

# Singing the Cadmium Blues

Artists fear that a Senate bill could wipe the brightest colors from their palettes

By IVAN AMATO

**A**t the Great Exhibition of London in 1851, visitors to the Crystal Palace set their eyes on paintings made with yellow pigments of unprecedented brilliance and stability. These cadmium sulfide pigments were introduced only five years earlier, and artists put them to immediate and striking use.

Cadmium yellows have smeared painters' palettes ever since, with pigment processors now mixing the sulfides with touches of cadmium selenide to offer a sunset of golds, oranges and reds.

But the sun may indeed set on cadmium pigments in the United States if the Senate approves a proposed amendment to the 1989 Solid Waste Disposal Act. The bill, introduced last fall by Sen. John Chafee (R-R.I.), views cadmium not as a source of vivid colors but as a potential poison.

At high enough concentrations in human or animal tissues, cadmium causes kidney toxicity and may trigger certain cancers. With heightened public concerns and demands for a safer environment, this heavy metal seems a natural for the toxics blacklist.

The bill aims to stem the tide of toxic substances flowing from incinerators to the air we breathe, and from the nation's dumps to the water we drink. In its present form it would ban, among other things, "the use of cadmium as a pigment and the importation of products containing cadmium as a pigment." Though the primary goal of this section of the bill is

to choke off cadmium now entering the waste stream via industrial products such as dyed textiles and colored plastic bottles, it would also quench the supply of art pigments that, according to some artists, have no good substitutes.

The bill has a lot of artists fighting to save their cadmium colors.

"It's all a tempest in a teapot," argues Richard Innes, an aide to the Senate Environment and Public Works Committee, which issued the proposed amendment. The issue probably won't come up for a vote before 1992, he says, and by then it almost certainly would contain a list of

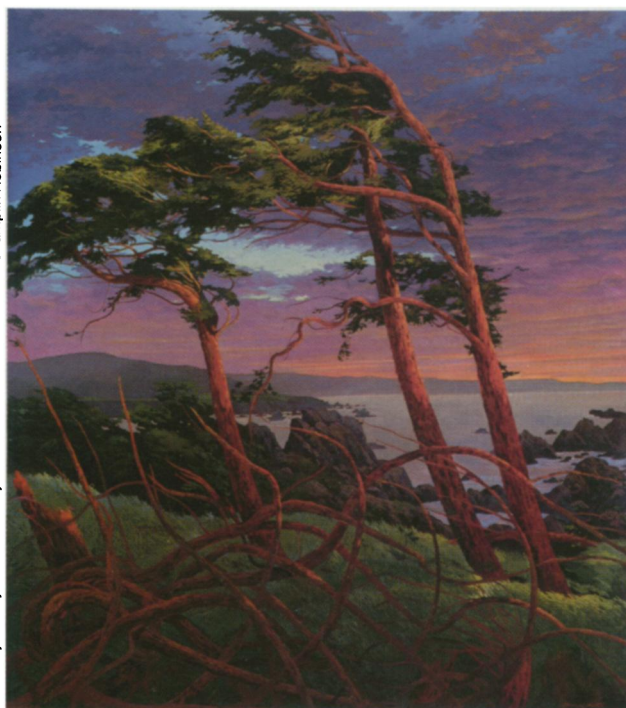
exemptions, including pigments for artists' palettes.

But without written assurance of such an exemption, many artists fear that lawmakers on Capitol Hill will unnecessarily pillage painters' palettes as they strive to keep cadmium wastes to a minimum.

"You would lose painting as we know it," says Michael L. Scott of New Richmond, Ohio. Scott is a landscape painter whose works often address environmental issues such as clear-cutting and acid rain. Without cadmium colors, he says, he couldn't convey the spiritual and sensory heightening evoked by the natural settings.

"Losing cadmiums would be like a composer losing the use of several keys," adds painter Robert Cottingham of Newtown, Conn. Artists rarely burn their paintings or throw them away, he says, so the cadmium in the pigments doesn't make it into the general waste stream. Besides, he and others say, artists' paints represent only a tiny, though unknown, fraction of the total amount of cadmium used in the United States. Compared with industries that use cadmium for making batteries or protective coatings for corrosion-vulnerable metals, artists contribute negligible amounts of cadmium to the waste stream, maintains Scott.

Scores of artists have written to members of the Senate in an effort to gain an exemption for fine-art cadmium pigments. In May, Sen. Pete V. Domenici (R-N.M.) wrote to Sen. Quentin N. Burdick (D-N.D.), describing the flood of letters



*"San Juan Island Passage" by Michael L. Scott, who used cadmium pigments to portray the trees and sky.*

from New Mexico's highly active arts community.

Burdick, who chairs the Environment and Public Works Committee, replied: "During this Congress I have received more mail on this issue than on any other hazardous waste issue facing the American public." Though he did not assure Domenici that the language of the bill would change, he did write that the committee "will look long and hard before banning cadmium-pigmented artist's paints."

The most vocal and visible proponent of a cadmium exemption for artists is New York City gallery owner Sherry French. This summer, she hung a collection of artworks showcasing the glories of cadmium pigments, titled "Waiting for Cadmium." She has made numerous public appearances and has met with senators, all in defense of cadmium-based colors for artists.

"Banning cadmium would devastate the art industry," French contends, noting that these pigments provide the brightest tones of colors ranging from yellow to deep maroon. "Van Gogh could not have painted his 'Sunflowers' without cadmium."

Though painters seem to agree that a sweeping ban on cadmium would deprive them of pigments that offer a unique combination of vividness, opacity and long-term stability, some admit they could get by without them. Stephen F. Hickman of Alexandria, Va., who paints futuristic fantasy scenes, says alternatives such as the organic, translucent "lake" pigments could serve him just as well. Landscape artist Scott, on the other hand, says these and other substitute pigments require more coats and fade or change color over time.

**S**ome artists, particularly jewelers and enamellers, face health threats from some of the same cadmium compounds they seek to keep on the shelves of art supplies stores. Epidemiologic and animal studies have linked high levels of cadmium in body tissues to kidney damage, lung and prostate cancers, reproductive disorders and several other ailments, notes Michael McCann, head of the Center for Safety in the Arts, based in New York City. "There are major [health] concerns regarding cadmium," he says. "The question comes down to: Where's the risk?"

And that's not easy to assess, McCann says. "The risk depends on what form the cadmium is in."

McCann and Joy Turner Luke of the Artists Equity Association in Washington, D.C., advise artists against using cadmium pigments in airbrushes, which turn the paints into easily inhaled aerosols. And they urge caution by those who



*"Cadmium Sunset: With" (top) and "Cadmium Sunset: Without" by Michele Harvey. Only the top painting features cadmium colors.*

Photo courtesy of Sherry French Gallery, New York City

use cadmium-containing pastels, which produce lots of breathable dust.

For painters who use hand brushes and buy prepared pigments rather than mix their own, McCann says the risk of kidney-damaging cadmium exposure would be low. Assessing cancer risk is another question, he says, because cadmium carcinogenesis involves so many unknowns.

Jewelers and enamellers brave far greater cadmium risks than painters, he adds: "The major concern is soldering with low-melting silver solders that contain about 20 to 30 percent cadmium. When you solder, that cadmium vaporizes into fine cadmium oxide fume, which is easily inhaled." McCann says an excess of kidney problems seems to be showing up among Native American jewelers of the Southwest.

"I do not oppose the bill," he says. "But I would support an exemption for artist's paints."

Yet Luke contends the bill could place cadmium pigments beyond the reach of most artists even if it did contain an artists' exemption. The industrial restrictions could render cadmium pigments specialty items and cause a drastic rise in prices, she says, noting that cadmium colors already cost several times more than standard colors.

**C**ongress is not the only federal branch furrowing its brow over cadmium. Last February, for instance, the Occupational Safety and Health Administration published a 95-page report summarizing the history of cadmium regulation, studies of health problems linked to the heavy metal, and

risk calculations for cancer, kidney damage and other disorders. The report represents a formal step toward implementing stricter limits on cadmium exposure for industrial workers.

"The trouble with a lot of regulations is that they'll take a substance — say, cadmium — and treat all forms of it the same," argues J. Lawrence Robinson, a vice-president of the Dry Color Manufacturer's Association in Alexandria, Va. Although he agrees that cadmium should be kept out of the air and water, Robinson says banning products containing cadmium pigments is unfair to industry. A better approach, he claims, would be to rely on smokestack scrubbers to capture cadmium released during incineration, and then to place the toxic ash in land disposal areas that meet EPA safety specifications.

While overregulation might burden specific population sectors, underregulation could impose health risks on the public as a whole, counters Allen Herskowitz of the Natural Resources Defense Council in New York City. "No one has a right to pollute," he says. Other environmentalists contend that granting an exemption to artists would encourage more cadmium users to press for their own exemptions, ultimately resulting in ineffective regulation of cadmium-containing waste.

Cadmium atoms, when bound to sulfur and selenium, serve as a fount of color and aesthetic possibility. Yet they also lurk as strong suspects behind some health-wrecking disorders. As legislators and regulators attempt to negotiate among aesthetic, economic, environmental and health concerns, cadmium's bright and dark sides will undoubtedly pose a difficult dilemma. □