chapter 2

CLEAN AIR

Despite ever-increasing population and urban growth, the Pacific Southwest's biggest urban areas, including Los Angeles, continued to make progress in the ongoing struggle to protect tens of millions of residents from ground-level ozone (smog), as well as other air pollutants that can be just as harmful – particulates (dust and soot), nitrogen oxides (which add to smog), and carbon monoxide.

Clean Air Progress Continues in Major Urban Areas

L.A. Improves, but Regains Title of Smoggiest

The 2001 smog season concluded as the cleanest on record for California's South Coast air district (the metropolitan L.A. area), with only 36 days of smog levels exceeding the federal health standard. The good news is that the area had healthy air on 329 days — the best record in over 40 years. The bad news is that although this continues a steady trend toward cleaner air, the South Coast recaptured from Houston, Texas the title of smoggiest area in the nation. In 2001, the South Coast Air Quality Management District began putting its new "clean fleet" rules into effect, covering buses, trash trucks, street sweepers, cars and trucks, and airport ground vehicles. These landmark rules require public and private vehicle fleet owners to purchase only the cleanest-burning new vehicles.

Meanwhile, San Diego County achieved the federal health standard for ozone every single day in 2001– the first time since the standard took effect in 1971, when unhealthy air was recorded there about 25% of the time. The achievement is all the more impressive in view of the fact that local population – and motor vehicles – have more than doubled there since 1971.

EPA Downgrades San Joaquin Valley Smog Status to "Severe"

In October 2001, EPA reclassified the San Joaquin Valley from "serious" to "severe" status because the area failed to meet the ozone (smog) health standard. This move triggers further action by the San Joaquin Valley Unified Air District, including the creation of a new clean air plan demonstrating that the area will meet the health standard by November 15, 2005.

Phoenix Meets Ozone (Smog) and Carbon Monoxide Health Standard

The Phoenix area has had over four years of air quality that meets the ozone and carbon monoxide health standards, demonstrating that pollution control measures adopted by the community have worked. The Arizona Department of Environmental Quality (ADEQ) and the Maricopa Association of Governments are cooperating to develop workable plans to maintain this clean air status.

Tucson Particulates Action Plan

In 1999, Tucson failed to meet the clean air standard for particulates (dust and soot). Pima County air officials then began working with EPA, ADEQ, and community members to develop a Natural Events Action Plan under EPA's Natural Events Policy. The policy allows a community to adopt voluntary measures to control particulates if the measures can take effect sooner that way. The Pima County Department of Environmental Quality submitted it's plan to EPA in June 2001. The agency is now working with the local stakeholders to develop dust control measures for the area.

Las Vegas: EPA Proposes to Approve Carbon Monoxide Plan

EPA is planning to propose approval of the Las Vegas Valley's carbon monoxide (CO) clean air plan in early 2002. To clear the way, EPA staff have been working with the Nevada Department of Environmental Protection and Clark County to resolve issues related to vehicle smog checks, fuels and permits for new facilities that would add to CO pollution. The plan relies on emission reductions in all three areas to attain the national health standard for CO.

On November 9, 2001, EPA made an official finding that the vehicle emission estimates in Clark County's particulate clean air plan are adequate. The plan covers 2001, 2003 and 2006.

Partnerships

Children's Health and Indoor Air: EPA's "Tools For Schools"

Opposite: Monument Valley, Navajo Nation, Arizona. Photo by Michael Feeley. Below: EPA Administrator Christie Whitman with fifth-grade class from San Francisco's Clarendon Elementary School. Photo by David D. Schmidt.

At many schools, maintenance and custodial staffs are inadequate, school districts have deferred maintenance, and indoor air quality has declined. Asthma has increased in students and teachers, as have complaints of "sick buildings," absences, workmen's compensation claims and even lawsuits blaming schools for making teachers and children ill. EPA's Indoor Air Quality Tools for Schools kit shows how school staff can work together to ensure healthy indoor air for everyone. Benefits include improving the health, attendance, and

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Windmills generate electricity at Altamont Pass, Alameda County, Calif. Photo by Christy Shake.

attention of asthma-prone students, and better academic performance.

EPA developed this simple, common-sense guide in partnership with the American Lung Association and several school organizations. The Tools for Schools kit contains educational materials and checklists for evaluating typical activities, to show how all members of the school community, from teachers to maintenance staff, can help assure healthy indoor air.

Using the kit, school staff learn to recognize what contributes to indoor air pollution, and understand their building's ventilation, as well as the importance of working cooperatively with the custodial and maintenance employees.

Tools For Schools Results

- The San Francisco School District's Indoor Air Quality Committee tried out Tools for Schools at several schools. At one in the Bayview/Hunters Point area, known for high rates of asthma, the nurse reported a dramatic drop in office visits for asthma inhalers after the school's indoor air quality team conducted walk–throughs and solved problems that caused poor ventilation.
- The Saugus School District in Southern California used Tools for Schools district–wide after the indoor air concerns of teachers and parents almost sparked a school boycott. The district corrected many typical indoor air problems and now has a solid relationship with its community.
- The Visalia School District in California's Central Valley, which is known for its high asthma rate, also used the kits district–wide, and won a national Tools for Schools Excellence Award.

For more information go to *www.epa.gov/iaq* and click on the "Tools for Schools" button, or call EPA's Shelly Rosenblum at 415-947-4193.

Owens Valley: L.A. Helps Clear the Air

For generations, dust rising each winter from the dry, windy bed of Owens Lake, in the Eastern Sierra's Owens Valley, has created the nation's worst particulate air pollution problem. Today, clean air is on the horizon. On November 17, 2001, the Los Angeles Department of Water and Power (LADWP), began irrigating the dust-prone lakebed to reduce dust storms.

Los Angeles began diverting the Owens River in 1913. By 1930 Owens Lake, once an expanse of (very salty) water 18 miles long and 10 miles wide, was a gigantic salt flat.

EPA became involved in the Owens Valley air pollution issue in the 1990s, encouraging Los Angeles and the local Great Basin Air Pollution Control District to develop a plan for the lakebed. In 1999 they reached an agreement to bring the Valley's air quality up to the national health standard by 2006.

California suffered no blackouts in the summer of 2001, and is continuing its efforts to reduce the environmental impacts of generating electricity.

During 2000 and 2001, the LADWP built a network of pipes and irrigation "bubblers" (outlets) on 10 square miles of the lakebed. The network is being expanded in 2002 and 2003. By the time the $150 million, L.A.–funded project is finished, the air should be safe to breathe year–round — for the first time in over 70 years.

Western Regional Air Partnership Gets $4 Million EPA Grant

EPA is investing $4 million in grant funds, as well as policy and technical assistance, in the Western Regional Air Partnership, a coalition of western state governments, Indian tribes, and federal agencies working to improve visibility at federal wilderness areas, including the Grand Canyon. Visibility has suffered in recent decades due to haze resulting in part from fossil fuel-burning power plants.

Sierra Army Depot Ends Open Burning/ Open Detonation of Munitions

The Sierra Army Depot in Lassen County, which has destroyed more unwanted munitions through open burning and open detonation than any other installation in the United States in recent years, last year ceased the practice when the Lassen County Air District changed the Depot's burn permit.

Local communities, including the Pyramid Lake Paiute Tribe protested the open burning and detonation because it caused air pollution. EPA, responding to these concerns, directed the Lassen County Air Pollution Control District to change the Depot's operating permit under the federal Clean Air Act, by adding a ban on open burning and detonation when safe alternatives exist. The Depot is now seeking to install technology for the reuse, recovery, and recycling of munitions, and is evaluating options for alternative disposal methods for its current stockpile.

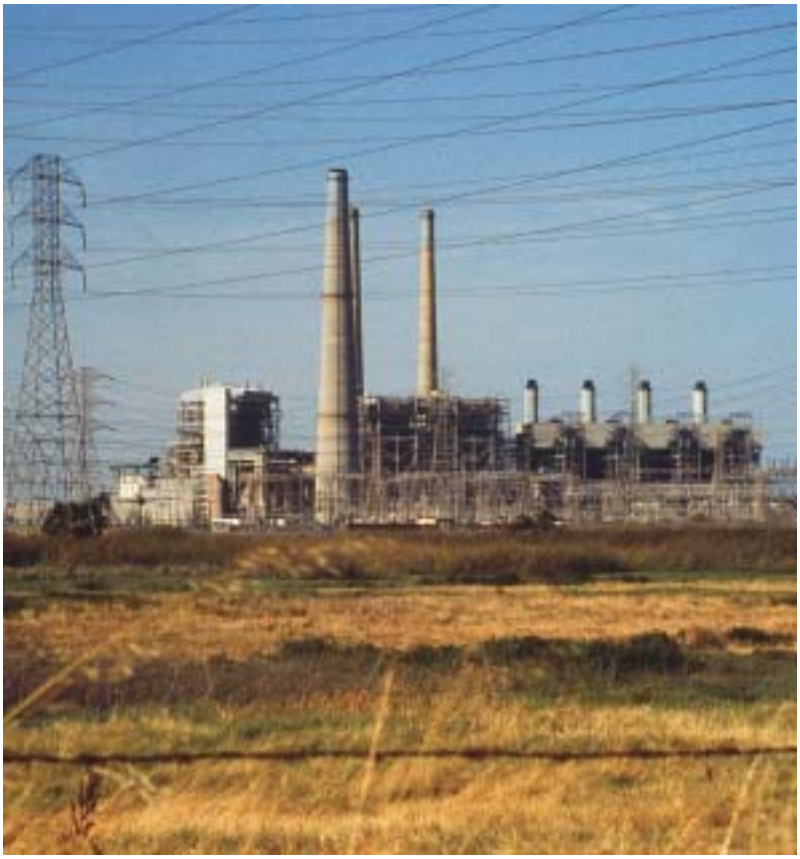
After lengthy negotiations with EPA, the Department of Defense also submitted significantly revised Toxics Release Inventory reports for the Depot. The updated reports for 1999 and 2000 show for the first time that the majority of toxic releases are to the land, and that air emissions are a much smaller amount than previously reported.

Infrastructure

Pacific Southwest Responds to Energy Crisis

EPA's Pacific Southwest regional office has been working diligently with other federal, state and local agencies to craft energy solutions that protect human health and the environment. As a result of these collective efforts, California suffered no blackouts in summer 2001, and is continuing its efforts to reduce the environmental impacts of generating electricity.

In the summer of 2000, retail electricity prices in parts of Southern California reached all-time highs, and shortages of generating capacity created temporary power outages in Northern California into early 2001. Many factors were involved, including a booming economy, growth in population and electricity demand, deregulation of electricity production in some states, drought in the Pacific Northwest reducing electricity from dams, and too few new power sources.



Pittsburg, Calif. power plant burns natural gas to generate electricity. Photo by Christy Shake.

EPA Expedites Permitting for "Peaker" Power Plants

Working cooperatively with the California Energy Commission, the California Air Resources Board, and local air pollution control districts, EPA developed a permit template for California air pollution control districts to speed up permitting of new power plants to meet daily "peaks" in demand. EPA also issued consent orders to several applicants, which allowed immediate construction while assuring compliance with federal clean air requirements. In 2001, EPA's Pacific Southwest office reviewed applications and draft permits for 15 "peaker" projects totaling approximately 1,320 megawatts (MW) of generating capacity.

Larger New Power Plants

President Bush on February 15, 2001 directed federal agencies to "expedite" federal permits for power plants in California. Since then, EPA has issued final construction permits for five major new power plants in California, totaling 2,390 MW: Elk Hills, 500 MW; High Desert, 700 MW; Pastoria, 750 MW; Midway Sunset, 500 MW, Blythe, 520 MW, and Sunrise, 320 MW. All will use state-of-the-art emission controls to minimize air pollution.

Flexibility for Existing Power Plants

EPA also worked with the state of California to allow the use of emergency backup generators if necessary to avert blackouts, and with Southern California's South Coast Air Quality Management District to allow power plants to operate at full capacity during the summer months, when demand for power was highest. Nevertheless, environmental impacts were minimized.

Enforcement

New Chrome Compliance Tool

EPA's Pacific Southwest office developed a *Manual to Aid Compliance and Enforcement of the Chromium Electroplating MACT* (Maximum Achievable Control Technology), to help state and local agencies develop their own MACT standards for chrome platers. This manual represents a comprehensive approach, by not only dealing with the technical and practical aspects of compliance, but also encouraging the use of pollution prevention and other innovative techniques. The manual is also used by EPA for compliance training and outreach, and to support EPA's Air Toxics and Environmental Justice initiatives.

Chevron Cuts Air Pollution in Hawaii

Under an agreement reached with EPA in May 2001, Chevron will pay a $650,000 penalty and spend at least $150,000 toward converting all of the loading racks at its Port Allen bulk gasoline terminal on Kauai, which will significantly reduce air pollution emissions. This settlement with Chevron resulted from its failure to install air pollution controls and limit emissions at its Hilo and Kahului bulk gasoline terminals, and its failure to inspect and file reports on equipment leaks and wastewater systems at its Kapolei petroleum refinery. This settlement is expected to achieve an annual emissions reduction of 230 tons of smog-forming volatile organic compounds.

EPA Science

How Much Water Pollution Comes from the Air?

From 1999 through 2001, EPA toxicologist Pam Tsai worked with other scientists from the non-profit San Francisco Estuary Institute on a cutting-edge project to estimate how much of San Francisco Bay/Estuary's contamination with five different heavy metals, PCBs (polychlorinated biphenyls), and PAHs (polycyclic aromatic hydrocarbons) is coming from the air. The scientists analyzed substances in the air from three locations using a high-volume air sampling device equipped with glass fiber filters and polyurethane foam. They also analyzed rain samples.

The scientists found that substantial amounts of all the pollutants except PCBs were entering the water directly from the atmosphere – 1,900 kg/year of copper, 930 kg of nickel, 93 kg of cadmium, 1,600 kg of chromium, and 27 kg of mercury. To put this in perspective, more than 10 times as much of these substances enters the bay/estuary in stormwater runoff.

As for PCBs, the scientists found that a greater amount of PCBs was leaving the bay as vapor, than entering the bay through atmospheric deposition. PAHs, however, proved to be the opposite: A greater quantity entering the bay by atmospheric deposition than leaving the bay as vapor.

EPA People

Jack Broadbent, New Director of Regional Air Division

Jack P. Broadbent, former deputy executive officer of California's South Coast Air Quality Management District, became director of EPA's Pacific Southwest Air Division in April 2001. At the South Coast district, Broadbent developed landmark regulatory programs that significantly contributed to cleaner air in the greater Los Angeles area. At EPA, he collaborates with other federal, state and local agencies, tribal governments, school districts, universities, the private sector, and community groups. Among his responsibilities as division director, Broadbent oversees grants to state and local agencies, reviews air quality plans, decides on permits, accomplishes rulemaking, determines compliance and enforcement of federal clean air regulations, and provides technical support.

Air Planning and Permits Chiefs Named

Steven Barhite joined the management team of EPA's Pacific Southwest Region as chief of the Air Planning office, and Gerardo Rios was named chief of the Air Permits office, in October 2001. Barhite came to EPA four years ago after working in research at San Francisco General Hospital. At EPA, he has worked on New Source Review and Clean Air Act Title V permits and programs, with a focus on the South Coast area. He took the lead on several key enforcement cases in the wood and metal coating industry involving precedential technology decisions. Recently, Barhite led the Air Division's efforts to address the energy crisis and construction of power plants. Gerardo Rios has been with EPA for 12 years, starting in the permits office. He went on to manage the U.S.-Mexico air program, where he established critical relationships between U.S. and Mexico partner agencies and stakeholders, and helped develop the first air quality plan for Mexicali and Tijuana. He also led EPA's Pacific Southwest Mexico Border Team and has been instrumental in establishing a borderwide air monitoring program. To reach Steven Barhite, call 415-972-3980. To reach Gerardo Rios, call 415-972-3974.

Yucca Mountain Regulatory Development

EPA developed, and on June 5, 2001 released, public health and environmental radiation protection standards for Yucca Mountain, Nevada, the Department of Energy's chosen site for high level nuclear waste. The standards limit individual annual radiation exposure to no greater than 15 millirem per year for the first 10,000 years following disposal of the waste. The separate groundwater standard for radiation is set at a level of 4 millirem per year.

Real-time Air Quality Conditions Now Available on EPA's AirNow Web Page

EPA's Ozone Mapping Project has air pollution forecasts, health information, and real-time ozone (smog) maps for San Francisco, Sacramento, Los Angeles, and other urban areas around the nation. The site provides people in our most populated areas with information about how we can protect our health and take action to reduce air pollution. To find out more, go to *www.epa.gov/airnow*.

Above: Jack Broadbent. Photo courtesy of South Coast Air Quality Management District.