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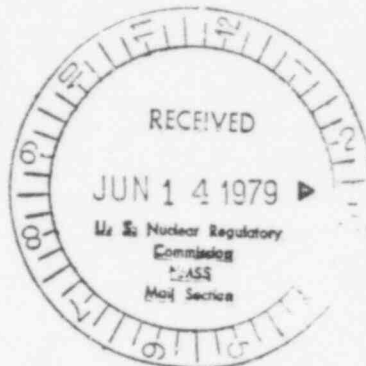
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General Office: 772 Horizon Drive, Grand Junction, CO 81501
Corporate Office: 212 West Michigan Avenue, Jackson, MI 49201
Registered Office: 141 East First South, Salt Lake City, UT 84111

(303) 245-5460
(517) 787-8415
(801) 534-0734

R. B. Sewell
Manager of Operations

June 12, 1979
60255A



Mr. J. E. Rothfleisch
U. S. Nuclear Regulatory Commission
Nuclear Material Safety and Safeguards
7915 Eastern Avenue
Silver Spring, Maryland 20555

Dear Mr. Rothfleisch:

In reference to Mr. D. M. Ryan's letter of May 22, 1979 concerning the presence of endangered species on the Shooting Canyon Uranium Project site, our responses to the eight assessment items are attached. Based on recent aerial and ground surveys, there are no endangered or threatened plant and animal species present in the vicinity of the project site. In addition, there is no critical habitat for these species in the area.

Sincerely,
for R.B. Sewell
by T.O. Bailey

R. B. Sewell
Manager of Operations

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ENDANGERED AND THREATENED SPECIES ASSESSMENT
FOR THE SHOOTERING CANYON URANIUM PROJECT

1. *Name of the project and applicant.*

Response:

Shootering Canyon Uranium Project
Plateau Resources Limited
772 Horizon Drive
Grand Junction, Colorado 81501

2. *Location (including map).*

Response: Refer to Section 2.1 and Figure 2.1 in the Draft Environmental Statement for the Shootering Canyon Uranium Project (NUREG 0504).

3. *Important dates, i.e., estimated beginning and completion of the project.*

Response:

- a. November 1969. Issuance of Source Material License for Hydrojet Leaching Facility.
- b. Early 1970's. Construction of leaching facility.
- c. Early 1970's. Commenced mine development and mining for LS 8, 9, and 10 (LS 8 and 9 renamed Tony M in 1977).
- d. February 1977. Plateau Resources Limited acquired Hydrojet properties.
- e. May 1977. Commenced baseline environmental studies.
- f. September 1977. Contracted for engineering and construction services.
- g. May 1978. Applied for a new Source Material License.
- h. September 1978. Filed a decommissioning plan for the Hydrojet Leaching Facility.
- i. February 1979. Draft Environmental Statement for the Shootering Canyon Uranium Project issued.
- j. August 1, 1979. Begin construction of the processing facility.
- k. December 1980. Complete construction and begin operation of the processing facility.
- l. 2000. Decommission the processing facility and reclaim areas disturbed by the project.

4. *Description of the proposed project and its purpose.*

Response: Refer to Section 1.1 of the Draft Environmental Statement for the Shootering Canyon Uranium Project (NUREG 05J4).

5. *Identification of the listed or proposed endangered or threatened species and any legally determined critical habitat, or any habitat considered to be essential to the species which may be present in the area influenced by construction.*

Response: A field survey of the project area, including the process facility site, tailings impoundment area, topsoil and overburden storage sites, and the access road corridor was conducted on June 6 and 7, 1979. The purpose of this survey was to determine whether the proposed endangered and threatened plant species listed in Table 1 were present in the project area. This table includes the six species provided in the U. S. Fish and Wildlife Service (FWS) letter to the NRC dated May 22, 1979 and three additional species proposed as endangered by the FWS (U. S. Department of the Interior, 1976). Another 21 species listed as threatened by Dr. Stanley L. Welsh of Brigham Young University (1978) were also considered in the survey.

None of the proposed endangered species in Table 1 or the expanded list of 21 threatened species were observed in the project area during the survey. In addition, none of these species were noted during recent field studies conducted by Ms. Elizabeth Neese of Brigham Young University (personal communication, 1979) in the Henry Mountains.

The field survey and earlier biological studies of the project area indicate that no essential habitat necessary to support the proposed endangered species occurs in the project area. A review of the habitat descriptions in Table 1 indicates that the species occur either at much higher elevations than the project site or in different vegetation types.

An aerial survey of the project area was conducted by raptor specialists from Woodward-Clyde Consultants, the U. S. Fish and Wildlife Service, and the Utah Division of Wildlife Resources on June 6, 1979 to determine the presence of the American peregrine falcon (Falco peregrinus anatum) and the bald eagle (Haliaeetus leucocephalus). The survey focused on the area within a 10-mile radius of the processing facility and tailings impoundment sites (Figure 1). This area was selected because 10 miles is the generally accepted foraging distance from nesting or perching sites for these two species (Snow, 1972, 1973; BLM, 1975; and Dr. Clayton White, Brigham Young University, personal communication, 1979). Additional observations were made beyond the 10-mile radius along cliffs bordering the Colorado River. These cliffs were considered to be the most favorable habitat for peregrine falcons and bald eagles in the project region.

Table 1. ENDANGERED PLANT SPECIES KNOWN FOR GARFIELD COUNTY, UTAH

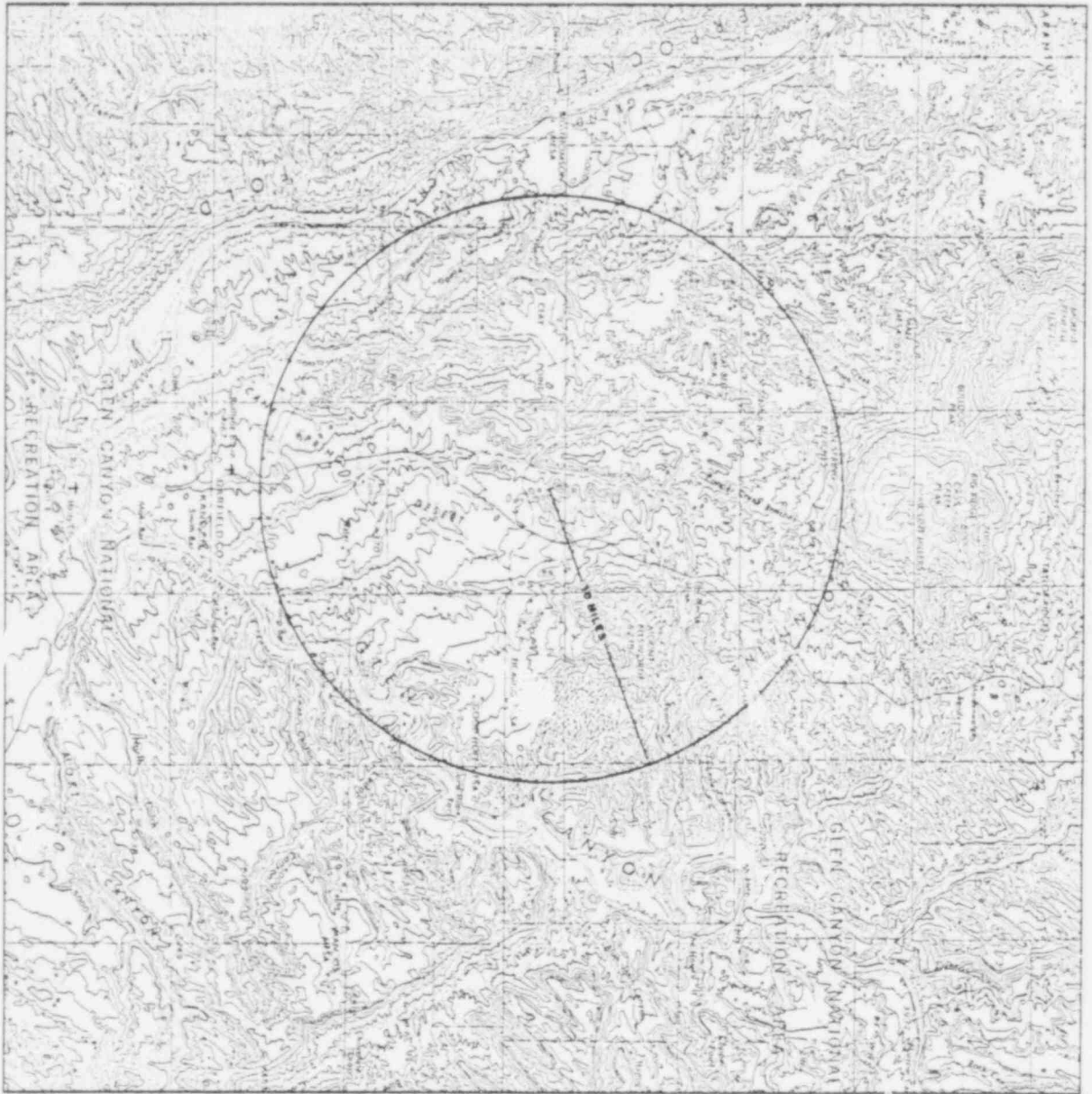
Species	Status*	Known Distribution and Essential Habitat
<i>Astragalus perianus</i>	E ¹ T ²	Mountains north of Bullion Creek, near Marysvale, Piute County (Type collection) known in Piute and Garfield Counties. Endemic. Tertiary, ingenous gravels, often on barrens, in alpine sites above 9000 feet in elevation.
<i>Castilleja aquariensis</i>	E ^{1,2}	Aquarius Plateau, western Garfield County. Sagebrush-grass meadows in rocky soil in the Engelmann spruce - subalpine fir zone.
<i>Castilleja revealii</i>	E ^{1,2}	Paunsaugunt Plateau, extreme southwestern Garfield County. Limestone, gravelly soil in a <i>lerosa</i> pine woodland at nearly 8000 feet in elevation.
<i>Cryptantha ochroleuca</i>	E ^{1,2}	Outcrop, 100 m south of Red Canyon Campground, along Utah Highway 12 in western Garfield County (Type collection) known in western Garfield County. Narrow endemic. Gypsiferous soil, western Garfield County.
<i>Eriogonum aretioides</i>	E ^{1,2}	Foot of the Escalante Range, Widtsoe, western Garfield County. Endemic, edaphically restricted. Bare, limestone gravel benches at the 7750 foot elevation.
<i>Eriogonum corymbosum</i> var. <i>revelianum</i>	E ¹ T ²	Head of the canyon at milepost 26 south of Antimony along Utah Highway 22, extreme western Garfield County. Endemic, rare and local. Gravelly, boulder-strewn, east-facing slope.
<i>Eriogonum cronquistii</i>	E ^{1,2}	West side of Bull Mountain, Henry Mountains, eastern Garfield County. Endemic, restricted. Loose, decomposed granite talus slopes at 8300 feet elevation.

Table 1. (continued)

Species	Status*	Known Distribution and Essential Habitat
<i>Heterotheca jonesii</i>	E ^{1,2}	Near Springdale, Washington County, also in Garfield County. Endemic, rare, local. Sagebrush belt at 4000 feet elevation.
<i>Ranunculus acriformis</i> var. <i>aestivalis</i>	E ¹ PoEx ²	Springs just east of U. S. Highway 89 and about 1.5 miles south of the intersection with Utah Highway 20 to Parowan, extreme western Garfield County. Endemic, presumed extinct. Meadow at springs.

* E = Endangered; T = Threatened; PoEx = Possibly Extinct.

1. Status as listed by USDI, 1976.
2. Status as listed by Welsh, 1978.



POOR ORIGINAL



Figure 1
Raptor Survey Area

PROJECT NO.	DATE	SCALE
100-100-100	10/10/10	1:10000

Woodward Clyde Consultants

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Habitat Preferences. Cliffs are the most commonly used nesting sites for the peregrine falcon and apparently represent the equivalent of escape cover. Peregrines generally nest on cliffs of igneous or sedimentary rock; however, they will also utilize the small caves typically found in limestone cliffs (Snow, 1973). This species normally selects nesting sites with an eastern exposure. Such sites receive the warmth of the morning sun but are protected during the afternoon.

Major prey species of the peregrine falcon include passerine birds, waterfowl, and shorebirds. Generally, falcon nesting sites are located adjacent to or relatively near prey populations.

Due to a lack of trees in the project region, the bald eagle is most likely to nest on cliffs. This species also prefers cliff sites with an eastern exposure.

In general, the bald eagle nests relatively close to large bodies of water where fish, the species' preferred prey, are plentiful. However, the bald eagle's food habits are extremely adaptable and in areas similar to the project region they may feed largely on jackrabbits (Snow, 1973).

Survey Results. No peregrine falcons or bald eagles were observed during the aerial survey. In addition, no critical habitat for either of the species was found in the area. The best available habitat observed during the survey is located approximately 10 miles south of the processing facility site along the banks of the Colorado River between California Bay and Ticaboo Creek. This habitat was not considered to be critical or essential to the peregrine falcon or the bald eagle since no evidence of the presence of either species was found there. It is the consensus of the raptor specialists that conducted the survey that project activities will not impact the peregrine falcon, bald eagle, or any critical habitat of both species.

6. *An assessment of the potential impacts of the construction or associated activities on the listed or proposed species or critical habitat.*

Response: Since no endangered or threatened plant or animal species or their critical habitats are present on the project site or in the area of potential project influence, there is no impact.

7. *Where impact is identified to listed or proposed endangered or threatened species or critical habitat, a discussion of the efforts that will be taken to eliminate any adverse effects.*

Response: Refer to the response to item 6.

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8. *Pertinent portions of an environmental impact statement, environmental assessment, professional publication and other relevant materials.*

Response: Pertinent references to the endangered or threatened plant and animal species of concern in this project are provided below.

Bureau of Land Management. 1975. Snake River Birds of Prey Research Project. Annual Report 1975.

Corr, Patrick O. 1969. Bald eagle nest ecology. Federal aid in Fish and Wildlife Restoration. Unpublished, 11 pp. Available at Conservation Library, Denver Public Library.

Edwards, Clyde C. 1969. Winter behavior and population dynamics of American Eagles in Utah. Ph.D. Thesis, Brigham Young University, Provo, Utah. 156 pp.

Higgins, Larry C. 1971. A Revision of Cryptantha Subgenus Oreocarya. BYU Science Bulletin. Biological Series-Vol. 13, No. 4.

Holmgren, Noel H. 1973. Five New Species of Castilleja (Scrophulariaceae) from the Intermountain Region. Bulletin of the Torrey Botanical Club. Volume 100, No. 2, pp. 83-93.

McDougall, Walter B. 1973. Seed Plants of Northern Arizona. The Museum of Northern Arizona, Flagstaff.

Neese, Elizabeth. 1979. Personal Communication. Doctoral Candidate, Brigham Young University. Conducting Floristic Research in the Henry Mountains, near the proposed site.

Olendorff, Richard R. 1968. An extensive bibliography on falconry, eagles, hawks, falcons, and other diurnal birds of prey.

Porter, R. D. and C. M. White. 1973. The peregrine falcon in Utah, emphasizing ecology and competition with the prairie falcon. Brigham Young University Science Bulletin 18(1):74 pp.

Smith, D. G. and J. R. Murphy. 1973. Breeding ecology of raptors in the eastern Great Basin of Utah. Brigham Young University Science Bulletin 18(3):76 pp.

Snow, C. 1972. Habitat Management Series for Endangered Species. Report No. 1. American Peregrine Falcon.

Snow, C. 1973. Habitat Management Series for Unique or Endangered Species. Report No. 5. Southern Bald Eagle and Northern Bald Eagle.

Sprunt, Alexander, IV. 1969. Population trends of the bald eagle in North America. In Peregrine Falcon Populations: Their Biology and Decline. Joseph Hickey, Editor. The University of Wisconsin Press, Madison. 347-351.

- Tidestrom, Ivar. 1925. Flora of Utah and Nevada. Contributions from the U. S. National Herbarium. Volume 25.
- Welsh, Stanley L. and Glen Moore. 1973. Utah Plants, Tracheophyta. Brigham Young University Press, Provo.
- Welsh, Stanley L., N. D. Atwood and J. L. Reveal. 1975. Endangered, Threatened, Extinct, Endemic, and Rare or Restricted Utah Vascular Plants. The Great Basin Naturalist. Brigham Young University, Provo. Volume 35, No. 4.
- Welsh, Stanley L. and James L. Reveal. 1977. Utah Flora: Brassicaceae (Cruciferae). The Great Basin Naturalist. Brigham Young University, Provo. Volume 37, No. 3.
- Welsh, Stanley L. 1978. Utah Flora: Fabaceae (Leguminosae). The Great Basin Naturalist. Brigham Young University, Provo. Volume 38, No. 3.
- Welsh, Stanley L. 1978. Endangered and Threatened Plants of Utah: A Reevaluation. The Great Basin Naturalist. Brigham Young University, Provo. Volume 38, No. 1.