



inside EPA

City of St. Louis Has Power-Full Trash

Part of the trash collected from households in St. Louis, Mo., is now helping to supply electric power for those households.

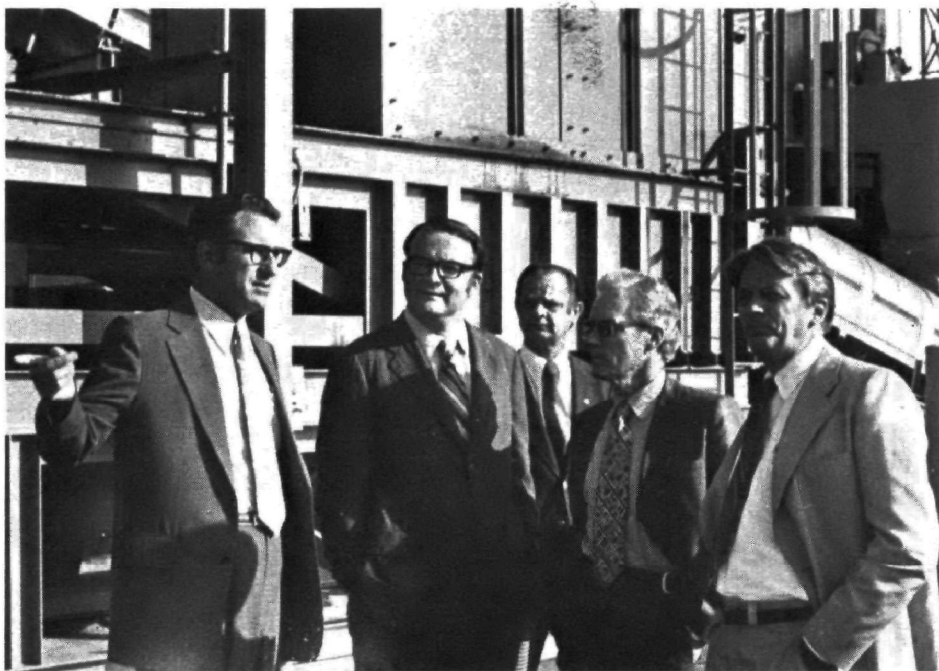
The pilot project, dubbed "Trash to Kilowatts", is a joint effort by the city, EPA, and the Union Electric Company. The project is designed to show whether it is practical to recover useful energy from municipal solid waste.

The project involves shredding and grinding waste into chunks the size of golf balls, or smaller, removing all ferrous metals by means of magnets, and then mixing the shredded waste with pulverized coal in the generating plant boiler. Coal is still the main fuel, supplying 90 percent of the heat value—to 10 percent for the waste.

The shredding and iron removal operations are accomplished with new equipment at the city's old incinerator plant. The waste is then hauled by trailer-truck to Union Electric's Meramec generating station about 15 miles away, where it is mixed with the powdered coal and blown into the boiler that generates steam for a 140-megawatt turbine. Special alterations had to be made to the feed system and grates to accommodate the trash.

The project has been operating since May, using about 20 percent of the solid waste produced by St. Louis, or about 300 tons per day. Officials hope to increase this to 40 percent for the Meramec plant, as operating "bugs" are discovered and corrected. Later, city officials hope, other plants may be converted to use all the city's combustible waste.

On an inspection visit to the plant last month, EPA Administrator



Inspecting the electric utility boiler which burns St. Louis's trash as an auxiliary fuel are, from the left, Earl K. Dille, executive vice president of the Union Electric Company; EPA Administrator Ruckelshaus; Paul Spelbrink, St. Louis, director of Streets; Jerome H. Svore, EPA regional administrator, and Arsen Darnay of EPA's Resource Recovery Division.

William D. Ruckelshaus said he hoped other communities would follow the St. Louis example and build similar systems, but he warned them not to expect Federal aid. EPA is helping to pay for the project only to demonstrate a new method of solid waste management that protects the environment and recovers valuable resources, he said. "Whoever produces the waste ought to pay for cleaning it up as a matter of principle" he added. The St. Louis project is designed to show a way to accomplish that.

Moreover, the "way" is not yet clear. The St. Louis system has problems with waste materials that

do not burn easily. Regional Administrator Jerome Svore told the visitors he had seen a rubber dog bone that had passed unscathed through the furnace with its implanted metal whistle still intact. Aluminum, copper, and other nonmagnetic metals are not removed from the waste stream, and engineers are studying the feasibility of further mechanical separation for such metals and for small abrasive particles that tend to erode the feeder pipes.

Despite these difficulties, project engineers are optimistic that the system will prove feasible both technically and economically.

250 in Washington EPA Advancement Program

A program to help employees qualify for higher job grades and pay and meet EPA's need for trained people is under way for about 250 workers in the Agency's headquarters components in the Washington, D.C. area.

It is called I CAN, an acronym for Insight into Career Advancement Needs.

The minority affairs staff of the Personnel Management Division, Charles S. Barden Jr., director, is responsible for I CAN. In a letter to all headquarters employees, Administrator William D. Ruckelshaus endorsed the I CAN program as an affirmative action toward achieving equal employment opportunities in EPA.

First step in I CAN was an individual skills inventory. All permanent employees through GS 7 were invited to fill out a simple questionnaire outlining their education, experience, job interests, and goals.

Out of 894 eligible employees, about 250 completed and returned the form, according to Elizabeth Stroud, I CAN coordinator.

More than half of these respondents have had personal interviews with Ms. Stroud or one of the other career counselors in the division, Dorothy Jones, Laurie May, and Kathleen Dillon. The interviewing, still in process, helps the employee decide on a "career ladder"—a tentative plan for additional study and training, to pursue career goals.

More than 100 employees will begin training courses under the I CAN program this fall at technical schools and colleges in the Washington area, Ms. Stroud said. Included in this number are 20 who will take beginning or refresher typing or shorthand and basic courses in office skills and English during the day at the Southwest Training Center at Fort McNair, four blocks from EPA's Waterside Mall offices, and at the Graduate School of the Department of Agriculture. The lat-

ter school's Individual Training Center uses teaching machines and programmed instruction materials, so the student can pursue his studies at his own rate and at times convenient to his office.

The I CAN program makes maximum use of the Federal Employees' Training Act, Ms. Stroud pointed out. It can help employees acquire skills beyond those needed in their present jobs.

"Suppose a clerk-stenographer wants to learn some aspect of automatic data processing," she said. "Although ADP training could not be utilized in her present position, the skill would have potential use in EPA. Therefore, the I CAN counselor might well recommend an ADP aptitude evaluation session and subsequent ADP training at the Agency's expense."

The I CAN counselor's recommendations are fitted to each individual and thoroughly discussed with the individual before being sent to the employee's supervisor for final approval. Training costs are paid by the program to which the employee is assigned.

Administrator Ruckelshaus expressed the hope that EPA regional offices and research centers would adopt similar programs, as the numbers of employees and the proximity of educational institutions permit. "Developing and implementing upward mobility throughout the Agency," he said, "can go a long way toward helping to meet EPA's manpower needs."

Flags Now Available

EPA flags are now available from the General Services Branch for regional offices, laboratories, and field stations that qualify under flag display guidelines issued last spring.

The flags display the EPA emblem on a white field and come in sizes for indoor, outdoor, and boat use.

RADIOACTIVE DEVICES FOUND IN FIRE DEBRIS

Two yard-long radioactive "needles" were recovered recently from a haystack of debris in a fire-gutted Las Vegas printing plant.

John Coogan, radiation safety officer at the National Environmental Research Center in Las Vegas; William Horton of the Nevada State Department of Health and Welfare; and Arthur Whitman of the Atomic Energy Commission's Nevada Operations Office, located the hazardous objects, using instruments and protective clothing provided by NERC-Las Vegas.

The devices were static eliminators designed to attract and drain away the electric charges that accumulate on paper as it goes through printing presses. Each contained 13.5 millicuries of americium-241, a radioactive isotope of the artificial element whose normal atomic number is 95. The isotope was incorporated in channel bars of stainless steel. Neither static eliminator had been installed on a press when the fire occurred, Coogan said. Each device was found intact, and tests at the Las Vegas laboratory showed there was no contamination of the wrecked print shop.

Two Worlds Seen Out of Balance

"The two worlds of man—the biosphere of his inheritance, the technosphere of his creation—are out of balance, indeed potentially in deep conflict. And man is in the middle. This is the hinge of history at which we stand, the door of the future opening onto a crisis more sudden, more global, more inescapable, and more bewildering than any ever encountered by the human species and one which will take decisive shape within the life span of children who are already born."

—Barbara Ward and Rene Dubos, *"Only One Earth"*

Administrator Visits the Nation's Last Frontier

Administrator Ruckelshaus and key staff members visited Alaska this summer to see environmental protection projects and inspect EPA's northernmost laboratories and field stations.



An Eskimo boy at Fairbanks greeted the visitors with cool curiosity.



At Wainwright, a village of 350 west of Point Barrow, Ruckelshaus inspected new water supply system and posed with Merritt A. Mitchell, left, of EPA's Alaska Village Program, and David O. Kagak, village clerk.



Bound for Prudhoe Bay, EPA officials flew over the forbidding Brooks Mountains along the route of the proposed trans-Alaska oil pipeline.



The midsummer sun drops low, but does not really set, on the Arctic Sea coast where oil has been discovered.

—photos by Philip Angell

Tahoe's Woes: Water Treatment Is Not Enough

Crystal-clear, mountain-rimmed Lake Tahoe, at an elevation of 6,225 feet in the Sierra Nevada range bordering California and Nevada, has long been considered an environmental paradise.

Now there's trouble in paradise.

Long before environmental protection became popular, efforts were launched to keep Lake Tahoe's water from contamination and premature aging. These included a series of scientific studies and engineering plans dating back to 1959, to:

- Install sewer systems throughout the Tahoe basin.
- Treat all sewage completely and carry all sludge and effluent away from the basin.
- Export all garbage and solid waste.

Despite these massive efforts, which already have cost about \$82 million, EPA Regional Administrator Paul DeFalco Jr. says the 22-mile-long lake is still in danger.

Testifying before a hearing of the Senate Subcommittee on Air and Water Pollution at Lake Tahoe in August, DeFalco said nutrients are entering the lake from land runoff, particularly from land disturbed by construction and real-estate develop-

ment. "Even the construction of water and sewer lines can cause environmental damage by increasing erosion potential," said DeFalco.

Communities at the south end of the lake are served by one of the most advanced sewage treatment systems in the world, built with Federal aid as a demonstration project. This plant provides tertiary or "polishing" treatment. Waste water from this plant is clean enough to swim in; indeed, it goes to a recreational lake on the Nevada side.

Altogether, DeFalco reported, the Tahoe interceptors, treatment plants, and export pipelines have cost \$32.4 million, \$14.7 million of which came from grants by EPA, its predecessor agencies, and the Department of Commerce. Collection systems costing \$49.6 million have been built with State and local funds. A proposed regional sanitation agency for the north and west portions of the Tahoe basin, scheduled for completion in 1975, will cost an estimated \$40 million additional.

Garbage, trash, and other solid waste in the basin is exported to sanitary landfills 15 to 30 miles away that are not in the Tahoe watershed.

Area air quality is better than the

national ambient standards, DeFalco said, but "may be significantly degraded if past growth trends in vehicle-miles and population are allowed to continue, particularly since Tahoe is an inversion basin."

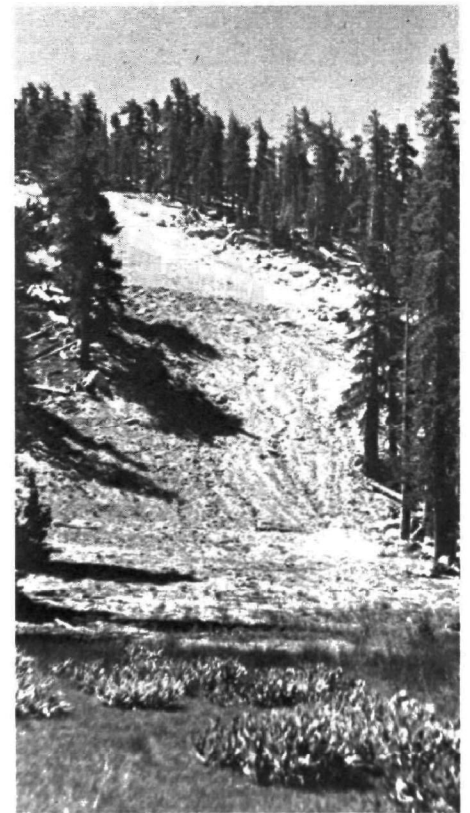
Two State air implementation plans administered through four air pollution control agencies affect the Tahoe area, he noted, and EPA has approved strict local regulations on smoke and construction dust, and open burning, and the use of single-chamber incinerators.

"Research indicates that significant amounts of nutrients in the form of nitrogen oxides from air pollution are contained in the rain-water which falls on Lake Tahoe," DeFalco said. "The automobile may pose the greatest threat to air quality, and the Tahoe Regional Planning agency (formed last December) should specifically consider the impact on air quality due to any increase use of the automobile in the basin."



—photo by Mike Arnold

Tahoe's waters are still clear and cold, but scars on the mountainside show where forest slopes have been slashed for the Heavenly Valley Ski Area.



—photo by Bill Thurston

Eroded ski run is due to careless bulldozing and short growing season.

Information Symposium Draws 1,600

More than 1,600 persons met last month in Cincinnati to discuss ways to deal with the information explosion in environmental matters.

We may already have a "substantial part" of the knowledge we need to protect the environment, Administrator William Ruckelshaus told the National Environmental Information Symposium. "Yet we don't have timely access to it because retrieval systems are uncoordinated or non-existent. There is as great a need to organize and manage information as there is to make new discoveries."

In his keynote address Ruckelshaus called for more openness in the handling and disclosure of environmental information, especially information used by industries or governmental bodies in making environmental decisions.

Such decisions, he said, "to be credible with the public . . . must be made in the full glare of the limelight. . . . We must lay our evidence on the table where it may be cross-examined by the technically informed and the public alike."

Some common themes emerged from the three-day meeting at which more than 75 speakers, moderators, and panelists took part. They were:

- The Symposium was only a first step, which must be followed up by further conferences at federal, state, and regional levels.
- An environmental information network of some nature is needed. (A similar recommendation was made at the UN environmental conference in Stockholm last summer.)
- EPA should have a large role in any national program to coordinate efforts to handle and make available environmental information.
- Referral activities — putting inquirers in touch with sources of



Selections from Documerica, EPA's photographic project to record the Nation's environmental problems and progress, were exhibited at the Cincinnati conference. It was Documerica's first showing outside Washington.

specific information—may be the most important current need.

- EPA must do more to provide environmental information in the forms needed by varying user groups.

Long hours of effort by EPA staffers lay behind the Symposium. Planning started about a year ago by a steering committee which included Ms. Sarah Thomas, library systems; Dr. Forest W. Horton Jr., management information systems; and the late Victor C. Searle, research information. Luther E. Garrett succeeded Mr. Searle on the committee.

Paid attendance was more than 1,400 (including 50 from foreign countries), representing five user groups: citizens, press and publications, industries and trade associations, researchers and professional societies, and government.

Members of the working committees included Dr. Andrew W. Breidenbach, NERC-Cincinnati director who was official host to the meeting; William J. Benoit, Joseph Cas-

telli, W. Ernest Minor, and Gilbert M. Gigliotti, of NERC-Cincinnati; and Frederick W. Lilly II, Willis E. Greenstreet, Morton H. Friedman, Mrs. Ruth Hussey, Ted Cubbison, Ms. Barbara Pedrini, and Ms. Dolores Gregory, all of the Washington headquarters staff.

Among the more than 75 speakers, moderators, and panelists were the following EPA officials: Thomas E. Carroll, Fitzhugh Green, Howard M. Messner, A. C. Trakowski, and Thomas T. Hart.

Fish Back in Canal

Five years ago the Suez Canal was a "dead" body of water. Oil and other discharges from the constant stream of passing ships caused so much pollution that no marine creatures could survive.

Then came the "Six-Day War" between Israel and Egypt in the summer of 1967. Ship traffic halted, and the canal has been blocked ever since.

Now, Flora Lewis reports in the *New York Times*, fish are flourishing in the waterway.

Lab on Wheels Takes to Air



—photo by Lou Resi

This truck-mounted water laboratory barely made it through the door of the Air Force C-124 transport last June during the floods that followed tropical storm Agnes. The lab was flown from Dayton, Ohio to the Wilkes Barre-Scranton airport with its EPA field crew: Lou Resi, supervisory microbiologist; William Stager, microbiologist, and Thomas Newman, equipment mechanic. They worked 15 consecutive days in the flood area.

Decision-Maker Workshops Slated

Plans for a continuing series of State workshops on water pollution control were made recently at a national conference in Annapolis, Md., sponsored by the Office of Water Programs Operation.

The workshops will be designed to acquaint local decisionmakers—mayors, city councilmen, city managers, and county officials—with the latest information on water pollution problems and control methods, with particular emphasis on the legal and economic aspects and the need for trained manpower.

More than 100 participants, two from each State, took part in the four-day National Decisionmakers Workshop along with representatives from EPA and other Federal agencies, industrial and consulting firms, and professional organizations in the water pollution control field.

In the keynote address, the pending amendments to the Water Pollution Control Act were outlined by

Richard A. Hellman, minority counsel to the Senate Public Works Committee.

Water pollution control represents one of the largest capital investments that local governments must make, the conferees were told. Decisions concerning this investment—for instance, to upgrade sewage facilities or to certify the capability of treatment plant operators—are often imposed on local officials who are already overburdened with other problems and plagued by arising costs.

The national conference reviewed the results of four pilot training projects for local decisionmakers already held in Missouri, South Carolina, Kentucky, and Maryland, with EPA assistance. The conference discussed how these pilot workshops could be improved and others held in other states on a continuing basis.

The conference was managed by Kirkwood Community College of Cedar Rapids, Iowa, under a grant from EPA.

'EVERY MAJOR ACTION' OF EPA IS CHALLENGED

"Every major action" of EPA is being challenged in court, Deputy General Counsel Allan G. Kirk II told a conference on environmental law in Washington, D.C., Sept. 22, but EPA welcomes the challenges.

The Refuse Act Permit Program to control industrial dumping in waterways "has been held up by" litigation for almost a year," Kirk said. "The auto makers have appealed our decision not to allow them until 1976 to meet (automotive) emissions standards. The pesticide makers have appealed the decision to forbid use of DDT, while the environmentalists have gone to court to make that decision effective immediately, rather than on the first day of next year.

"More than 60 lawsuits have been filed against us in connection with the approval of state implementation plans (for air pollution control). . . .

"Many of the suits dispute the adequacy of the evidence or the scientific analysis underlying a decision. . . . Challenges like this will be valuable to us as a test of our competence . . . and as a spur to do better where we are lacking. . . ."

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Sansom Revamps Water Office

Robert L. Sansom, assistant administrator for Air and Water programs, has reorganized the headquarters office for water pollution control, separating it into two components: Water Programs Operations and Water Planning and Standards. Each component will be under a deputy assistant administrator.

Eugene T. Jensen, formerly director of the Office of Water Programs, was named deputy in charge of Water Programs Operations, but he left the Agency at the end of September to become director of water quality and water resources programs for the Commonwealth of Virginia. Louis DeCamp is acting head of the component until a replacement is named.

The deputy in charge of Water Planning and Standards also has not been appointed, and until the post is filled the division directors

report directly to Sansom.

Four divisions under DeCamp and their directors include: Municipal Waste Water Systems, Ralph Palange; Oil and Hazardous Materials, Kenneth Biglane; Water Quality and Point Source Control, Albert Erickson; and Water Supply, James McDermott.

The Water Programs Office also will oversee a manpower development staff, responsible for arranging the training of treatment plant operators and specialists in water pollution control.

Three divisions in Planning and Standards include: Effluent Guidelines, Allen Cywin, director; Monitoring and Data Support, George Wirth, acting directors, and Water Planning, Mark A. Pisano, acting director.

Sansom also announced the formation of two supporting staffs in his own office, one for technical support to help assess the abatement and control potential of research developments from any source, and one for policy analysis to evaluate the interaction on air and water programs of other environmental developments, such as land use controls.

Test Plan Will Borrow the Car On a Big Scale

"Pop, can I have the car today?"

EPA plans to ask this question about 3,000 times during the next 11 months.

Owners of 1972 model cars and light trucks in Detroit, Los Angeles, St. Louis, Atlanta, and Philadelphia will be asked to lend their vehicles so EPA can test the efficiency of exhaust emission controls after the cars have been driven between 4,000 and 50,000 miles.

The vehicles will be selected from state registration lists and will cover 125 types in 24 engine classes typical of more than 70 percent of all 1972 models sold in the United States.

The two-day tests will be the same as those required for new car certification. They will be performed for EPA by three contractors.

What's in it for Pop?

He will get a \$50 savings bond and a rental car for the testing period.

RUCKELSHAUS'S YOUTH MESSAGE

The "role young people must play in the transition from mere concern for the environment to positive action in preserving and restoring it" was outlined by Administrator William D. Ruckelshaus in a message to the National Youth Conference on Science and the Environment last month in Chicago:

"First, every young person must believe that his efforts can make a difference, no matter how insignificant they may seem to him.

"Second, the student should consider a career in environmental work. His choice of specialties, like the need itself, is virtually unlimited.

"Third, an informed young generation should act as a catalyst to stimulate national awareness among citizens of all generations."



This exhibit on techniques and instrumentation for noise control, sponsored jointly by EPA and the National Bureau of Standards, was first shown at the Urban Technology Conference in San Francisco in August. It will be at Chicago's Museum of Science and Industry Oct. 23-Nov. 3, and the National League of Cities convention at Indianapolis Nov. 27-30.

Minnesota Lake Is Target for Restoration

An early test of rescuing a lake from premature aging is starting this month in Ely, Minn.

A \$2.3-million advanced treatment plant has been built—with 95 percent Federal funding—to remove phosphorus from the treated sewage waste water that Ely now discharges into Shagawa Lake.

The new facility will be operated as a demonstration project by EPA, at an annual cost of about \$575,000 for three years, after which it will revert to the city.

The Shagawa project is unique, according to Dr. A. F. Bartsch, Director of the National Environmental Research Center at Corvallis, Ore., because it is “the first attempt to restore a lake while continuing to discharge highly treated waste water into it,” rather than diverting the flow away from the lake.

The project culminates a study of Shagawa Lake begun six years ago by an EPA predecessor agency, the Federal Water Pollution Control Administration. This study included building and operating a pilot treatment plant, with floating test basins in the lake itself, to learn the effects of different degrees of phosphorus removal on the lake waters.

Project chief is Robert M. Brice, who will direct a staff of 30, includ-

ing 12 researchers from NERC-Corvallis and 18 operating people from NERC-Cincinnati. Ronald L. Morris of the Cincinnati group is plant engineer.

The 2,340-acre lake, whose waters flow north into Superior National Forest and the Boundary Wa-

ters Canoe Area, has deteriorated markedly in the last 70 years, in contrast to hundreds of other lakes in the vicinity. Ely is a gateway to the northern Minnesota lake country. Its permanent population of 5,000 swells to more than 20,000 in the summer months.

Las Vegas Facility Gets Third Name in 18 Months

SWRHL to WERL to NERC-LV!

That is the triple-play name switch undergone by EPA employees in Las Vegas in the last year and a half.

Early in August the laboratory complex employing 246 persons and occupying six buildings on the University of Nevada campus and various field facilities in the area was designated EPA's fourth National Environmental Research Center.

In a speech to employees announcing the change, Deputy Administrator Robert Fri said the change signified an upgrading of the Las Vegas facility's status in the Agency and an expansion of its mission.

Founded in 1959 as a radiological health laboratory of the U.S. Public Health Service, the center was long known as the Southwest Radiological Health Laboratory or SWRHL (pronounced “swirl”).

Shortly after incorporation into EPA in December, 1970, the name was changed to Western Environmental Research Laboratory, WERL (pronounced “whirl” to rhyme with the old name).

Now it is NERC (pronounced, if you want to pronounce it, “nerk,” with or without “LV” or “Las Vegas” tacked on the end), and it is on an organizational par with the other NERCs in Cincinnati, Ohio; Research Triangle Park, N.C.; and Corvallis, Ore.



'Mt. Trashmore' Taking Shape

Four years' worth of garbage and trash from Virginia Beach, Va., is covered with six feet of earth and has been landscaped since this photo was taken. An amphitheater facing the water will be built in the 60-foot hill's curve at upper right, and a Soap Box Derby coasting ramp at upper left.

The project was begun in 1967, supported by EPA funds as a solid waste management demonstration.

The new municipal park covers about 35 acres. Its curved hill is 900 feet long and 300 feet wide.