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John Hopkins

From: Steven Reneau [sreneau@lanl.gov]
Sent: Thursday, May 22, 2003 8:18 AM
To: johnhopkins@lanl.gov
Subject: Clif Retreat at TA-54

John:

In 1991 I conducted a reconnaissance investigation of erosional processes along cliffs at Mesita del Buey at TA-54. This investigation included both field traverses of cliff edges and examination of aerial photographs, and revealed that cliff retreat on this mesa is dominated by the dislodgement of fracture-bounded blocks of tuff, producing discrete rockfalls. No evidence was found for larger landslides as have been documented along some canyon walls at TA-21 and TA-67 (Reneau 1995a, 1995b). The observations at TA-54 are consistent with those at TA-21 and TA-67, and indicate that cliffs along shallow canyons such as those found adjacent to Mesita del Buey retreat by rockfall events of relatively small size, whereas larger landslides can be produced along the margins of deeper canyons as occur at TA-21 and TA-67. At TA-21 and TA-67 I concluded that a 50-foot setback along cliffs that do not experience large landslides should be adequate to ensure the integrity of disposal pits for periods of at least 10,000 years, and because of their similar geologic setting to Mesita del Buey, these conclusions can also be applied to TA-54.

References Cited

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