



COLORADO

Division of Reclamation,
Mining and Safety

Department of Natural Resources
1313 Sherman Street, Room 215
Denver, Colorado 80203

November 21, 2018

Karl Nyquist
Prowers Aggregate Operators, LLC
7991 Shaffer Parkway, Suite 200
Littleton, CO 80127

Re: West Farm Pit, Permit No. M-2008-078, 112c Permit Amendment Application (Revision No. AM-01), Preliminary Adequacy Review

Mr. Nyquist:

The Division of Reclamation, Mining and Safety (Division) has completed its preliminary adequacy review of the above referenced amendment application submitted for the West Farm Pit. All comment and review periods for the application began on November 5, 2018, when the application was called complete for filing purposes. The decision date for the application is set for February 4, 2019.

The review consisted of comparing the application content with specific requirements of the Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials. The Division has identified adequacy items requiring clarification or additional information. These items are identified below under their respective exhibit heading, and are numbered sequentially.

Exhibit A – Legal Description (Rule 6.4.1):

- 1) The application describes Parcel B (the sand load-out area adjacent to the railroad) as containing 23.05 acres more or less. This amount is 3.75 acres less than the amount estimated by the Division in its June 14, 2018 inspection report. Please confirm the proposed permit area for Parcel B contains all land disturbed or proposed to be disturbed by the operation in that area.

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

- 2) The Exhibit C – Pre-Mining/Mining Plan Map shows a tailwater pond at the northwest edge of the site located partially outside of the proposed permit boundary. Please be advised, all land disturbed by the operation, including stormwater or settling ponds, must be included in the permit area. Please revise the map to include this pond inside the proposed permit area. Alternatively, the applicant could revise the amendment application to expand the permit area to include the pond.
- 3) The Exhibit C – Pre-Mining/Mining Plan Map shows a large sediment pond located north of the wash plant, the northern and western edges of which appear to be very close to the proposed permit boundary. Please clarify how the operation will maintain and eventually reclaim this pond without



disturbing land outside of the permit boundary. Will the operation maintain a buffer between the pond and the permit boundary? If so, please include this buffer on the map.

- 4) The Exhibit C – Pre-Mining/Mining Plan Map shows the proposed western permit boundary to be very close to the western edge of the wash plant/stockpiling area. The current approved permit boundary includes more space in this area. Will the revised western permit boundary allow enough room for mining and reclamation activities to occur in the wash plant/stockpiling area without creating off-site disturbance?
- 5) The Exhibit C – Pre-Mining/Mining Plan Map shows a series of sediment ponds in Phase 13 which overlap the proposed mining limit for the South Mining Area. Please explain and/or correct the location of these ponds on the map.
- 6) The Exhibit C – Pre-Mining/Mining Plan Map includes the feature “Phase 1A Stockpiling Area” with an arrow pointing to the northern edge of the South Mining Area. This appears to be an error. Please explain and/or correct the location of this feature on the map.
- 7) The Exhibit C – Pre-Mining/Mining Plan Map shows portions of the proposed permit area to include land identified as “Conservation Easement”. Please provide more details on this easement. Has the easement owner been notified of the proposed expansion of the permit area?
- 8) The Exhibit C – Pre-Mining/Mining Plan Map shows a potential future multi-use railroad corridor located between the North and South Mining Areas. Please provide more details on this corridor.
- 9) The Exhibit C – Pre-Mining/Mining Plan Map does not label Co Rd Hh 8/10 which runs east-west between the North and South Mining Areas. Please label this road on the map.
- 10) The Exhibit C – Pre-Mining/Mining Plan Map identifies existing culverts, bridges, ditches, roads, and fences located on and within 200 feet of the proposed permit boundary. Please include on the map the owner’s name for all such structures, as required by Rule 6.4.3(g).
- 11) The Exhibit C – Pre-Mining/Mining Plan Map does not include the buildings and other permanent, man-made structures located within 200 feet of the proposed permit boundary/affected land boundary south of Parcel A, and east and south of Parcel B. Please include on the map the locations and owners of all permanent, man-made structures located within 200 feet of the proposed permit boundary, as required by Rule 6.4.3(g).

Exhibit D – Mining Plan (Rule 6.4.4):

- 12) Please provide specific details on the construction of the slurry walls. For slurry walls already installed, please provide the final construction drawings. For proposed slurry walls, please provide the design specifications, and commit to providing the final construction drawings after installation is complete. Please provide more details on how the South Mining Area slurry wall will be installed



across the existing irrigation lateral and Co Rd Hh 8/10, as depicted on the Exhibit C – Pre-Mining/Mining Plan Map.

- 13) Please confirm the proposed mining slope is 3H:1V. (In the case that pit walls will be mined at slopes steeper than 3H:1V, the Division must hold costs in the reclamation bond for backfilling pit slopes.)
- 14) Please clarify the maximum disturbed area at any time. This acreage amount should include all land currently disturbed and proposed to be disturbed by the operation (covered by the reclamation bond proposed in Exhibit L).
- 15) Pursuant to Rule 6.4.4(e), please provide an approximate timetable for the proposed phases of mining including estimated disturbance acreage amounts for each phase. Please be sure this mining timetable correlates with the reclamation timetable in Exhibit E.
- 16) Please provide more details on the future conveyor shown on the Exhibit C – Pre-Mining/Mining Plan Map which is oriented northeast-southwest from the wash plant to Co Rd HH.5. Please provide its approximate dimensions, and any permanent structures associated with its construction (i.e. concrete footing). Would this conveyor cross Co Rd HH.5 to Parcel B? If so, would the portion of the conveyor crossing the road be covered to prevent sand from spilling onto the road? Additionally, would this specific activity require any additional permitting with the county?
- 17) Please provide more details on the activities to occur in Parcel B during operations.

Exhibit E – Reclamation Plan (Rule 6.4.5):

- 18) Please provide details for any reservoir infrastructure installed or proposed to be installed (e.g., pump stations, inlets/outlets). The locations of these structures should also be shown on the Exhibit F map. If details for any proposed final structures are not known at this time, please commit to submitting a Technical Revision to provide these details at a later date.
- 19) Please specify the temporary seed mixture for topsoil stabilization, including seeding rates in PLS/acre.
- 20) Please provide a reclamation timetable pursuant to Rule 6.4.5(2)(e) that includes estimated periods of time required for the various phases of reclamation, a description of the size and location of each area to be reclaimed during each phase, and an outline of the sequence in which each stage or phase of reclamation will be carried out. Please be sure this reclamation timetable correlates with the mining timetable in Exhibit D.
- 21) Please specify the proposed post-mining land use for Parcel B.



- 22) Please describe the reclamation to be achieved in Parcel B. Where will topsoil for this area be derived for reclamation? Is there an existing topsoil stockpile in this area, or will the topsoil be hauled in from Parcel A?
- 23) Please describe the reclamation to be achieved for sediment ponds and any other water conveyance or storage structures to be reclaimed.
- 24) Please describe the reclamation to be achieved for the scale house. Will any portions of this feature require demolition for reclamation? If so, please be sure costs for its demolition and removal are included in the reclamation bond estimate in Exhibit L.
- 25) Please describe the reclamation to be achieved for the future conveyor. Will any portions of this feature require demolition for reclamation? If so, please be sure costs for its demolition and removal are included in the reclamation bond estimate in Exhibit L.

Exhibit G – Water Information (Rule 6.4.7):

- 26) The application includes two letters from the Division of Water Resources (DWR), dated February 16, 2015 and January 31, 2018, approving installed liners at this site after their office reviewed the results of the 90-day performance tests. Please confirm these letters are pertaining to the two slurry wall enclosures in the North Mining Area depicted on the Exhibit C – Pre-Mining/Mining Plan Map.
- 27) In the letter from the DWR, dated January 31, 2018, Item #3 specifies that additional information is required to be submitted prior to the lined reservoir being used for storage of water. During the Division's June 14, 2018 inspection, the first slurry wall enclosure (Phases 1-4) was filled with water. Please clarify whether the DWR has been informed of this use, and if all required information for this use has been submitted to their office.
- 28) The application includes a copy of the discharge permit obtained from the Colorado Department of Public Health and Environment (CDPHE) for two defined discharge points, Outfall #001-A and Outfall #002-A. Please provide a map of the site (large format not necessary) showing the locations of these two permitted discharge points.
- 29) Please confirm the maximum amount of exposed groundwater on site at any time will be 0.61 acre (for temporary dewatering trenches and settling ponds). Please also confirm the appropriate permitting will be maintained from the DWR for any exposed groundwater.
- 30) Please confirm that mining in the South Mining Area will remain above the static groundwater table until the proposed slurry wall has been installed and approved by the DWR.
- 31) Please provide the Division with a copy of the current Substitute Water Supply Plan for the site. If it has not been approved at this time, please commit to providing this document once approved, and maintaining a current version on file with the Division throughout life of mine.



- 32) Please provide more details on the groundwater monitoring plan, including all groundwater sampling points, the frequency of sampling and reporting to the Division, and the parameters analyzed. Please provide a discussion of the monitoring data collected thus far, including any trends observed.
- 33) Please specify what criteria would require implementation of the groundwater mitigation plan. Please provide a timeline for response and notification to the Division in the case of suspected off-site groundwater impacts.
- 34) The proposed lined reservoirs are at least partially located within the 100-year flood plain of the Arkansas River. Please provide a flood analysis and flood control plan addressing how the operation will safely convey the expected 100-year flood event throughout the life of mine, including during final reclamation.

The flood analysis should quantify the velocity and volume of flows expected on site from a 100-year flood event, as well as the elevation of the 100-year base flood event and its relation to the elevation of any proposed spillways and reservoir embankments. The flood control plan should propose mitigation measures such as pit side armoring, inflow and outflow channels, and/or other appropriate measures. If specific details for these measures are not known at this time, please commit to submitting them later in a Technical Revision.

Exhibit H – Wildlife Information (Rule 6.4.8):

- 35) The application states that no federal or state threatened or endangered species were identified in the study area. However, Colorado Parks and Wildlife (CPW) recently expressed concerns about the state endangered suckermouth minnow for which a section of the Arkansas River (in the vicinity of the mine site) is considered critical habitat. Please describe what measures the operation will take to prevent any impacts to this state endangered species.

Exhibit L – Reclamation Costs (Rule 6.4.12):

- 36) Please submit an Exhibit L map showing the proposed scenario for the reclamation bond. This map should depict the site at the point in time of maximum disturbance (including Parcel A and Parcel B), and should correlate with the reclamation tasks included in the bond estimate.
- 37) On the Reclamation Cost Summary table, please include a column with estimated acreages for each row.
- 38) Please clarify whether sediment ponds and ditches will require backfilling for reclamation. If so, please specify the source of the backfill material, provide an estimated volume of backfill material required, and include costs for this task in the bond estimate.
- 39) Please provide more details on how the scale house and the conveyor will be demolished or removed for reclamation. What equipment will be used for demolishing/removing these



structures? Will the materials be disposed of on site or hauled off site for disposal? If the materials will be disposed of on site, please indicate the anticipated location(s) on the Exhibit L map. Please be sure the bond estimate includes all costs for demolishing/removing these structures, including costs for disposal.

- 40) Please be advised, the Division must hold 100% of the costs for slurry wall installation until the operator demonstrates the liner has been approved by the DWR, after which time, the Division must hold a minimum of 20% of the costs for installation. Please demonstrate the bond estimate includes 100% of proposed costs for installing the slurry wall liner in the South Mining Area (minus the northern wall to be shared with the existing northern enclosure), and a minimum of 20% of costs for installing the two slurry wall enclosures in the North Mining Area. Please be sure the demonstration (evidence of actual costs incurred or bids provided for the projects) includes line item costs.
- 41) Please explain the credits included in the bond estimate for Phases 7 and 10, Phases 5 and 6, Phase 13, Phase 14, Phase 15, Phase 16, and Phase 17.
- 42) The bond estimate includes a lump sum mobilization cost. The Division requires additional information in order to calculate the mobilization/demobilization costs for the proposed reclamation plan. Please specify the type and number of equipment to be used for reclamation, and the nearest location from which this equipment could be obtained.

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

- 43) Please specify which of the two owners listed is the surface owner, and which is the owner of the substance to be mined.

Exhibit S – Permanent Man-Made Structures (Rule 6.4.19):

- 44) Please provide a list of all permanent, man-made structures located on or within 200 feet of the proposed permit boundary/affected land boundary (for Parcel A and Parcel B), and their respective owner(s).
- 45) The application does not address all structures located within 200 feet of the proposed permit boundary, particularly the buildings and other permanent, man-made structures located south of Parcel A, and south and east of Parcel B. Please demonstrate that structure agreements have been attempted for all permanent, man-made structures located on or within 200 feet of the proposed permit boundary (including for Centurytel and Milford and Daniel D. Rasmussen, for which Certified Mail receipts could not be found).
- 46) Please clarify whether executed structure agreements have only been obtained from GP Irrigated Farms LLC and Sutphin Petroleum LLC.



Additional Items:

- 47) For the West Farm Seepage and Rapid Drawdown/Slope Stability Analyses prepared by Cesare, Inc. (dated March 21, 2013) and the Data Report, Seepage, Rapid Drawdown, and Slope Stability Analyses also prepared by Cesare, Inc. (dated February 2, 2016), please provide a site map showing locations of the sections analyzed.
- 48) Please provide a stability analysis for the proposed slurry wall to be installed in the South Mining Area (similar to the ones submitted for the North Mining Area slurry walls), or commit to providing the analysis prior to its installation.

This concludes the Division's preliminary adequacy review of your amendment application. Please ensure the Division sufficient time to complete its review process by responding to these adequacy items no later than two weeks prior to the decision date, by **January 21, 2019**.

Please remember that, pursuant to Rule 1.6.2(1)(c), any changes or additions to the application on file in our office must also be reflected in the public review copy which was placed with the Prowers County Clerk and Recorder. Pursuant to Rule 6.4.18, you must provide our office with an affidavit or receipt indicating the date this was done.

If you have any questions, you may call me at (303) 866-3567, ext. 8129, or email me at amy.eschberger@state.co.us.

Sincerely,



Amy Eschberger
Environmental Protection Specialist

Cc: J.C. York
J&T Consulting, Inc.
305 Denver Avenue, Suite D
Fort Lupton, CO 80621

