#### §3285.204 Ground moisture control.

(a) Vapor retarder. If the space under the home is to be enclosed with skirting or other materials, a vapor retarder must be installed to cover the ground under the home, unless the home is installed in an arid region with dry soil conditions.

(b) Vapor retarder material. A minimum of six mil polyethylene sheeting or its equivalent must be used.

(c) *Proper installation*. (1) The entire area under the home must be covered with the vapor retarder, as noted in §3285.204(a), except for areas under open porches, decks, and recessed entries. Joints in the vapor retarder must be overlapped at least 12 inches.

(2) The vapor retarder may be placed directly beneath footings, or otherwise installed around or over footings placed at grade, and around anchors or other obstructions.

(3) Any voids or tears in the vapor retarder must be repaired. At least one repair method must be provided in the manufacturer's installation instructions.

# Subpart D—Foundations

### §3285.301 General.

(a) Foundations for manufactured home installations must be designed and constructed in accordance with this subpart and must be based on site conditions, home design features, and the loads the home was designed to withstand, as shown on the home's data plate.

(b) Foundation systems that are not pier and footing type configurations may be used when verified by engineering data and designed in accordance with §3285.301(d), consistent with the design loads of the MHCSS. Pier and footing specifications that are different than those provided in this subpart, such as block size, metal piers, section width, loads, and spacing, may be used when verified by engineering data that comply with §§3285.301(c) and (d) and are capable of resisting all design loads of the MHCSS.

(c) All foundation details, plans, and test data must be designed and certified by a registered professional engineer or registered architect, and must 24 CFR Ch. XX (4–1–11 Edition)

not take the home out of compliance with the MHCSS. (See 3285.2)

(d) Alternative foundation systems or designs are permitted in accordance with either of the following:

(1) Systems or designs must be manufactured and installed in accordance with their listings by a nationally recognized testing agency, based on a nationally recognized testing protocol; or

(2) System designs must be prepared by a professional engineer or a registered architect or tested and certified by a professional engineer or registered architect in accordance with acceptable engineering practice and must be manufactured and installed so as not to take the home out of compliance with the Manufactured Home Construction and Safety Standards (part 3280 of this chapter).

## §3285.302 Flood hazard areas.

In flood hazard areas, foundations, anchorings, and support systems must be capable of resisting loads associated with design flood and wind events or combined wind and flood events, and homes must be installed on foundation supports that are designed and anchored to prevent floatation, collapse, or lateral movement of the structure. Manufacturer's installation instructions must indicate whether:

(a) The foundation specifications have been designed for flood-resistant considerations, and, if so, the conditions of applicability for velocities, depths, or wave action; or

(b) The foundation specifications are not designed to address flood loads.

## §3285.303 Piers.

(a) *General.* The piers used must be capable of transmitting the vertical live and dead loads to the footings or foundation.

(b) Acceptable piers—materials specification. (1) Piers are permitted to be concrete blocks; pressure-treated wood with a water borne preservative, in accordance with AWPA Standard U1–04 (incorporated by reference, see §3285.4) for Use Category 4B ground contact applications; or adjustable metal or concrete piers.

(2) Manufactured piers must be listed or labeled for the required vertical load