

# Report to the Montrose County Planning Commission

Prepared by the Montrose County Planning and Development Department

**#1**

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**PREPARED BY:** Steve White, Planning and Development Director

**MEETING DATE:** July 1, 2009 at 6:00 p.m.  
Friendship Hall  
1001 N. 4<sup>th</sup> Ave.  
Montrose, Colorado

**SUBJECT:** Piñon Ridge Mill Facility Special Use [SU-08-0047]

**APPLICANT:** Energy Fuels Resources Corporation  
P.O. Box 888  
Nucla, CO 81424

**OWNER:** Same

**LOCATION:** 31525 Highway 90

**PROPOSAL:** To construct and operate a facility to process uranium and vanadium ore.

**ZONING:** General Agricultural (A)

**MONTROSE COUNTY MASTER PLAN REVIEW:**

Planning Area:	West End Planning Area
Projected Land Use:	Agricultural
Road Classification:	Hwy 90 – Major Arterial

**PROJECT DESCRIPTION:**

1. The Planning Commission held a 2<sup>nd</sup> public hearing on June 10, 2009 at Friendship Hall in Montrose Colorado. The applicant provided a presentation and public comment was taken. The Planning Commission made a motion to continue this item to July 1, 2009 at 6:00pm at Friendship Hall. The purpose of continuance was to allow staff to work on adding or amending the conditions to address comments from the public and Planning Commission concerns.
2. The Planning Commission held a public hearing on May 19, 2009 at the Nucla Jr./Sr. High School Gymnasium. The applicant provided a presentation and public comment was taken. The Planning Commission made a motion to continue this item to a meeting to be held at Friendship Hall on June 10, 2009 at 6:00pm.
3. The West End Planning Advisory Committee was in attendance and after hearing public comment, recommended approval of the Special Use Permit. Their approval included conditions regarding the possible use of sound barriers

and if there are traffic issues, especially during school hours then they would like an opportunity to review this issue in the future.

4. Since the meeting of May 19<sup>th</sup>, the Planning and Development Department has received a number of citizen comment letters. These letters have been included with the staff report.
5. The applicant is proposing to operate a mill that will process uranium and vanadium ore on an 880 acre site. The property is located on the south side of State Highway 90 approximately 12 miles west of Naturita and approximately 7 miles east of Bedrock. Access to the site will be from State Highway 90.
6. Development of the site will include an administration office, mill facility, truck scale, truck wash, tailing cells and evaporation ponds. The entire site will be surrounded by a barbed wire fence. A chain link fence with barbed wire will enclose the uranium processing area. This fence will be posted with warning signs to restrict unauthorized access. There will be a guardhouse near the entrance of the site for inspection and control of traffic entering the facility.

**ANALYSIS:**

7. The Montrose County Master Plan designates the area of the proposed Special Use Permit (SUP) as "Agricultural". These areas are defined as, "areas designated for development in agricultural, agribusiness, low-density residential (not including major subdivisions) and planned development uses. Generally, community water service is not available; typical of the County's General Agricultural Zone District". The Master Plan Land Use Element does not deal directly with Special Uses. Therefore, it is the Planning Director's position that a properly permitted Special Use Permit in this area would be consistent with the Master plan.
8. The Montrose County Zoning Resolution allows new mineral resource development and extraction operations and facilities as a Special Use in the General Agricultural District. Section IV (Zone Districts) indicates the following regarding uses within each zoned district: "Within each zone district, uses are listed as a use-by-right, a special use, or a prohibited use. For uses not listed or not clearly fitting within one or more categories, the County Planner (Planning Director) shall determine in what district the land use is allowed any by what measure(use-by-right or special use)." For this use the County Planner has determined that a uranium mill falls under the use criteria of a new mineral resource development and extraction operation and facility, which requires a special use permit.
9. The applicant has indicated that the facility will operate 24 hours per day, 350 days per year, and will employ up to 85 people, and will process approximately 500 tons of ore per day. The project operating life of the facility will be approximately 40 years.

10. Energy Fuels Resources Corporation plans to mill ore that will primarily be brought from nearby mines. The ore will be delivered to the site by trucks at an estimated rate of 21 loads per day, predominately during daylight hours.
11. The milling operation involves grinding the ore into a fine slurry and then leaching it with sulfuric acid to separate the uranium and vanadium from the rock. The uranium and vanadium are then recovered from solution and precipitation as concentrates, which are sealed in 55-gallon, steel drums and transported off site. Uses of uranium and vanadium include fuel for electric power generation, manufacturing of industrial chemicals, medical applications, and formation of high strength alloy steels.
12. Since August 2007, Energy Fuels has been conducting environmental baseline studies at the property and preparing designs for submittal of a Radioactive Source Material License application to the Colorado Department of Public Health and Environment (CDPHE). CDPHE is the primary licensing authority for uranium mills in the State of Colorado. CDPHE also requires an Environmental Report. All requirements as set forth by CDPHE must be approved prior to issuance of a Mill License. A condition is included in the Special Use Permit, which requires the Mill License to be approved by CDPHE prior to operation of the mill.
13. Water for the facility will be provided by private wells. The estimated average water requirement for the project is 144 gallons per minute to support the milling process, dust suppression, washrooms, truck wash and fire suppression systems. The majority of the water will be used for processing the ore and wherever feasible water will be recycled to minimize consumption. The groundwater will be pumped from a series of on-site and adjacent off-site wells. Energy Fuels has installed three production wells to date which sustained a total of 130 gallons per minute over a two day period. The applicant is proposing two additional wells to provide the water needed to meet the 144 gallons per minute to operate the facility. All water will be pumped to a 300,000-gallon raw water storage tank. A separate potable water system will be constructed for water to be used in the change facility, restrooms and offices.
14. Energy Fuels has also entered into an agreement with the Town of Naturita as a contingency in the event that the wells cannot sustain the full 144 gallons per minute to operate the facility. The agreement will allow a quantity of 150,000 gallons (104 gallons per minute) for a 24 hour period, with a 15 year time frame. This water would be trucked to the facility from the Town of Naturita. It should be noted that the applicant has indicated the life of the mill to be 40 years. If Energy Fuels uses water from the Town of Naturita, additional water resources will be required if the mill operates beyond the 15 year time period as set forth by the agreement with the Town of Naturita. A condition has been added by staff to address this issue so the agreement matches the life of the mill as indicated by the applicant.
15. Following the extraction and recovery of the uranium and vanadium from the ore, the remaining waste products from the milling operation are disposed onsite, in engineered facilities designed to protect the environment. These facilities are

designed to contain 40 years of waste material at a milling rate of 500 tons per day.

16. Individual Sewage Disposal Systems (ISDS) will provide wastewater service for the potable water used in association with restrooms and other similar facilities.
17. Stormwater runoff will be contained on the site and will be regulated under a general permit from CDPHE.
18. Fire hydrants and sprinkler systems in the buildings will be used as a part of the overall fire protection system. An emergency plan will be prepared as a part of the CDPHE licensing requirements. Trucking companies transporting materials to and from the facility are required by USDOT regulations to have an emergency response plan.
19. The applicant has indicated that a number of environmental control measures will be implemented. This includes a metal building that encloses the mill facility with concrete floors designed with curbs, spill collection sumps and containment areas. Leak detection and emergency shutoff systems will be installed in critical areas to minimize the volume of a release should a leak or equipment failure occur. Air emissions will be controlled through a variety of methods starting with the use of water sprays at the ore dumping platform, ore stockpiles and conveyor hopper. A dust collecting baghouse will be installed at the conveyor hopper and a dust scrubber will be installed to capture dust generated during mixing. Automated equipment and hermetically sealed rooms and emission control devices will be used to limit exposure of mill employees and the general public to "as low as reasonably achievable" levels of radiation and fugitive dust.
20. Tailing slurry which consists of sandy waste material and process water will be deposited in tailing cells designed and constructed to prevent seepage of solution into the surrounding environment. The design of the cells provides a double liner system with an intervening leak detection system. Systems will also be in place to pump reclaimed tailing water for reuse in the milling process.
21. Evaporation ponds will also be installed with a double layer liner system. The ponds will be surrounded with a chain-link fence and covered with netting to prevent animals from accessing the pond water.
22. As a part of the requirements of CDPHE, a closure and reclamation plan must be created prior to the issuance of a license to operate the facility. This includes the posting of a reclamation bond that will cover the cost of a third-party contractor to close and reclaim the site in the event that Energy Fuels is unable to perform the work.
23. The applicant is currently conducting baseline monitoring of the site which includes installation of monitoring wells to characterize groundwater, mapping and testing of physical soil conditions and assessment of seismic potential. Two onsite meteorological stations have been installed to measure wind speed, direction, temperature, evaporation levels and other climate related parameters. Five air monitoring stations have been installed including three on-site and two off-site. Vegetation and wildlife studies have been completed on a quarterly

basis and biota have been collected and analyzed for pre-milling background radiation levels.

24. All systems designed to protect the environment and human health prior and during operations of the facility will be under the jurisdiction of the CDPHE.
25. The Montrose County Zoning Resolution states that Special Uses are extraordinary in nature and a complete site plan and impact mitigation plan will be required to be reviewed and approved. A review criteria is to be used to judge the acceptability of the special use proposed. The criteria which may be used for review of a special use include, but are not limited to:
  - The use and its location as proposed are in conformance with the Master Plan of Montrose County and where it does not, variations are to be identified and approved as a part of the Special Use.
  - All application documents and technical reports present a clear picture of how uses are to be developed and arranged on the site.
  - The site plan conforms to the district design standards of the zoning regulations; where it does not, variations are to be identified and approved as part of the Special Use.
  - All on and off-site impacts have been satisfactorily mitigated either through agreement, public improvements, site plan requirements, buffering or other mitigation measures.
  - The special use promotes the best interest of the general public's health, safety and welfare as set by either federal, state or county regulation.
  - The special use proposed is not planned to be developed on a nonconforming parcel.
  - The applicant has willingly forwarded to the County all pertinent technical information.

**RECOMMENDATION:**

26. Staff recommends **approval** of this application based on the following **findings of fact**:
  - a) The proposed Special Use Permit is not in conflict with the land use designation of the Montrose County Master Plan.
  - b) Public Health and Safety will be mitigated through regulations set forth by Montrose County, the State of Colorado and the Federal Government.
  - c) The proposal meets the requirements of the County Zoning Resolution and the special use criteria.
  - d) The site of the facility is located near areas where ore is being mined and away from populated areas limiting the potential impact on the citizens.

**Approval is subject to the following Conditions:**

1. The permit shall be applicable only to the specific use and specific property for which it was issued.

2. The Special Use Permit (SUP) shall run with the land; **however, if the application/facility changes ownership, the new owner/applicant shall be required to file an amendment to the SUP to provide the County with all information necessary to identify the new owner/applicant. The County also reserves the right to add additional conditions that may be reasonably necessary due to the change of ownership.**
3. Prior to mill operation all applicable County, State and Federal permits shall be obtained, and maintained in good standing at all times for all mill operations through site closure.
4. Prior to mill operations an access permit shall be obtained from the Colorado Department of Transportation.
5. The development of the facility shall be in conformance with the site plan as shown in Figures 2, 5 and 6 which are included in the Special Use Permit Application submitted July 2008.
6. All exterior lighting shall be down directed with fixtures having a 90 degree cutoff.
7. If operation of the facility (processing of ore) has not commenced in **seven** years from the date of BOCC approval, the permit shall become null and void.
8. Prior to construction of the mill a report **shall** be submitted which provides information regarding the proposed water sources to be used for milling operations.
9. If construction/operation of the mill requires water from the Town of Naturita an agreement for 40 years **shall** be submitted, to coincide with the proposed life of the mill.
10. **Only raw (unprocessed) uranium ore and/or uranium/vanadium ore shall be processed at the Piñon Ridge Mill. No other feedstock may be processed at the mill or directly disposed of in the tailings facility as a processing waste stream. Only 11e(2) by-product material generated at the facility (as defined by the Colorado Revised Statutes) may be disposed of at the facility and no non- 11e(2) materials may be disposed of at the facility.**
11. **An adequate water supply amount, as set forth by the Applicant in the Special Use Permit Application, Pg. 4-8, §4.5.4, for all mill operations shall be obtained prior to beginning mill construction/operations, and maintained through closure of the mill. Applicant shall provide County with verification of all sources of the water, including copies of agreements with suppliers of the water, any agreements with holders of water rights to sell or permit use of the water by the Applicant, Applicants own private water supply, or any other source of water the Applicant will be using for mill operations. Water rights for all wells to be used at the mill shall be obtained prior to operation of the facility.**
12. **Approval of this permit does not limit the power of the Board of County Commissioners to take legal or administrative action to enforce the conditions of this permit. In the event that it is alleged that there has been a violation or violations of the permit conditions or applicable provision of the County's rules and regulations, the Board by resolution, may terminate this permit after notice and opportunity to be heard at a public hearing has been provided to permittee, and the**

Board has determined by a preponderance of the evidence following the hearing that a violation has occurred. Providing there is no immediate risk to the health, safety or welfare of the citizens of Montrose County, permittee shall be granted 30 days in which to remedy the violation(s), and shall provide County with a plan of correction within 10 days following the hearing. At the end of the 30 days from the hearing date, if permittee has not corrected the violation(s), County may revoke or suspend the SUP, at the Board of County Commissioners sole and absolute discretion.

13. The mill operator is responsible for implementing the well/spring monitoring and mitigation program including any subsequent amendments or changes, outlined in the June 29, 2009, Technical Memorandum from Golder Associates. (note: changes to Golder Report as follows: Page 4, Mitigation Measures, "Mill Operator" added after word hire, and 50% changed to 25% loss in productivity).
14. In the event a significant impact (as defined in the Technical Memorandum from Golder Associates, dated June 29, 2009) on a beneficial water use is established as resulting from Energy Fuels' operations, Energy Fuels will mitigate the impact through establishing an alternate water supply, providing financial compensation, or a combination of the two. Mitigation actions shall be determined by consideration of the then-current beneficial use that are affected, the projected term of the impact, the presence of alternative supplies of water for temporary or long term replacement, and the potential economic impact to the affected beneficial users. Mitigation actions as outlined in the Technical Memorandum from Golder Associates, dated June 29, 2009, shall be required to begin immediately upon discovery of the significant impact, depending on the beneficial use, and the impact on the user.
15. Upon request, the mill owner/operator shall provide truck haulage records to Montrose County for all deliveries to the mill. The records will include the date of delivery, type and quantity of materials, and where feedstock originated, or other data the County deems necessary.
16. All mill operations shall be in compliance with applicable federal, state and local laws and regulations and in compliance with all federal and state permit requirements and conditions.

#### **SUGGESTED MOTION:**

I move to approve the Special Use Permit for the Piñon Ridge Mill Facility Special Use [SU-08-0047], based on the findings of fact and subject to the conditions of approval listed in paragraph #26 of this report.

#### **ATTACHMENTS:**

Letter from Energy Fuels  
Technical Memorandum – Golder Associates  
Public Comment Letters

**Cc:** Applicant  
Owners  
Co. Attorney  
Co. Building Official  
Co. Engineer