

Suspect a problem? Will testing uncover it?

Martha Merson



Do you suspect a problem with the air or soil or water in your area? You can't test ALL the soil, ALL the air, or ALL the water. Environmental professionals are trained to take samples to find out how much contamination is present.

The basic rule is that the more samples you take, at the most likely locations and depths, the more confident you can be in the results. If you do not feel confident in the sampling plan, you might have to push for more testing.

The Case of Dow Chemical

In the town of Wayland, Massachusetts, Dow Chemical used to have a research lab. Its workers experimented with chemicals that they sometimes dumped outside the building. Residents were afraid that some of these dangerous chemicals were still on the property.

Community members formed a group with help from Toxics Action Center. They also applied

for and received a grant from the state's Department of Environmental Protection. Together, they forced Dow to clean up the land. Part of the process was to test soil samples from the area. When it came time to start testing, the community had a chance to comment on the sampling plan. Linda Segal, one neighbor who was active in the community, remembers, "This was an important point for us to get an expert opinion. The expert said we needed more samples. He wanted more data and he told us to insist. Just because Dow had admitted there was a problem and agreed to clean-up the site didn't mean we could go mind our own business while they got the job done. We had to pay close attention through the whole process."

Getting a hazardous waste clean-up going

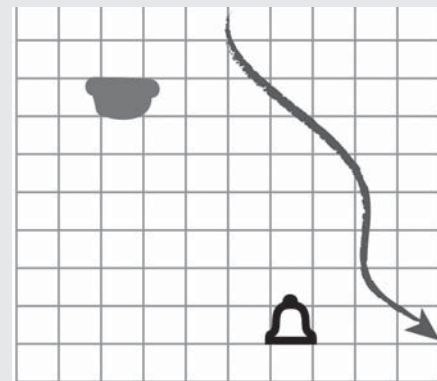
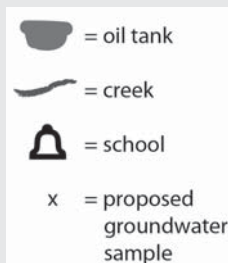
The current owner is usually the one who has to pay; it can vary from state to state. The owner may want more tests to show that others share the

Your turn: Make Up a Sampling Plan

Read the tips (on the next page) for where to sample.

Mark an x on 5 spots where you think it is important to test.

There is no one right answer. Explain your thinking. Talk it over with others.



blame. More testing can delay the clean-up.

At talks about clean-up, the cost may seem like the biggest issue. Everyone seems to agree: "We would like to clean up." But then the owner complains: "The cost is too high."

Jim Luker, an environmental consultant, noted, "Many times owners select the cheapest clean-up option. Years later tests show that the clean-up failed. Then the owner has to go back to square one and use a more expensive option. This means the final cost is double or triple the original estimated cost." Picking the best plan should take into account:

- the cost for clean-up
- the site history – knowing where to test and what contaminants to look for
- plans for the property's use
- risks to anyone using the property
- length of time for clean-up

Will all the contamination be gone?

In some cases, communities have asked property owners to make the site as clean as other land in the area. This is called cleaning up to background levels.

The state can enforce a clean-up only to the standards it has set to protect people's health. These may be higher or lower than background levels, so it's worth looking into.

Martha Merson is the project director for Statistics for Action. For more on sampling, see SFA Soil Guide: Digging into the Dirt <<http://sfa.terc.edu>>.

Great, so we all agree it's time to move ahead with cleaning up the property.



I don't know. My land isn't even worth a million dollars and the clean up will cost \$5,000,000. This doesn't make sense.

Tips for Soil Testing

On land where you know or suspect a problem, like an oil tank leak or dry cleaning fluid spill, samples should be collected:

- on all four sides
- downstream or downhill; sometimes contamination travels.
- near the edges of the property, especially if a school, playground, or wetland borders the property
- near any spot
 - ⇒ with discolored soil or water with a sheen
 - ⇒ with soil that has a chemical smell
 - ⇒ where hazardous chemicals were stored or used
 - ⇒ near the surface where people come into contact with the soil such as a playground
 - ⇒ with trees that are sick or dying for no natural reason

These tips for sampling soil or water come from an environmental professional with the MA Department of Environmental Protection.