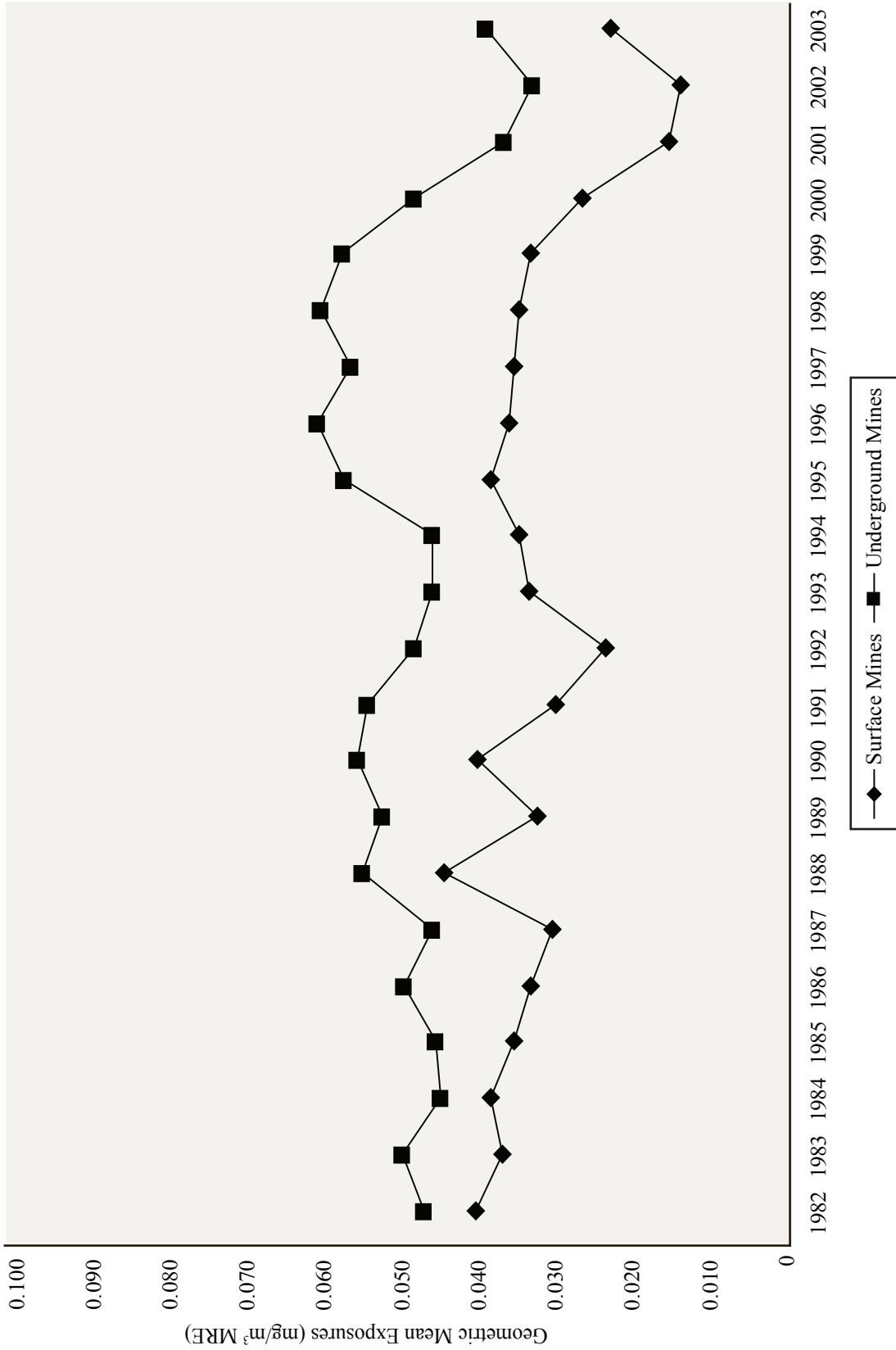


**Respirable quartz: Geometric mean exposures in coal mining, MSHA inspector and mine operator samples, 1982–2003**



PEL - permissible exposure limit    REL - recommended exposure limit    mg/m<sup>3</sup> - milligrams per cubic meter    MRE - Mining Research Establishment  
 MSHA - Mine Safety and Health Administration  
 NOTE: The MSHA PEL is 2 mg/m<sup>3</sup> MRE for respirable dust containing less than or equal to 5 percent quartz. The PEL is adjusted using the formula [(10 mg/m<sup>3</sup> MRE) / (% quartz)] for respirable dust containing greater than 5 percent quartz. See appendices for source description, methods, and agents.  
 SOURCE: MSHA coal mine inspector and mine operator quartz data.