

December 23, 2015

Donald R Corson Jr.
C&B Sand and Gravel Inc.
P.O. box 147
Baggs, WY 82321



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

1313 Sherman Street, Room 215
Denver, CO 80203

**RE: Sheehan Pit, File No. M-2007-058 , Construction Material Limited Impact (110)
Application Adequacy Review -2**

Dear Mr. Corson:

The Division of Reclamation, Mining and Safety (Division) is in the process of reviewing the above referenced application in order to ensure that it adequately satisfies the requirements of the Colorado Land Reclamation Act for the Extraction of Construction Materials (Act) and the associated Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for Hard Rock, Metal, and Designated Mining Operations (Rules). During review of the material submitted, the Division determined that the following issue(s) of concern shall be adequately addressed before the application can be considered for approval.

<u>Per Rule</u>			
6.2.1	General Requirements		
(1)			This Rule provides for the guidelines for, and information requirements of, each Exhibit required to be submitted with the permit application, as specified according to Section 6.1.
(2)			Maps and Exhibits
Maps, except the index map, must conform to the following criteria:			
	(a)		show name of Applicant;
	(b)		must be prepared and signed by a registered land surveyor, professional engineer, or other qualified person;
	(c)		give date prepared;
	(d)		identify and outline the area which corresponds with the application;
	(e)		with the exception of the map of the affected lands required in Section 34-32.5-112(2)(d), C.R.S. 1984, as amended, shall be prepared at a scale that is appropriate to clearly show all elements that are required to be delineated by the Act and these Rules. The acceptable range of map scales shall not be larger than 1 inch = 50 feet nor smaller than 1 inch = 660 feet. Also, that a map scale, appropriate legend, map title, date and a north arrow shall be included.
6.3.1	EXHIBIT A - Legal Description and Location Map		



(1)			The legal description must identify the affected land, specify affected areas and be adequate to field locate the property. Description shall be by (a) township, range, and section, to at least the nearest quarter-quarter section, and (b) location of the main entrance to the mine site reported as latitude and longitude, or the Universal Transverse Mercator (UTM) Grid as determined from a USGS topographic map. A metes and bounds survey description is acceptable in lieu of Township, Range, and Section. Where available, the street address or lot number(s) shall be given. This information may be available from the County Assessor's office or U.S. Geological Survey (USGS) maps.
For the main 8.14 are site please include the main entrance GPS location.			
(2)			The main entrance to the mine site shall be located based on a USGS Topographic map showing latitude and longitude or Universal Transverse Mercator (UTM). The operator will need to specify coordinates of latitude and longitude in degrees, minutes and seconds or in decimal degrees to an accuracy of at least five (5) decimal places (e.g., latitude 37.12345 N, longitude 104.45678 W). For UTM, the operator will need to specify North American Datum (NAD) 1927, NAD 1983, or WGS 84, and the applicable zone, measured in meters.
Several maps included in Exhibit A meet the scale requirements however do not note the mine entrance or are largely illegible. Please resubmit a more readable copy.			
(3)			A map showing information sufficient to determine the location of the affected land on the ground and existing and proposed roads or access routes to be used in connection with the mining operation. Names of all immediately adjacent surface owners of record shall also be shown. The operation location map shall be a standard 1:24,000 scale U.S. Geological Survey map. The location of the proposed operation shall be shown and labeled with the mine site name.
Unable to determine scale of map. Operation needs to be labeled with the mine site name on map.			
6.3.3 EXHIBIT C - Mining Plan			
	(b)		the estimated depth to which soil, suitable as a plant growth medium, will be salvaged for use in the reclamation process. This description must be consistent with information provided in Exhibit B. Sufficient soil must be salvaged to meet the vegetation establishment criteria of Rule 3.1.10. If plant growth medium is not reapplied on a graded area immediately after salvage, then the Operator/Applicant must specify how the topsoil will be stockpiled and stabilized with a vegetative cover or other means until used in reclamation. Plant growth medium stockpiles must be located separate from other stockpiles, out of the way of mine traffic and out of stream channels or drainage ways. The location of plant growth medium stockpiles must be shown on Exhibit E - Map;
For the 0.62 acres how much topsoil will be salvaged in this area? 60" is referenced as the total depth but how much will actually be stockpiled and stored for future reclamation. How will it be stabilized until used for reclamation?			
	(d)		specify the thickness of the deposit to be mined;

Specify thickness of the un-weathered bedrock to be mined. The thickness varies but is there a depth/elevation that is the end of mining target?		
	(e)	describe the major components of the mining operation such as: roads and access routes, pit, office, shop/maintenance buildings, plant, processing facilities, and any underground openings such as adits or ventilation facilities. These components must be located on Exhibit E - Map;
Clarify that trucks will be loaded within the permit boundary and <u>not</u> from Moffat CR1. Boundary may be adjacent but trucks should be within permit boundary when being loaded not on the country road.		
	(h)	specify how much water will be used in conjunction with the operation, and the source of this water;
Clarify if any water will be used for processing of mined material.		
	(m)	Specify whether the deposit will be processed on-site. If the deposit will be processed, then describe the nature of the process, facilities and chemicals utilized. The process area and any structures must be described on Exhibit E - Map;
Clarify that all hydrocarbons will either be stored in a secondary containment or in the storage shed.		
6.3.4 EXHIBIT D - Reclamation Plan		
(1)	(a)	Specify at what point in the mining plan and to what depth(s) overburden will be replaced in relation to ongoing extraction.
Specify to what depth mining will occur when reclamation will commence. Specify how and to what depths of overburden and fill will be replaced. Clarify when the 0.62 acre area will be reclaimed.		
	(b)	Specify the maximum gradient of reclaimed slopes (horizontal:vertical). If the Application proposes slopes steeper than 3:1, the Operator/Applicant must include a justification that supports steeper slopes for the proposed post-mining land use, and demonstrates compliance with the applicable performance standards of Section 3.1.
Will the 2:1 slopes be seeded? Please justify why slopes in non-consolidated material are stable and should be left at a 2:1 rather than the Division practice of 3:1. Significant steep slopes does not support post mining land use of rangeland/wildlife. Please include a cross-section map depicting the final reclamation configuration of mine benches and highwalls. What is the proposed slope configuration for the 0.62 acre stockpile area?		
	(c)	specify the measures that will be taken to revegetate the site, if applicable, including:
	(i)	State the thickness of plant growth medium to be replaced. Sample and analyze available soils sufficiently to establish quantity and quality;
Specify the thickness of plant growth material to be replaced. Is there a difference between the mine site and the 0.62 acre area?		

<p>How many acres are estimated to be included in the "lower grade slopes and flatter operations area"? Please specify what these areas are, non highwalls only?</p> <p>What sampling will occur to establish quantity and quality of soils?</p>		
	(ii)	<p>State at what point in the mining plan the site will be seeded. Explain how the seedbed will be prepared to eliminate compacted conditions (e.g., plowed, chiseled, disced). State the type, application rate, and soil incorporation methods of fertilizer application, if any. NOTE: Soil amendments shall only be applied where soil tests indicate nutrient deficiencies for the plant species to be established;</p>
<p>What seed mix will be used for stockpile storage?</p> <p>Will compacted areas be ripped in addition to disced, specifically the access roads, processing areas and stockpile storage areas?</p> <p>Will any fertilizer or other soil amendments be used and if so at what rate?</p> <p>How will you address areas where not enough soil material exist, will material be brought in?</p>		
	(iii)	<p>State the grass, forb, shrub and tree species to be planted and the applicable quantities. Specify the quantity of each grass and forb species as pounds of pure live seed per acre;</p>
<p>The referenced seed mix is primarily wheatgrasses and lacks diversity. The Division encourages the operator to include other grass species, forbs and shrubs. You may wish to reference your Exhibit B (a) for the pre-disturbance vegetative makeup of the site.</p> <p>Please remove/ rephrase the statement that limits seeding to a total of 32.7 PLS over a total of 3 acres, as more than 3 acres is currently disturbed.</p> <p>Clarify if the same or a different seed mix will be used at each of the sites.</p>		
	(iv)	<p>Specify the application method for grass and forb seeding. If the seed is to be broadcast, the application rate shall be twice the rate required for seed drilling. If the seedbed has not been adequately roughened prior to seeding, the seed shall be raked or harrowed after broadcast application;</p>
<p>Please reiterate that all methods other than drill seeding will use double the rates listed in section iii.</p> <p>Unless previously justified slopes need to be changed to 3:1 not 2:1 for unconsolidated material. Note that drill seeding on such a slope is rare and the reclamation cost will be estimated for methods other than drill seeding if slope is left at a 2:1. Only the 0.62 acre will be estimated using drill seeding methods.</p> <p>The Division disagrees with the timing of seeding. Seeding should occur in late fall, not mid-summer. Please change the timing or provide rationale for summer seeding. Seed bed preparation should be conducted just prior to seeding.</p>		
	(v)	<p>if a mulch is needed, specify the kind to be used, the crimping method, and rate of application; and</p>
<p>What deems mulching as necessary? Land with sufficient soil volume to seed?</p> <p>If drill seeding is likely unfeasible, would traditional mulching also be unfeasible.</p> <p>Clarify if mulching entails crimping as well.</p> <p>It is recommended that in applications were drill seeding is impractical that spray on mulching/erosion control be used. Please state something to this extent.</p>		

	(d)		Specify which ponds, streams, roads and buildings, if any, will remain after reclamation. These features must be shown on the Exhibit E - Map. If ponds are part of the Reclamation Plan, slopes from 5 vertical feet above to 10 vertical feet below the expected average water level cannot be steeper than 3H:1V; remaining slope lengths may not be steeper than 2H:1V. Where wildlife habitat is the proposed future land use, shorelines should be irregularly shaped to promote a diverse wildlife habitat. The Colorado Division of Wildlife (DOW) must be consulted where wildlife use is the proposed future land use.
The fence surrounding the private land is incomplete on the eastern permit boundary bordering the county road. Please clarify if this will be reconstructed upon completion of reclamation.			
	(e)		Specify the reclamation treatment of any waste rock dumps, underground mine openings, ditches, sediment control facilities, buildings and other features specified in your mine plan but not previously addressed in the Reclamation Plan narrative. These features must be shown on Exhibit E - Map. This should describe the measures taken to minimize disturbance to the hydrologic balance, prevent off-site damage, and provide for a stable configuration consistent with the proposed future land use.
How will stormwater and sediment be controlled between when BMPs are removed and vegetation is established. All previously mentioned BMP's are synthetic, only natural BMP's may remain post reclamation. Will the benches have berms/swales? Will any sediment traps remain? The mine site is greater than the referenced 8.14 acres and the current disturbance is over the 3 acres total referenced. Please revise these statements. Progressive reclamation may be used but the max disturbance specified should be equal to or greater than the actual ground disturbance.			
(2)			All 110 Limited Impact applications must provide an estimate of the actual costs to reclaim the site based on what it would cost the State of Colorado using an independent contractor to complete reclamation. (Such estimates are not required for activities contemplated by the operator and approved by the Office to be outside the scope of the proposed reclamation plan.) The unit costs should include estimates for the following activities as appropriate to the operation: backfilling, grading, topsoil application, seeding, mulching, fertilization, and labor to complete reclamation. Determine and specify the point during the operation when the site has reached a point of maximum disturbance. The cost to reclaim the site to the specifications of the Reclamation Plan at this point must be estimated. Unit costs (cost per cubic yard), volumes, haul or push distances, and grades must be included when backfilling and grading are part of the Reclamation Plan. Volume and unit costs for finish grading, subsoil and topsoil application must be provided in terms of cost per cubic yard. The estimated cost for fertilizer, seed and mulch acquisition and application must be provided as cost per acre.
	(a)		Equipment costs must include such factors as equipment operator wages and benefits, fuel and lubricant consumption and depreciation. The cost to mobilize and demobilize the equipment from the nearest population center known to have the required equipment availability should be estimated.

Please include push distances of material saved for fill and estimated volumes. Please include volumes of material topsoil needing to be moved and the associated equipment and labor costs. Please clarify that 3 acres as reference in the seeding is to be disced or if more is needed specify how much. Is the cost of seed martial included with the tractor drill seeder? Previously it was referenced that drill seeding due to the rocky nature may be impractical. How much are is anticipated to use the tractor drill seeded. And please include cost for the other methods/equipment necessary to seed.		
	(b)	All items referenced in the Reclamation Plan must be included in the cost calculation. These items in addition to earthwork, such as building demolition, fencing, monitoring well sealing or stream channel reconstruction must also be included in the reclamation cost estimate.
What equipment/how will rock scaling recontouring be conducted? Is I anticipated that all consolidated bedrock will meet final reclamation grade? What is the cost for demo and removal of the shed and stilt fence? Is there a cost for installing permanent stormwater controls? If the fence is to be completed what is the cost for that? How will vegetation success be evaluated and will long-term monitoring be necessary?		
	(c)	After the direct costs noted above have been estimated, the Office may add up to an additional maximum eighteen and one-half (18.5%) percent of that total, which includes private contract, typical overhead costs. This additional cost is required to cover indirect costs that an independent contractor would incur when performing reclamation of the site. Five (5%) percent additional cost shall be added to cover Office administration cost in the event of bond forfeiture and permit revocation.
The Division notes that cost show is the direct costs only and the office reserves the right to add indirect, overhead and administrative costs.		
6.3.5	EXHIBIT E – Map	
(1)		In addition to the requirements of 6.2.1(2), the Operator/Applicant must provide a map that clearly describes the features associated with the mining plan and the components of the Reclamation Plan. Include one map for the mine plan and one map for the Reclamation Plan. The map(s) must be drawn to a scale no smaller than appropriate to clearly show all elements that are required to be delineated by the Act and these Rules; show a north arrow, note any section corners adjacent to the proposed operation, and indicate the date illustrated. At a minimum, maps must include the following information:
Various photos attached can be used as a reference but cannot be substituted for any of the maps in Exhibit E as they do not meet the requirements of 6.2.1(2). If needed include several maps to convey all information requested below.		
(2)		Mining Plan Map
	(a)	outline and label the permit boundaries, described in Exhibit A - Legal Description; for all 110 Limited Impact and 111 Special Operations, the Office considers the area bounded by the permit boundary to be analogous to the affected area;
Map does not include 0.62 acres of land to be added in the amendment.		

	(b)		label the names of owner(s) of record of the surface of the affected area and of the land within two hundred (200) feet of the affected area, identify the owner of the substance to be mined, and the type of structure and owners of record of any permanent or man-made structures within 200 feet of the affected area;
Please address this entire section.			
	(c)		outline and label all major surface features to be used in connection with the proposed operation such as: existing and proposed roads, pit boundary, topsoil stockpiles, overburden stockpiles, product stockpiles, waste rock fills, stream channels, buildings, processing plant, underground openings such as adits or ventilation facilities, ponds, impoundments, dewatering pumps, diversions or waste disposal areas;
Please indicate where the following items are to be located: access roads, product stockpiles, buildings (shed), silt fence. Clarify that all portable processing equipment will be confined to the operation area.			
	(f)		Outline and label existing disturbance within and/or adjacent to the permit boundary (e.g., previously mined areas, roads or excavations resulting from utility construction). Re-disturbance of previously disturbed areas, by the proposed mining operation, must be included in the permit area and addressed in Exhibit D - Reclamation Plan.
The 20 yr. line has been surpassed, the entire area appears to be affected. Update the map to reflect current site conditions. Specifically #5 narrative.			
(3)			Reclamation Plan Map
	(a)		show the gradient of all reclaimed slopes (horizontal:vertical) sufficient to describe the post mine topography;
Map does not include 0.62 acres of land to be added in the amendment. No topography for within the permitted area is included. Please show the slopes of all benches, highwalls. The operator may wish to have a separate topographic and cross-section map to convey this information. Map previously sent is not a cross section map but it helps convey how the two areas of the main 8.14 ac mine will be contoured differently.			
	(b)		indicate where vegetation will not be established and the general area(s) for shrub or tree planting;
The 20 yr. line has been surpassed, the entire area appears to be affected. Update the map to reflect current site conditions. Specifically #5 narrative. Indicate if the entire 8.76 acre site will be seeded or if only portions, where and how much.			
	(d)		state the average thickness of replaced overburden by reclamation area or phase; and
Please address.			
	(e)		State the average thickness of replaced topsoil by reclamation area or phase.
Please address.			
6.3.6	EXHIBIT F - List of Other Permits and Licenses Required		
			Provide a statement identifying which of the following permits, licenses and approvals which are held or will be sought in order to conduct the proposed mining and

			reclamation operations: effluent discharge permits, air quality emissions permits, radioactive source materials licenses, disposal of dredge and fill material (404) permits, permit to construct a dam, well permits, explosives permits, State Historic Preservation Office clearance, highway access permits, U.S. Forest Service permits, Bureau of Land Management permits, county zoning and land use permits, and city zoning and land use permits.
If since 2007 permit applications have been granted please provide the division with the approved permits.			
6.3.7		EXHIBIT G - Source of Legal Right-to-Enter	
			Provide a description of the basis for legal right of entry to the site and to conduct mining and reclamation, for Owners of Record described in Rule 1.6.2(1) (e) (i). This may be a copy of access lease, deed, abstract of title, or a current tax receipt. A signed statement by the Landowner and acknowledged by a Notary Public stating that the Operator/Applicant has legal right to enter and mine is also acceptable.
Section 8 of the lease agreement states "No, oil, petroleum products shall be stored above or below ground at the Sheehan Pit or the Stockpile Site unless prior written approval has been granted by the Lessor." Please provide documentation that hydrocarbons may be store in the storage shed. Or include a statement in your mining plan that no hydrocarbons will be stored at this site.			
6.3.12		EXHIBIT L - Permanent Man-Made Structures	
			Where the mining operation will adversely affect the stability of any significant, valuable and permanent man-made structure located within two hundred (200) feet of the affected land, the Applicant shall either:
	(a)		provide a notarized agreement between the Applicant and the Person(s) having an interest in the structure, that the Applicant is to provide compensation for any damage to the structure; or
Please include structure agreements for the following: Moffat County Roads 1 & 2 ROW features and bridge, USGS Slater Creek Gaging Station.			
	(b)		where such an agreement cannot be reached, the Applicant shall provide an appropriate engineering evaluation that demonstrates that such structure shall not be damaged by activities occurring at the mining operation; or
	(c)		Where such structure is a utility, the applicant may supply a notarized letter, on utility letterhead, from the owner(s) of the utility that the mining and reclamation activities, as proposed, will have "no negative effect" on their utility.

Please submit your response(s) to the above listed issue(s) by **Friday, January 01, 2016** in order to allow the Division sufficient time for review. Please note that according to the board order the permit must be approved by December 21, 2015, an extension is pending with the required approval date of January 20th, 2016.

The Division will continue to review your application and will contact you if additional information is needed.

This letter shall not be construed to mean that there are no other technical deficiencies in your application. The Division will review your application to determine whether it is adequate to meet the requirements of the Act after submittal of all required items.

If you require additional information, or have questions or concerns, please feel free to contact me. Amy Yeldell at the Division of Reclamation, Mining and Safety, 1313 Sherman St., Room 215, Denver, CO 80203. Direct contact can be made by phone at 970-254-8511 or via email at amy.yeldell@ state.co.us

Sincerely,



Amy Yeldell
Environmental Protection Specialist
Department of Natural Resources
Division of Reclamation, Mining and Safety
Phone: (970) 254-8511
Fax: (970) 241-1516

Cc:
Russ Means, Senior EPS / Field Office Supervisor, Grand Junction DRMS