

12. Where possible, provide maintenance access to the filter system to minimize worker exposure to excess lead dust when changing the filters. Consider using bag-in/bag-out (or similar) technology.
13. If air from exhaust ventilation is re-circulated into the range, ensure that (A) the system has a high efficiency filter followed by a reliable back-up (minimally a HEPA) filter, mounted in series; and (B) controls monitor the concentration of lead in the return air; and (C) if the re-circulation system fails, airflow bypasses the re-circulation system and automatically exhausts outdoors. *All* of the three system components must be installed, operated, and maintained. [NOTE: Pressure drop monitoring across the HEPA filter serves as an effective monitoring approach.
14. Recent development of alternative non-lead bullets may permit lower flow rates or minimal industrial ventilation. Conduct a risk analysis to determine if materials (frequently other metals) in the alternate bullets require industrial ventilation. At a minimum, comply with indoor air quality requirements.



TITLE

HANDGUN AND
SMALL BORE RIFLE
RANGE DESIGN

FIGURE

VS-99-04b

DATE

3-03