trips: 0 daily, _____ peak-hour am, _____ peak-hour pm

I certify that based on the proposed use(s) the total vehicle trips using the Institute of Transportation Engineers, Trip Generation Handbook, Second Edition or subsequent editions will average thirty (30) trips per day based on any fourteen (14) day time frame.



Ronald G Nies
c/o Ronald G Nies, c=US, o=3 Rocks Engineering
email=ronnie@3rockengineering.com
03/11/24

Date 3/11/24

Seal



Colorado Licensed Professional Engineer

If the above has been certified, then the applicant can complete the form and acknowledge that only the questions marked by asterisk (*) are required to be answered.

NOTE: If the additional information provided warrants improvements to the roadway system, even though the traffic generated by the proposed use is less than thirty (30) trips per day, such improvements will be required. If in the future the use exceeds an average of thirty (30) trips per day a complete analysis could be required.

6. *What is the general location of the subject property? _____
Sections 24 and 25, T20S, R68W of the 6th Principal Meridian in Fremont County CO.

7. *What are the names and/or the numbers of the public roadways that serve the site? _____
CO Hwy 120

Provide a site plan drawing that shows the subject property, its proposed access points and all public roadways within a one-half (1/2) mile radius of the subject property, marked as Exhibit 7.1. An exhibit has been attached.

8. *What is the classification, according to the Fremont County Master Plan, of the roadway from which the project site will gain access to the public transportation system?
 Expressway or Freeway --- Major Arterial --- Arterial --- Collector --- Local

9. *Do the roadways in question lie within a three (3) mile radius of any incorporated town or city limits or the boundary of another County? Yes --- No
If yes, provide the name(s) of the jurisdiction(s): City of Florence
In addition if a new roadway is to be constructed, how will it comply with the transportation plan in effect for the municipality? _____

10. *Will this project require a Fremont County Driveway Access Permit or a Colorado Department of Transportation (CDOT) State Highway Access Permit? Yes --- No
Please explain: _____

11. *Will the project require construction of, or improvement to any roadway maintained by the CDOT?
 Yes --- No
If yes, will the proposed construction or improvement be in compliance with CDOT's "5 Year Transportation Plan"? Yes --- No Please Explain _____

Has CDOT required that the applicant provide a traffic study? Yes --- No
If yes, a copy of the study shall be attached to this application, marked as Exhibit 11.1. An exhibit has been attached.

12. *Will the project require construction of, or improvement to any roadway currently maintained or proposed to be maintained by the County? Yes --- No
If yes, what would be the social, economic, land use, safety and environmental impacts and effects of the new roadway on the existing transportation system and neighborhood? _____

13. *Are any roadways proposed to be vacated or closed in conjunction with the proposed project?
Yes --- No
If yes, please explain. _____

14. *Is the proposed project site adjacent to or viewable from any portion of the Gold Belt Tour Scenic Byway or other scenic corridor designated by the Master Plan? Yes --- No
If yes, identify the byway and or scenic corridor: _____
If yes, explain how the scenic quality will be affected by the proposed project. _____

If yes, what measures will be taken to not have a negative impact on the byway and or scenic corridor? _____

15. *Will the proposed project gain access to the public transportation system via 3rd, 9th, K and or R Streets in the Penrose-Beaver Park Area of the County? Yes --- No

16. *Does the subject property have frontage on a public roadway? Yes --- No
If answered no, then documentation evidencing a "right of access" to the subject property for the proposed use shall be attached marked as Exhibit 16.1. An exhibit has been attached. If answered no, then please explain what the right of access consists of: Holcim secured an access corridor during the purchase of the limestone resource.

17. *What is the right-of-way width of the public roadway(s) that serve the site? 100 ft.

18. *What is the surface type of the public roadway(s) that serve the site? Concrete and asphalt

19. *What is the surface width of the public roadway(s) that serve the site? 40 ft

20. *What are the existing drainage facilities for the public roadway(s) that serve the site? Culverts and bar ditches

21. *Does the public roadway(s) that serves the site have curb and gutter? Yes --- No
If answered yes, what is the type of curb and gutter? _____

22. *Does the public roadway(s) that serves the site have adjacent sidewalks or other pedestrian ways?
 Yes --- No
If answered yes, what is the width(s) and surface type(s)? _____

23. *How many access points will the subject property have to public roadways? One

24. *Will the proposed roadways that access the public roadways intersect the public roadways other than at perpendicular? Yes --- No
If answered yes, please explain: _____

25. *What are the sight distances, in all directions, from the subject property access point(s) along the public roadway that serves the site? (*mark and provide distance for each that is applicable*)
 Northerly, site distance: _____ Southerly, site distance: _____
 Easterly, site distance: 400 ft. Westerly, site distance: 1000 ft.

26. *What are the distances from the subject property access point(s), in all directions, to the nearest intersection with another public roadway along the public roadway that serves the site? (*mark and provide distance for each that is applicable*)
 Northerly, distance: _____ Southerly, distance: _____
 Easterly, distance: 3.75 miles Westerly, distance: 2200 ft

27. *What are the distances from the subject property access point(s), in all directions, to the nearest driveway(s) along the public roadway that serves the site? (*mark and provide distance for each that is applicable*)
 Northerly, distance: _____ Southerly, distance: _____
 Easterly, distance: _____ Westerly, distance: 1000 ft

28. *What are the distances from the subject property access point(s), in all directions, to the nearest blind curve(s) along the public roadway that serves the site? (*mark and provide distance for each that is applicable*)
 Northerly, distance: _____ Southerly, distance: _____
 Easterly, distance: 400 ft. Westerly, distance: 1000 ft

29. *What are the distances from the subject property access point(s), in all directions, to the nearest blind hill(s) along the public roadway that serves the site? (mark and provide distance for each that is applicable)

Northerly, distance: _____ Southerly, distance: _____
 Easterly, distance: 400 ft Westerly, distance: _____

30. *Identify any and all hazardous conditions with regard to the public roadway(s) that provide access to the subject property in the general area of the subject property: No hazardous conditions exist regarding this public road access.

If the public roadway(s) that currently serve the subject property have any hazardous conditions, then recommendations shall be made for improvements that will decrease the hazardous conditions on the public roadway(s): _____

31. *Explain what effect the proposed use will have on the existing traffic in the neighborhood. If no change is expected, please explain why no change is expected: No change is expected to traffic in the neighborhood. Please refer to the comment in the top margin of Page 2 of this form.

32. *Will the proposed use, due to the increase in traffic or the type of vehicle traffic generated by the proposed use, change the level and or type of required maintenance for the public roadway(s) that serve the site? Yes --- No, (please explain) NA

If the proposed use, due to the increase in traffic or the type of vehicle traffic generated by the proposed use, changes the level and or type of required maintenance for the public roadway(s) that serve the site, then recommendations shall be made that would lessen the maintenance impact for the entity in control of maintenance of the public roadway(s): _____

Note: If improvements are required, it may be mandatory that such improvement be installed prior to final approval of the application.

33. *Are new roadways proposed to be constructed, on or off site, in association with the proposed project? Yes --- No If yes, provide evidence that the roadways will be constructed to conform to natural contours in order to minimize soil disturbance, cut and fills, protect drainageways and not create to unstable slopes. The interior Material Transport and Access Corridor will be constructed according to guidance from DRMS, CPW, ACE and MSHA.

34. Provide an analysis of the existing traffic volumes on the adjacent roadway system, including the average weekday traffic (*vehicles per day*) and the weekday peak-hour traffic (*vehicles per hour – am and pm*), showing the dates and times of traffic counts or source utilized for traffic volume counts. Determine the existing level of service or percentage of roadway capacity currently in use.

Roadway name or # _____ average weekday traffic _____
Weekday peak-hour traffic _____ am _____ dates _____ times
Weekday peak-hour traffic _____ pm _____ dates _____ times
Current level of service - % of roadway in use _____

Roadway name or # _____ average weekday traffic _____
Weekday peak-hour traffic _____ am _____ dates _____ times
Weekday peak-hour traffic _____ pm _____ dates _____ times
Current level of service / % of roadway in use _____

Roadway name or # _____ average weekday traffic _____
Weekday peak-hour traffic _____ am _____ dates _____ times
Weekday peak-hour traffic _____ pm _____ dates _____ times
Current level of service / % of roadway in use _____

35. Provide an estimate of the probable traffic directional distribution from and to the subject property based on the proposed use(s) and assignment of the estimated traffic volumes to the adjacent roadway network. Estimate the future background and resulting total traffic volumes (*including the estimated generated traffic due to the proposed use*) on the adjacent roadway system for a twenty (20) year design period, showing volumes for both left and right turn movements as well as through traffic. _____

36. Determine the projected future levels of service or percentage of roadway capacity to be in use at the subject property's access points and key adjacent intersections. Provide recommendations for street and access improvements if any portions of the roadways do not have the capacity to accept the additional estimated traffic volumes. All necessary improvements will be required to be designed, completed and accepted by the County prior to any final action regarding the application.

37. Please provide any additional information considered by the Certifying Engineer to be pertinent to the roadway impact in association with the proposed project: _____

I hereby certify that the foregoing information was prepared by myself or under my direct supervision and is true and correct to the best of my knowledge and belief.

_____ Date _____
Colorado Licensed Professional Engineer

SEAL

If not completed by an Engineer, then the following acknowledgement shall be signed by the applicant and/or owner.


By signing this Application, the Applicant, or the agent/representative acting with due authorization on behalf of the Applicant, hereby certifies that all information contained in the application and any attachments to the Application, is true and correct to the best of Applicant's knowledge and belief.

Applicant understands that any required private or public improvements imposed as a contingency for approval of the application may be required as a part of the approval process.

Fremont County hereby advises Applicant that if any material information contained herein is determined to be misleading, inaccurate or false, the Board of Commissioners may take any and all reasonable and appropriate steps to declare actions of the Board regarding the Application to be null and void.

Signing this Application is a declaration by the Applicant to conform to all plans, drawings, and commitments submitted with or contained within this Application, provided that the same is in conformance with the Fremont County Zoning Resolution.

Hamza Mekhfi
Applicant Printed Name

Signature 

March 28, 2024
Date

Hamz Mekhfi
Owner Printed Name

Signature 

March 28, 2024
Date

CUP Exhibit 3.13 Master Plan Compliance

The subject property is located in the Plains Planning District of the 2015 Fremont County Master Plan.

Objectives

F1. The proposed mining is will be conducted to be protective of water quality and wildlife habitat. The subject parcels are surrounded by Ranch Land LLC, substantially isolated from recreators with the exception of hunters with permission to be on the private land.

F1.1 Holcim has conducted groundwater and surface water baseline quality and quantity characterization investigations. Water monitoring will continue throughout the life of the mine with DRMS.

F1.2 Holcim obtained input from CO DWR, and US ACE while preparing the CO DRMS application. Agency recommendations are incorporated into the DRMS 112 permit application.

F1.3 Brown and Caldwell prepared a stormwater drainage report for the project and it is included in the county application.

F1.4 Brown and Caldwell performed a wildlife investigation/survey of the mine area. CPW visited the site and prepared recommendations that were incorporated in the DRMS 112 permit application.

F1.5 Development will not occur within the flood hazard area of the Arkansas River.

F2. The proposed mining is a long term limestone resource for Holcim. Reclamation will return the mined area to rangeland for cattle and wildlife habitat that will maintain the rural character.

CUP Exhibit 3.14 Surrounding Land Use Compatibility

The Ranch Land LLC ranch includes two areas currently permitted for mining. Mining and cattle ranching are the principal land uses on the ranch.



CUP Exhibit 3.15 Fire Protection Plan



FREMONT COUNTY FIRE PROTECTION PLAN AND DISTRICT COMMENT FORM

The Fremont County Subdivision Regulations and Fremont County Zoning Resolution require a fire protection plan be submitted with many different types of applications, at the time of application submittal. In order to provide consistency in the information received, it shall be required that these plans be submitted on this form.

The Fremont County Department of Planning and Zoning (Department), Fremont County Planning Commission (Commission) and Fremont County Board of County Commissioners (Board) take into consideration the responses of the Applicant and the District during their respective review process.

Attachments can be made to this form to provide expanded narrative for any application item including supportive documentation or evidence for provided form item answers. Please indicate at the form item that there is an attachment and label it as an exhibit with the application item number, a period and the number of the attachment for that item (*as an example, the first attached document providing evidence in support of the answer given at application item number 4 would be marked - Exhibit 4.1, the fifth attached document supporting the narrative provided for application item 4 would be marked - Exhibit 4.5*). Exhibit numbers should be placed in either the lower right hand area or the upper right hand area of the exhibit.

If the subject property is not in a fire protection district, only applicants' information and map are required. A copy of the Colorado State Forest Service Wildfire Hazard Area Map with the subject property clearly and accurately located, shall be attached and marked as Exhibit A.

APPLICANT INFORMATION

1. Project Name Red Creek Quarry formerly Ranch Land Rock Pit #1 CUP 02-3

2. Project Description Red Creek Quarry (RCQ) will be the limestone source for the cement plant when Bear Creek Quarry is mined out.

3. Type of application:

- | | |
|--|--|
| <input type="checkbox"/> Zone Change #1 | <input type="checkbox"/> Special Review Use Permit |
| <input type="checkbox"/> Zone Change #2 – Use Designation Plan | <input checked="" type="checkbox"/> Conditional Use Permit |
| <input type="checkbox"/> Zone Change #2 – Final Development Plan | <input type="checkbox"/> Temporary Use Permit |
| <input type="checkbox"/> Commercial Development Plan | <input type="checkbox"/> Change of Use of Property |
| <input type="checkbox"/> Commercial Development Modification | <input type="checkbox"/> Subdivision Preliminary Plan |
| <input type="checkbox"/> Expansion of an existing Business or Industrial Use | <input type="checkbox"/> Minor Subdivision |

3. The subject property is located at:

Sections 24 and 25 T68W of 6th P.M. in Fremont County, Colorado

Address and or General Location (*If general location only is used, it will be required that a legal description of the subject property be attached Marked as Exhibit 3.1*) An exhibit is attached.

4. Fire protection will be provided in what manner and with what resources? Fire extinguishers will be available as required by MSHA. Holcim has a water truck with a water canon available in the event of fire emergency.

5. The source of water for fire protection is:

--- Water District – Name of District: _____

--- Well – Colorado Division of Water Resources Well Permit Number: _____

Is the well approved for fire protection? Yes --- No Please explain: _____

The well has not been applied for or constructed. _____

--- Cistern – What is the cistern capacity? _____ Gallons – What is the water source for filling the cistern? _____

6. What is the distance from the subject property to the nearest fire hydrant? _____

The nearest hydrant is at the plant, approximately 7 miles north _____

7. What public roadways provide access to the subject property? One _____

8. How many accesses to public roadways will the subject property have? One _____

9. Are the interior roadways existing and or proposed for the subject property adequate for fire vehicle access? Yes --- No Please explain by providing right-of-way and surface widths, length of roadway, surface types for all interior existing and proposed roadways and turning radii for cul-de-sacs. The 200 ft ROW will be develop with a 40 ft wide gravel road built to county standard.

MTAC is approximately six miles long. _____

10. What are the existing and or proposed interior roadway names? Material Transport and Access

Corridor (MTAC). _____

11. Is the subject property located within a fire protection district? Yes --- No

If yes, please provide the district name: Florence Fire District _____

If the subject property is not located within a fire protection district please answer the following questions and the form will be considered completed for submittal. If the subject property is located within a fire protection district then answers to the following will not be required, however the remainder of the form shall be addressed by a representative of the fire protection district in which the subject property is located.

a. What is the name of the fire protection district closest to the subject property? _____

b. What is the distance from the subject property to the nearest fire protection district boundary? _____

c. Is it logical and feasible to annex the subject property to a fire protection district?

Yes ----- No Please explain: _____

d. What types of fire protection improvements are proposed for the subject property and or structures to be housed on the property? Please explain: _____

By signing this Application, the Applicant, or the agent/representative acting with due authorization on behalf of the Applicant, hereby certifies that all information contained in the application and any attachments to the Application, is true and correct to the best of Applicant's knowledge and belief.

Applicant understands that any required private or public improvements imposed as a contingency for approval of the application may be required as a part of the approval process.

Fremont County hereby advises Applicant that if any material information contained herein is determined to be misleading, inaccurate or false, the Board of Commissioners may take any and all reasonable and appropriate steps to declare actions of the Board regarding the Application to be null and void.

Signing this Application is a declaration by the Applicant to conform to all plans, drawings, and commitments submitted with or contained within this Application, provided that the same is in conformance with the Fremont County Zoning Resolution.

Hamza Mekhfi
Applicant Printed Name

Signature

March 28, 2024
Date

Hamza Mekhfi
Owner Printed Name

Signature

March 28, 2024
Date

CUP Exhibit 3.22 Corporate Ownership

OFFICE OF THE SECRETARY OF STATE
OF THE STATE OF COLORADO

CERTIFICATE OF FACT OF GOOD STANDING

I, Jena Griswold, as the Secretary of State of the State of Colorado, hereby certify that,
according to the records of this office,
HOLCIM (US) INC.

is an entity formed or registered under the law of Delaware, has complied with all applicable requirements of this office, and is in good standing with this office. This entity has been assigned entity identification number 19901009684.

This certificate reflects facts established or disclosed by documents delivered to this office on paper through 04/29/2024 that have been posted, and by documents delivered to this office electronically through 05/01/2024 @ 14:05:42.

I have affixed hereto the Great Seal of the State of Colorado and duly generated, executed, and issued this official certificate at Denver, Colorado on 05/01/2024 @ 14:05:42 in accordance with applicable law. This certificate is assigned Confirmation Number 15999493.



Jena Griswold

Secretary of State of the State of Colorado

*****End of Certificate*****
Notice: A certificate issued electronically from the Colorado Secretary of State's website is fully and immediately valid and effective. However, as an option, the issuance and validity of a certificate obtained electronically may be established by visiting the Validate a Certificate page of the Secretary of State's website, <https://www.coloradosos.gov/biz/CertificateSearchCriteria.do> entering the certificate's confirmation number displayed on the certificate, and following the instructions displayed. Confirming the issuance of a certificate is merely optional and is not necessary to the valid and effective issuance of a certificate. For more information, visit our website, <https://www.coloradosos.gov> click "Businesses, trademarks, trade names" and select "Frequently Asked Questions."



CUP Exhibit 3.24 Owner Authorization to Consultant



March 1, 2024

Fremont County
Department of Planning and Zoning
615 Macon Avenue, Room 210
Cañon City, CO 81212

RE: Red Creek Quarry
Authorization to Represent Applicant/Property Owner

To Whom It May Concern;

I, Hamza Mekhfi, of Holcim (US) Incorporated, with corporate office address of 3500 US Highway 120, Florence, CO 81226 , hereby grant authorization to Dr. Angela Bellantoni of Environmental Alternatives, Inc. with address of P.O. Box 326, Cañon City, CO 81212 to represent Holcim (US) Inc. to Fremont County for application submission, review and due process of a Conditional Use Permit for Red Creek Quarry.



Hamza Mekhfi, Plant Manger



CUP Exhibit 3.28 Hazardous Materials List

Description	Quantity (gallons)	Location	Secondary containment
Diesel Fuel	20,000	Outside shop	Double walled tank with crash bollards
Motor Oil	440 (8-55 gallon drums)	Inside shop	Spill containment pallets
Transmission Oil	330 (6-55 gallon drums)	Inside shop	Spill containment pallets
Hydraulic Oil	440 (8-55 gallon drums)	Inside shop	Spill containment pallets
Diesel Exhaust Fluid	660 (2-330 gallon tones)	Inside shop	Spill dikes



CUP Exhibit 3.29 DRMS Reclamation Plan

CUP Exhibit 3.29 Reclamation Plan

CO DRMS 112 Permit Exhibit E: Reclamation Plan (Rule 6.4.5)

Section 2.5

Post-mining land use will be rangeland, consistent with post-mining land use of BCQ. Rangeland will blend successfully with the vicinity land uses and post-mining land uses of the area mines. In addition, rangeland is suitable for the challenges of semi-arid high desert conditions of the area. Reclamation will improve available forage for cattle.

This reclamation plan is in addition to the reclamation plans for BCQ and the Plant Area that were approved by the Division in the original BCQ application (M-1977-344) and AM-01. Due to the extensive life of RCQ, 100 years, Holcim intends to initially post bond for Sections 24 and 25 in Fremont County or approximately 30 years of quarry material. The bond will include reclamation for the conveyor and conveyor service road, quarry infrastructure and approximately 1000 acres of limestone and sandstone mining disturbance. The access road from the plant to RCQ and the Hwy 96 access road will not be reclaimed. At approximately year 20, Holcim will notify DRMS that a bond estimate for reclamation of anticipated disturbance in the subsequent 1000 acres will be forthcoming. Holcim will adjust the bond as appropriate in response to DRMS inspection, comments and recommendations. Bonding adjustments will continue in like manner for the life of the mine.

All natural material above the translime geologic layer will be salvaged. Native plant growth material ranges in thickness from 0 inches where limestone outcrops to eight inches deep. The plant growth material will be segregated from the overburden and stockpiled along the perimeter in berms approximately 10 feet high and 100 feet inside the permit boundary. All overburden above the translime layer will be salvaged for use in construction of the perimeter berm and final reclamation. The perimeter berms will be seeded with a temporary seed mix to stabilize the surface. Stockpiling will continue until approximately Year 20 when contemporaneous reclamation will commence.

Reclamation will occur contemporaneously with mining after Year 20 and continue in like manner through the life of the mine. At the end of mining, all reclamation will be completed within two years. Reclamation will include sloping benches, backfilling the sandstone pit and bringing up the elevation of the mine floor. An abundance of overburden exists to the extent that the lowest two benches will be completely backfilled thus raising the elevation of the mine floor .

Two distinct reclamation efforts will be implemented to reclaim RCQ. The mined out area will be reclaimed beginning in Year 20 using stockpiled overburden and plant growth material using traditional equipment. At the end of the life of the mine, RCQ infrastructure including buildings, conveyor corridor and utilities will be demolished, and footprint reclaimed.

Because of the 100-year life of the mine and ever-changing costs of reclamation tasks, Holcim suggests a phase bonding approach. Holcim proposes submitting a bond for the conveyor and access corridor, Sections 24 and 25 in Parcel 3, and the access to Hwy 96. This area will be developed and mined for 20 to 30 years. After Year 20, Holcim will review the bond to progress into Pueblo County sections for subsequent years.

2.5.1 Reclamation of Material Extraction Areas

Reclamation of mined out sections of the mine will begin by rebuilding slopes using the salvaged overburden. A mined out area will be marked by up to 4 benches or 140 feet of highwall. Haul trucks will transport the stockpiled overburden to the toe of the benches. Bulldozers will push the overburden into

the bench forming slopes 3H:1V or gentler (Figures 2.5.1-1). Excess overburden after rebuilding slopes will be used to elevate the pit floor.

When the slopes are stable and the pit floor is at a suitable elevation, the area will be prepared for seeding. The rebuilt slopes and pit floor will be graded with a motor grader and compacted. The topsoil will be loaded into haul trucks with a loader and distributed over the graded areas to a depth ranging from 4 to 6 inches.

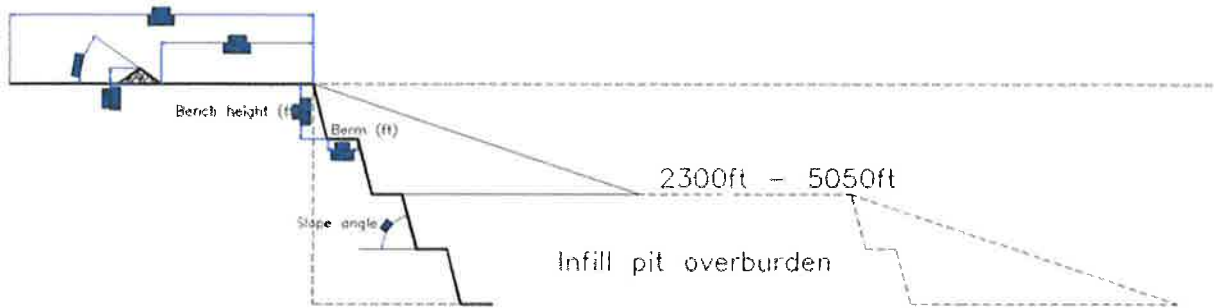


Figure 2.5.1-1 Cross-section of benched highwall and final reclamation slope 3H:1V

While distributing the plant growth material, erosion furrows will be contoured into the bench slopes to mitigate erosion. The furrows will be contoured parallel to the edge of the bench and approximately midway between the edge of the bench to the highwall. Erosion furrows are preferred to straw wattles since they can remain after reclamation vegetation takes hold. This increases precipitation infiltration time for the new and ultimately established vegetation.

Seeding will occur either in the fall or spring with the seed mix presented in Table 2.5.1-1. This seed mix was approved by DRMS in the AM-01 for BCQ. Seed will be broadcast at the rate of 111.5 pounds of live seed per acre, mulched with certified weed free straw, two tons per acre, and tracked into place with a dozer. Fertilizer was not recommended by NRCS. A noxious weed program will utilize chemical weed control if noxious weeds start establishing in the affected land areas that are not controlled by mowing.

Table 2.5.1-1 NRCS Reclamation Seed Mix

Species	Variety	Required PLS* Rate/Acre	% of Species in Mixture	PLS Seeding Rate Per Species/Acre
Sideoats gramma	Niner, El Reno	18.0	20	3.6
Crested Wheatgrass	Hycrest	10.0	20	2.0
Indian Ricegrass	Nezpar	12.5	15	1.9
Mammoth Wildrye	Volga	30.0	20	6.0
Alkali Sacaton	None specified	3.0	10	0.3
Streambank Wheatgrass	Sodar	22.0	10	2.2
Alfalfa	Ladak	16.0	5	0.8
		111.5 PLS/Acre		

*PLS – Pounds live seed per acre

2.5.2 Reclamation of Mine Infrastructure

Once mining ceases, all infrastructure including conveyor system, buildings, and utility infrastructure will be removed from the permit area. The metal buildings will be disassembled and scrapped to a metal recycler. Utility lines will be excavated and electricity distribution poles removed. The septic vault will be drained, excavated and placed in the concrete scrap stockpile. The conveyor will be disassembled; either sold, transported to another Holcim quarry or scrapped. The crushers and screens will be sold or transported to another Holcim quarry. Concrete structures such as conveyor supports, building slabs, septic vault, etc. will be stockpiled and eventually crushed and used as backfill in final slope rebuilding.

The infrastructure footprint including parking lots, buildings pads and conveyor support pads will be ripped with an excavator or loader equipped with a claw. The ground will be ripped to a depth of 1 foot, then graded and contoured with a motor grader. Seed bed preparation and seeding will proceed as described above.