

**YUCCA MOUNTAIN PROJECT
BIOLOGICAL RESOURCES PROGRAM
MONTHLY PROGRESS REPORT
OCTOBER 1991**

Summary of Work Accomplished During Report Period

EG&G Energy Measurements (EG&G/EM) conducted work for Ecology task (WBS 1.2.5.4.7) for the Project Office. Activities included conducting preactivity surveys; continuing site characterization effects studies, support studies for the radiological monitoring program, desert tortoise studies, and habitat reclamation studies; development of work instructions and study designs for new studies; and responding to requests by Project Office.

Monitoring and Mitigation

- A preactivity survey was conducted for VH-1 well (91-030d).
- Preactivity survey reports were prepared and submitted to the Project Office for Well JF-3 (91-020d), the Prototype Borehole (91-027d), and VH-1 well. Reclamation stipulations also were written and submitted for Well JF-3.
- Postactivity surveys were conducted for Trench A'2 and Neutron Borehole 52. The postactivity survey report for Trench A'2 (#1989-3558) was sent to Project Office.
- EG&G/EM met with SAIC, DOE, RSN, TRW, and BR to discuss locations for proposed boreholes and pits.

Habitat Reclamation

- Eight study plots were established for the plant succession studies. Data were collected on seven study plots.
- A draft study design for the reclamation trial plots was prepared.
- EG&G/EM received approval from Project Office to use five areas for reclamation trials.

Site Characterization Effects Studies

- The drying and weighing of vegetation production samples were completed.
- Counting and sorting of invertebrate samples to the taxonomic level of Order was completed.
- Weather and soil moisture and temperature data were collected on 48 ecological study plots (ESPs).
- Traffic volume data were collected at eight locations and counters moved to new sites each week.
- Dust collection equipment (clamps, petri dishes, and filter paper) were installed on 47 ESPs for the disturbance monitoring studies.
- Continued entering small mammal trapping data into the computer database.
- Data entry of weather data collected at ESPs was completed. Proofing and verification of the data were continued.
- Maintenance was started on 35 ESPs. UTM coordinates were recorded for two corners of each plot using the Magellan Global Positioning System.
- Locations for soil profile descriptions were marked on 24 ESPs.

Radiological Monitoring Program

- Small mammals were trapped and collected from the eight radiological monitoring locations. This concludes the trapping and collecting efforts for calendar year 1991.
- Small mammal data collected in October were entered into the computer database.
- Annual maintenance of small mammal trap grids was completed on six plots. Traps and trap covers were re-marked, traps were cleaned and replaced if broken, and batting material replaced if needed.

Desert Tortoise Program

- One tortoise was found lying on its carapace and slightly injured. A transmitter was attached to the tortoise. The tortoise was monitored and appeared healthy. The U.S. Fish and Wildlife Service was notified.
- Surveys were conducted twice to monitor ravens abundance.
- All radiomarked tortoises were located at least once each week. Three tortoises (206, 292, and 482) have not been found for more than two months. Tortoise 207 was found and radiomarked. This tortoise was first marked in 1989 and lost its transmitter in July 1991. Approximately 50% of the radiomarked tortoises have not moved from their burrows since October 21, indicating the possible start of hibernation.
- Twelve new tortoises were found. Ten were radiomarked and two marked only with numbers. One-hundred-twenty-seven tortoises have been marked for the Yucca Mountain Project. Ninety-one of these have been radiomarked.
- Thirty radiomarked tortoises were measured, weighed, and photographed. All radiomarked tortoises now have been measured, weighed, and photographed this fall.
- Searches were conducted for hatchling tortoises in areas near possible nests. None was found. Two hatchlings were found (October 11) while locating radiomarked tortoises. The two tortoises were in the process of hatching when found. One hatchling was found dead four days later. The second one was found alive on October 16, and marked with a number and a two-month, hatchling transmitter.
- The transmitter of a radiomarked tortoise was found about 500 meters from the tortoise's usual home range. The transmitter had two tooth marks on it, and the antenna was broken. The tortoise was not found.

Support Items

- **EG&G/EM provided the following items to the Project Office;**
 - 1) **Monthly activity report for September.**
 - 2) **Weekly reports of activities.**
 - 3) **A letter for Project Office concerning the impact of off-road driving on environmental and archeological programs.**
 - 4) **Reviews of the State of Nevada's "Environmental Studies Plan" and "Impact Assistance Report: Inventory of Past DOE Land Disturbance, Yucca Mountain, Nevada, and Estimated General Reclamation Costs."**

- **EG&G/EM participated in or conducted the following activities for the Project Office in October:**
 - 1) **Gave a presentation to the Technical Review Board on the effects of thermal loading on biological resources.**
 - 2) **Participated in the water appropriation hearings.**
 - 3) **Provided support for two Public Outreach tours of the Yucca Mountain Project.**
 - 4) **Met with W. Wilson of the Field Operations Center (FOC) to discuss landscaping at the FOC building and the videotaping of ESD activities.**

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-2-

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