

**INFORMATION REQUIRED BY COGCC OPERATOR GUIDANCE REGARDING
RULE 1001.c: RECLAMATION VARIANCES AND WAIVERS (DECEMBER 17, 2015)**

Pond E

A. Site History and Description

Pond E (Facility Name RRRPPCWE, Facility Number 286532) was constructed as a fenced, multi-well production pond on an unnamed tributary of Lorencito Canyon in 2007. RRRH conducted a sensitive area determination of the pond location prior to construction and concluded that the relatively shallow depth to groundwater warranted installation of a liner. As a result, Pond E was constructed with a 20-mil PVC synthetic liner. Pond E was operated under COGCC Centralized E&P Waste Management Facility Permit #292832. The pond is located in the southeast part of Red River Ranch as shown on the attached map of Red River Ranch CBM facilities. Also attached is an aerial photograph of the site (2013 imagery).

Ponded water dimensions were approximately 180' x 100 (0.41 acres) x 4'. The reserved topsoil was spread over the pond liner. Aquatic and emergent wetland plants were planted in and adjacent to the pond center, allowing the pond to also function as a constructed wetland.

The pond was constructed next to an existing ranch road, and did not require construction of a new access road.

In addition to ephemeral flows of surface water derived from upslope runoff, the pond received produced water from nearby CBM wells. The Raton-Vermejo-Trinidad aquifer in which the CBM wells were set produces water that is generally considered potable. The quality of water in the pond was sufficiently high that CDPHE permitted direct discharge of water from the pond into Lorencito Canyon under Permit CO-0048089. The CBM system was shut down by March 31, 2012, and the pond did not receive any CBM produced water after that date.

COGCC inspected the Centralized E&P Waste Management Facility, of which this pond is a part, on May 22, 2013 and May 28, 2015. No problems related to reclamation or stormwater were identified in the May 22, 2013 inspection report. The May 28, 2015 inspection report noted the presence of some noxious weeds.

Analyses of pond bottom soil samples collected in September 2014 indicate that the applicable COGCC Table 910-1 contaminants of concern are present in concentrations below the Table 910-1 limits or are below background concentrations established through analysis of nearby soils.

A Form 27 was submitted to COGCC on October 27, 2014, that provided the soil analytical data and communicated RRRH's desire to leave the pond as it currently existed for the benefit of wildlife and native vegetation. COGCC conditionally approved the Form 27 on November 5, 2014, requiring RRRH to (1) notify COGCC when the pit liner is removed and provide documentation of disposal of the liner at a permitted disposal site, (2) notify COGCC when the final soil gas survey of the plugged and abandoned Global Resources Lorencito #1 well is completed and provide COGCC with a report of soil gas survey results, and (3) notify COGCC

when RRRH's variance request regarding final land contours is granted by the Director. RRRH had indicated in the Form 27 that it planned to leave the fence in place, but the fence was subsequently damaged by stormwater and was removed.

COGCC Rule 905.b.(3)A. on synthetic liner disposal requires that liner material shall be removed and disposed in accordance with legal requirements for solid waste disposal. The legal requirements for solid waste disposal are administered by CDPHE. Following discussions with COGCC staff, RRRH submitted a request to CDPHE on October 20, 2015 for authorization to retain Pond E in its current condition with the liner left in place. On November 30, 2015 CDPHE approved the request with the condition that COGCC must also approve the plan to leave the liner in place. A copy of CDPHE's approval letter is attached.

The nearby Global Resources Lorencito #1 well had been plugged and abandoned prior to RRRH acquiring Red River Ranch, and one of the COGCC's conditions of RRRH's centralized E&P waste management facility permit was a requirement to conduct soil gas surveys around Pond E in 2008 and upon facility closure. The final soil gas survey around Pond E was conducted on December 9, 2014, and the survey results (showing no methane was present) were reported to COGCC on January 11, 2015.

B. Final Reclamation and Requested Variances

As discussed in Section C, below, RRRH has completed most of the reclamation activities required by COGCC Rule 1004. However, RRRH intends to retain certain assets at this location that have continuing utility to ranch operations. The following assets will not be reclaimed or removed:

- Pond – The pond holds a small amount of water during snow melt and after rainstorms and will be retained in its current condition for the benefit of wildlife and native vegetation. The pond also materially improves water quality in Lorencito Canyon through removal of sediment in ephemeral stream flows.
- Water Gathering System - The water gathering system that was used to pipe water from wells to the pond can be used to pipe water from sources to locations where it could be used for firefighting, wildlife water supply, irrigation, and other water uses.

Closure of this location in its current condition will require variances from parts of COGCC Rule 1004.a in the following regards:

- The pond will not be backfilled or graded back to its original topographic contours so that the site can continue to function as a pond. The outlet structure will be retained so that RRRH can regulate water levels in the pond if needed.
- The synthetic liner will be left in place.
- The vegetative cover that has been established around the pond and on the access road may not reflect pre-disturbance forbs, shrubs, and grasses and may be less than 80 percent of pre-disturbance levels in some parts of the location.

C. Additional Information Required by COGCC Operator Guidance on Rule 1001.c

COGCC Operator Guidance on Rule 1001.c: Reclamation Variances and Waivers (revised December 17, 2015) requires submission of information needed to support COGCC's evaluation of whether public health, safety, and welfare will be protected and significant adverse environmental impacts prevented if variances from specified reclamation rules are granted. That information is presented below.

Operator Guidance Requirement 1. Evidence that all wells on the location are plugged and abandoned, and that a Form 6 subsequent was submitted for each well.

No CBM wells were drilled at the Pond E location.

Operator Guidance Requirement 2. Evidence that all oil and gas equipment has been removed from the location, including flowline risers and gathering line risers.

Because no wells were drilled at the Pond E location, there was no oil and gas equipment to be removed as evidenced by the three photographs that are submitted along with this document as a COGCC Form 4 attachment.

Operator Guidance Requirement 3. Evidence that trash and debris belonging to the operator or its agents has been removed from the location.

All trash and debris belonging to RRRH and its agents have been removed from this location. This is evidenced by the two photographs that are submitted along with this document as a COGCC Form 4 attachment.

Operator Guidance Requirement 4. Evidence that noxious weeds have been controlled as required by Rule 1004.

Noxious weeds at this location are monitored and controlled in accordance with RRRH's ongoing weed management program that includes spraying by a licensed contractor and by licensed staff, as well as mechanical treatment by RRRH staff. Any noxious weeds identified on or adjacent to this location are sprayed and/or mechanically removed.

Operator Guidance Requirement 5. Documentation showing the operator consulted in good faith with the surface owner regarding final reclamation pursuant to Rule 306.f. Information describing the consultation (who, where, when) should be provided.

As both the operator at and the surface owner of this location, RRRH has carefully considered all aspects of final reclamation (including the timing of reclamation activities, the desired final land use and seed mix), as required by COGCC Rule 306.f, in development of its reclamation plan for this location. The results of the 306.f final reclamation consultation were incorporated in RRRH's Final Reclamation Plan, dated October 21, 2015. That Final Reclamation Plan was submitted to COGCC on October 23, 2015.

Operator Guidance Requirement 6. Documentation of the existing state of reclamation for the entire location.

Subsequent to construction of Pond E, RRRH undertook interim reclamation measures that included cleanup of the location and revegetation of disturbed areas that were no longer needed.

All debris, rubbish, supplies, and waste materials have been removed. No materials were burned or buried on the site.

Reclamation progress is currently being and will continue to be monitored concurrently with stormwater inspections conducted by a RRRH contractor. Any required corrective measures will be implemented.

Operator Guidance Requirement 7. Documentation detailing how the oil and gas location will be stabilized and details about what required stormwater management controls will be in place prior to COGCC's final signoff reclamation inspection.

The site is currently well-stabilized with vegetation, and the dam faces are free of gullies. No structural controls are required to prevent erosion and sedimentation.

This location is currently being and will continue to be inspected under RRRH's ongoing stormwater management program, conducted in accordance with the requirements of COGCC Rule 1002.f until COGCC approves final reclamation.

Operator Guidance Requirement 8. The operator's analysis of how public health, safety, and welfare will be protected and significant adverse environmental impacts prevented even if compliance with the specified provisions of Rule 1104 receive a variance.

RRRH believes that granting the requested surface owner variances will not compromise public health, safety, and welfare and will not result in significant adverse environmental impacts. The following information is presented in support of COGCC's evaluation.

1) The specific nature of the location, including urban vs. rural, proximity to surface water, wildlife areas, 317B area, or sensitive area classification – This location is in a remote, rural part of the ranch, 7.2 miles from the nearest known residence (the ranch residence). It is 26 feet southwest of the nearest named surface water body (Lorencito Canyon, an ephemeral stream), which appears to also be the nearest sensitive area. There are no nearby 317B areas.

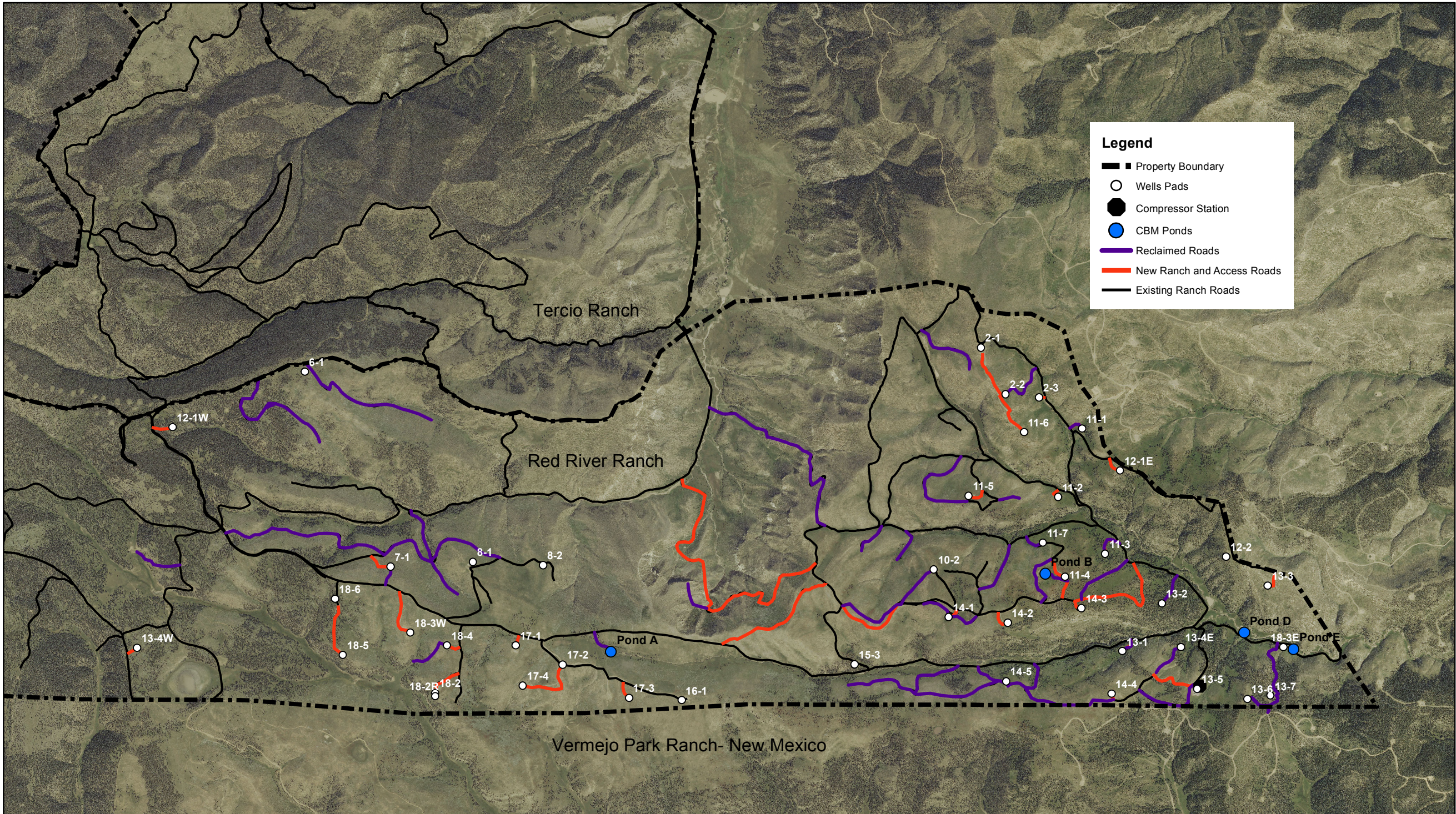
The nearest state wildlife area is 3.3 miles northwest of the location. The location is not in a sensitive wildlife habitat or a restricted surface occupancy area. It is in black bear habitat, but there is no food-related trash on the location.

Vegetation in the vicinity of the pond is predominantly montane grassland with some herbaceous riparian vegetation adjacent to Lorencito Canyon. The pond edge is vegetated with emergent wetland plants. Soils on which the pond was constructed have been mapped as Molinaro loam, 2 to 12 percent slopes.

2) Comparative Benefits of Recontouring and Reseeding vs. Just Reseeding – Recontouring of the pond would eliminate the pond’s ability to retain water, support riparian and wetland vegetation, serve as a source of water for wildlife, and enhance water quality in Lorencito Canyon. Recontouring of the land surrounding the pond is not necessary, as its topography has not been disturbed.

RRRH believes that the reseeded work that has taken place to date has produced a vegetative cover that is more than adequate to stabilize the location and, within a reasonable period of time, create a vegetative cover comparable in composition and density to adjacent undisturbed areas.

Consultant Assessment - RRRH has engaged an environmental consultant to implement its stormwater management program and to provide periodic inspections of this and other locations. These inspections evaluate potential pollutant sources, erosion control, sediment control, runoff conveyance and control, and maintenance of structural and revegetated areas. The consultant has prepared a report (dated September 13, 2014) which concluded that there are no conditions at this location that might adversely impact public health safety or welfare, nor any conditions at this location which might result in significant adverse environmental impacts. The consultant’s report was provided to COGCC on October 9, 2014, and the conclusions of the consultant’s report were included in the RRRH Final Reclamation Plan submitted to COGCC on October 23, 2015. The RRRH natural resource management staff has also concluded that wildlife resources are not being adversely impacted by this location in its current condition.



Legend

- Property Boundary
- Wells Pads
- Compressor Station
- CBM Ponds
- Reclaimed Roads
- New Ranch and Access Roads
- Existing Ranch Roads



Red River Ranch CBM Facilities

Updated: July 25, 2016



Pond (0.54 acres)

Pond Variance Area (0.49 acres)

Pond E

Boundaries are approximate and based on information available to the preparer.





COLORADO

Department of Public
Health & Environment

Dedicated to protecting and improving the health and environment of the people of Colorado

November 30, 2015

Mr. Peter J. Talty, Vice President
Red River Ranch Holdings LLC
Eleven Times Square
37th Floor
New York, NY 10036

RE: **Approval with Conditions** for Beneficial Use of the Synthetic Liners in Ponds D and E at the Red River Ranch, Las Animas County, Colorado

File: SW/LAS/RRR 7.1

Dear Mr. Talty,

The Colorado Department of Public Health and Environment (the "Department") Hazardous Materials and Waste Management Division (the "Division") received the following Request for Retention of Pond Liners in Ponds D and E (the "Request") for Red River Ranch (the "Facility") located south of Weston, Colorado approximately 24 miles southwest of Trinidad, Colorado.

"Retention of Pond Liners in Red River Ranch Ponds D and E". Submitted by: Access Environmental, LLC. Document dated: October 20, 2015. Document received: October 20, 2015.

The Division reviewed the submitted Request pursuant to 6 CCR 1007-2, Part 1, the Regulations Pertaining to Solid Waste Sites and Facilities (the "Regulations"). Jill Parisi and Curt Stovall met with Jack Sosebee, a Facility representative, on November 5, 2015 to further discuss the Request.

Background Information

Ponds D and E were constructed in 2006 and 2007, respectively. The ponds were built on ephemeral tributaries to Lorencito Canyon. The ponds received water produced from nearby coalbed methane wells and surface water and sediment from the ephemeral tributaries. The ponds were lined with a commercially-available 20-mil polyvinyl chloride (PVC) liner and approximately 1 foot of native soil was placed on the liner for protection. Emergent wetland and herbaceous riparian vegetation were planted in this soil to allow the ponds to function as constructed wetlands. The synthetic liner serves to retain water in the ponds and create an environment suitable for wetlands.

Operation of the ponds was authorized by the Colorado Oil and Gas Conservation Commission (COGCC) under a Centralized Exploration and Production Waste Management Facility Permit #292832. In addition, the Facility was authorized to discharge water from the ponds into Lorencito Canyon by the Department's Water Quality Control Division under a minimal industrial discharge Permit COG-600724. This permit was terminated in 2015 as coal bed methane production ceased at the Facility on March 31, 2012.

Beneficial Use Determination

Pursuant to the COGCC 900 Series rules, synthetic liners shall be removed and disposed of at an approved solid waste disposal facility. The Facility has requested to leave the synthetic liners in-place since removal of the liners would require demolition of the constructed wetlands, which are currently benefitting Red River Ranch and the Lorencito Canyon



drainage area, primarily by removing suspended solids from the ephemeral stream flows. In addition, the ponds provide a water source for wildlife at the Facility, which is under a conservation easement.

Based on the Division's review and the discussions at the referenced meeting, the Division believes that the lined ponds and associated wetlands meet the requirements of Section 8.6 of the Regulations and provide a beneficial use by controlling sediment and improving stormwater quality. Therefore, the Division **approves** the submitted Request to retain the pond liners in Pond D and E **with the following condition:**

1. It is the Division's understanding that the COGCC will concurrently conduct a closure assessment for Ponds D and E by reviewing the quality of the sediment and water collected in the ponds, pursuant to the Series 900 requirements and Form 27 - Site Investigation and Remediation Workplan. The PVC liners may remain in-place contingent on COGCC's approval of a regulatory closure of Ponds D and E.

Please note that this determination does not preclude separate review action by Las Animas County or the Colorado Oil and Gas Conservation Commission.

In closing, the Division is authorized to bill for its review of technical submittals at a rate of \$125 per hour, pursuant to Section 1.7 of the Regulations. An invoice for the Division's review of the above-referenced document will be transmitted under separate cover.

Please send any questions regarding this letter to the attention of Jill Parisi at jill.paris@state.co.us or by phone at 303-692-3348.

Sincerely,



Jill Parisi, P.E.
Solid Waste Permitting Unit
Hazardous Materials and Waste Management Division



David Snapp
Materials Management Unit Leader
Hazardous Materials and Waste Management Division

cc: Kent Robinson, Las Animas County Planning Commission
Bob Lucero, Las Animas County Oil and Gas Liaison

ec: Jack Sosebee, Access Environmental, LLC.
Margaret Ash, COGCC
Tony Caligiuri, Conservation Easement
Jeff Deatherage, Division of Water Resources



Photograph 1. Pond E, facing northwest from southeast end of pond.



Photograph 2. Pond E, facing northwest across dam face from southeast end of dam.



Photograph 3. Pond E, facing east from south end of dam.