

Edge Environmental, Inc.

May 14, 2010

Frank Filas
Environmental Manager
Energy Fuel Resources
44 Union Blvd., Suite 600
Lakewood, CO 80228

Re: Report for the Proposed Piñon Ridge Project – Potential Effects to Colorado Pikeminnow

Dear Frank:

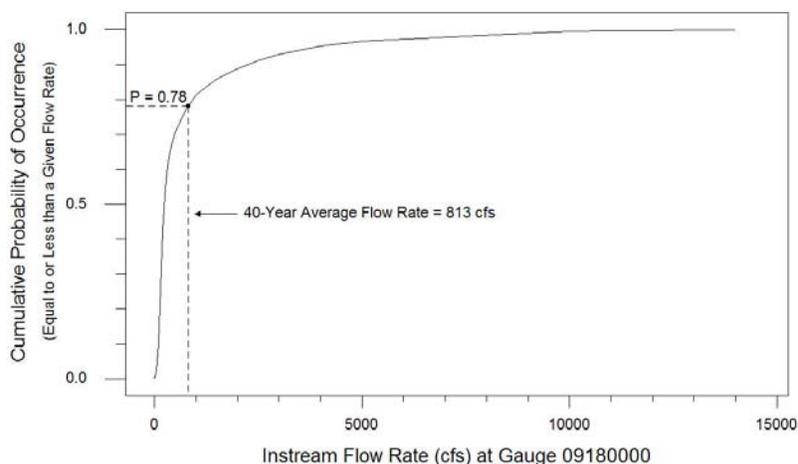
Edge Environmental, Inc. (Edge) has prepared this letter report to assist in discussions with the U.S. Fish and Wildlife Service regarding the Piñon Ridge Project's potential effects to the Colorado pikeminnow. The report follows.

Energy Fuels Resources Corporation (Energy Fuels) has proposed to construct and operate the Piñon Ridge Mill Facility (Mill Facility) to process uranium/vanadium ore mined from its existing nearby operations and from area mines owned and operated by other entities. The project would be located on approximately 880 acres in western Montrose County, Colorado within the Paradox Valley, approximately 12 miles west of Naturita and approximately 7 miles east of Bedrock, along State Highway (SH) 90. The proposed location of the Mill Facility is approximately 7 miles from the Dolores River, approximately 9 miles southwest of the confluence of the Dolores and San Miguel rivers, and approximately 70 miles from the confluence of the Dolores and Colorado rivers (see attached Figure 1).

The Colorado Department of Public Health and Environment (CDPHE) is the primary licensing authority for uranium mills in the State of Colorado pursuant to an agreement with the U.S. Nuclear Regulatory Commission (NRC) under Section 274 of the Atomic Energy Act of 1954, as amended. As required by state law, Energy Fuels submitted the Piñon Ridge Project Environmental Report to CDPHE in November 2009. The report, prepared by Edge Environmental, Inc., contains analyses of potential environmental effects of the project on numerous resources, including potential effects to four species of Colorado River Basin fish (the bonytail chub, Colorado pikeminnow, humpback chub, and razorback sucker) listed as endangered under the Endangered Species Act. Two of the species, Colorado pikeminnow and razorback sucker, have designated critical habitat in the Colorado River, upstream and downstream from the confluence with the Dolores River, which is more than 65 miles downstream from the confluence of the Dolores and the San Miguel River (see attached Figure 1). The Colorado pikeminnow was known to occur historically within the Dolores River as far upstream as the Paradox Valley (upstream from the confluence with the San Miguel River), but the only recent records for the species are from 1991 when four pikeminnow were captured within the lower 1.2 miles of the Dolores River (Valdez et al., 1992), approximately 68 miles from the project site. There have been no known observations of pikeminnow within the Dolores River since 1991.

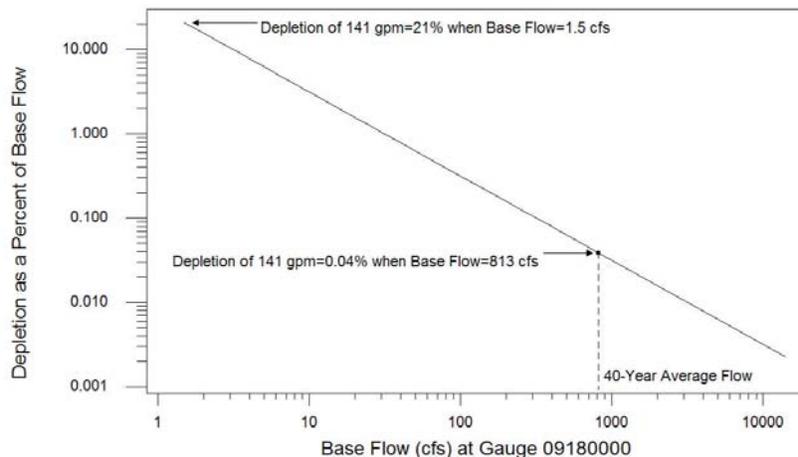
Energy Fuels would require an estimated 141 gallons per minute (gpm, equivalent to 0.314 cubic feet per second or cfs) to operate the proposed Mill Facility for processing 500 tons of ore per day. At 500 tons per day, the Mill Facility would have an operating life of 40 years. The water is expected to be pumped from wells on Energy Fuels' property and on adjacent property and would be withdrawn at the estimated rate of 141 gpm for the life of the project.

Mean daily discharge (cfs) at USGS Gauge 09180000 on the Dolores River near Cisco, Utah was evaluated for flows during the past 40 years, from March 1971 through March 2010. That gauge is closest to where Colorado pikeminnow were last observed in 1991 (see attached Figure 1). During that 40-year period (selected to coincide with the life of the project), the overall average flow was 813 cfs, with a maximum of 14,000 cfs and minimum of 1.5 cfs. Over the 40-year period there were 14,165 days for which the mean daily discharge was recorded; the minimum rate of 1.5 cfs was recorded only once, in July 2002, for an occurrence probability of $P = 0.00007$ during the past 40 years. Flows of 2 cfs or less were recorded on 14 occasions (cumulative $P = 0.00988$); flows of 10 cfs or less occurred 59 times (cumulative $P = 0.00417$); flows of 235 cfs or less occurred 7,078 times (cumulative $P = 0.5$) in the past 40 years. The average flow rate of 813 cfs or less occurred 11,080 times out of 14,165 measurements for a cumulative probability of occurrence of $P = 0.78$. Cumulative probabilities for flows less than or equal to any base flow rate measured in the Dolores River at Gauge 09180000 during the past 40 years are depicted in the graph, below, along with the 40-year average flow rate.



If the average observed flow rate of 813 cfs occurred during the next 40 years, groundwater withdrawn by the project at the rate of 141 gpm (0.314 cfs) by the proposed Mill Facility would be 0.038 percent of the average flow and would most likely be undetectable. During the very infrequent periods of extremely low flows, a withdrawal rate of 141 gpm could be a relatively meaningful proportion of the total instream flow measured at Gauge 09180000. If the base flow was 1.5 cfs, withdrawal of 141 gpm would be 20.94 percent of that rate. If the base flow was 2.0 cfs, the withdrawal would be 15.71 percent; if the base flow was 235 cfs, the withdrawal would be 0.13 percent of the base flow rate.

Percentages of the groundwater withdrawal rates relative to all other base flows in the Dolores River and average flow measured over the past 40 years are depicted in the graph below, with both axes logarithmically transformed.



Extremely low flows have very rarely occurred during the past 40 years. If similar extreme low flows were to occur during the operational life of the proposed Mill Facility, water withdrawn to process ore could amount to a substantial portion of the instream flow in the lower Dolores River during the period of such flows. Whether that potential reduction in flow would harm Colorado pikeminnow would depend on their presence and concurrent habitat utilization at the time. Valdez et al. (1992) judged the Dolores River to be suitable for all life stages of Colorado pikeminnow; deep pools were suitable as holding habitats for adults and juveniles and adjacent gravel/cobble riffles were suitable for spawning. Low flows in the Dolores River were observed to reduce fish habitat values in the river by exposing cobble bars and possibly impeding fish movements between habitats and river reaches (Valdez et al., 1992).

The project could contribute to similar effects. However, the extremely low probabilities associated with occurrence of extreme low flows during the life of the project, based on the past 40 years of stream flow data, and the simultaneous occurrence of Colorado pikeminnow, the likelihood of which is unknown, leads to a conclusion that project-related effects on the endangered species are discountable (i.e., extremely unlikely to occur) and insignificant (never reaching the point where take occurs) because extreme low flows in the Dolores River do not appear to persist for more than a few days.¹ This assessment does not take into consideration the potential for pikeminnow to relocate to deeper water, if available, in case of extreme low flow events.

Because there is no federal action agency with responsibility for the project, Energy Fuels is not required to contribute to the Recovery Program. However, in the 2009 Piñon Ridge Project Environmental Report, Energy Fuels proposed to make a one-time contribution of \$4,310.73 to a program(s) that is focused on the conservation and recovery of endangered Colorado River fish. The sum is based on the proposed project's estimated average annual depletion of 227 acre-feet at \$18.99 per acre-foot. Determination of the proposed contribution was modeled on the Service's approach for offsetting impacts due to water withdrawals in the Upper Colorado

¹ While the terms "discountable" and "insignificant" are generally applied to Section 7 consultations between the Service and a responsible federal agency as required under the Endangered Species Act, we believe the terms are applicable and appropriate for use here even though this report is not prepared for use in the context of Section 7 consultation, as there is no federal nexus for this project

Basin by projects subject to Section 7 consultations (for example, USFWS, 1999) that would deplete more than 100 acre-feet per year.

In summary, our analysis indicates that take either will not or is extremely unlikely to occur. Energy Fuels' intended mitigation contribution should further diminish the potential for take and provide for the species' recovery. If you have questions about the report, please contact me (307.742.0848) or Mary Bloomstran (303.988.8844).

Sincerely,
Edge Environmental, Inc.

A handwritten signature in black ink, appearing to read "Archie Reeve". The signature is stylized with a large, looped initial 'A' and a distinct 'R'.

Dr. Archie Reeve, Wildlife Biologist

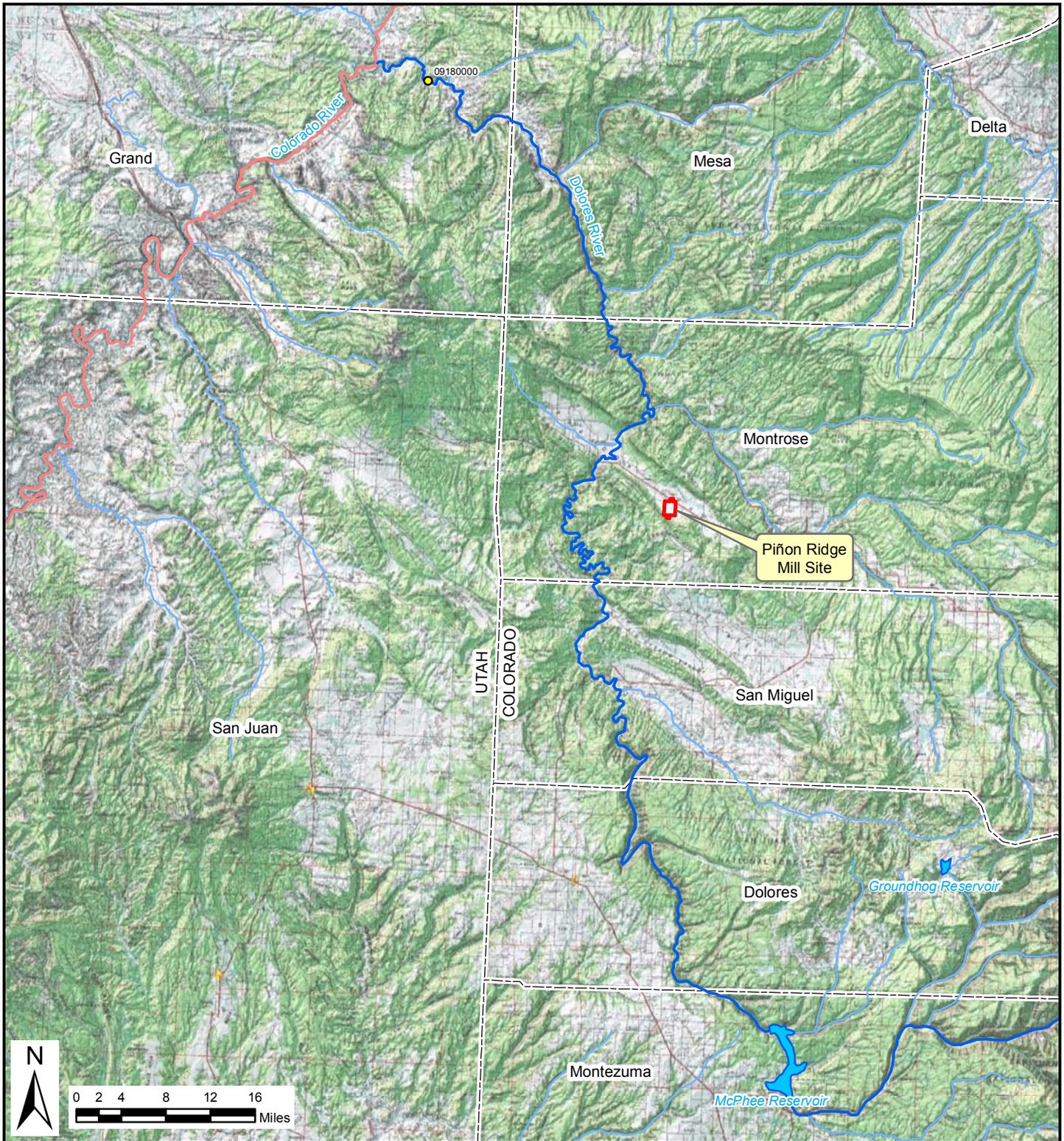
A handwritten signature in black ink, appearing to read "Mary Bloomstran". The signature is highly stylized and cursive.

Mary Bloomstran, President

Attachment – Figure 1

Literature Cited

- U.S. Fish and Wildlife Service. 1999. Final Programmatic Biological Opinion for Bureau of Reclamation's Operations and Depletions, Other Depletions, and Funding and Implementation of Recovery Program Actions in the Upper Colorado River Above the Confluence with the Gunnison. U.S. Fish and Wildlife Service, Mountain-Prairie Region 6, Denver, Colorado.
- Valdez, R.A., W.J. Masslich, and A. Wasowicz. 1992. Dolores River Native Fish Suitability Study. Final Report prepared for Utah Division of Wildlife Resources, Contract No. 90-2559. BIO/WEST Report Number TR-272-02.
- Weir, J.E., E.B. Maxfield, and E.A. Zimmerman. 1983. Regional Hydrology of the Dolores River Basin, Eastern Paradox Basin, Colorado and Utah. U.S. Geological Survey, Water-Resources Investigations Report 83-4217, Denver, Colorado.



- Stream Gauges
- Colorado River - Critical Habitat for Colorado Pikeminnow and Razorback Sucker
- Dolores River
- Property Boundary

Figure 1

**Piñon Ridge Mill Project Location
in Relation to
Critical Habitat for Endangered Fish**