



IMAGED

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February 11, 2011

Mr. Dave Kuzara
Westmoreland Resources, Inc.
Absaloka Coal Mine
P.O. Box 449
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Permit ID: C1985005
Revision Type: Permit Amendment
Permitting Action: Deficiency
Subject: Permit Amendment Application 00186; First Technical Deficiency

Dear Dave:

The Department reviewed Westmoreland Resources' (WRI) submittal of Amendment Application 00186 (Tract III West) to SMP C1985005. The application was initially received on February 26, 2010. The application was determined to be complete on October 18, 2010. Our review of the amendment application identified numerous deficiencies that must be addressed before Department review of the application can proceed. Please address the following:

General Comments:

- On the Exhibit D-2 Drill Hole Map the Amendment Application 00186 boundary and Tract III boundary lines are not represented as noted in the legend. They are noted in the legend as dashed lines; however, they are continuous or irregular large dashed lines on the map. Additionally, the Amendment Application 00186 boundary does not show the eastern extent.
- The 19 new holes mentioned in the overburden analysis are unidentifiable on the map. Site numbers are illegible on the map.

As we are processing with review of MR09-05-04, please ensure that the following Application 00186 materials are updated with the information found acceptable in MR 09-05-04.

17.24.308(1)(a) and 313(1)(h)(xii): Exhibit B-1, Tables 1 and 2, Equipment List.

17.24.305(1)(d): Exhibit B-2, Plate 1, Mine Sequence Map.

17.24.321 and 314(2): Exhibit B-34, Plate 1, Operation Drainage Control Plan map. While updating the map for MR 09-05-04 information, Drainage 4 in Tract III West must be added to Plate 1.

17.24.303(1)(c): A check of the most recent cadastral survey indicates the surface owner in T1NR37ES27 is different than that indicated in the Surface Ownership report in Exhibit C-2. Please review this report for accuracy for the permit area and the area within ½ mile of the permit.

17.24.303(1)(t): The current Air Quality Permit (#1418-04) does not include the sections 22, 27, or 34 in T1N38E. While the permit is based on tons, the legal description in the Air Quality Permit may need to be updated.

17.24.303(1)(t): The current permit includes a determination of the absence of jurisdictional wetlands. This documentation does not include the review of the amendment area, has WRI communicated with the ACE on this subject?

17.24.304: The overburden discussion lays out the unsuitable characteristics of the overburden in a clear description; however, the mitigation strategy should be more detailed. The main mitigation will be mixing during overburden removal and spoil placement and contouring.

Using the truck shovel approach may result in less mixing than with the Dragline method. A demonstration of how a truck shovel operation will create adequate mixing needs to be included in the proposed permit text.

Text with the application currently states: *"Burial of weathered McKay coal remnants and Stray-2 coal excavated as overburden will mitigate associated elevated levels of EC, boron, selenium and nitrate-N. Spoils originating from the area of holes 1032, 1035 and 1039 may require monitoring to determine levels of Mo in regraded spoils."*

EC is a normal parameter tested for in spoil sampling and Selenium appears negligible. Three constituents are of most concern; Nitrate-N, Boron, and Molybdenum. These three parameters of concern could be handled in the following manner:

- * Nitrates should be included as a parameter in the MPDES monitoring points if not already included.
- * For Boron analyze the spoil surface where materials from holes 1025 and 1035 are placed.
- * For Molybdenum analyze the spoil surface where materials from holes 1032, 1035, and 1039 are placed.

Text regarding these or similar methods needs to be added to the amendment application.

For spoil placement, the overburden appears to be most suspect in the burned out coal and adjacent to coal seams. The statement quoted above states that the most suspect materials associated with the weathered McKay coal and stray 2 coal will be buried. This is an appropriate approach.

17.24.304(1): References to the location of baseline data collected for the Tract III West area must be added into the permit.

17.24.304(1)(l): The reference to the location of the required pre-mine condition, capability, productivity, and history of landuse information must be corrected in Volume 1.

17.24.304(1)(j): The application does not include the baseline wildlife data or habitat map as required. The operator reported that the information was collected and was inadvertently not included.

ARM 17.24.304(1), 314 and 646: WRI included no streamflow data for the Tract III West drainages. During discussions on baseline monitoring, WRI committed to installation of a continuous recorder streamflow site in Kuehn Coulee below Tract III West disturbance. If this was completed, please provide the data that was collected. If the site was not construction, WRI needs to include a small ephemeral drainage streamflow site for this area to provide representative pre-mine/undisturbed data for later comparison with reclaimed drainage data. The data will be important for evaluating (and calibrating) Western Alkaline sediment control and bond release modeling and data. Other small drainages within or adjacent to Tract III West may be considered to maximize the predisturbance monitoring period.

WRI also needs to consider a similar streamflow network for monitoring and comparison of smaller undisturbed and reclaimed drainages mine-wide (e.g. pre-mine/undisturbed basins similar to comparable

reclaimed drainage basins). This could include reactivation of some previous surface water monitoring sites.

ARM 17.24.304(1), 314, 646: WRI's discussion of spring monitoring was very limited and included only springs 21, 22 and 236, immediately within the Tract III West disturbance area.

WRI must include a more complete description and graphs of historic spring flow and chemistry data for these and other springs adjacent to and nearby Tract III West, including any springs likely to be impacted and springs in the vicinity not likely to be impacted.

17.24.304(1)(i)(B): Appendix B, Water Level Data and Hydrographs – The table shows station data for each monitoring well and water levels for July '08 and Jan '09. Why are two measurement dates reported in the table, but the hydrograph shows monthly measurements for the baseline year? Also, please complete the empty cells in the table for wells B16R2 and B16SR.

17.24.304(1)(i)(B): Why do baseline water quality analyses summary reports say “draft” at the top? Are these the final reports? Poor legibility of these reports makes them difficult to read. Please submit more readable copies of analytical data in a final – non draft – format.

17.24.304(1)(i)(i): While Exhibit E-2 Plate 1; Premine Vegetation Physiognomic Types; provides the required information, it would be much more useful if the Disturbance boundary were simply a line, and colors were used to distinguish between physiognomic types.

17.24.304(1)(k): Amendment Application 00186 includes additional soil survey area than what is represented in the current permit. Please update Exhibit D-9 to show the proposed amendment area and soil survey extents.

17.24.305(1)(c): Exhibit B-05, Plate 1, Permit Area Description Map must be updated or rational given for its' removal from the permit.

17.24.305(1)(e): The currently approved Exhibit B-6, Plate 1 depicts an occupied dwelling on the reservation within 1,000' of the permit boundary in Section 9. Please identify the status of the dwelling or include it on the exhibit.

17.24.305(1)(d)and (k): The projected disturbance limit is proposed to follow ~ 150 outside of the Robinson coal outcrop. This will prove to be extremely limiting and require modification. Maps depicting the disturbance limit (Exhibit B-3, Plate 1) should be revised to depict a more extensive affected area boundary. A significant extent of the disturbance limit should fall within 200' of the permit boundary.

17.24.305(1)(j): Exhibit D-2 Plate 1, Drill Hole Map with Pre-mining Topography must be referenced on Page 3-7 of Book 1, Volume 1.

17.24.305(1)(r): The permit states that Exhibit B-31, Plate 1 is intended to fulfill the requirements of this rule. However, Plate 1 displays pre-mine land-use and proposed post-mine land uses. Exhibit E-2, Table 1 shows the pre-mine vegetation communities and the tie to pre-mine land uses. This table needs to be expanded to show the relationship between the vegetation communities and the post-mine land uses.

17.24.308(1)(a): Exhibit B-34, page 8, paragraph 2 states, “Initial pit development ... will take place within the watershed controlled by Dry Coulee Dam.” This appears to be contrary to the typical mining operations described in Exhibit B-1 that identifies a pit length of ~2,500. Exhibit B-1 also indicates a different mining sequence for the initial or “boxcut” pit from the typical mining operation. The method of

mining procedures and proposed engineering techniques for the boxcut pit must be explained. This explanation must include a review of haul roads and ramps.

17.24.308(1): WRI should consider adjusting the mining sequence depicted on Exhibit B-3 Plate 1: it does not appear logical that operations would mine out Segment 1 haul road in year 4. The west side of the haul road will likely be mined in year 5.

17.24.308(1)(f): The noxious weed plan agreement with Big Horn County in Exhibit C-6 has expired. Please include the updated agreement or a time schedule for renewal indicating that the agreement will be in place by the spring growing season.

17.24.313(1)(c): The amount of spoil in temporary stockpile depicted in Table 6 appears conservative. For the bond, the Department will require either worse case (5.3 million cubic yards) or that depicted in the table with commitments for accurate tracking of the stockpile and associated adjustments to the bond.

17.24.313(1)(d)(i): Exhibit B-7, Plate 3 was proposed to identify the typical final location of overburden and parting material in the fill. Page 7 of Exhibit B-1 references this plate. Additional narrative is required on page 7 to better explain the fact that typically top lift overburden will be used to construct the top lift backfill bench.

17.24.313(1)(d)(iii): A narrative description and calculations used in the derivation of the swell factor for "altered overburden" must be included in Exhibit B-8.

17.24.313(1)(d)(v): The Department has numerous questions and comments about Exhibit B-8, Table 7. First, the conversion from Tons to BCY was performed incorrectly. Second, the coal conservation plan and Table 7 contain different coal reserve numbers: ~16 million tons versus 18 respectively. Finally, the table adequately makes the finding that there is enough spoil to create a landscape similar to pre-mine but does not demonstrate the feasibility of the post mine topography shown on Exhibit B-8, Plate 1. This comparison is made through a determination of the volume of the final pit shell and the PMT versus the swelled volume of overburden removed plus coal waste material. Something similar to Table 5 in the approved permit is required for Tract III West.

ARM 17.24.313(1)(e) and (f), and 634: Comparisons of pre-mine and PMT drainage profiles and representative valley bottom cross sections for disturbed drainages within Tract III West are missing and need to be provided. The PMT profiles approximating pre-mine topography and blending in overall concave longitudinal profile with adjacent undisturbed drainages need to be ensured throughout the amendment area. To facilitate Department review, pre-mine and PMT profiles should be overlaid for direct comparison, including reference points (e.g. disturbance limits, main tributary junctions, roads, dams or other relevant features).

17.24.313(1)(h): Plate 1, Revegetation Plan Map, and Table 1, Post-mine Land Use Acreages, present a combined grazing land or pastureland category. Grazing land and pastureland are separate land uses and should be presented separately on the map and table. The Department understands that the operator does not actively reclaim to pastureland, and that pastureland often establishes from direct haul soils. As a suggestion, the entire area currently marked as grazing and pastureland could be shown as proposed grazing land, and as-built pastureland acres could be added through minor revisions as they occur. Language to that effect could be added to the pastureland section on page 3 of Exhibit B-31, and/or Table 1.

17.24.313(1)(h): Exhibit B-31, Page 4. The Woody Plant Sites section should be updated to describe Track III West, as much of the substrate and topography will be favorable to woody plant establishment.

ARM 17.24.314, 633, 638: The post-mine drainage control plan indicates that WRI would establish perimeter sediment control as post-mining topography is established, with perimeter ditches and traps (2-year, 24-hour runoff plus three years of sediment volume) ‘...if not already in place...’ from initial sediment control; see Exhibit B-34, page 9 and Appendix D). WRI proposes to keep these traps in place until revegetation is established (‘...typically... three growing seasons...’). However, Western Alkaline sediment control requirements suggest that operational ponds and traps be reduced or reclaimed, and replaced with adequate (lower or no volume) BTCA sediment control measures once the drainage basin above has been regraded (potentially prior to soil laydown). The Western Alkaline sediment control plan may indicate further reductions in BTCA measures as reclamation progresses (e.g. see 40 CFR 434, Subpart H).

WRI did not describe removal and reclamation of the perimeter ditches below traps and ponds in Tract III West. Perimeter ditches concentrate flows and increase runoff and sediment transport, and should be refilled and reclaimed when upgradient drainage areas are regraded and resoiled, leaving only the BTCA sediment control measures needed (e.g. traps, shallow depressions and /or silt fence) to approximate pre-mine sediment loads.

ARM 17.24.314: To minimize unnecessary disturbance of forested and steeper undisturbed areas, a portion of the proposed Tract III West Overburden Stockpile (47 acres proposed, south of the facilities area) should be relocated. More of the stockpile material should be left onsite or moved and stored in nearby regraded areas. Removal of additional acreage of the limited treed lands within the mine area would result in a much longer delay in recovery of similar pre-mining hydrologic characteristics for the area and increase the impacts to the wildlife community.

17.24.314(3): Page 3-23, 5.9.3.2 Water Quality – Probable Hydrologic Consequences, Sub-Robinson – it is not clear from the brief discussion (four sentences) in this section why changes in water quality to the sub-Robinson from overlying Robinson spoils is not anticipated. The comments that “water quality for sub-Robinson strata is variable” and “water quality has remained consistent at individual wells throughout the monitoring period” is not sufficient to address the possibility of contamination from overlying spoil water. Discussion needs to include the depth to water below the Robinson spoil in the proposed area to be mined.

Probable Hydrologic Consequences, Table 5-4, “Draft” Robinson Spoil Wells Average Groundwater Quality. Please finalize this table so that it is not “draft”. Rather than just an average concentration for water quality parameters for each of the Robinson spoil monitoring wells, please list the maximum and minimum and the number of samples at each site to give the reader a more complete picture of spoil water quality and variability.

ARM 17.24.314(1)(c), ARM 17.24.648: Page 5-27, 5.9.3.3 Private Wells - The application states that “Any impacts to neighboring groundwater users will be rectified as outlined in Permit 85005.” The operator must indicate in the application that impacts to water users will be addressed pursuant to ARM 17.24.314(1)(c) and ARM 17.24.648.

ARM 17.24.315, 639: WRI must include drainage control design requirements for Watersheds 11, 12 and 13 (e.g. Exhibit B-34 text, and Appendix D). In relation to these three drainages, an explanation of any required pond design or field adjustment required for Dry Coulee Dam (or addition/modification of other upstream structures) with the additional disturbance proposed from Tract III West, or other mining disturbance not included in earlier sediment control designs is needed. These changes could include differences in disturbed area, sediment or runoff storage volumes/elevations, High Water Level

(HWL)/emergency spillway or principal spillway elevations/designs, or elevation to maintain 10-year, 24-hour runoff storage.

ARM 17.24.315, 633, 639: Sediment control designs for traps and ponds used for sediment control, particularly along the disturbance limit, must be revised to contain 10-year, 24-hour runoff events (and 3 years sediment storage) for the worst-case runoff scenario as the default - not 2-year, 24-hour runoff events as described in Exhibit B-34, and B-34 Appendix D. Lower volume BTCA alternate sediment methods may be acceptable for approved Western Alkaline sediment control plans during initial brushing and grubbing operations (though not for soil salvage as stated in Appendix D, page I-3), however, these are typically limited to short periods. Western Alkaline sediment control plans are also applicable for topsoil stockpiling areas, regraded drainages and reclaimed drainages. Other BTCA alternate sediment control practices may be approved for operational sediment control on a case-by-case basis [e.g. typically for smaller disturbance areas, road embankment outslopes, temporary roads, soil stockpiles; e.g. see ARM 17.24.301(19), 633, 638].

Perimeter ditches (typically the soil stripping edge) above traps and ponds should be limited in extent to intercepting only disturbed area runoff to minimize mixing and excess runoff contributions from adjacent undisturbed areas, and reduce projected trap design storage volume.

17.24.321: Design of or plans for construction of the roads are minimal. There is not enough information provided to meet the requirements of this rule. Specifically, there is no information on “cut, embankment, culvert, drainage ditch, and no demonstration of compliance with ARM 17.24.601 through 17.24.606”.

17.24.322: Coal Conservation: Exhibit B-12, page 14. The estimated quantities of Rosebud McKay coal is 1.6 million tons in polygon 24 and 0.26 million tons in polygon 25, these numbers are transposed when compared to Plate 1 and will need to be corrected.

17.24.322: Coal Conservation: Exhibit B-12, Plate 1 Polygon number 30 is not identified, please correct.

17.24.322: Coal Conservation: Exhibit B-12, page 15. The text does not include discussion of polygon 28 which is included in the proposed mine plan.

ARM 17.24.501: WRI applied the currently approved Swell Factor (SF) used for the dragline operation – 19% (for unaltered OB, ~2/3 of total spoil volume), and a 15% SF for altered OB (scoria; ~1/3 of total spoil) – to the truck–shovel operations of Tract III West. Please provide an explanation why the SF values would not be lower with truck-shovel handling, due to more handling and compaction potential, and revise them as needed.

The revised PMT for this application included a significant (possibly inadvertent) change outside of the proposed Tract III West area, leaving the entire railroad embankment in place below the Dry Coulee Dam pond (e.g. Exhibit B-8, Plate 1). This change would not approximate pre-mine topography; please retain the approved PMT for this area.

The proposed PMT shows more flat slopes (e.g. 10% and less, esp. <2%), and less steep slopes (e.g. >10%, esp. >30%) than pre-mine. WRI must adjust the proposed PMT to approximate pre-mine slopes, particularly for the most affected slopes <= 2% and >= 30% (e.g. Exhibit B-8, Figures 1 & 2 and Exhibit B-8, Plate 1). Examples of areas needing improvement include:

- long flat ridge in the SE portion (NW ¼ Section 34, and adjacent sections 27, 35);
- several flatter ridge and hilltops (north central Section 35);
- main ridge in Watershed 3 (SW 1/4 Section 26); and
- portions of the north ridge (NE ¼ Section 27, and adjacent section 22).

WRI must make smaller adjustments across Tract III West to include more topographic diversity in the PMT, similar to pre-mine slope, ridge, and small tributary features.

17.24.501: The text on page 4 in Exhibit B-7 identifies that the post mine slopes are similar when the <20% slope are compared between pre and post mine. The <20% number is arbitrary and should be removed. Figure 1 shows all of the information and additional interpretation is unnecessary.

17.24.501(2) and 505(2): Table 6 depicts that approximately 7% of the spoil is expected to be "waste coal" and in year 4 the amount of climbs to over 9%. Depending on the lift being excavated, spoils could be almost 50% coal waste. While coaly waste has been proven non-toxic and non-acid-forming in the past, this amount of coal waste in the spoil could combust and affect reclamation. One or more of the following exhibits must be updated to address covering the waste coal: B-1, B-2, B-8, or D-7.

17.24.503: The application proposes to have company discretion as to reclaim or leave all sediment traps in place as small depressions. The rule requires department approval and a blanket approval of this scale is not appropriate. Please remove this language from the application.

17.24.645(2)(2): Page 5-27, 5.10 Monitoring Plan – A commitment from the operator to install a sub-Robinson well to replace B7SR is needed.

17.24.701(2): Soil Salvage. Westmoreland Resources proposes to use single-lift soil salvage in the Tract III West amendment area. Single-lift soil handling requires a demonstration to and a finding by the department. The discussion in Exhibit B-26 Soil Balance plan speaks to soil quality and gives some reclamation field examples to demonstrate that single lift soil handling would work. The explanation is incomplete and does not completely demonstrate why this works. For example there is a list of field numbers with a short description of how these fields demonstrate alternate soil type performance. An adequate example should point out the reason a particular field demonstrates the method works (i.e. field 143P contains soil substitution with 25% coarse fragments. The vegetation community planned here was ... the success has been realized... Additionally this method was successful in fields ...). The Department is not suggesting a whole study is conducted; we just want a more detailed explanation as to why the list of fields demonstrates single-lift handling acceptability.

The Salvage and Redistribution discussion briefly explains the validity of single-lift soil salvage, then lists a number of reclamation fields that are examples. We propose WRI use a couple of the fields and show how their success demonstrates why single lift works for the reclamation goals in Tract III west.

- Alternatively, salvaging less soil overall in a two-lift system is acceptable. For example, a 6-inch lift 1 and a 12-inch lift 2 while targeting a 18-inch laydown could be used. This could reduce haulage and keep established soil development in the surface lift for reclamation.
- Another option available is taking some soils as two-lift and some as single-lift; done as soil characteristics change.

If using the single-lift salvage method, Table 2. Approximate Depth and Volume of Soils Available for Salvage and Redistribution, Tract III West Projected Disturbance should only designate the depth salvaged in a single-lift.

17.24.711(3): The Department requests that a commitment to plant a specific number of acres and plants per acre be added to discussions of woody planting sites in Exhibit B-30 and B-31. These would clarify the operator's current commitments to plant woody species for wildlife habitat in upland and drainage sites which are relatively vague, and would not be commitments of density at bond release.

17.24.724: A much higher portion of the Track III West amendment area than the current permit area is pre-mine vegetation types which are dominated by woody plants, 74% of the area. The phase III revegetation success criteria must be re-evaluated for the amendment area as cover and production capabilities are likely different. Additionally, a woody species density criteria will be required for grazing land in the amendment area to protect wildlife use of the area, as per 82-4-231(10)(j) MCA, and ARM 17.24.751. The area pre-mine contains woody plant species which are important to wildlife species in the area and wildlife habitat is considered a joint use.

17.24.751(2)(f): Disturbed wetlands and riparian vegetation must be restored. This includes wetlands and riparian areas not associated with jurisdictional waters of the U.S., and does not include acreage of open water disturbed. Please add language to the permit in Exhibit B-24, B-30, or other appropriate exhibits listing the acres of wetland and riparian vegetation planned for disturbance and how they will be replaced.

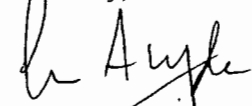
17.24.764(1)(d): Exhibit B-31, Plate 1 shows multiple areas where the proposed post-mine landuse of cropland exceeds the <8% gradient required. These locations must be moved in order to comply with the gradient restriction.

MPDES Outfalls

17.30.1322. WRI has not designated any MPDES outfalls within the disturbance proposed from Tract III West. The addition of outfalls to the facility's MPDES permit must be accomplished prior to any discharge.

Please feel free to contact me if you have any questions.

Sincerely,



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FC: 620.303 (Application 00186)