What was in the smoke?

What are the health risks of exposure to smoke?

A number of federal agencies have conducted studies on the smoke from forest fires, exposure to the people, and possible health consequences. These studies show that while breathing high concentrations of smoke is not good for you, the concentrations to which people are exposed by smoke from prescribed burns seldom reach the point that they pose a health risk to the general population, although sometimes smoke can be an irritant or health risk for people with existing health problems.

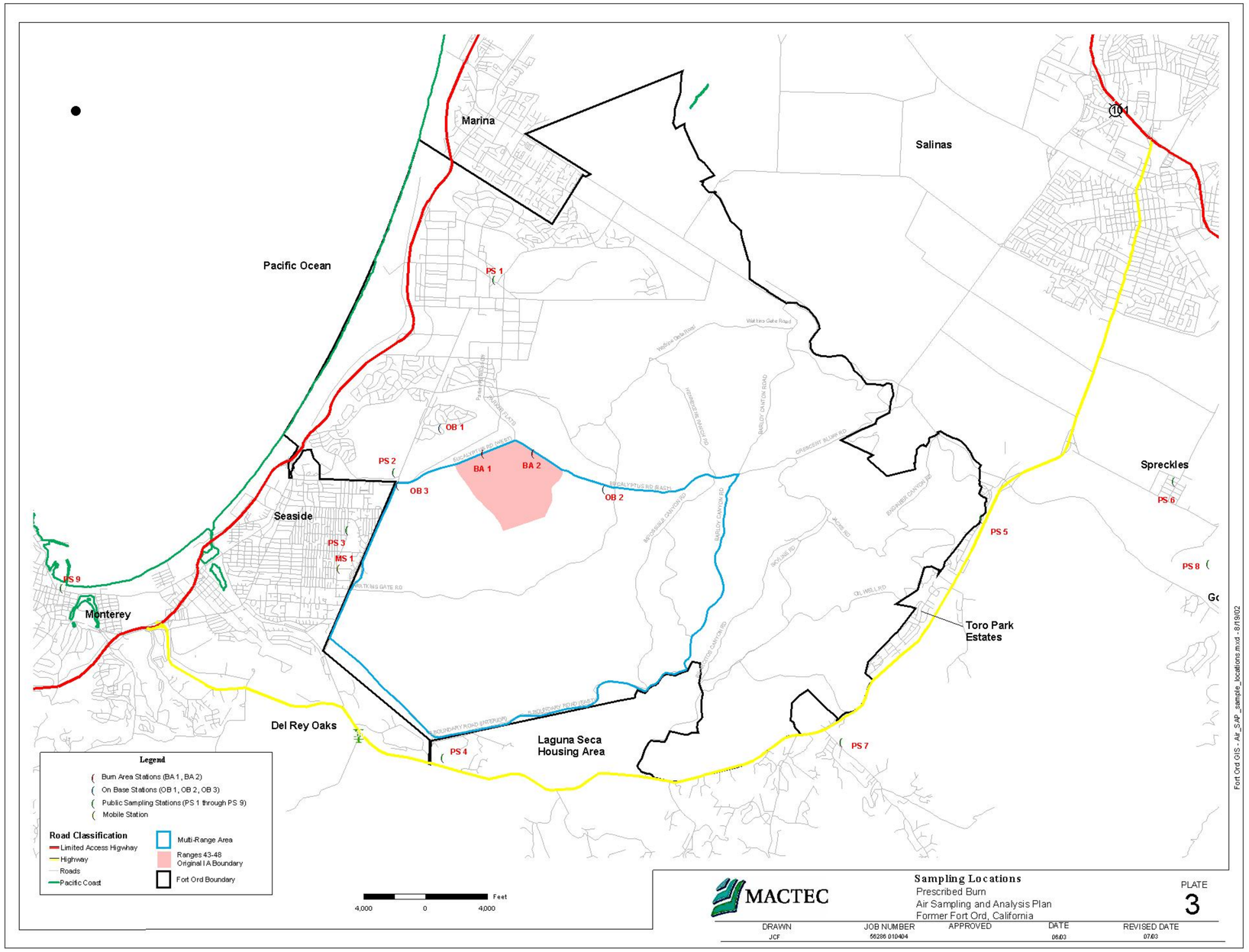
Health effects from smoke depend on the concentration of the pollutants inhaled, the duration of the exposure, the proximity to the fire and the individual's biological responses to these materials. Potential health effects include irritation of the eyes and the respiratory tract, persistent cough, and physical discomfort in breathing. In general, these are reversible, short-term effects.

How many people had respiratory problems?

Local hospitals do track some data on hospital visits. Information on the number of cases with flu-like symptoms is typically collected during the flu season. Since the prescribed burn was conducted before the flu season, the types of information that would be helpful in comparing the number of hospital visits during the burn with similar days without a burn, are not available.

The Monterey County Health Department, however, reported that on Friday, October 24, there were two cases in the Monterey area and two cases in Salinas area that could have been related to the prescribed burn and smoke; over the weekend, there was one case that could be related to the smoke.

The Army's prescribed burn hotline received 81 complaints on Friday, October 24. Some callers noted difficulty breathing and eye irritation, while others were concerned about the effects on people with asthma. Many callers noted smoke and ash. Most calls came from Monterey, Carmel and Seaside. The hotline received three complaints on Saturday, October 25 and three on Sunday, October 26.



Were there toxins in the smoke or ash?

The Army, in consultation with U.S. Environmental Protection Agency, California Department of Toxic Substances Control, California Air Resources Board and Monterey Bay Unified Air Pollution Control District, conducted a study to evaluate if the ordnance and explosives – some of which did detonate during the fire – would contribute air emissions that might pose additional threat to public health. Based on the study, the researchers concluded that air pollutant emissions from incidental detonations during a prescribed burn at Ranges 43-48 would be minor compared to emissions contributed directly by burning vegetation alone, and would result in pollutant concentrations well below health-protective regulatory screening values. Ranges 43-48 had been selected for this study because the area was expected to contain highest concentration of variety of types of ordnance and explosives.

The air monitoring program was designed to measure the ordnance-related emissions included in the study, as well as down-wind concentrations of some vegetation-related emissions, including particulate matter. Fifteen (15) monitoring stations were placed in and around Fort Ord. The air monitoring results will become available within 60-90 days.

Typically, small particles 10 microns or less in size, are measured because they can get into the eyes and respiratory systems and can cause health problems. Falling ash is characteristic of vegetation burning, but visible ash is much larger than 10 microns in diameter and therefore do not have the same potential health consequences as the small particles.