

November 29, 2016

Sent via ePermit system

Gabe Johnson Spring Creek Coal LLC Spring Creek Mine PO Box 67 Decker, MT 59025

Permit ID: C1979012

Revision Type: Amendment Permitting Action: Deficiency

Subject: APPAM5; Arrowhead Amendment-Round 1 Acceptability Deficiency

## Dear Gabe:

The Department of Environmental Quality (DEQ) has completed its acceptability review regarding Spring Creek Coal LLC's application for Amendment APPAM5. The following deficiencies must be adequately addressed before DEQ can determine the application acceptable:

**ARM 17.24.303(1)(b):** The Legal Description does not match what DEQ currently has on record. Please provide the following: T8S, R40E, Section 35 and T9S, R39E, Section 1 in the legal description.

**ARM 17.24.303(1)(o):** The signature for Bruce Jones on page 25 of the State Commercial Lease #3090005 for Addendum 303M AHA Right to Enter does not have the year in the notary block, which makes it invalid. Please correct signature block with proper notary.

**ARM 17.24.303(1)(r):** Please reference the document to the Right to Enter document instead of duplicating the entry in two spots.

**ARM 17.24.303(1)(t):** A new certification of liability for insurance has been received, please update the expiration date to reflect this.

**ARM 17.24.303(1)(v):** The address for Montana Department of Environmental Quality should be updated to 1218 E 6th Avenue, Helena MT, 59601.

**ARM 17.24.303(1)(x):** Please attach the affidavit of publication for the completeness determination.

**ARM 17.24.304(1)(e):** The hydrologic baseline collection is incomplete. See comments on ARM 17.24.304(1)(f)(i), ARM 17.24.304(1)(f)(i)(B), and ARM 17.24.304(1)(f)(i)(C).

In MQAP Table 2-4, the northings and eastings change columns after the first seven wells. Please correct.

**ARM 17.24.304(1)(f)(i)(A):** Section 2.3.1 states that "Water levels in piezometer PZ-LYC-1 have remained above the floor of the stream channel nearby, indicating temporary seepage from deep soils into the channel during spring. The piezometer was dry by the end of June 2015". This seems contradictory. Is it above the stream channel, or is it dry?

In Section 2.3.2, paragraph 1, replace "the seams having inferior properties" with "economic and operational considerations", or something similar.

In Section 2.3.2, "it is apparent that well PM-OB-02 has some hydraulic connection with the alluvial groundwater source [should be system, not source]." Later in the same paragraph, "hydraulic communication between the overburden well and alluvium is minor". Please provide additional information to support these statements.

In Section 2.3.3, none of the tables seem to reflect what they are intended to. In particular, the claim that groundwater elevations are "nearly equivalent, within 15 feet or less, to the "static" (quasi-equilibrium) historic groundwater elevations". The table referenced for this claim only shows water levels from about 2008 onward, not the 1977-onward mentioned in the text. Also, DEQ does not consider ±15 feet "nearly equivalent", unless the changes were on the order of thousands of feet.

In Section 2.3.3. it is suggested that any significant part of the water level declines is caused by "changes in gas buoyancy". Please provide an adequate explanation of how this is happening.

Section 2.4.1. Groundwater is only "effluent" if it is leaving the groundwater system, e.g. a spring or flowing well. Even then, the term is generally understood to mean a waste discharge from human activity.

Section 2.4.5. states that potentially over 100 feet of compacted fill, likely over 1,000 feet wide in places, will not have an impact on shallow groundwater, whether from compaction, removal of recharge areas, or alteration of surface water flow patterns. Evidence supporting this claim will need to be included.

Section 2.5.1 et seq. Hydraulic conductivity and permeability are not necessarily the same thing. Stick with hydraulic conductivity. Include range of values in any interpretive discussion of aquifer parameters.

Section 2.6. The term "enriched" suggests an addition. Don't use it in conjunction with ground water unless you are adding something.

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In Section 2.6.1 it is suggested that irrigation is the source of high sulfates. This will need references and more discussion. Irrigation generally results in increases of nitrogen and sodium, not sulfate.

Section 2.6.1. Laboratory Reporting Limits (RDLs) change according to the nature of a sample, interferences, and other factors. Several different arsenic RDLs are evident on a quick examination of the WQ tables. Please describe these factors.

In attachment 5-6 (Precision and Sensitivity Quality Control Samples), there are samples with negative values, e.g. Sodium on P-SW-08 01/27/2015. Both the sample and the duplicate have values in Attachment 5-5 (Surface Water and Groundwater Quality Lab Analytical Results). Is there a reason these data are excluded? If so, it should be footnoted in the table and discussed in the text.

**ARM 17.24.304(1)(f)(i)(B):** One year of quarterly monitoring of groundwater quality is required by ARM 17.24.304(1)(f)(i)(B) for baseline. Only two quarters of monitoring were submitted for the nine piezometer monitoring locations. Please submit the results of a full year of quarterly groundwater quality monitoring.

ARM 17.24.304(1)(f)(i)(C): The listing of known wells and springs provided in Attachment I Vol. 5-8 does not include the Montana Bureau of Mines and Geology, Groundwater Information Center (GWIC) database as a source. GWIC often contains records of wells and springs for which no DNRC water rights have been obtained, thus it is likely that the listing in Attachment I Vol. 5-8 is incomplete. Please use GWIC as an additional source for readily discoverable wells and springs.

Exhibit 1 Vol 5-4. The well names and symbols are extremely hard to see on this map.

**ARM 17.24.304(1)(f)(ii)(A):** Section 2.6. At the first mention of groundwater classes, add a discussion of the classes and SC ranges. Since the classes are defined in specific conductivity, it might be better to replace discussions of TDS elsewhere with EC values, just for consistency.

**ARM 17.24.304(1)(f)(ii)(B):** Section 2.6.2. Surface water and groundwater changes are not necessarily similar. Particularly given the difference in sampling frequency and data density, groundwater should have its own section, not just a "See Section 1.7.2".

Attachment I Vol. 5-3b Continuous Flow Records includes pressure transducer data for Site ID: YC-SW-1. This site is not listed in MQAP Table 2-1 Stream Water Monitoring Plan or Attachment I Vol. 5-2a Surface Water Completeness Tables. Clarify the location of this site and include it in the baseline and surface water monitoring documents.

**ARM 17.24.304(1)(f)(ii)(B)(I):** In Appendix I Vol 5 SW\_GW\_Hydrobase, Section 1.4, there is no explanation as to why Dry Creek is handled differently than the other stations. Please provide an explanation.

**ARM 17.24.304(1)(f)(ii)(B)(II):** Attachment I Vol. 5-2 Stream Flow Quality Statistical Summary does not include total phosphorus, which is listed as a sampled parameter in Table 5-1 of the MQAP. Please include total phosphorus in the surface water quality summary and analysis.

Attachment I Vol. 5-2 Stream Flow Quality Statistical Summary cites ARM 17.30.647(1)(e) as the applicable standard for total nitrogen. In 2014, DEQ adopted Circular DEQ-12A Montana Base Numeric Nutrient Standards which prescribes numeric standards for total nitrogen and total phosphorous for wadable streams. Total nitrogen and total phosphorus water quality should be evaluated using the DEQ-12A numeric nutrient standards.

Attachment I Vol. 5-2 Stream Flow Quality Statistical Summary describes Dry Creek as a Class F-1 Stream. Currently, Montana Rules have not designated any drainage as Class F-1. Regardless of the physical flow characteristics of Dry Creek, per ARM 17.30.611(1)(c), Dry Creek is currently classified as a C-3 Stream and should be evaluated as such.

Attachment I Vol. 5-2 Stream Flow Quality Statistical Summary states that specific water quality standards do not apply to ephemeral streams. However, recent litigation has indicated that specific water quality standards may in fact apply to ephemeral streams as well. Dry Creek water quality should also be evaluated against specific water quality standards in DEQ-7 and DEQ-12A.

**ARM 17.24.304(1)(f)(iii):** The baseline discussion states that the haul road will not disrupt water uses associated with stream flow. While surface water impacts are not predicted, the potential to impact surface uses still exists. The haul road will likely restrict shallow ground water flow. Little Youngs Creek and Youngs Creek receive baseflow from shallow ground water below the haul road, and any reduction in baseflow could affect downstream uses. Regardless of whether impacts are predicted to surface water uses, ARM 304(1)(f)(iii) still requires a description of alternative water supplies, should any impacts occur.

**ARM 17.24.304(1)(g)(i):** The rule requires "a detailed description of all overburden and mineral materials..." Referencing a section of this document for stratigraphic sections and lithologic logs is acceptable, but there needs to be a relatively complete narrative description within the text.

ARM 17.24.304(1)(g)(ii): Referencing a completely separate document does not fulfill the requirement of a "detailed description". A fairly complete synthesis or summary of the documents referenced is needed within the text. Referencing the other documents for site-specific details or field data is fine, but the text needs to include sufficient information to stand on its own without any other documents. For each unique overburden material, the text should include a narrative summarizing the information required by ARM 17.24.304(1)(g)(ii). "Unit X of the overburden is weakly lithified siltstone to fine sandstone, primarily comprising oxidized silicates and clays. Sodium content is generally moderate, water infiltration is slow. Soils formed on X are primarily Class III, due to slow infiltration and moderate salinity. See Document Y for detailed analysis" is acceptable. "See Document

Y for discussion of material properties of the overburden" is not.

**ARM 17.24.304(1)(g)(iii):** The text only references other documents and "logs submitted to DEQ". The logs in question should be included in an appendix of this document, and a table summarizing log ID, date, location, depth, and page where the log is located would be perfectly adequate for the text.

**ARM 17.24.304(1)(g)(iv):** Please cite the studies mentioned.

**ARM 17.24.304(1)(i):** Summary Tables and Appendices to the Arrowhead Amendment Baseline Vegetation Inventory were not included in the permit materials. Please submit the Summary Tables and Appendices to complete the Baseline Inventory for the Amendment area.

**ARM 17.24.305(1)(h):** Please include the reference of cultural resources and archaeological sites to Plate 7 Arch 2. Additionally, DEQ would prefer the Plate 7 maps be listed as 305(1)(h) maps to correspond with the appropriate rule.

Both Cultural Resource maps need to be attached to the cultural resource report under the Baseline section rather than under Maps.

**ARM 17.24.305(2)(a):** There appears to be several maps tagged as APPAM5 which are not listed on the Map Affidavit submitted for this amendment. Please ensure that all maps that were submitted with AM5 are listed on the Map Affidavit.

**ARM 17.24.308(1)(f):** The map in the Noxious Weed plan does not include the proposed Amendment area. Please update the plan to include this area.

The CAD file that was included for the Noxious Weed Management Plan did not have an ortho photo attached. Please include appropriate data files for all maps.

**ARM 17.24.312(1)(d):** The wetland mitigation plan should be developed and submitted to DEQ prior to permit approval.

**ARM 17.24.313(1):** Topsoil stockpiles are indicated on two maps and noted using two unique map elements. Figure 313 B, Soil Salvage Map, only designates prime farmland topsoil stockpile locations marked with a blue border element. Plate 8, Field Map 2, shows all topsoil stockpiles marked with a common red border element. In other words, the field map shows that all topsoil stockpiles are the same and the soil salvage map only shows prime farmland topsoil stockpiles. Please reconcile the map elements for topsoil stockpiles on these maps. On Plate 8 differentiate the general soils from the prime farmlands and use the same topsoil stockpile layer to update figure 313 B soil salvage map. Additionally, evaluate the prime farmland stockpiles for a location not on other prime farmland soils.

Geologic suitability indicates elevated levels of Molybdenum (Mo) and Selenium (Se) in 2014 bore holes OB 7-10. These bore holes from 2014 drilling should not have used

greases or lubricants suspect of Mo or Se. This is supported by comparing 2014 borings and historic borings in the Youngs Creek drainage. Drilling from 2014 shows OB-2 and 3 in Youngs Creek are non-detect for Mo and Se, where 1976 borings Concho-OB-5, 7, and 8 have exceedances of Mo and Se. Starting at the surface of Squirrel and Dry Creek sampling indicated Mo and Se in sample results from borings OB-7, 8, and 9. The cut and fill for the creek crossings will excavate material with exceedances of these constituents. This material will be used in the road according to construction plans. Due to these elevated test results soils at the surface and excavation materials with possible concentrations of Mo and Se will be encountered in this portion of the road. Testing for Mo and Se could be limited for the road section that falls in T8S, R39E, Sec 33 and 34 and T9S, R39E, Sec 3, 4, 9, and 10. Additionally, due to the soil layers being included in drill sampling the soils should have these parameters tested pre-salvage. Include tests for Mo and Se for soils pre-salvage and spoil upon PMT regrade. Testing should at least occur in the following land sections: T8S, R39E, Sec 33 and 34 and T9S, R39E, Sec 3, 4, 9, and 10.

Alluvial soil salvage indicates a topsoil lift followed by use of a geotextile for protecting the remaining alluvial sub-soils. The permit discussion does not address if there will be alluvial subsoil cut and fill beyond salvage and prior to placing the textile. Additionally, information regarding the purpose and performance of the geotextile is required. It can be inferred that the idea here is to protect the alluvial subsoil layers from compaction and to support continued conveyance of subsurface waters. Without demonstration, as mentioned above, justification for use of a textile is missing. This may result in unnecessary efforts for the goal of protecting the sub-soils. Add justification and performance of the geotextile for use of protecting the soils it is intended for. Additionally, if the textile has these parameters it could be used in the prime farmlands to minimize the need to salvage to 36 inches.

**ARM 17.24.313(1)(e):** Please submit channel center lines and cross sections surveyed in Squirrel Creek, Youngs Creek, and Little Youngs Creek documenting pre-disturbance conditions.

**ARM 17.24.313(1)(g)(iii)(B):** Table 313-2b "Mean Soil Replacement Quantity for Arrowhead Amendment" shows a deficit of soil between the needed and available soil volumes of 80,668 cubic yards. This must be reconciled to achieve an adequate soil balance.

**ARM 17.24.313(1)(h):** Page 29 of the Reclamation Plan states that "Construction across Squirrel Creek, Youngs Creek, and Little Youngs Creek will consist of removal and salvage of alluvial topsoil...". Dry Creek has not been included in this statement. Please explain how construction and reclamation of Dry Creek will be conducted.

**ARM 17.24.313(1)(h)(i):** Table 313-4 includes a Summary of PMT Component, Vegetation, Substrate, and Acreages. Cropland is listed as utilizing generic topsoil, when prime farmland soils are designated to be salvaged and stockpiled separately. Please include prime farmland soils in Table 313-4 as appropriate. Also update appropriate portions of the "Targeted Substrate Depth Range" for Prime Farmland soils.

**ARM 17.24.313(1)(h)(iii):** Four new seed mixes have been added to Spring Creek mine through AM5. Two of these are for riparian areas, and two are for pastureland and cropland. Both the pastureland and cropland seed mixes include very aggressive introduced species of smooth brome and crested wheatgrass. Other options should be considered for these land uses as these are aggressive species that SCCC, and other companies, have been combating in other reclamation areas. As the rest of the amendment area is being reclaimed as wildlife habitat, consider utilizing native species in these areas that have the potential to provide adequate food sources for those wildlife species.

**ARM 17.24.313(1)(h)(iv):** The third circumstance included in this section does not meet the definition of the rule in that there is no "... documentation of the desirability and necessity of using the introduced species to achieve the approved postmining land use." Please include additional language to meet the requirements of this rule.

**ARM 17.24.313(1)(h)(x):** See comments for ARM 17.24.724.

**ARM 17.24.314(1)(c):** See deficiencies under ARM 17.24.304(1)(e) and (f) and 17.24.648.

**ARM 17.24.314(3):** The AHA PHC should be updated to include data and conditions described in the Spring Creek Major Revision TR1 PHC.

The PHC and Table 12 evaluate surface water quality using human health standards from DEQ-7. Based on stream flow conditions in the AHA and recent court decisions, DEQ-7 and DEQ-12A numeric aquatic life standards apply to all streams in the AHA. Thus, surface water quality should be evaluated using aquatic life standards, unless an applicable human health standard for a specific constituent is more stringent.

Section 3.1.8 only discusses historic and current water uses. Surface waters in the AHA are classified as C-3 waters and as such must be maintained suitable for bathing, swimming and recreation, and growth and propagation of non-salmonid fishes and associated aquatic life, waterfowl, and furbearers. Further, while naturally marginal, other uses for these waters include drinking, culinary and food processing purposes, agriculture, and industrial water supply. Include these uses in the PHC discussion, including Section 4.1.1.4.

Section 3.1.8.1 describes downstream water quality from mining and related operations as better than baseline conditions. DEQ does not agree that the loss of natural levels of suspended sediments results in an improvement in water quality. Please discuss changes in water quality expected within the context of 'gains' or 'losses' rather than value judgments.

The PHC only discusses historical and current uses of ground water. Ground water uses includes all beneficial uses for each ground water class as described in ARM 17.30.1006. Update the PHC to include all ground water beneficial uses, and whether adverse impacts to beneficial uses may occur outside of the permit area.

The PHC discusses the impacts to alluvial ground water as insignificant due to minimal compaction from the haul road. The basis for this generalization is a geotechnical

compaction report which indicates that compaction will occur generally in clay materials. However, this report is inadequate, as it only analyzes one soil sample from an unknown location in Youngs Creek. Furthermore, while the compaction may be limited to clay materials, alluvial drill logs and ground water depths indicate saturated clays at many locations, implying that some alluvial ground water may be impacted. Impacts from forest road compaction on shallow ground water flow are well documented, and given the disturbance area and fill volume of the haul road some compaction and alluvial ground water impacts are likely. Furthermore, since Youngs Creek and Little Youngs Creek are gaining stream reaches through the haul road path, some impact on surface flows is also possible. The PHC should be updated to include a quantitative analysis of possible impacts to alluvial ground water and surface flows, and how these impacts may affect off permit uses.

Section 8.0 Summary discusses "potential for impacts to surface water use (livestock watering), to private wells (livestock watering and domestic) located near the mine until groundwater levels recover, and to downgradient surface mine reclamation." The later part of this sentence is unclear, and needs clarification. Further, potential impacts should be examined in the context of inside or outside the permit boundary, not the distance from mining.

Section 4.2.5.2 Groundwater Quality discusses the impacts of dust control agents (magnesium chloride) on shallow groundwater. These impacts should be placed in the context of occurring outside or inside the permit boundary, and how increased chloride concentrations may affect agriculture uses in the alluvial valleys. In addition, given the interaction between shallow groundwater and streams at road stream crossings, there is potential for similar impacts to streams from magnesium chloride, which should be discussed in Section 4.2.2.2 Surface Water Quality.

PHC Section 3.1.7 states that precipitation-driven discharges in May 2005 exceeded MPDES permit limitations for total iron. Effluent limitations for total iron are not applicable to storm-driven discharges; please remove this statement.

PHC Table 9 presents the status of permitted MPDES outfalls (e.g. active or planned) as of June 2015. Please ensure this information is current.

**ARM 17.24.314(3)(b)(ii):** Please describe whether acid-forming or toxic-forming materials that could result in the contamination of surface or ground water supplies are present.

**ARM 17.24.315(1):** The Youngs Creek diversion discussion refers to ARM 17.24.236. This is an incorrect citation and should be updated to reference ARM 17.24.636 Special Requirements for Temporary Diversions.

**ARM 17.24.317(1):** The proposed Youngs Creek diversion has no narrative explaining how it will be compliant with ARM 17.24.751. As this will be diverting an active channel with fish species present, SCCC must address fish passage for this diversion.

**ARM 17.24.324(1)(a)(ii):** The root abundance tables starting on page 324-3 require an update. The column "Roots^2" has a number and letter system that indicates abundance and size of roots of a soil type and its horizon depth. The footnote needs updating in the "Abundance" category so that the number used in the table is described. Currently the footnote says the "Abundance" categories are: f=few, c=common, m=many. Please update the table footer to explain the number designations of 1, 2, and 3.

**ARM 17.24.324(1)(b):** Prime farmland soil types McR-a and Th-a indicate that the prime farmland status is valid to 36 inches. Soil practices for prime farmland rule 17.24.811 describes these soil types will be salvaged and replaced to 48 inches. Per the soil survey this would mean 36" must be salvaged. The salvage plan in 17.24.324 and on the salvage map indicates a 12" inch salvage for prime farmlands. Please increase the Prime Farmland soil salvage depths or indicate other means of protection.

Prime farmland topsoil stockpiles have been designated with the intent of returning them to the area they were salvaged from in order to maintain soil quality. Studies have shown stockpiling soil for long periods of time, greater than 10 years, degrades soil quality. The haul route for the Arrowhead amendment will conceivably be in service for longer than ten years. To retain soil quality through soil biologic interaction the depth of a stockpile should only be as deep as roots can penetrate (Strohmayer 1999). Prime farmland stockpile footprints are separated from general soil stockpiles with the intent of returning them to their original locations. Minimizing the stockpile depths will help retain soil quality. Additionally, using alfalfa or other deep rooted plants as cover species also enhances soil quality through maintaining biologic activity in the soil. For prime farmland soils using a maximum stockpile depth of 12-15 feet with a deep rooted cover crop including alfalfa will enhance material quality for reclamation. Prime farmland was calculated with a one foot stripping depth for an area of about 14 acres. Based on one foot an acre would accommodate a soil stockpile 14 feet thick. If salvage were set to three feet the stockpile footprint should fit on 4 acres. These stockpile footprint sizes should be achievable. Please determine if the volume of prime farmland topsoil to be stripped will fit in the stockpile footprints at a depth of 14 feet or less and designate the depth in the permit. Reference Patti Strohmayer: Soil Stockpiling for Reclamation and Restoration activities after Mining and Construction; Restoration and Reclamation Review, Student On-Line Journal Department of Horticultural Science, Vol. 4, No.7, Spring 1999 University of Minnesota, St. Paul, MN.

**ARM 17.24.324(1)(c):** The current plan shows soil stockpile zones on prime farmland soils. Prime farmland disturbance should be minimized to as small as possible. Unless the operator can justify additional soil disturbance for stockpiling purposes, stockpile locations should be located outside of prime farmland soils.

**ARM 17.24.324(1)(e):** The fourth criteria utilized for monitoring prime farmlands states that sampling techniques will be approved by the NRCS. This should be updated to include MT DEQ technical guidelines as well.

**ARM 17.24.324(1)(h):** Four reference area locations are shown on Plate 23, Sheet 2.

These locations should all be upgradient of the intended haul road disturbance. Production at downgradient locations has the potential to be impacted by the haul road disturbance. Therefore, un-impacted reference areas should be the standard for reclamation and the downgradient location on Little Youngs Creek will need to be moved upgradient of the projected disturbance.

**ARM 17.24.503(1):** The attachment "Vol1A\_503\_20110426\_APP183.pdf" no longer exists and has been replaced by "503\_SmDepressions\_20110426\_APP183.pdf". Please reference the correct attachment.

**ARM 17.24.605(1):** The attachment "Vol1A 605.pdf" no longer exists and has been replaced by "605\_RdRailHydroImpact\_20151001\_APPAM5.pdf". Please reference the correct attachment.

**ARM 17.24.631(1):** The attachment "Vol1A\_631\_20110426\_APP183.pdf" no longer exists and has been replaced by "631\_HydroRequire\_20151001\_APPAM5.pdf". Please reference the correct attachment.

**ARM 17.24.632(1):** The attachment "Vol1A 632.pdf" no longer exists and has been replaced by "632\_SealDrillHoles.pdf". Please reference the correct attachment.

**ARM 17.24.633(1):** The attachment "Vol1A 633.pdf" no longer exists and has been replaced by "633\_WQ\_Stnds.pdf". Please reference the correct attachment.

The permit states that sediment ponds will be maintained until revegetation requirements have been met. Per Western Alkaline standards at 40 CFR 434 Subpart H, all drainages associated with MPDES outfalls can be permitted under an approved Sediment Control Plan. Therefore, ponds may be removed prior to meeting all vegetation requirements.

**ARM 17.24.633(5)(a):** The statement, "There have been no unplanned discharges from the sediment control ponds except as a result of storms in excess of 10-year, 24-hour events," is no longer applicable and should be removed. Discharges occurred in 2014 as the result of spillway leaks following a snow melt event.

**ARM 17.24.634(1):** The attachment "Vol1A\_634\_20110426\_APP183.pdf" no longer exists and has been replaced by "634\_ReclaimDrainage\_20151001\_APPAM5.pdf". Please reference the correct attachment.

**ARM 17.24.635(1):** The attachment "Vol1A 635.pdf" no longer exists and has been replaced by "635\_FlowRequire.pdf". Please reference the correct attachment.

**ARM 17.24.636(1):** The attachment "Vol1A 636.pdf" no longer exists and has been replaced by "636\_DiversionTempRequire.pdf". Please reference the correct attachment.

**ARM 17.24.637(1):** The attachment "Vol1A 637.pdf" no longer exists and has been replaced by "637\_DiversionPermRequire.pdf". Please reference the correct attachment.

**ARM 17.24.638(1):** The attachment "Vol1A 638.pdf" no longer exists and has been replaced by "638\_SedControlMeasures\_20151001\_APPAM5.pdf". Please reference the correct attachment.

**ARM 17.24.639(1):** The attachment "Vol1A\_639\_20110426\_APP183.pdf" no longer exists and has been replaced with "639\_SedPondsOtherTrtmnt\_20110426\_APP183.pdf". Please reference the correct attachment.

**ARM 17.24.640(1):** Attachment "Vol1A 640.pdf" no longer exists and has been replaced by "640\_DischargeStructure\_20151001\_APPAM5.pdf". Please reference the correct attachment.

**ARM 17.24.641(1):** The attachment "Vol1A 641.pdf" no longer exists and has been replaced by "641\_SpoilsAcidToxic.pdf". Please reference the correct attachment.

**ARM 17.24.642(1):** The attachment "Vol1A 642.pdf" no longer exists and has been replaced by "642\_Impoundments.pdf". Please reference the correct attachment.

**ARM 17.24.643(1):** The attachment "Vol1A\_643\_20110426\_APP183.pdf" no longer exists and has been replaced by "643\_GW\_Protect\_20110426\_APP183.pdf". Please reference the correct attachment.

**ARM 17.24.644(1):** The attachment "Vol1A\_644\_20110426\_APP183.pdf" no longer exists and has been replaced by "644\_GW\_Recharge\_20151001\_APPAM5.pdf". Please reference the correct attachment.

**ARM 17.24.645(1):** The attachment "Vol1A\_645\_20110426\_APP183.pdf" no longer exists and has been replaced by "645\_GW\_Monitor\_20131014\_MR191.pdf". Please reference the correct attachment.

**ARM 17.24.646(1):** The attachment "Vol1A\_646\_20110426\_APP183.pdf" no longer exists and has been replaced by "646\_SW\_Monitor\_20131014\_MR191.pdf". Please reference the correct attachment.

**ARM 17.24.647(1):** The attachment "Vol1A 647.pdf" no longer exists and has been replaced by "647\_WellsTransfer.pdf". Please reference the correct attachment.

**ARM 17.24.648(1):** The attachment "Vol1A 648.pdf" no longer exists and has been replaced by "648\_Water\_Rights\_and\_Replacement\_20151001\_APPAM5.pdf". Please reference the correct attachment.

**ARM 17.24.649(1):** The attachment "Vol1A 649.pdf" no longer exists and has been replaced by "649\_WaterUnderMines.pdf". Please reference the correct attachment.

**ARM 17.24.650(1):** The attachment "Vol1A 650.pdf" no longer exists and has been replaced by "650\_PostmineRehabStruct.pdf". Please reference the correct attachment.

**ARM 17.24.651(1):** The attachment "Vol1A 651.pdf" no longer exists and has been replaced by "651\_StreamChannel\_20151001\_APPAM5.pdf". Please reference the correct attachment.

**ARM 17.24.652(1):** The attachment "Vol1A 652.pdf" no longer exists and has been replaced by "652\_WellsOpeningsSafety.pdf". Please reference the correct attachment.

**ARM 17.24.713(1):** Permit language references ARM 17.24.131.1(h)(ii). This should actually reference 17.24.313(1)(h)(ii). Please correct this to the appropriate reference.

**ARM 17.24.724(3):** Technical standards regarding ARM 17.24.724 were generated and are included in the application under Addendum 313B. The table of contents for this addendum incorrectly references the Appendices page as page 28. This page is blank and appendices are actually listed on page 29. These Appendices are not attached. Please update the Table of Contents to accurately reflect the location of the appendices and attach them to the addendum.

Table 5 sets a woody plant density standard of 2,800 woody plants per acre based on a 90% density requirement, according to note 5, for the Woody Riparian Areas. This standard should be set at the weighted mean for that community type of woody species and thus be set at 3,040 woody plants per acre. As these communities had strong components of currant, snowberry, chokecherry, box elder trees, and cottonwood trees, the weighted means of trees and shrubs has been added, 25 and 3,015, to make a standard of 3,040 woody plant density per acre.

Footnote 6 for Table 5 has not been included. Please explain footnote 6 for Table 5. Footnote 3 from Table 7 is not necessary. This appears to be a comment for the operator, but should not be included as part of the permit. If there are needed changes that result from future data collection or data interpretation, they can be addressed at that time. If there are changes that need to be done, please make them now. Otherwise, please remove this footnote.

Table 1 has not been updated to include pre-mine community types and acreages present in the amendment area. Please update Table 1 to reflect the amendment area.

**ARM 17.24.725(2):** Current permit material does not take into consideration rule changes in 2012 to this rule. MCA 82-4-235(3) allows for phase III bond release to be applied for prior to the ten growing seasons required in specific instances. This section should be updated to incorporate these changes if SCC intends to utilize the 2012 rule changes.

**ARM 17.24.751(1):** Attachment Vol1A\_751\_2011426\_APP183.pdf no longer exists and has been replaced by 751\_FishWildProtection\_20151001\_APPAM5.pdf. Please update the reference.

**ARM 17.24.751(2)(f):** The wetland mitigation plan should be developed and submitted to DEQ prior to permit approval.

**ARM 17.24.801(1):** The attachment "Vol1A\_801\_20110426\_APP183.pdf" no longer exists and has been replaced by "801\_20110426\_APP183.pdf". Please reference the correct attachment.

**ARM 17.24.802(1)(a):** The attachment "Vol1A\_802\_20110426\_APP183.pdf" no longer exists and has been replaced by "802\_20110426\_APP183.pdf". Please reference the correct attachment.

**ARM 17.24.804(1):** The attachment "Vol1A 804.pdf" no longer exists and has been replaced by "804.pdf". Please reference the correct attachment.

**ARM 17.24.806(1):** The attachment "Vol1A\_806\_20110426\_APP183.pdf" no longer exists and has been replaced by "806\_20110426\_APP183.pdf". Please reference the correct attachment.

**ARM 17.24.811(1):** The file name referenced for ARM.17.24.811 is incorrect and should be corrected.

**ARM 17.24.815(1):** The file name referenced for ARM 17.24.815 is incorrect and should be corrected.

**ARM 17.24.821(1):** The file name referenced for ARM 17.24.821 is incorrect and should be corrected.

**ARM 17.24.823(1):** The file name referenced for ARM 17.24.823 is incorrect and should be corrected.

**ARM 17.24.831(1):** The file name referenced for ARM 17.24.831 is incorrect and should be corrected.

**ARM 17.24.832(1):** The file name referenced for ARM 17.24.832 is incorrect and should be corrected.

**ARM 17.24.833(1):** The file name referenced for ARM 17.24.833 is incorrect and should be corrected.

**ARM 17.24.834(1):** The file name referenced for ARM 17.24.834 is incorrect and should be corrected.

**ARM 17.24.835(1):** The file name referenced for ARM 17.24.835 is incorrect and should be corrected.

**ARM 17.24.836(1):** The file name referenced for ARM 17.24.836 is incorrect and should be corrected.

**ARM 17.24.837(1):** The file name referenced for ARM 17.24.837 is incorrect and should

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be corrected.

**ARM 17.24.805(1):** The attachment "Vol1A 805.pdf" no longer exists and has been replaced by "805.pdf". Please reference the correct attachment.

**General Comment:** Please provide a reference for each map to the rule they are addressing. It would be very helpful for review to have every rule within ARM 17.24.305 attached to its own map.

Upon receipt of satisfactory responses to these deficiencies, DEQ will determine the application to be acceptable.

Please feel free to contact Robert D. Smith at 406-444-7444 with questions regarding this letter.

Sincerely,

Robert D. Smith for

Chris Yde, Supervisor Coal and Uranium Program

Industrial and Energy Minerals Bureau

Phone: 406-444-4967 Fax: 406-444-4988 Email: CYde@mt.gov

Cc: Jeff Fleischman, Office of Surface Mining Lauren Mitchell, Office of Surface Mining

FC: 620.403 (AM5)

## Gilbert, Sharona

From: Do Not Reply <DoNotReply@mt.gov>
Sent: Tuesday, November 29, 2016 8:19 AM

**To:** Eichhorn, Ashley

Cc: jfleischman@osmre.gov; lmitchell2@osmre.gov; DEQCoal; fbartlett@osmre.gov; Gilbert,

Sharona; Laura. Ackermann@cldpk.com; gabriel.johnson@cldpk.com;

eric.detmer@cldpk.com; gabriel.johnson@cldpk.com

**Subject:** Acceptability Review Deficiency for Spring Creek Mine: APPAM5

Deficiencies were identified for Permit: C1979012, Application Number: APPAM5 during the Acceptability Review. Please log into the ePermitting system to view the deficiency letter.