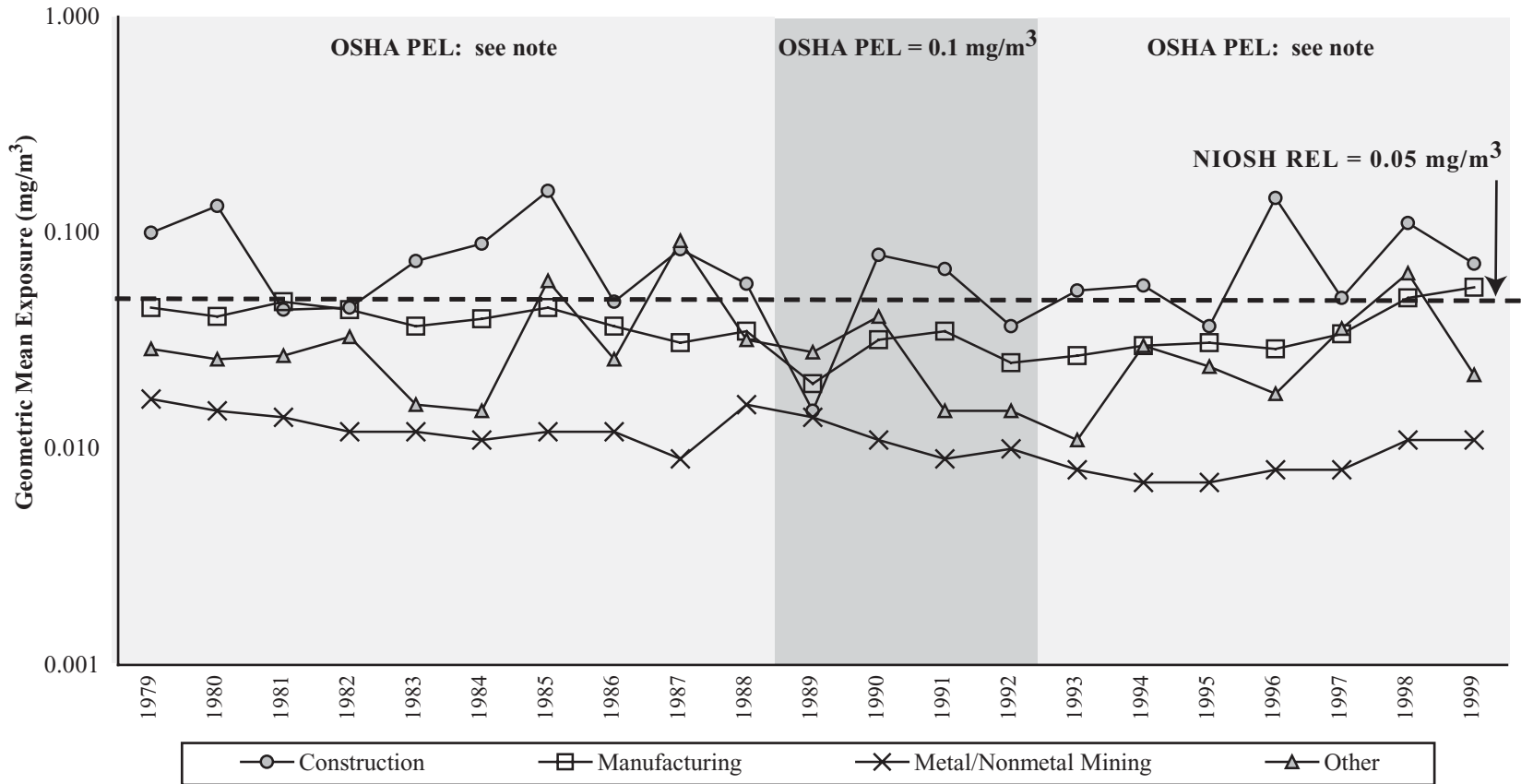


**Figure 3-6b. Respirable quartz: Geometric mean exposures by major industry division, MSHA and OSHA samples, 1979-1999**



PEL - permissible exposure limit      REL - recommended exposure limit      mg/m³ - milligrams per cubic meter  
 NOTE: Before March 1, 1989 and after March 22, 1993, the OSHA PEL is [(10 mg/m³) / (% quartz + 2)], for respirable dust containing at least 1 percent quartz. From March 1, 1989 to March 22, 1993, the OSHA PEL was 0.1 mg/m³ for respirable quartz. For metal/nonmetal mining, the MSHA PEL is [(10 mg/m³) / (% quartz+2)] for respirable dust containing at least 1 percent quartz. See appendices for source description, methods, and agents.  
 SOURCE: Mine Safety and Health Administration (MSHA) metal/nonmetal data. Occupational Safety and Health Administration (OSHA) Integrated Management Information System.