

## Key Findings

People who lived near the plant and led active, outdoor lifestyles had the highest level of exposure to airborne plutonium.

- Plutonium, a radioactive metal, was the contaminant of primary concern released from Rocky Flats.
- The largest amounts of plutonium released from Rocky Flats into nearby communities came from a fire at the plant in 1957 and from a waste oil storage area in the late 1960s.
- Carbon tetrachloride, a solvent used at Rocky Flats for cleaning and degreasing, was the key chemical of concern released from the plant.
- The individual's location, lifestyle and period of exposure were found to have a greater effect on health risks than gender or age.
- Soil sampling conducted by the Citizens' Environmental Sampling Committee, coordinated by the Health Advisory Panel, confirmed previous soil sampling studies, which showed that the highest off-site plutonium concentrations in soils were predominantly east of the plant.
- The greatest off-site exposure to plutonium and carbon tetrachloride resulted from people breathing contaminants released into the air. Exposures by ingesting water, vegetables and meat, and through skin contact were found to be significantly smaller than exposures from breathing plutonium.
- The main risk of inhaled plutonium is cancer of the lung, liver, bone and bone marrow.
- Carbon tetrachloride exposure may cause liver cancer, but this has only been demonstrated at high doses in experimental animal studies.
- People who lived near the plant and led active, outdoor lifestyles (such as laborers or ranchers) had the highest level of exposure to airborne plutonium. Of these lifestyles and locations modeled, a laborer living or working southeast of Leyden near Indiana Street and 64th Ave. had the highest risk of developing cancer. The majority of this exposure was due to plutonium inhaled from a Rocky Flats fire on September 11 and 12, 1957.
- Health risks due to dioxin and beryllium releases from Rocky Flats were considerably less than risks from plutonium or carbon tetrachloride.
- Health risks due to uranium releases from Rocky Flats were less than risks from plutonium releases.
- The accidental release in water of the radioactive chemical tritium (hydrogen-3) from Rocky Flats in 1973 to Great Western Reservoir was the greatest source of drinking water contamination, but presented a small off-site health risk.