

Scoping Questions 4 (Rick Hall).

1. Air pollution affects plants through various ways including acidification, eutrophication and ground-level ozone. Chemicals react with air to form compounds that cause harm to vegetation. Air pollutants, including sulfuric acid, mix with water droplets that form clouds. The resulting acidic rain is harmful to trees, fish, animals and other organisms. How can we be sure none of this will happen throughout the life of the silicon smelter plant? The Plant is expected to have a 50 year lifespan. How can you be certain this won't happen with the increased pollution the smelter will create?
2. Air pollution leads to losses in crops, trees, vegetation and ornamental plants. Human commercial and industrial activities lead to air pollution, which has drastic effects on both plants and animals. The effects of air pollution on plants may be evident in a number of ways. Foliage develops injuries that, with time, appear as necrotic lesions. Yellowing of leaves (chlorosis) may also be an effect of acidification. Other symptoms include mottling, bronzing, reddening and stunted growth. When sulfur dioxide and nitrogen oxides combine with water in the atmosphere, they form acid rain, which intoxicates the soil and waters where it falls, causing damage to plants. Acid rain weakens trees by destroying their leaves, decreasing the nutrients available to them. The toxic substances released from the soil also poisons the plants. Acid water dissolves nutrients and other important minerals in the soil and washes them away before they can be consumed by plants. The communities within the smelters' watershed depend on logging and agriculture to support their families and provide 100's of jobs. How can you be certain that this resource will be protected forever? How can you be certain the losses in crops, trees and plant will not happen when the smelter starts belching its toxic emissions? How can you be certain humans and animals won't be negatively impacted from the smelter's toxic emissions?
3. Coal plants are responsible for 42 percent of US mercury emissions, a toxic heavy metal that can damage the nervous, digestive, and immune systems, and is a serious threat to the child development. Just 1/70th of a teaspoon of mercury deposited on a 25-acre lake can make the fish unsafe to eat. How can you ensure our fish will be safe to eat within the 50 year life span of the smelter? How can you ensure that the mercury level won't increase?
4. Sulfur dioxide (SO₂) is produced when the sulfur in coal reacts with oxygen, SO₂ combines with other molecules in the atmosphere to form small, acidic particulates that can penetrate human lungs. It's linked with asthma, bronchitis, smog, and acid rain, which damages crops and other ecosystems, and acidifies lakes and streams. How can you ensure our health and ecosystems won't be damaged within the 50 year life span of the smelter?
5. Nitrous oxides are visible as smog and irritate lung tissue, exacerbate asthma, and make people more susceptible to chronic respiratory diseases like pneumonia and influenza. How can you ensure the Nitrous oxides won't harm the health of humans and animals within the 50 year life span of the smelter?