"Analysis of PM10 Exceedances, January 1995-March 1997, Doña Ana County, New Mexico"

SUMMARY: NMED Air Quality Bureau staff have analyzed weather conditions and other circumstances associated with recent exceedances of the 24-hour PM10 standard. Considering all sites from January 1995 through June 1998, a total of 171 exceedances were measured. The number of days when exceedances occurred was 70, which is less than the total number of exceedances because many days had exceedances at more than one site. A few of the exceedances were found to have been caused by an industrial accident (2 exceedances) and by construction activities adjacent to the monitor (1 exceedance). The industrial accident was a start-up problem with an acid plant at the ASARCO smelter in Texas. A plume of smoke from the smelter caused exceedances at the Sunland Park City Yard site. The exceedance due to construction activities occurred at Chaparral when the school yard next to the monitor was under construction. The NMED Air Quality Bureau has requested that EPA exclude these exceedances from determination of attainment status, in accordance with EPA policy on exceedances caused by unusual, non-recurring events. The remaining exceedances (168 out of 171) were found to have been caused by windblown dust raised by high winds. Evidence for this conclusion included weather records of high winds, time-lapse video photography, and news reports of major dust storms on the exceedance days. During dust storms, high winds cause dust to become airborne from areas with exposed dry soil, including the surrounding desert, dirt roads, and areas disturbed by construction or other earth-moving activities. Dust storms were especially frequent and severe in 1996 in part because of the extreme drought in this area from Fall 1995 through Spring 1996. The NMED Air Quality Bureau requested that these exceedances caused by high winds also be excluded by EPA from determination of attainment status, in accordance with EPA's Natural Events Policy.