

## Samples and Lab Data

In this program, we base our evaluation on whether health effects are likely to exist according to widely accepted and peer-reviewed literature. We do not undertake health studies, but look to existing studies, and assume similar health impacts.

We use international health standards, as calculated by WHO, the U.S EPA, the European Union, and others as our baselines in determining acceptable levels of pollutants found in air, water, and soil.

Health studies conducted by local authorities at sites investigators visit are valuable to support our screening. These studies should always be copied, scanned and uploaded. However, we will not generally use these data to make decisions about site remediation. Instead, we will use credible and accurate sampling results, compared against international standards, as our basis for determining the existence of, or potential for health risks associated with, contamination at the site. Other local studies should be scanned and appended to the ISS if available as background information.

In many cases, a separate agency may have already carried out sampling at a site. When these samples are available and credible, the mean of all samples should be taken and entered into the Credible Test Results box. Individual sample results should be listed on the second page of the ISS in the Samples Taken box and uploaded as an attachment.

If no sampling data exists, investigators should conduct sampling according to Pure Earth's guidelines. Each sample should come from a known or suspected human exposure area and should relate to an identifiable pathway. For example, samples collected from a drinking water source are better than samples from an industrial effluent pipe. Similarly, samples from soil inside a community are better than samples from inside an industrial estate or workshop.

Once samples are collected, send them to a reliable and certified regional laboratory. Tell the laboratory which parameters/pollutants to test for based on which pollutants are most harmful to human health and your investigation of the pollution source. Try to be as specific as possible. For example, Total Volatile Organic Compounds (VOCs) is an acceptable parameter, however if the source of the pollution is petroleum production, it may be better to test for Toluene or Benzene because they are commonly associated with petroleum. Similarly, laboratories can be asked to analyze for all heavy metals, but it is far better to specify specific metals such as lead, mercury, cadmium or chromium (preferably for hexavalent chromium).

Enter composite test results in the sample matrix of the first page of the ISS, and enter any other test result details in the second page in the Other Pollutants fields, and upload the laboratory results as an attached document.