

HOW DO I CALCULATE THE VOLUME OF MY CONTAINMENT DIKE(S)?

SITUATION 1:

If your drycleaning machine is the only thing setting within your containment dike and it is setting on the floor of the dike, you must gather the following information and put the numbers in the steps listed below:

- 1) Measure the length of the dike wall _____ (in inches) = "a" in the formula
- 2) Measure the width of the dike wall _____ (in inches) = "b" in the formula
- 3) Measure the height of the dike wall _____ (in inches) = "c" in the formula
- 4) Number of gallons the largest storage tank in your drycleaning machine holds _____ (in gallons) = "d" in the formula
- 5) Measure the length of the machine _____ (in inches) = "e" in the formula
- 6) Measure the width of the machine _____ (in inches) = "f" in the formula

Step 1: Take the answer for "d" and put it in the blank below and multiply it by the number indicated to obtain the minimum amount that your dike is required to hold in gallons:

$$\underline{\quad (d) \quad} \times 1.1 = \underline{\quad\quad\quad} (g)$$

Step 2: Take the answer for "a" and "b" and multiply them together:

$$\underline{\quad (a) \quad} \times \underline{\quad (b) \quad} = \underline{\quad\quad\quad} (h)$$

Take the answer for "e" and "f" and multiply them together:

$$\underline{\quad (e) \quad} \times \underline{\quad (f) \quad} = \underline{\quad\quad\quad} (i)$$

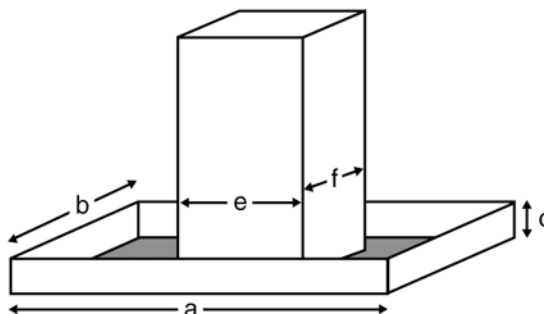
Then, we subtract the area of the machine from the area of the dike. This is multiplied by the height of the dike to obtain the available volume to hold drycleaning solvent if released from the machine and convert to gallons:

$$\underline{\quad (h) \quad} - \underline{\quad (i) \quad} = \underline{\quad\quad\quad} (k), \text{ then take } \underline{\quad (k) \quad} \times \underline{\quad (c) \quad} = \underline{\quad\quad\quad} (m), \text{ then take } \underline{\quad (m) \quad} \times 0.00432 = \underline{\quad\quad\quad} (n)$$

Step 3: Compare the answer in Step 1=(g) to the answer in Step 2=(n) to determine if the dike will hold 110% of the solvent in the largest storage tank in your drycleaning machine.

Answer (n) must be \geq (greater than or equal to) answer (g). If it is, then your containment area is large enough.

$$\underline{\quad (n) \quad} \geq \underline{\quad (g) \quad}$$



(over)

SITUATION 2:

If your drycleaning machine is the only thing setting within your containment dike and it is NOT setting on the floor of your dike but above the height of the dike walls, you must gather the following information and put the numbers in the steps listed below:

- 1) Measure the length of the dike wall _____ (in inches) = "a" in the formula
- 2) Measure the width of the dike wall _____ (in inches) = "b" in the formula
- 3) Measure the height of the dike wall _____ (in inches) = "c" in the formula
- 4) Number of gallons the largest storage tank in your drycleaning machine holds _____ (in gallons) = "d" in the formula

Step 1: Take the answer for "d" and put it in the blank below and multiply it by the number indicated to obtain the minimum amount of volume that your dike is required to hold in gallons:

$$\underline{\quad (d) \quad} \times 1.1 = \underline{\quad (e) \quad}$$

Step 2: Take the answer for "a", "b" and "c" and multiply them all together:

$$\underline{\quad (a) \quad} \times \underline{\quad (b) \quad} \times \underline{\quad (c) \quad} = \underline{\quad (f) \quad}$$

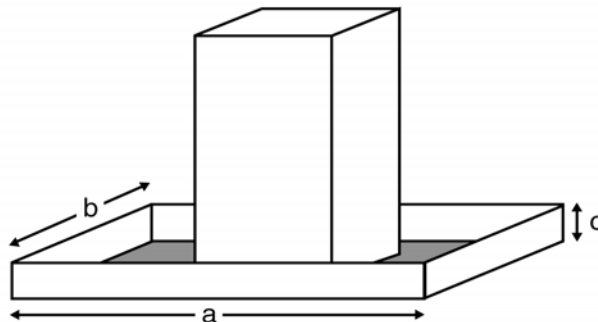
Then, multiply your answer (f) by a conversion factor to gallons:

$$\underline{\quad (f) \quad} \times 0.00432 = \underline{\quad (g) \quad}$$

Step 3: Compare the answer in Step 1=(e) to the answer in Step 2=(g) to determine if the dike will hold 110% of the solvent in the largest storage tank in your drycleaning machine.

Answer (g) must be \geq (greater than or equal to) answer (e). If it is, then your containment area is large enough.

$$\underline{\quad (g) \quad} \geq \underline{\quad (e) \quad}$$



If you have more than one machine in the same diked area, additional calculations will be required. You may need to contact our office for additional clarification or in some cases a professional engineer may need to help you determine this.