



MICHAEL MYERS

Paula Moseley, president of Boulder-based Planetary Solutions, displays cork flooring options in the store's showroom.

Careful choice of products keeps indoor air healthy

More homeowners consider nontoxic alternatives

BY CHRISTINE WEEBER
Business Report Correspondent

When Margie McCulloch, owner/designer of Red Pepper Kitchen+Bath in Boulder, recently walked into a newly built store, she was unnerved. "My eyes were itching, my chest got heavy, my head got full," she said.

As a residential design consultant and retailer of less-toxic cabinetry, McCulloch quickly made the connection between the indoor air in the new building and her symptoms. "I was reacting to all the fumes in there," she explained.

Like McCulloch, people can experience physical reactions to common chemicals found in a number of typical building materials such as paints, adhesives, carpeting and cabinetry. In surveys by the State Departments of Health in New Mexico and California, 16 percent of respondents in both states said they reacted to everyday chemicals. Half of the Californians who reported reactions also said they had to take special precautions in their home or with their home furnishings.

As houses and buildings have become "tighter" and more energy efficient, emissions from building materials are having a greater impact on indoor air quality. "Synthetic building products are going to off-gas (or emit chemicals)," said David Sechler,

owner of Conscious Habitation LLC, an architectural design, home inspection and consultation business in Boulder. "If you have a lot of off-gassing within a tightly sealed envelope, the toxins have nowhere to go," he added.

The green-building industry increasingly is taking up the challenge to create environments that are both healthy and sustainable. To meet these demands, green-building experts pay attention to the overall design and function of a home as well as its "ingredients."

Sechler and Pete Chandler are certified bau-biologists, or building biologists, who are trained to evaluate the health of homes and workplaces. Chandler, owner of Living Space, a Boulder-based inspection and consulting business, says he looks at ventilation, air quality, moisture/humidity, sunlight and electromagnetic fields when investigating a home or office.

Chandler's clients include individuals who feel ill in their living places — those who are "downstream" — as well as people designing new homes who have no specific health issues — or "upstream." He helps clients address health issue concerns at the beginning of the building process to avoid building-related illnesses in the future. VaST, a Boulder architectural firm,

> See *Air*, page 19B

AIR from page 10B

has included Chandler on a number of projects.

Chandler and other green-building experts have dozens of stories about people "downstream." They say their clients' symptoms include headaches, itchy eyes, dizziness, fatigue, disorientation and restricted breathing. They also note the American Lung Association's warning that asthma can be exacerbated by paints and varnishes, molds, formaldehyde, cleaners, room deodorizers, and dust and dander in carpeting.

Paula Moseley, president of Boulder-based Planetary Solutions, also works with people in existing homes and those planning new projects. As a retailer of sustainable and healthier building products, Moseley says some customers don't have sensitivities, "but they want to be as clean as they can." Others have children with allergies and asthma.

At the other end of the spectrum are customers who are so chemically sensitive "they can't come in the showroom, so we help them on the front porch" of the store, Moseley said. Even though all of Planetary Solutions' products meet certain criteria, not all of those with chemical sensitivities can tolerate all the products, she explained.

Many of Moseley's chemically sensitive clients became sensitive after a serious exposure at work or home or became sicker after their last remodel. "Now they know what to watch out for," she said. For individuals who are already chemically sensitive, finding the right products can be complicated. Moseley helps customers read material safety data sheets and provides product samples for people to test before they install it or use it throughout their

house. Sleeping with the sample next to one's pillow or close to the bed is the standard test for personal tolerance.

Even some sustainable products should be tested by those sensitive to chemicals, Moseley said. Some, like recycled pop-bottle carpeting, are better for the environment but might not work for some individuals.

The good news is that a wide variety of healthier products are becoming more readily available. AFM Safecoat and BioShield are two companies that manufacture formaldehyde-free and low-VOC (volatile organic compounds) paints, stains, sealers and adhesives. For those who want to avoid latex-based paints completely, natural plasters, milk paints and clay paints are also available.

Formaldehyde also can off-gas from the particleboard and plywood in typical kitchen and bathroom cabinetry. At Red Pepper Kitchen+Bath, McCulloch carries two lines of formaldehyde-free cabinetry — Neil Kelly Cabinets and her own custom cabinetry line. The custom line features Agriboard, made from agricultural byproducts, with door options that range from traditional solid wood doors of sustainably harvested wood to contemporary aluminum and glass doors.

Kitchen and bath designer Studio3, also of Boulder, also sells two less-toxic cabinetry lines made by Crystal Cabinet Works and Westridge Cabinets.

Green-building retailers and consultants help their clients create "a place that rejuvenates them," Chandler says, by paying attention to the design and function of the built environment and by carefully selecting its "ingredients."