



COLORADO

Division of Reclamation,
Mining and Safety

Department of Natural Resources

1313 Sherman Street, Room 215
Denver, CO 80203

March 6, 2015

Deb Koenig
Crossfire Aggregate Services, LLC
820 Airport Road
Durango, CO 81303

Re: Crossfire Bonds Gravel Pit, New 112c Application, File No. M-2015-001, Preliminary Technical Adequacy Review Letter

Dear Ms. Koenig,

I have begun my review of the Construction Materials 112c permit application, which was found complete by the Division on January 28, 2015. Notices were sent to you and to outside agencies by the Division at that time.

During the review, a number of items that must be addressed or that require further information have been identified. Please respond to each of these items, as listed in the paragraphs below. Please label your responses to facilitate review and inclusion in the application materials. Items not named in this letter are considered adequate at this time.

Application Form, Item 3, Page 1

The form states that the proposed permitted area will be 220 acres. The application exhibits that follow clarify that there will be disturbed and undisturbed land comprising this 220 acres. However, the exhibits also show that not all disturbed areas are included in this total acreage figure. Please see the discussion regarding acreage discrepancies below, under Exhibits C, D, and E, and provide a corrected acreage figure on a replacement application form page, if appropriate.

Structure Agreement

An agreement for an oil and gas well ("Bondad Ute 01-36-2," owned by BP) is included in the application. The agreement is properly signed and notarized by Crossfire, but not by BP. Please provide further agreement documentation that includes signature and notarization of a representative of BP for this structure. This will be further discussed under Exhibit S, below.

Please ensure that a properly-executed structure agreement is obtained for all other significant structures within 200 feet of the proposed permit boundary.

Exhibit C – Pre-mining and Mining Plan Maps (Rule 6.4.3)

The Pre-mining and Mining Plan Map does not include a map scale or a signature. Please review the general map standards in Construction Materials Rule 6.2.1(2), as well as the specific information to be included in this map, in Rule 6.4.3. Please provide a corrected map which includes these items.



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The list of Owners of Record of surface land within 200 feet contains names of three entities. Please ensure that the same information contained in the published legal notice is also individually mailed to each of those entities. Those mailings must be by certified mail with return receipt requested. Further information concerning the mailing of notices is contained on the application page which has the notice template. You will need to provide to the Division all of the receipts for the certified mailings, and the signed green cards for each delivery.

The Pre-mining and Mining Plan Map includes a delineation of the proposed permit boundary. This boundary encompasses ten mining phases and a buffer strip around much of the perimeter. However, the proposed permit boundary does not encompass the "Operations" area or the "Conceptual Access" road. Since these are areas that will be developed and/or disturbed to support the proposed mining operation, they must be included in the permitted area and the total acreage figure. Please provide a corrected map which includes these areas in the permitted area.

Please note that the entire footprint of the area to be affected by constructing the hillside access road must be shown on the map and included in the permit affected acreage, not just the travel surface of the road.

The Mining Plan Map is required to include an indication of the direction of mining. The map you have provided includes a numbered series of mining phases. This office presumes that the phases are numbered to reflect that they will be mined sequentially according to the numbering. If this interpretation is incorrect or if mining is to proceed according to a different sequence please provide clarification or a revised map.

There is no indication on the mining plan map where stripped topsoil or overburden will be stockpiled in the phases until it is replaced. This is a reclamation issue which affects the bond amount, and it will be discussed further in Exhibit D, below.

Exhibit D – Mining Plan, Rule 6.4.4

The third paragraph of the Mining Plan narrative explains that the proposed permitted area will include a total of 220 acres, with approximately 170 to be mined (169.2 acres, according to the figures in the phases on the map). The paragraph further states that the remaining non-mined acres will be for buffers, setbacks, access roads, utility rights-of-way, equipment storage and an operations area. It is good that those mining-related and other uses are identified, but it is not clear whether the rest of the approximately 50 acres (i.e., 220 acres minus 170 acres) includes all of the individual acreages of each of those other smaller areas. They must all be included in the permit acreage. As mentioned above, all of the various proposed areas must be included, especially all affected areas, and the acreage figures and maps must be consistent. Please provide revised figures or clarification for this.

The Mining Phasing, on page 2 of Exhibit D, states that there will be 15 phases, though the maps show 10 phases. Please clarify if this is a typo or if there are other phase areas not identified elsewhere in the application materials.

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Prior to excavation in each phase, the topsoil and overburden will be separately stripped and stockpiled, for later replacement during reclamation. Please generally describe where these stripped materials will be stockpiled, and show it conceptually on the mining plan map.

Exhibit E – Reclamation Plan, Rule 6.4.5

The acreages shown in Table E1 add up to a total of 228 acres, which appear to include the access road (2.5 acres) and a “facilities” area (5.2 acres; which is possibly the same as the operations area). This calls into question the acreages represented elsewhere in the application’s exhibits, reinforcing the need to include all affected lands and to clearly identify these areas on the maps. Please revise this table as needed to correlate to the necessary acreage corrections provided in the other exhibits.

The acreages in Table E1 include 2.5 acres for the proposed access road. Please ensure that all land that will be affected by the cut and fill for constructing the road are included in the road acreage.

There is a 13,068-square foot difference between the 228-acre “Total” area included on Table E1, and the 227.7-acre sum of the smaller areas within that Total. This type of discrepancy shows up elsewhere in the application. It is acceptable to provide “approximate” acreages, but please provide acreage figures that are at least to the nearest one-tenth (0.1) acre throughout the revised materials that you will provide.

The reclamation plan states that clean fill material may occasionally be imported to the site for reclamation backfill. This activity will be included in those that will be approved for this permit. But please be reminded that prior to each importing event, a Notice must be provided to this office, which includes all the information required per Construction Materials Rule 3.1.5(9). Please commit to this.

Mining will be carried out in some areas to depths that come close to the underlying sandstone. Please be reminded that a sufficient depth of material must either remain unmined, or be replaced, over the sandstone in order to provide sufficient rooting depth and drainage for successful revegetation of the site; usually this is a minimum of two feet. Please commit to this.

There are two different seed mixes provided for the revegetation. The site can currently be described as dry rangeland, and the post-mining land use is also rangeland. One of the two seed mixes is for irrigated pasture. Please clarify this by stating whether part of the site will be reclaimed as irrigated pasture, or whether just the rangeland mix will be used. If two different mixes will be used, please delineate the two different seeding areas on a revised reclamation map.

The exhibit states that straw mulch will be applied at the rate of 1200-2000 pounds per acre, and crimped in. Later, the exhibit states that hay mulch will be applied at a rate of 4000-5000 pounds per acre, and crimped. Please clarify why there are two different types and application rates of mulch. If appropriate, please delineate the two different mulch areas on a revised reclamation map.

Exhibit G – Water Information, Rule 6.4.7

The exhibit narrative and enclosures are adequate overall. There is a map included in the exhibit, which appears to depict locations of registered water wells in the vicinity of the proposed permit area. The background is very pixilated but the locations of the water features are clear enough. The map's usefulness would be improved if the proposed permit boundary and a few standard map features (such as legend, scale, etc.) were added. However, since a statement has been provided that there will be no adverse effect to water wells in the area, this map is not required by this rule.

Exhibit J – Vegetation Information, Rule 6.4.10

The narrative descriptions of the various vegetation communities are good. However, the supporting map of the vegetation information (Map J) does not contain a legend explaining what each color represents. Please provide a revised map containing the additional vegetation information as needed.

Exhibit L – Reclamation Costs, Rule 6.4.12

The breakdown of the reclamation costs is good, since it identifies each task within each phase, and also includes the indirect costs. The Division will also perform a cost estimate, based on the amounts and types of disturbance you have described in the mining plan (Exhibit D). Please note that several of the questions raised in the paragraphs above seek information which will help the Division to more closely estimate the costs.

Exhibit N – Source of Legal Right to Enter, Rule 6.4.14

The area described in other exhibits for the proposed access road does not correlate with the area shown in the "Access and Utility Easement." Other exhibits and maps describe a road alignment that climbs the hill toward the north (in section 36); the location in this exhibit indicates that the road will climb the hill slope toward the south (in section 1). Please clarify this discrepancy, by revising the necessary exhibit materials.

Exhibit O – Owners of Record of Affected Land, Rule 6.4.15

The "Mining Lease" document, which is the final item provided in this exhibit, appears to be missing every second page. Please provide a complete copy of the document.

A minor item to mention concerns the exhibit's Index Map. This has no bearing on the approvability of this exhibit but name of the affected landowner, the Bonds Family Ranch Partnership, LLP is misspelled. No corrected map is necessary.

Exhibit Q – Proof of Mailing Notices to County Commissioners and Conservation District, Rule 6.4.17

These proofs of certified mailings are sufficient. Please provide the signed green cards, showing proof of delivery, when you receive them.

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

This exhibit is sufficient. Please be aware that all additional materials to be provided to the Division as part of this application and related correspondence must be additionally filed with the clerk and recorder, and a

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receipt obtained therefor. These additional filings are to be made in a timely manner, and the obtained receipts must be provided to the Division.

Exhibit S – Permanent Manmade Structures, Rule 6.4.19

The only manmade structure described is the oil and gas well outside the northwest corner of the proposed permit boundary. An incomplete Structure Agreement, discussed above, was provided with the application, and you were directed to obtain the notarized signature of a person authorized to represent the owner of that well. However, you have provided a Geotechnical Stability Exhibit, discussed below, which presents information sufficient to replace the need for the completed structure agreement. No response is needed.

Geotechnical Stability Exhibit, Rule 6.5

The geotechnical report provided reveals several important characteristics about the site and the present strata. The mesa surface is largely covered in thin topsoil, and underlain by varying thicknesses of fine-textured overburden, grading to natural gravels, cobbles and boulders at depth. The numerous auger borings and perimeter outcrop observations further indicate that a sandstone bedrock layer underlies the aggregate of the entire site, and it is probably safely assumed that there is no aquifer to be affected in the mining area.

The main factor to be analyzed therefore is the issue of slope stability in the mining area and the nearby structures. The report appropriately separates short-term from long-term stability, and granular from clay/granular slope profiles. The report correctly identifies the risk of failed slopes near the perimeter damaging areas outside the permit boundary.

The mining plan (Exhibit D) describes a non-mined setback from the eastern mesa crest, which will provide a visual screen to offsite areas east of the pit, but also provide a buffer to enhance the stability of the upper eastern mesa slope. The geotechnical report includes the supporting data to be able to define the proper minimum setbacks and maximum slopes that can be created to maintain onsite stability, and eliminate risk of offsite damage. The Division accepts the report based on the data provided. The operator will therefore limit the depths, angles of temporary and permanent slopes, and setback distances throughout the phases of the mining plan accordingly.

The decision date for this application is set for April 28, 2015. Please respond to each of the items above before this date, by providing two complete sets of response materials to the Division: an original set must be mailed to our Denver office (see address on letterhead), and a complete set of copies must be mailed or delivered to me at the Durango Field Office: 691 CR 233, Suite A-2, Durango, CO 81301. Please be reminded that an identical set of your response materials must be filed with the clerk and recorder.

If you have any questions, please contact me at the Division's Durango Field Office: 970-247-5193 or by email: bob.oswald@state.co.us.

I will contact you in the near future to schedule a pre-operation inspection of the proposed site.

I look forward to receiving your responses.

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Sincerely,

A handwritten signature in black ink, appearing to read "Bob Oswald". The signature is written in a cursive, flowing style.

Bob Oswald

Environmental Protection Specialist

Ec: Russ Means, DRMS Grand Junction
Gregg Donaldson, Tegre Corp. (agent for the applicant)

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