

**FINAL COVER SYSTEM PERFORMANCE AT SEMI-ARID LANDFILLS
– OVER 10 YEARS LATER**

TOM PARKER, P.E., B.C.E.E.

**Camp Dresser & McKee, Inc.
6000 Uptown Blvd. NE, Suite 200
Albuquerque, New Mexico 87110**

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Tom Parker, PE, BCEE, CDM

The closure of municipal landfills in semi-arid regions presents different challenges for landfill owners, designers, and operators. For instance, a majority of municipal solid waste landfill caps constructed in the past 20 years have consisted of a “mono” type cover consisting of an onsite 24-inch to 36-inch thick layer of silty/sandy soil, a 6-inch thick “vegetative” layer, and an “armoring” layer on steeper sideslopes. Semi-arid landfill covers must be designed to withstand isolated- severe rainstorms (monsoon type events) that occasionally occur during the summer months. This paper and presentation will focus on performing an investigation of two municipal landfills closed in the past 20 years in New Mexico:

1. City of Albuquerque – Broadway Landfill – Closed in 1990
2. City of Santa Fe Landfill – Closed in 1998

Landfill closure information will be summarized for each landfill including: landfill size, year closed, final cap design details, landfill slopes and sideslopes, final cap borrow source, vegetative layer borrow source, seed mix, seed mix application method, armoring type, drainage channel details, annual rainfall amounts, number of severe rainfall events, and a discussion on routine cap maintenance activities performed since closure. A field inspection will be made at each landfill and the following observations will be noted:

1. Overall Cap Performance
2. Amount and Type of Vegetation
3. Performance of Armoring Material
4. Condition of Drainage Channels
5. Sideslope Conditions
6. Differential Settlement Issues

Closure cap information will be summarized and presented at the symposium.

BIOGRAPHY

Mr. Parker has over twenty-five years experience on a variety of solid waste planning, engineering, and construction projects. He has provided project management, planning, design, and technical review services for 100's of solid waste projects nationwide. He graduated from Clarkson College of Technology in Potsdam, NY in 1983 with a BS in Civil/Environmental Engineering. He is a registered Professional Engineer in New Mexico and three other states and is a board certified environmental engineer (BCEE) by the American Academy of Environmental Engineers. Since 1989, he has been providing solid waste consulting services to clients in the arid southwest. Solid waste projects include: landfill design and closure disaster debris management, solid waste management plans, landfill design and closure, transfer station and recycling facility permitting and design, recycling and waste minimization programs, and landfill gas projects. He has been an active SWANA member since 1990, served as president of the local chapter, International Board Representative, and served as the International President in 2007. He has planned, participated, and moderated at numerous SWANA local, regional, and national events. He is married with two kids and resides in Albuquerque, New Mexico.