TEP Rocky Mountain LLC
Proposed Drill Cuttings Management Plan for the
RWF 21-18 Well Pad (COGCC Location ID 335569)
June 26, 2019

Purpose

TEP Rocky Mountain LLC requests approval to manage drill cuttings produced from the PA 44-13 well pad (COGCC Location ID 457469) at the RWF 21-18 as described below.

Drilling activities will commence at the PA 44-13 well pad in late May 2020, where 20 new wells are planned to be drilled. The total volume of drill cuttings to be generated from these 20 new wells is approximately 7,000 cubic yards. Due to the size and physical constraints / limitations of the PA 44-13 well pad, there will be no permanent disposal of drill cuttings on the well pad itself. Therefore, the drill cuttings from these new wells will need to be transported to and managed at a separate, off-site drill cuttings management facility.

The RWF 21-18 well pad (COGCC Location ID 335569) is an existing location that will be re-constructed to support drill cuttings disposal for the 20 proposed wells to be drilled from the new PA 44-13 well pad. A new drilling pit will be built along the cut slope of the RWF 21-18 pad and will have a design capacity to hold approximately 7,500 cubic yards of drill cuttings. The distance between the two pads is approximately 1.56 miles.

The purpose of this Cuttings Management Plan is to request authorization and approval to relocate drill cuttings from the PA 44-13 well pad and manage them for permanent disposal and stabilization at the RWF 21-18 as described above. As shown on the attached exhibit, both the PA 44-13 and the RWF 21-18 locations are on fed surface (U.S. Naval Oil Shale Reserve managed by the U.S. Bureau of Land Management). After reviewing other potential alternatives for off-site disposal, and after extensive consultation and on-site meetings with the BLM, it is agreed that this is an acceptable and reasonable plan for safely managing the drill cuttings from the new wells to be drilled at the PA 44-13 well pad.

Need

The primary reasons for seeking approval of an alternative management plan for the drill cuttings from this pad are as follows:

1) Spatial constraints at the PA 44-13 Well Pad. The PA 44-13 pad is located on a steep side-slope (i.e., the east side) of Balzac Gulch as shown on the attached Exhibit. Balzac Gulch is an ephemeral drainage that is eventually tributary to the Colorado River which is approximately 1.9 miles due south of the well pad. Due to the steep terrain and topography of this area, the size of the pad is very limited and there is no room for the on-site disposal of drill cuttings at this location. The only options for management of drill cuttings generated from this pad is to transport and manage the cuttings at another, nearby permitted oil and gas location, or to haul the drill cuttings to an off-site commercial disposal facility.

2) Adverse and unacceptable safety and environmental risks associated with transporting the cuttings to an off-site commercial disposal facility. The only access to / from the PA 44-13 well pad is the Anvil Points Road which traverses the bottom of an unnamed gulch immediately below West Anvil Point and the steep side slopes of Balzac Gulch. This is an unimproved, dirt road with grades that have been surveyed up to 16% in locations. Additional details regarding the volumes of cuttings, truck trips per day, distances, etc. are provided in the Safety and Environmental Considerations section below.

3) Disposal costs. As outlined above, approximately 7,000 cubic yards will be disposed / stabilized at the RWF 21-18 drilling pit.

The three options for off-site disposal / management, and their respective estimated disposal and trucking costs are summarized below:

Disposal Option (7,000 cubic yards)	Estimated Disposal Costs	Estimated Trucking Costs	Total Estimated Disposal Costs
PA 44-13 pad to the RWF 21-18 Drilling Pit	0	$87,525	$87,525
PA 44-13 to West Garfield County Landfill	$245,000	$175,050	$420,050
PA 44-13 to Green Leaf Environmental Services	$189,000	$350,100	$539,100

Disposal at the RWF 21-18 Drilling Pit: There are no disposal fees associated with final disposal and management at the RWF 21-18 Drilling Pit. Trucking / transporting the cuttings from the PA 44-13 to the RWF 21-18 Drilling Pit is the only cost associated with this option; therefore, the total estimated disposal costs for this option are approximately $87,525.

West Garfield County Landfill: The disposal fees associated with final disposal and management at the West Garfield County Landfill are estimated to be $245,000. Trucking costs for this option would be an additional $175,000. The total estimated costs for this option are calculated to be $420,050. Disposal at the West Garfield County Landfill is approximately 5 times higher than disposal at the RWF 21-18 drilling pit.

Disposal at Green Leaf Environmental Services: The disposal fees associated with final disposal and management at the Green Leaf Environmental services are estimated to be $189,000. Trucking costs for this option would be an additional $350,100. The total estimated costs for this option are $539,100. Disposal at the Green Leaf disposal facility is over 6 times higher than disposal at the RWF 21-18 location.

From an economic and efficiency standpoint, disposal of drill cuttings from the PA 44-13 at either the West Garfield County Landfill or the Green Leaf Environmental Services commercial facilities is not justifiable. There are no compelling reasons to incur the added mileage, expense, and transportation-related risks that would otherwise be incurred by transporting this volume of drill cuttings to either of these commercial disposal facilities.

The RWF 21-18 drilling pit provides ample capacity to accommodate the entire volume of drill cuttings (7,000 cubic yards) that will be generated from the new 20 wells that will be drilled from the PA 44-13 well pad.

Safety and Environmental Considerations

Worker Safety. As noted above, the only access road to this well pad is a narrow, single lane, unimproved, dirt road that travels through the bottom of the unnamed gulch below West Anvil Point, and the steep side slopes of Balzac Gulch. The road is built upon the steep, clay slopes of the Green River formation. As shown in Photos 1 and 2 below, not only is the grade of the road very steep, but there are numerous sharp, blind corners and line-of-sight visibility is very limited. Because this is the only access road in / out of this well location, this road will also be very congested with other drilling, completions, roustabout / construction, and other oil field support services related traffic. Traffic management and controlling heavy truck traffic on the narrow access road is going be a very challenging aspect of safely working at this location – there is simply little or no room for two vehicles going in opposite directions to pass each other. Hauling drill cuttings down the mountain beyond the RWF 21-18 location for off-site disposal at a commercial facility will unnecessarily add additional heavy truck traffic on the road each day.

Photo 1. Narrow, steep, and curving access road leading to the PA 44-13 well pad.

Photo 2. Narrow, steep, and curving access road leading to the PA 44-13 well pad.

Drilling activities at this location will occur during springtime conditions when road conditions are typically muddy, slick, and occasionally frozen. TEP is deeply concerned about worker safety associated with hauling many truck-loads of drill cuttings per day down a very steep, slick and narrow road. In the interest of worker safety, TEP believes that it is critical to minimize the number of truck loads transporting drill cuttings for disposal, and to minimize the distance required to transport cuttings for final disposal.

A new drilling pit to be constructed at the RWF 21-18 location is the closest and most practical existing location where drill cuttings produced from new wells to be drilled at the PA 44-13 well pad could be transported for management and final disposal. COGCC's approval to allow TEP to manage drill cuttings at the RWF 21-18 location will greatly mitigate and reduce the risks associated with transportation of drill cuttings from this pad.

Community Safety. Community safety impacts are expected to be minimal for disposal at either the RWF 21-18 drilling pit or the West Garfield County Landfill. A comparison of the total vehicle miles required for transportation and disposal of cuttings to the RWF 21-18 drilling pit option versus the off-site commercial disposal option are summarized in the table below.

Disposal Option (7,000 cubic yards)	Distance (round-trip miles)	Number of Loads (6 CY/load)	Total Vehicle Miles for Off-site Disposal
PA 44-13 to RWF 21-18	3.12	1,167	3,641
PA 44-13 to West Garfield County Landfill	7.7	1,167	8,986
PA 44-13 to Green Leaf Environmental Services	67.26	1,167	78,492

The greatest impact to community safety would mostly be associated with transporting the drill cuttings to the Green Leaf Environmental Services disposal facility. This option would increase heavy truck traffic along the I-70 corridor and through the community of Debeque by the same number of trips as indicated in the table above. As shown in the table above, this option would put another 1,167 trucks on I-70 over a period of approximately 110 days and would result in an additional 78,492 miles of heavy truck traffic to be driven unnecessarily. This option poses an unnecessary and unacceptable risk to both the truck drivers and other motorists traveling I-70 during this time period.

Environmental Safety / Protection. As discussed above, the RWF 21-18 pad location is the closest and most feasible location that is suitable for disposal of the drill cuttings to be produced from the new wells to be drilled from the PA 44-13 well pad location.

The added trips (and mileage) associated with the off-site, commercial disposal options would also pose an increased and unnecessary risk of accidental exposure of E&P wastes to water ways below the RWF 21-18 location, namely the unnamed gulch immediately below West Anvil Point and the Colorado River. Off-site disposal at either commercial disposal facility will require unnecessary travel on the steep, winding access road. In the event of a spill of waste materials off the road and onto the steep side slopes below the road, the physical cleanup of the slopes would result in considerable surface disturbance and might not even be possible in some areas due to the severe angle of the slope.

However, if COGCC approves the management and disposal of drill cuttings at the nearby RWF 21-18 drilling pit, much of these health and environmental risks become negligible. As explained in the variance request letter, the distance of the haul route from the PA 44-13 pad to the RWF 21-18 pad is 1.56 miles, whereas the distance of the haul route from the PA 44-13 pad to either of the off-site commercial facilities are several orders of magnitude greater in distance. Because the nearby RWF 21-18 location is located in close proximity to the PA 44-13 well pad, disposal at this location would remove most, if not all of the truck traffic (associated with cuttings disposal) from the access road, the I-70 corridor, and the local communities. As a result, these safety and environmental risks would be greatly minimized / averted.

Outstanding Compliance Issues, Spills, Corrective Actions. Based upon a review of the COGCC database for the facilities associated with this proposal, there was one corrective action that was identified during the most recent COGCC Field Inspection Unit (FIU) inspection conducted on December 13, 2018 at the RWF 21-18 location (document number 689302613). The Corrective Action identified was a minor housekeeping issue (small pile of debris / trash) near a gate leading to the separators. The pile of debris

was promptly removed and a FIRR (document number 401893316) was submitted (on January 4, 2019) with the response that this Corrective Action has been addressed and the debris has been removed from location. There were no other un-resolved Corrective Actions, open spills, or other compliance issues for this location. Additionally, this location was checked for any open action items within TEP's internal inspection and maintenance programs, and there are no current unresolved equipment, storm water management, weed control, housekeeping, SPCC, or other issues identified at this location. The results of this review are summarized in the table below.

Pad Name	COGCC Location ID no.	COGCC FIR Corrective Actions (CAs)?	Un-resolved spills?	Production / Equipment	Storm water, weeds, SPCC
RWF 21-18 pad	335569	Doc # 689302613; 12/13/18; 1 CA; FIR submitted (doc# 401893316) – issue resolved.	No	Pass. No issues.	Pass. No issues.

Drill Cuttings Management Procedure

Drilling activities will commence at the PA 44-13 well pad in early May 2020, where 20 new wells will be drilled over a time period of approximately 110 days. The estimated volume of drill cuttings to be generated during the drilling of these new wells is approximately 7,000 cubic yards. Due to the limited size and physical constraints of the PA 44-13 well pad, there will be no permanent disposal of drill cuttings on the well pad itself.

It is proposed that drill cuttings from these new wells be transported by truck a distance of approximately 1.56 miles, where they will be managed at a separate off-site drilling pit to be constructed at the RWF 21-18 well pad. After all cuttings from the PA 44-13 wells have been received and tested for compliance with COGCC 910-1 cleanup standards, the drilling pit at the RWF 21-18 will be reclaimed and closed.

The general protocol for managing cuttings at this location is as follows: As drill cuttings are brought to the surface, they will be temporarily placed into a designated storage cell that is close to the rig shaker assembly. Once the temporary storage cell becomes full, a loader will place the cuttings into a dump truck where they will be transported to the new drilling pit to be constructed at the RWF 21-18 well pad. There, cuttings from each new well will be segregated and placed into the drilling pit and periodically sampled to determine if the cuttings meet COGCC 910-1 standards. Additional treatment or amendment of the cuttings may be needed occasionally to ensure that COGCC 910-1 standards are met prior to reclamation. If needed, clean fill material may be mixed with the cuttings to ensure that cleanup standards are met. Confirmation samples of the blended material will be collected and submitted to an approved analytical laboratory and analyzed for the full COGCC 910-1 list of organic, inorganic, and metal compounds (in soils) to ensure that these materials comply with COGCC cleanup standards. If sample results indicate that any of the inorganic parameters (i.e., Sodium Absorption Ratio, Electrical Conductivity, etc.) exceed their respective cleanup standards or background concentrations, these materials must be covered with a minimum cap of 3-ft of clean material (i.e., soils meeting 910-1 cleanup standards).

Representative samples from the entire volume of the drilling pit will be collected and analyzed to ensure compliance with COGCC 910-1 cleanup standards prior to reclaiming the drilling pit. If the composition of the cuttings is verified to comply with the entire list of 910-1 cleanup standards (including the

inorganic parameters), these materials may be either buried in-situ within the drilling pit, or they may be re-used on the fill slope as needed to help shape and contour the pad in preparation for interim reclamation activities as outlined in COGCC's Interim Reclamation requirements of COGCC Rule 1003.

After all cuttings from the PA 44-13 wells have been received and tested for compliance with COGCC 910-1 cleanup standards, the drilling pit at the RWF 21-18 will be closed. The moisture content of all drill cuttings will be kept as low as practicable at all times to prevent accumulation of liquids. Both pads are included in TEP's storm water management program and will be inspected and maintained per COGCC's Site Stabilization and Storm Water Management requirements, Rule 1002(f).

Interim reclamation of these areas will occur within six (6) months following closure of the drilling pit. The disturbed areas surrounding each location, including access roads if applicable, will be re-contoured to blend as nearly as possible with the natural topography. TEP will complete final grading of back-filled and cut slopes to prevent erosion and encourage establishment of vegetation. Existing drainages will be re-established where appropriate and topsoil will be spread in a uniform depth that will allow the establishment of desirable vegetation. All disturbed areas will be reseeded in the first favorable season following closure of each location. TEP operates under an integrated Noxious Weed Management Plan that complies with the Colorado Noxious Weed Act, Colorado Oil & Gas Conservation Act, and the BLM Gold Book. All interim reclamation activities will be conducted in accordance with COGCC Rule 1003 (Interim Reclamation).

Drill Cuttings Sampling Procedure

To demonstrate compliance that the drill cuttings generated from this pad comply with COGCC Rule 910-1, all drill cuttings produced from the new wells to be drilled will be characterized according to the following procedure:

Sampling Frequency. Prior to transportation from the original well pad, all drill cuttings will be dried to the greatest extent possible to minimize the accumulation of any fluids and to facilitate the physical management and handling of the material. As drill cuttings are brought to the surface at the PA 44-13 pad, they will be loaded and hauled directly to the new drilling pit at the RWF 21-18. There, the cuttings will be placed in an orderly manner into the RWF 21-18 drilling pit according to the order in which the wells are drilled.

First-Well Sampling: As discussed with COGCC, TEP will specifically target the cuttings from the first well drilled at the PA 44-13 pad for a more intensive and thorough characterization process to ensure that the analytical data for the drill cuttings generated from this first well are representative of the cuttings to be generated from the subsequent wells to be drilled from that pad. This sampling strategy is appropriate since all wells from this pad will be drilled through the same geologic formations, will have similar completion depths, and will all be drilled using the same equipment, drilling muds, and techniques. This more aggressive sampling design will ensure that the initial well and all subsequent wells will meet applicable COGCC 910-1 standards. Samples from the first well on the PA 44-13 pad will include one grab sample from the surface horizon (0 to 1,000 feet deep); one grab sample from the surface horizon to the "top of gas" interval (1,000 feet to 5,400 feet); and two grab samples from the production zone (5,400 feet to total depth – TD, which is estimated to average approximately 9,000 feet). As a precautionary measure, cuttings from the production zone will be segregated (for each well) within the cuttings management pit or drilling pit and will be managed separately. Cuttings from the Production Zone are more likely to contain elevated hydrocarbon constituents and may require additional treatment to ensure that they meet COGCC 910-1 standards prior to final disposal. It is anticipated that drill cuttings

produced from the surface horizon through the top of gas intervals (0 – 6,500 feet) will not exceed 910-1 standards; however, this will be verified through the sampling design as shown in the table below:

First-Well Sampling Frequency*		**Subsequent Well Sampling Frequency***		**Final Cell Confirmation Sampling ****	
Depth	Number of Samples	Depth	Number of Samples	Location	Number of samples
Surface (0 – 1,000 ft)	1	Production zone (6,500 ft – TD)	1	One sample from each third of pit	3-4
Top of Gas (1,000 to 6,500 ft)	1				
Production Zone (5,400 – TD)***	2				

* Before mixing / blending. Grab samples.
** After mixing / blending. Composite samples (5-point)
***Addition verification samples will be collected from any production zone materials that require treatment to meet COGCC 910-1 standards.

Subsequent-Well Sampling: To ensure that cuttings from subsequent wells continue to meet COGCC 910-1 standards, a single grab sample will be collected from drill cuttings produced from the production zone (6,500 feet to TD) of each subsequent well. It is anticipated that drill cuttings generated from the surface to the top of gas intervals (0 to 6,500 feet) will contain relatively minor concentrations of contaminants that would exceed COGCC 910-1 standards; therefore, targeting the production zone will capture those cuttings that have the greatest potential to exceed 910-1 standards and that may also require additional treatment prior to final disposal. Any drill cuttings that are found to exceed the COGCC 910-1 clean-up standards may be mixed with additional available clean soils until the 910-1 standards have been achieved. Mixing will be accomplished using a track hoe and blending clean soils in with the production zone cuttings at a ratio of approximately 1:1 until the material is thoroughly mixed. A second verification sample will then be collected after mixing to ensure that the COGCC 910-1 standards are met. All samples will be submitted to an approved, fully accredited environmental laboratory for COGCC 910-1 analysis as described in the table below.

Final Cell Confirmation Sampling: Once all drill cuttings have been placed at the PA 44-13 Cuttings Management Area or into the RWF 44-18 drilling pit, and the soil samples collected up to that point indicate that all COGCC 910-1 constituents are below their respective allowable thresholds, the cuttings will be fully mixed using a track-hoe. After the cuttings have been thoroughly mixed, and as a final check to ensure that the entire volume of the cell contents meet COGCC 910-1 standards, the cuttings management area and drilling pit will be divided into thirds, and a composite sample (5-point) will be collected from each third of the cuttings management area or drilling pit. All samples will be submitted to an approved, fully accredited environmental laboratory for COGCC 910-1 analysis as described in the table below.

Until adequate characterization of the cuttings materials has been completed, personnel will segregate cuttings from individual wells inside the cuttings management area or drilling pit. Mixing the cuttings from multiple wells will not be allowed until the cuttings have been characterized as described above and are below applicable COGCC 910-1 cleanup standards.

Sample Analysis. It is proposed that all drill cuttings be analyzed in accordance with the following list of analytes from the COGCC 910-1 Table. As shown in the table below, and through this variance request, TEP is requesting relief for treating drill cuttings produced from the PA 44-13 well pad for the inorganic constituents of Electrical Conductivity (EC), Sodium Absorption Ration (SAR), and pH. If present within the rooting zone, elevated concentrations of these inorganic constituents can affect soil characteristics and interfere with establishing vegetation that is needed for successful reclamation of the location. Any cuttings that exceed these inorganic constituents must be covered with at least three feet of clean fill

material so as to not impact or interfere with the successful reclamation and revegetation of the disturbed areas.

Additionally, TEP is requesting relief from meeting the 910-1 Arsenic standard due to the naturally elevated concentrations of this metal that is found throughout the Piceance Basin. Background concentrations for arsenic typically exceed the COGCC cleanup standard for this metal, and the standard is simply not attainable.

Record Keeping. TEP will maintain records of all drill cuttings generated from each well including total volume of cuttings per well, date cuttings were transported to the RWF 21-18 drilling pit, and the analytical data for all samples associated with each well. TEP will maintain these records for a period of 5-years and will provide data to COGCC upon request.

Table of COGCC 910-1 Contaminants Applicable to Drill Cutting Produced from the PA 44-13 well pad.

Contaminant of Concern	COGCC Table 910-1 Threshold (mg/Kg)	Analytical Method
DRO	500	SW 8015M
GRO		SW8015D
BENZENE	0.17	SW 8260C
TOLUENE	85	
ETHYLBENZENE	100	
XYLENE TOTAL	175	
ACENAPHTHENE	1,000	SW 846, SW 8270D
ANTHRACENE	1,000	
BENZO(A)ANTRHACENE	0.22	
BENZO(A)PYRENE	0.022	
BENZO(B)FLUORANTHENE	0.22	
BENZO(K)FLUORANTHENE	2.2	
CHRYSENE	22	
DIBENZO(A,H)ANTHRANCENE	0.022	
FLUORANTHENE	1,000	
FLUORENE	1,000	
INDENO(1,2,3-CD) PYRENE	0.22	
NAPHTHALENE	23	
PYRENE	1,000	
ARSENIC*	0.39	SW 6010C, 6020A, 7471B, SW 7196A,
BARIUM	15,000	
CADMIUM	70	
CHROMIUM	-	
CHROMIUM (III)	120,000	
CHROMIUM (IV)	23	
COPPER	3,100	
LEAD	400	
MERCURY	23	
NICKEL	1,600	
SELENIUM	390	
SILVER	390	
ZINC	23,000	
ELECTRICAL CONDUCTIVITY (EC) (mmho/cm)*	<4 mmhos/cm or x2 bkgd	USDA H60
pH*	6 to 9	SW9045D
SODIUM ADSORPTION RATIO (SAR)*	12	USDA H60

*TEP is requesting relief for treating drill cuttings produced from the PA 44-13 well pads for these constituents.

Preparing Drill Cuttings for Burial. All drill cuttings will be managed / handled as follows:

- The drilling pit at the RWF 21-18 has been designed and constructed to hold approximately 7,000 cubic yards of cuttings from the PA 44-13 wells.
- All cuttings from each well produced from the Surface Zone and from the Surface to Top of Gas Zone will be placed into the drilling pit in a chronological manner. It is anticipated that drill cuttings generated from these intervals will contain relatively minor concentrations of contaminants that would exceed COGCC 910-1 standards and will require minimal treatment. This will be verified by the sampling protocol described for the first well to be drilled from this pad.
- All cuttings from the Production Zone will be stored in a separate part of the drilling pit for specific sampling and potential treatment if needed. Based upon analytical data for samples collected from the Production Zone, if treatment is required, clean fill will be added to the Production Zone cuttings at a 1:1 ratio and will be thoroughly mixed with a track-hoe. After mixing, additional composite samples will be collected and submitted to the laboratory for analysis. This process will be repeated until all materials are below the applicable COGCC 910-1 standards.
- To ensure that cuttings from each well are kept separate and readily identifiable, TEP will mark cuttings from each well in such a manner that it will enable TEP to clearly identify cuttings from specific wells (e.g., installing lathe on the edge of the drilling pit, using GPS instrumentation to survey cuttings locations from specific wells, or using some other method that allows for separating and identifying cuttings from individual wells). This will ensure that TEP will be able to clearly identify cuttings from specific wells for cuttings sampling and characterization purposes as described above.
- After all cuttings from the respective wells have been placed and successfully treated, the drilling pit will be covered with a minimum of 3-feet of clean fill and will be reclaimed per the reclamation plat prepared for this location.

Summary

Due to the size constraints of the PA 44-13 pad, all drill cuttings from the upcoming wells to be drilled in May – July 2020 will require off-site management and disposal. TEP is requesting approval from COGCC to allow for off-site treatment and disposal of drill cuttings at a proposed drilling pit to be constructed at the RWF 21-18 well pad for the following reasons:

Safety Benefit: The RWF 21-18 well pad is the closest of the three off-site alternatives. This equates to significant reductions in the total vehicle miles driven as compared to the other two off-site commercial disposal facilities. This reduction in vehicle miles driven has a direct translation to reducing risk to both support personnel, the local community, and traffic on the I-70 corridor. Total miles driven required for disposal at the West Garfield County Landfill is ~ 2.5 times greater than the miles driven for disposal at the RWF 21-18 well pad. Total miles driven required for disposal at the Green Leaf Environmental Services disposal facility is ~ 22 times greater than the miles drives for disposal at the RWF 21-18 well pad. Allowing use of the RWF 21-18 location for cuttings disposal will result in significantly fewer miles driven than would otherwise be required for the other two off-site commercial disposal options.

Economic Benefit: Utilizing the existing RWF 21-18 well pad is by far the most economic option of the three off-site alternatives. Disposal at the West Garfield County Landfill is approximately 5 times higher than disposal at the RWF 21-18 drilling pit. Disposal at the Green Leaf disposal facility is over 6 times higher than disposal at the RWF 21-18 location. Allowing disposal at RWF 21-18 drilling pit results in significant, verifiable cost savings.

Environmental Benefit: Because the RWF 21-18 location is the closest of all three potential off-site disposal options, this will also result in reduced vehicle emissions, fugitive dust emissions, and potential impacts and disturbance to wildlife. Additionally, shorter transportation distances have a direct correlation to reduced risk in terms of vehicle accidents, and a reduced potential for spills and related cleanup costs. These drill cuttings are generated from a drilling process that uses exclusively water-based bentonitic drilling fluids and will be managed / disposed in accordance with COGCC Rule 907.d (1-3).

In addition to the reasons presented above, it should be noted that the RWF 21-18 location is on Fed surface and is managed by the U.S. Bureau of Land Management. After multiple discussions and on-site meetings with the BLM, they fully support this drill cuttings management proposal as evidenced by the attached approved Application for Permit to Drill, which includes BLM's approval to construct a drilling pit at the RWF 21-18 well pad to be used for the management and permanent disposal of cuttings generated from the new wells being drilled at the PA 41-13 well pad.

Beneficial Re-use of Cuttings to Improve Reclamation: The outcome of the previous reclamation activities conducted at the RWF 21-18 has not succeeded to the degree that was hoped for by BLM. Consequently, BLM strongly supports the request for the drill cuttings to be managed as described in this Cuttings Management Plan, as it provides an opportunity to improve upon the previous reclamation efforts conducted at the RWF 21-28 well pad and will help to restore this area back to pre-disturbance conditions as much as possible.

In summary, transportation of drill cuttings to the RWF 21-18 far out-weighs the safety and environmental risks that, otherwise, would be associated with the transportation and off-site disposal at the off-site commercial disposal facilities. It is far safer and more cost effective to manage these cuttings at the closest possible location to where they originated.

Based upon the reasons provided above, TEP requests permission to construct and utilize a new drilling pit to be constructed at the RWF 21-18 well pad for the management and permanent disposal of drill cuttings that will be generated from drilling new wells at the PA 44-13 well pad location.