

Environmental Laws and Alternative Dispute Resolution: Tools for Environmental Justice

Assessment of Risks

Introduction

People want to know about the health risks on contaminated land in their community. A tool that is used to make decisions about how to address contamination is “risk assessment.” It is important for community residents to know about risk assessment because the more informed they are about the facts and process, the more they can help influence government to make the proper decisions about cleaning up contaminated land.

Using Laws to Promote Environmental Justice

Risks from exposure to contaminated land depend on the chemicals that are present at the site, the ways people are exposed to the chemicals, and who those people are. Risk assessment for human health is used to address four main questions:

- What contaminants exist at the site?
- How are people exposed to contaminants?
- How dangerous could contaminants be to human health?
- What contaminant concentrations are safe?
- Are children, elderly or other vulnerable populations exposed?

Risk assessment is not an exact science. It is a method that uses the best information available about the site and the manner in which people are exposed to the site—the better the information, the better the decision. Community residents are an important source of information that can be used to improve the risk assessment process.

Steps of Risk Assessment:

To protect everyone who could come in contact with pollutants from a contaminated site, government uses risk assessment to study the potential impacts of the site on human health and environment. Risk assessment involves a four-part process.

Please see the following page for summaries of these four steps in risk assessment.

Step 1: Data Collection and Evaluation

Samples of the soil, water, air, fish, garden vegetables, and other things are collected. From these samples, the type and amount of chemicals are determined. This process creates understanding of what has happened at and around the site and where chemicals may have been left.

Step 2: Exposure Assessment

Data collected in Step 1 are used to find out how much of each chemical people may be exposed to. The amount of exposure depends on many factors, including:

- How much of each chemical is on the site;
- How many people are exposed to or come in contact with it (exposure pathways);
- Which people are exposed to it; and
- How a contaminant acts on receptors (e.g., people).

Step 3: Toxicity Assessment

Toxicity assessment is a tool to learn the potential for a contaminant to cause harm and how much of it causes what kind of harm. It asks: "What does the chemical do to people? How much is harmful?" This step helps with understanding the impact of the contaminated site on humans.

Step 4: Risk Characterization

This step tells us which chemicals pose the risk and what the risks are. It addresses the level of confidence in the results and can provide safeguards to address unknown factors.

Community Residents and Risk Assessment

Community residents can play an important part in the assessment of risk from a contaminated site. Information from residents can help answer:

- Where are chemicals located on the site?
- How did the chemicals get there?
- What is the history of the site?
- What do people do on or near the site?
- Who is exposed to the site?
- How are people exposed to the site?
- Are vulnerable populations exposed to it?