Room for the System

6

ROOM FOR THE SYSTEM

Prepare the space for the purification system, according to the plan that you agreed upon when your partner visited with you for the signing of the covenant. In some cases, this may mean constructing an entirely new building; in other cases, an existing structure can be modified to install the system.

It is CRUCIAL that the building conform to the regulations of your local health department, remember the Health Department established measures to reduce the potential health risk.

The goal of the health department is to protect the health of the people that will use the clean water, this by *monitoring* the following:

1. Good conditions of the room
2. Cleaning of the room
3. Cleaning during the operation
4. Hygiene of the operator
5. Operator safety during operation of the system
6. The good quality of the final product (clean water)
7. The operation of the system don't harm the environment

If you do not have a copy local health department regulations, your Initiating Partner or your In Country Coordinator can supply it for you.

Ahead you will find requirements to build the room, according the regulations of the health department and the characteristics that the clean water system needs to work in an easy, clean, organized way.

Please take note of them as far as your means permit and have everything ready for the installation day. The most important is to use your creativity and imagination to accomplish the requirements.
Below you are going to find different pictures to get ideas to prepare your room.

1. Requirements for the room

The room should be in good conditions, if you have an existing structure that can be modified to install the system; you need show to your Initiating Partner IP or your In Country Coordinator ICC. They can advise you on the best way how you can prepare the room for the installation of the system.

If you will construct an entirely new building the suggested measures are 4 meters x 4 meters (13ft 2in x 13ft 2in); however, you can talk with your IP or your ICC if you have other ideas.

Remember the construction of the room should be:

a) Solid construction, appropriate and in good condition, must prevent for entering or nesting insects, birds, rodents or other pests, and the entry of other environmental pollutants like smoke, dust, and others.
b) Good lighting and ventilation
c) Floor easy to clean and no slip
d) Walls with smooth plaster and painted
e) Adequate ventilation and easy cleaning
f) Doors in good condition and easy cleaning
g) Roof without openings well sealed to keep out trash, dust or any mice or insects.

There are 5 important activities that you need to consider:

1.1 Bathroom
1.2 Area to wash bottles
1.3 Production area
1.4 Area to disinfection - rinsing and filling - sealing bottles
1.5 Delivery Area
1.6 Storage Area

1.1 BATHROOM

- The laboratory should have a bathroom in good working condition
- The bathroom should NOT be inside of the production area but can be next to the production area.
- The door of the bathroom should NOT open direct to the production area.
- Should use antibacterial liquid soap
- Barr soap is NOT accepted
- Disposable paper towels must be available
- Cloth towels are NOT accepted
- In the bathroom and production area there should be a sign that says "Wash your hands" and a graphic description of the procedure

To wash bottles

Bathroom

To clean boots.

1.2 AREA TO WASH BOTTLES

This area should be outside the purified water laboratory here is where you will wash on the outside of the bottles (garrafones) with raw water, in order to remove any external dirt that the bottles bring.
Note: it is necessary to do the disinfection of the bottle before filling.

1.3 PRODUCTION AREA

- This is where the system is installed
- In the production area there should be a pedal or touch washbasin, different from the one used to wash bottles (garrafones) and the bathroom

1.4 AREA TO DISINFECTION - RINSING AND FILLING - SEALING BOTTLES

After washing the bottles on the outside they pass to the disinfection and filling in.
First you will wash and disinfect the bottles using clean water and the garden sprayer; then you will rinse with clean water
You can also use the brush to wash the bottles inside
Purified water is used that comes from the system to rinse the bottles
The bottles will be filled in with clean water, then you cover with the cap and finally you will seal using a hair dryer

Note:
You will need an outlet to plug the hair dryer.

1.5 DELIVERY AREA

This area is where you will deliver the bottles (garrafones) to your customers, in the days and hours that you have settled.

1.6 STORAGE AREA

This area is where you are going to storage the empty and filled bottles (garrafones), as well as caps, seals and other materials that you will use for the clean water system

This area also needs to be clean and should not present a risk of contamination for the filled bottles with clean water.

Note:
Remember don't storage a clean water bottler for more than one week.

A. Walls

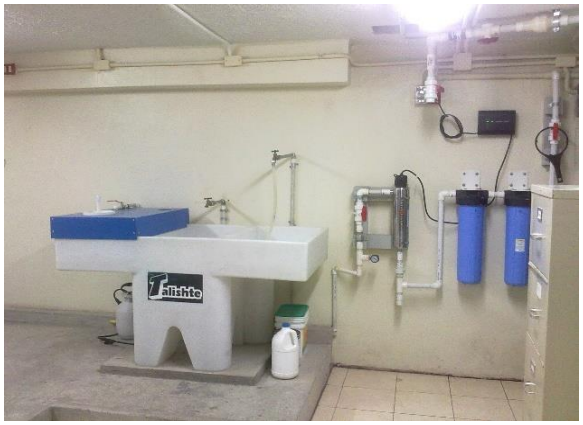
The walls inside of the room should be:

- Tiles or smooth plaster on walls is mandatory No cracks
- Non-absorbent material.
- Tile of 1.5 or 2 meters high is preferential
- With smooth plaster and no absorbent material
- Painted with light color
- Easy to clean and wash
- It must NOT be made of wood

Smoot plaster

B. Roof

- The roof without openings well sealed to keep out trash, dust, any mice or insects.
- Easy to clean
- In good condition, smooth surface
- Should avoid accumulation of garbage
- It must NOT be made of wood



C. Drains

Drains must be at least 3 drains for:

- System
- Sink
- Floor

All drains must have their respective cover and you should seal all holes where insects may enter. (Pipe the a least 2 ½ ")

D. Floor

The floor for the room should be:

- Easy to clean
- Waterproof and washable
- No slip
- Avoid contamination
- The floor can be granite, ceramic or other smooth material
- In light color
- It must NOT be made of wood

Note: Sanitary curve is required in the joints wall floor, and in the corners of walls to avoid angles that allow the nesting of insects


Desinfección del laboratorio

E. Lighting

- The room should have good lighting, natural or artificial.
- The lamps must be protected in case of rupture. (this protection should prevent that the glass particles fall down when the lamp break)
- The protection must be plastic
- The room should have not hanging wires in process area.



G. Windows and ventilation

- The windows should have mesh in order to keep out trash, flies or insects and to prevent that the glass particles fall down when the window break
- Adequate ventilation to not enclosed odors
- Easy to clean
- Air stream from clean area to contaminated area.


H. Doors

- The doors preferably should open outwards
- Easy to clean
- Good condition, smooth surface and no absorbent material

Note:
In warm weather you should have a mesh door in order to help the air circulation

I. Energía Eléctrica

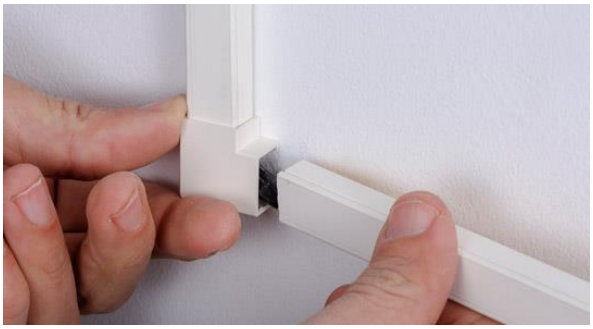
The power electricity is 110 watts, #8 wire from transformer to top of fuse panel, where will connected the electrical ground rod.

Fusel Panel

J. Conduction pipe

- The pipe must be identified to be able to distinguish which corresponds purified water, raw water, drain, light, etc.
- It must be indicated with arrows the direction of the flow.
- Purified water must be indicated with green color (It may be a green label)
- There should not be wires hanging. They should be placed inside specific channels.
- Electricity must be indicated with black color (It may be a black label)

Wire Channel for electric wires



10. Water Tanks

- The Water tanks of 300 gallons or 1,100 liters. One is for raw water that will be purified and one for storage the clean water. with fitting for 1" PVC
- Tanks should be inside of the room to protect them from contamination, raining the sun and the green alga.

NOTE:
Is suggested to install the water tanks on the right side of the board; because the system goes from right to left.