

#### **4.22.3.2 Intermittent Filter Cells**

Depending on the volume of effluent and type of structure using an intermittent sand filter, the intermittent filter may need to be split into cells that contain dosing zones. A filter cell is the total filter area that can be served by a single dosing pump or set of pumps. Cell sizing is limited to 600 GPD. The minimum filter design requirements for cells and pumps include the following:

1. Filter cells are hydraulically isolated from one another and shall be constructed according to the minimum requirements in section 4.22.3.
2. Each cell shall be equivalent in surface area and volume.
3. Each cell shall receive equal volumes of wastewater per dose.

#### **4.22.3.3 Intermittent Filter Dosing**

1. Timed dosing is required, and the filter dosing cycle should meet the following minimum recommendations:
  - a. Pumps are set to dose each cell once per hour.
  - b. Dose volume delivered to the filter surface for each cycle should be 5% of the daily design flow.
  - c. A pump on override float should be set at a point that equates to 70% of the dosing chamber's volume.
  - d. A high-level audio and visual alarm float should be set at 90% of the dosing chamber's volume.
  - e. A low-level off float should be placed to ensure that the pump remains fully submerged at all times.
2. The pump controls should meet the following:
  - a. Be capable of monitoring low- and high-level events so that timer settings can be adjusted accordingly.
  - b. Have event counters and run-time meters to be able to monitor daily flows.

Figure 4-33 provides a cross-sectional view of an intermittent sand filter cell.