



Cleaner Times

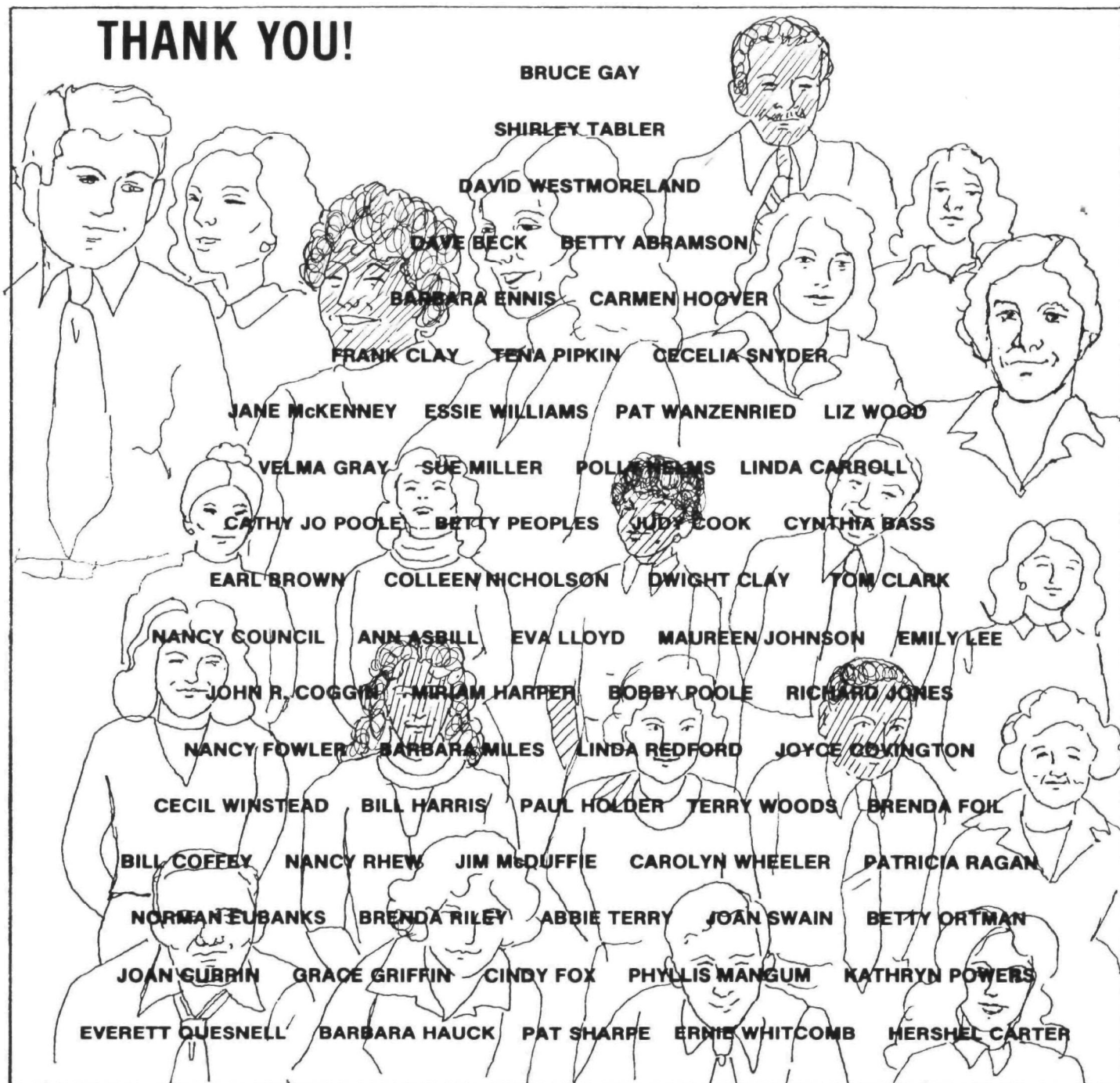


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THANK YOU!



Liz Martin, Dotty Rose, and Elaine Hyman want to personally thank the reporters, photographers, compositors, printers, artists, Word Processing Center and Forms and Publications Center for doing a great job throughout the year in getting out the "Cleaner Times." Without all of your help, this would not have been possible. We know we have pushed you at times, but you have always come through. So, from all of us, to all of you, MERRY CHRISTMAS, HAPPY NEW YEAR, and THANK YOU!

TOWARD A SULFATE STANDARD

by Dorothy H. Rose

Researchers realize that "pollution knows no boundaries," and that pollutants may go through a long series of chemical changes in their travels; changes that may intensify their adverse effects. Sulfates are a mixture of a number of substances some toxic, some not. They are a result of chemical changes and because they may be extremely harmful to human health, they merit attention.

How are sulfates formed? What are their effects on health? Where do they come from, and what is being done to control them?

According to reports by the Office of Air Quality Planning and Standards and the American Lung Association, sulfates are compounds of varying harmfulness found everywhere in the atmosphere. They are produced by nature as well as man. Where they are man-made, they can far outstrip nature's output in quantity and toxicity.

Most man-made sulfates originate from sulfur dioxide (SO_2) emissions, a gaseous pollutant whose control is required by Federal regulation. SO_2 by itself does not cause as much of an adverse effect on human health as this pollutant's secondary product, sulfate, which is formed from chemical reactions between sulfur dioxide emitted into the air and other substances already present. Sulfate is found in the air as particulate matter and can be measured as such.

HISTORY: In 1930 an air pollution tragedy occurred in the Meuse River Valley, Belgium, in which sixty people died and thousands became ill. Since that time scientists have been trying to identify the lethal components in the polluted air which caused that and subsequent disasters.

It is evident, even though the scientists' job is far from complete, that the episodes of heavy air pollution which resulted in illness and death involved sulfur oxide/particulate complex (SPC) components. There is a strong relationship between the SPC and severe effects on the respiratory system evidenced by the large number of people affected.

In London, levels of smoke (black particulate matter measured by degree of opacity) and SO_2 and their relationship to daily deaths and illnesses have been examined since 1958. By 1962 the controls mandated under Britain's Clean Air Act began to reduce the levels of these two pollutants.

HEALTH EFFECTS: Increasing evidence indicates that the following significant adverse health effects may be produced by long-term exposure to air containing high concentrations of sulfur dioxide and particulates: increased susceptibility to acute lower respiratory infections and decreased levels of lung function in both children and adults; aggravation of chronic respiratory disease; and an increased risk of chronic respiratory disease--particularly bronchitis and emphysema--in adults. Children, the elderly, people who smoke, and those with respiratory ailments are even susceptible to short term exposure.

Many studies involving children have been conducted over the years. These studies indicate that lower respiratory infections are consistently related to pollution and the frequency and severity of infection increases with the amount of pollution.

EPA has conducted a considerable number of epidemiologic studies in its Community Health and Environmental Surveillance System (CHESS) program. One study took place in four communities in Salt Lake City, Utah. This study involved approxi-

mately 9000 non-asthmatic children, almost 75% of whom had lived in the same community at least three years. All of the communities had similar particulate and nitrogen oxide levels but different levels of sulfur dioxide and suspended sulfates. Parents of children 12 years old or less were asked to fill out a questionnaire.

The study questionnaire asked about frequency of treatment by a doctor for pneumonia, croup, bronchitis, and other deep chest infections. It also ascertained family characteristics, smoking habits and socioeconomic status. The study indicated that, among those children living three or more years in the community of highest pollution, there was an increased incidence of total acute lower respiratory illness, croup, and acute bronchitis.

To corroborate the effects of SPC, scientists in HERL have been conducting studies using guinea pigs. The animals are first exposed to sulfuric acid aerosol (H_2SO_4). They are then, along with a control group of animals, exposed for four minutes to a streptococcal aerosol. The animals which breathed H_2SO_4 had an increased particle deposition in the respiratory tract when compared to animals which were not exposed to H_2SO_4 .

Increased viable or non-viable respiratory particle deposition due to sulfuric acid exposure may result in a more severe biologic response. Investigators have reported that sulfur oxide type air pollution was positively associated with an increased incidence of an illness characterized as the common cold. Epidemiologic studies of health effects of air pollution, in areas with predominantly sulfur oxide type pollutants, have continually reported that the principal most subtle health effects are increases in the (Continued on page 6)



WHERE THERE'S SMOKE....

It's not for everybody--just that very special person who yearns to be different and wants to make a special contribution. If you meet this description then we need you in the VIP Donor Club. The VIP (Very Important Platelets) Club is for special donors who pledge to schedule blood donations five times a year at the Durham Red Cross Blood Center. Members of this select group have appointments for their donations. This makes it possible for them to avoid delays.

Their donations are used primarily for the extraction of platelets. These platelets must be collected by 2 p.m. daily for those people who suffer from leukemia, cancer, and bone marrow failures of various types.

Of course, the other components are used for patients who need them. This makes it possible for a single VIP donation to help save the lives of up to four different people.

Having donated, you are already a special person--however, you can be a very special person by signing up for the VIP Club.

Call Elaine Hyman, your Local Recruiter, on extension 1321. I will be happy to discuss the particulars with you.

WHO IS THAT BEARDED FELLOW?



This Christmas celebrity wasn't always a jolly, generous elf. He was a Saint--St. Nicholas.

Known as the Bishop of Myra, he became the subject of many popular legends. His habits earned him honors as the legendary Bishop of

There's trouble for respiratory disease victims

Not everyone thinks the odor of burning leaves is heavenly. It can cause illness in individuals with respiratory diseases and, therefore, is in direct violation of state and local open burning regulations in residential areas.

Few people realize that nearly one-fourth of the materials burned in open fires is released into the air as air pollution. These pollutants include particulates (soot, dirt, dust), hydrocarbons (the major component of smog), carbon monoxide and other irritating gases.

Each year at this time, we remind area citizens of the health and fire dangers of burning yard wastes and of the benefits of alternative disposal methods such as composting. We are putting special emphasis on these reminders because the Research Triangle area experienced several inversions during the summer.

If backyard leaf fires were smoldering during fall atmospheric inversions, hundreds of tons of pollutants would blanket a residential area, irritating the eyes, nose and throats of healthy people and creating severe breathing problems for people who suffer from respiratory ailments.

Christian Charity. There's even a shrine built to him in Bari, Italy.

What bits and pieces of information there are available suggest that St. Nicholas came from a wealthy family but was an orphan. He shared his wealth with the poor and sick and devoted himself to the conversion of sinners and care of the poor.

Legend tells of his throwing bags of gold into homes where the people were facing starvation. One (Continued on page 4)

FORD SIGNS TOXICS CONTROL LAW

President Ford has signed the Toxic Substances Control Act, calling it "one of the most important pieces of environmental legislation that has been enacted by the Congress."

The Law, PL 94-469, gives the Environmental Protection Agency power to regulate all substances that may produce toxic effects.

Generally, the new law gives the EPA Administrator authority to:

- *Require industry to provide test data and supply detailed information on specified substances;
- *Prevent or limit the marketing of new substances which the Administrator believes harmful, and
- *Limit or ban the marketing of existing substances that are proven harmful.

In signing the measure, President Ford called it "a strong bill" and cautioned EPA to administer it in a manner to avoid "regulatory burden" and duplication of existing enforcement authorities under other laws.

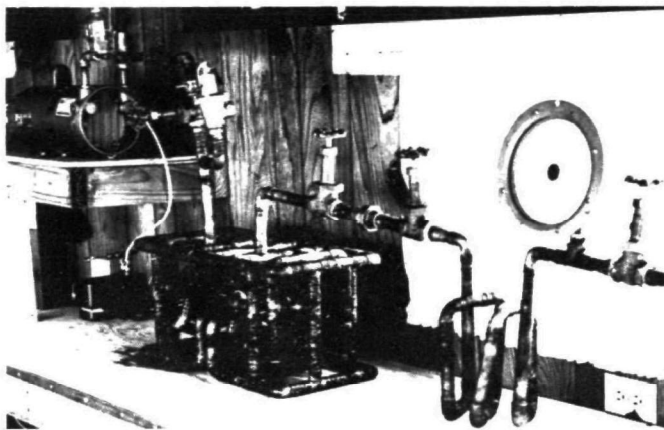
The White House says the new act should "minimize the risk of unknown hazards to health or the environment from toxic substances while permitting us to continue to reap the benefits which those substances can contribute."

SLANG

Working your way through the federal system of acronyms is now a simplified procedure. By using the new booklet, Selected Letter and Abbreviated Name Guide, you can quickly and easily translate anything from ALAPCO to OTLUP to QUAMIS to WSAP. The booklet was put together by Betty Abramson. She'll be glad to send you a copy and would also appreciate any additions. She's at MD-14.

THE HUFFING AND PUFFING MACHINE

by Elaine Hyman



"The Huffing and Puffing Machine," so named by Technician Frank Clay, is technically referred to as the Cryocondenser Sampling Collection System. The cryocondenser technique makes it possible for Dr. Phil Hanst and John Spence, ESRL, to observe extremely small concentrations of trace gases found in the atmosphere.

Air is pumped into the cryocondenser which has been immersed in liquid nitrogen. The outlet of the cryocondenser is kept closed while the air is driven in (the huffing action). Condensation takes place until the vessel is full, at which time pressure begins to rise and the

input pump is turned off. The oxygen and nitrogen are pumped out of the vessel (the puffing action), leaving a residue of ice, solid carbon dioxide (CO₂), and condensed trace gases. This procedure allows for infrared measurement of atmospheric trace gases such as freon 11 and 12, carbon tetrachloride, carbonyl sulfide, and hydrocarbons.

The procedure is repeated several times allowing for an accumulation of trace components. CO₂ and water are removed chemically before remaining residue is analyzed by infrared techniques.

EPA TOUCH FOOTBALL RESULTS

Second Week

Second week action was highlighted by the stunning 27-13 upset of Dinger's Ringers by the upstart Ken's Quickies. The Quickies connected on two fourth down touchdown passes to offset first half scores by the Ringers, then scored on an intercepted fumble early in the second half to take the lead for good.

The second game witnessed the revival of the Willies, who out passed, out ran and out cheated the error prone NERC-Offs in a 40-13 laughter.

Third Week

Ken's Quickies were stunned by the early antics of the NERC-Offs' Pete (the Gazelle) Gabele, but rebounded from a 7-0 deficit to grind out a 22-7 victory. The NERC-Offs "track meet" offense slowly disintegrated under the hard rush of the more physical Quickies, who methodically marched to their third consecutive win.

Dinger's Ringers recovered from their previous upset to pummel the Willies 40-12, but the Willies did stop the legendary Ed Dinger's touchdown per game streak compiled over three previous seasons. The Willies operated without star performer Doug Bell (no relation to Ricky) who was rehearsing his famous pole climbing act for the playoffs.

Next Month: Results of the Championship Playoffs and Bell's Telephone Pole

League Standings (10-31-76)

Team	Won	Lost	Pts scored	Pts allowed
Ken's Quickies	3	0	56	20
Dinger's Ringers	2	1	93	45
The Willies	1	2	52	60
NERC-Offs	0	3	26	102

ALCOHOL + DRIVING DON'T MIX

Information has been obtained concerning the alcohol consumption, biographical and psychological characteristics of drivers who are involved in highway crashes or citations. The most significant biographical variables are sex, age, marital status, and occupational level. Important descriptions of driving include previous crashes, citations, suspensions, experience, and exposure.

The highway is the scene of a significant portion of the accidental deaths and injuries in the United States. A large percentage of these are associated with the use of alcohol. The risk of a driver or pedestrian being involved in a traffic accident whereby alcohol is consumed increases precipitously with the increased amount of alcohol in the body.

Most people killed in traffic accidents after drinking have very high blood alcohol concentrations. It is known that many drinking drivers have a history of alcohol problems. Therefore, a focus on the relation of alcohol to highway safety will both reduce the highway carnage and identify problem drinkers who are in need of treatment.

~~~~~  
WHO IS THAT....(Cont'd from page 3)

of the most popular legends tells now he threw three bags of gold to three maidens to save them from a life of shame. It is this legend which spawned the habit of giving gifts to children at the feast of Saint Nicholas on December 6.

The Dutch form of his name is "Sant Nicolaas." In America, the English transformed this to Santa Claus and associated him with Christmas, the traditional English time of giving gifts.

Who says Santa Claus isn't real?

## REISSUE OF TWO-DOLLAR BILL



Secretary of the Treasury William E. Simon has announced the reissuance of the \$2 bill as a Federal Reserve Note, Series 1976. The new note was issued on April 13, 1976 (Thomas Jefferson's birthday), and features an engraving of Thomas Jefferson on the front and a rendition of "The Signing of the Declaration of Independence" on the back.

It is estimated that the new \$2 note will result in a savings of \$4-7 million per year in printing of \$4-7 million per year in printing of \$1 notes. The new \$2 note is expected to replace about one-half of the "ones" in circulation over a period of the next several years. The new note will be printed in sufficient volume, 400 million per year, to assure wide availability.

The two-dollar bill was first issued as U.S. currency in 1862, and in subsequent years the bills were issued under a variety of authorities as U.S. Notes, Silver Certificates, Treasury Notes and

National Currency. A relatively small number of \$2 notes were produced annually until August 10, 1966, when the Treasury Department announced that the printing of the bill would be discontinued.

"While the design of the new note is consistent with the nation's bicentennial," the Secretary added, "it is not solely a bicentennial commemorative, but rather the two-dollar bill fulfills a permanent and practical role in the use of American currency. Additionally, as two-dollar bills gradually come to be substituted for ones, fewer pieces of currency will need to be carried by individuals and small cash transactions will be greatly facilitated."

Secretary Simon stated that "the American people are the key to the success of this program. The reissue of the \$2 bill can add a new convenience to our currency system and help in reducing the cost of government."

### PERSONNEL CORNER

#### QUALITY INCREASES:

|                    |              |
|--------------------|--------------|
| Lloyd M. Hedgepeth | - OAQPS/MDAD |
| Thomas G. Dzubay   | - ESRL       |
| John C. Bobrowski  | - HERL       |
| Joan S. Bivins     | - OAQPS/MDAD |
| Betty G. Abramson  | - OAQPS/MDAD |
| Kathryn I. Aiken   | - OA/CMD     |

#### SPECIAL ACT OR SERVICE:

|                 |                |
|-----------------|----------------|
| Paul J. Lamothe | - ESRL - \$300 |
| Richard J. Paur | - ESRL - \$250 |

## NIEHS OFFERS COURSE

The National Institute of Environmental Health Sciences (NIEHS) is offering an Adult Basic Education Course, Monday and Wednesday from 3:00 to 5:00 p.m., Bldg. 10, Conference Room, for persons wanting to complete a high school education. Information can be obtained by calling Norman Eubanks at 549-8411, ext. 1321.

## SAFETY FIRST

Some OA employees have expressed a desire to use the tunnel at the ERC Annex for commuting from the Administration Building to the R&D Building cafeteria, especially during cold damp weather. The tunnel in question was designed to house steam lines, telephone cable, and electrical cable only. It runs from an air handling equipment room in the Administration Building to the Boiler Room, Beaunit R&D Building. It is not EPA space, and it is not safe for human travel.

So button up your overcoat and take a brisk 40 yard walk between buildings. You'll be much healthier and safer.

## JUST FOR THE ASKING

Recent speeches available in the Public Affairs Office include:

Russell E. Train, EPA Administrator:

"Who Owns American Wildlife"? Given at the Symposium on Wildlife and America, in Washington, D.C. on September 30, 1976.

Discusses the new toxic substances control bill before the American Public Health Association, Miami, Florida, October 21, 1976.

John R. Quarles, Jr., EPA Deputy Administrator:

"To Grow or Not to Grow--That is Not the Question." Given at the Fifth Annual International Pollution Engineering Congress in Anaheim, California.



"IT'S THE GIFT THAT  
KEEPS ON GIVING"



SULFATE...(Cont'd. from page 2)

incidence of asthma attacks, clinical symptoms of upper airway irritation and exacerbation of pre-existing illness in individuals with chronic obstructive lung disease, particularly chronic bronchitis.

TRANSFORMATION IN ATMOSPHERE: The formation of the components of SPC has not yet been completely delineated, however, the transformation seems to take place as follows: the basic step is the reaction of sulfur dioxide with oxygen to form sulfur trioxide ( $\text{SO}_3$ ). The process is slow in clean air but pollution speeds up the change. Thus, in the presence of nitrogen oxides, hydrocarbons, and sunlight this oxidation occurs more quickly. Even without the presence of sunlight, the reaction is accelerated through catalysis by particles of carbon on such metallic oxides as those of vanadium, iron, manganese, copper, lead, and aluminum. Once sulfur dioxide becomes sulfur trioxide it can combine immediately with any water vapor present in the atmosphere to produce harmful sulfuric acid.

Researchers in the Environmental Sciences Research Laboratory are studying these transformation processes as well as the sources of sulfur oxides and new and improved measurement methods.

How long either sulfur dioxide or sulfuric acid and sulfates remain in the atmosphere is not exactly known.  $\text{SO}_2$  is thought to remain from hours to weeks, the sulfates longer. Natural factors such as precipitation, wind speed and temperature can alter these facts. However, studies indicate that sulfur dioxide and its products may be transported hundreds of miles downwind from their source. The SPC's traveling ability is obvious from sulfate monitoring. Higher sulfate concentrations appear in the eastern portion of the U.S. than in other

parts of the country.

LOCATION. Sulfur Dioxide accounts for about 95% of man-made sulfur emissions. In the U.S., electric power generating plants are the source of about 55% of total  $\text{SO}_2$  emissions. These plants have been responsible for a rapidly growing proportion of sulfur dioxide emissions. While total man-made  $\text{SO}_2$  increased by 45% between 1960 and 1970, power plant emissions increased by twice that figure.

Lesser amounts of sulfur dioxide come from industrial processes, stationary source fuel combustion from other than power plants, and transportation. Automobiles contribute very little in the way of  $\text{SO}_2$  emissions, however, when autos are equipped with catalytic converters, some of the sulfur in gasoline is changed to sulfuric acid before it leaves the exhaust pipe, and the sulfuric acid can reach people in the immediate vicinity of highways, before diffusion can lessen its effect.

WHERE WE STAND: In view of the available data, EPA has stated that an air quality standard or other major regulatory program for sulfates is not supportable at this time. EPA believes that additional research is needed. Therefore, the Office of Research and Development is developing a comprehensive "Sulfates Research Plan" which will focus on improving monitoring capability to permit identification of particle size and chemical form of toxic sulfates, developing more complete health effects data, and characterizing the long range transport and transformation mechanisms. This research program will require several years to complete; consequently, it is doubtful that a comprehensive regulatory program specifically for sulfates could be initiated before the end of the decade.

Though currently available information does not now permit the

establishment of a comprehensive sulfate regulatory program, the information does suggest a need to minimize increases in regional sulfur oxides emissions as a means of preventing increased levels of atmospheric sulfates. In the interim, prior to the initiation of any comprehensive control program, existing regulatory options can be effective in limiting increases in sulfate concentrations. The "significant risk" policy for power plants ordered to convert from oil or gas to coal, the vigorous enforcement of state implementation plans for the control of sulfur dioxide and particulates and the increasing application of new source performance standards to power generating facilities are vital components of an overall strategy that should limit growth of ambient sulfate levels. EPA analysis indicates that these regulations and policies should prevent major  $\text{SO}_2$  emission increases through 1980 in the regions of maximum sulfate impact. Unless a sulfate or other new regulatory program is enacted,  $\text{SO}_2$  emissions increases are projected after that time.

EPA is currently involved in a suit brought by the Sierra Club in which they claim that EPA should set an ambient air quality standard for sulfates. Their argument is that EPA knows enough now to say that sulfates cause adverse health effects and must be listed as a criteria pollutant. EPA maintains that it does not know enough at present to list it as a criteria pollutant and that it is already indirectly regulating sulfates under existing standards for TSP and  $\text{SO}_2$ . Furthermore, EPA maintains that its Research Plan to study sulfates is a sufficient response to the sulfate problem at this time.

## WHITE MAN HAS LONG HISTORY OF WASTE

Back in 1855, Chief Sealth of the Dunwanish Tribe in the State of Washington wrote a letter to President Franklin Pierce. The city of Seattle took its name from Chief Sealth, and his letter probably makes the case for responsibility to the environment as well as anything else we have seen. To President Franklin Pierce:

"The Great Chief in Washington sends words that he wishes to buy our land. How can you buy or sell the sky--the warmth of the land? The idea is strange to us. Yet we do not own the freshness of the air or the sparkle of the water. How can you buy them from us? Every part of this earth is sacred to my people. Every shiny pine needle, every sandy shore, every mist in the dark woods, every clearing and humming insect is holy in the memory and experience of my people.

"We know that white man does not understand our ways. One portion of the land is the same to him as the next, for he is a stranger who comes in the night and takes from the land whatever he needs. The earth is not his brother but his enemy, and when he has conquered it, he moves on. He leaves his father's graves, and his children's birthright is forgotten.

"There is no quiet place in the white man's cities. No place to hear the leaves of spring or the rustle of insect wings. But perhaps because I am savage and do not understand--the clatter only seems to insult the ear. And what is there to life if a man cannot hear the whippoorwill or the arguments of frogs at the pond.

"The whites too shall pass--perhaps sooner than other tribes. Continue to contaminate your bed and you will one night suffocate in your own waste. When the buffalo are all slaughtered, wild horses all tamed,

the secret corners of the forest heavy with the scent of many men, the view of the ripe hills blotted out by talking wires. Where is the thicket? Gone. Where is the eagle? Gone. And what is it to say goodbye to the swift and the hunt, the end of living and beginning of survival."

## A CAR-FREE LIFE CAN BE CARE-FREE

According to the U.S. Census Bureau about 20 percent of American households already do without cars. The Highway Users Federation says Americans drove 5% fewer miles in 1974 and cut down another 4% in 1975.

The U.S. Dept. of Transportation will be allocating nearly \$12 billion over the next 5 years to boost mass-transit systems. Public transit ridership rose nationally for the first time in more than a decade last year. While Americans may not be abandoning their cars in droves, the benefits to living without owning a car, reports the Christian Science Monitor, could be substantial.

While air pollution goes down and we can breathe easier, our pocket-books and wallets could also swell.

One family estimated that it cost a minimum of \$1,750 per year in car depreciation, insurance, and parking to own a car. Another family cut their travel costs from over \$250 per month to \$100 a month when they sold their two cars.

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Liz Martin . . . . . Editor  
Dorothy Rose . . . . . Assistant Editor  
Elaine Hyman . . . . . Reporter

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## A BICENTENNIAL CHRISTMAS

This Christmas marks the 200th anniversary of one of the most famous battles of the Revolutionary War. On the night of December 25, 1776, Washington led 2400 troops across the Delaware River during a sleet storm and fell on the Hessian garrison at Trenton, capturing 1200 men with virtually no casualties. It was a glorious moment for the American cause, made even better by the subsequent success at Princeton less than two weeks later.

During this Bicentennial Christmas, everyone can remember that bitter night two centuries ago, and reflect on America's growth since that time. Those cold, tired, troops were ready to give their all to the American cause. Today, every citizen can contribute to the nation's well-being, and their own as well, by purchasing U.S. Savings Bonds for themselves or a perfect holiday gift.

Series E Savings Bonds are re-designed for the Bicentennial, carrying vignettes of the Revolutionary period on their face. They make great souvenirs and gifts for everyone, and they grow with the years at a good rate of interest.

In good times and troubled times, our citizens have traditionally lent their support to the American ideal through the purchase of government securities. There can be no better way to show faith in America this Bicentennial Christmas than to continue that tradition by buying Bicentennial-design U.S. Savings Bonds.



# BRAIN TEASER

by Frank Clay (Roving Reporter)

Ms. Jones, Ms. Othamar, Ms. Hanson, Ms. Nance, and Ms. Roush all went shopping one morning at Macey's. They bought a French oven, a lace tablecloth, oriental cookware, a yogurt maker, and a desk lamp. Each lady bought only one item and each lady went directly to the floor that sold the item that she bought. Everyone got on the elevator at the first floor except Ms. Roush. A man returning for his car keys that he had left in the bathroom on the third floor also got on the elevator, as well as a fat man wearing lipstick who had a rare baldheaded albino monkey on a leash with him. The elevator stopped at each floor, and no more than two people ever got off the elevator at any time. The only married lady in the group bought a lace tablecloth on the fourth floor, while the lady who bought the oriental cookware got off the elevator with the man who left his car keys in the bathroom. Ms. Nance got off the elevator with the fat man wearing lipstick who had a rare baldheaded albino monkey on a leash with him, while Ms. Jones had to leave the elevator all alone. If office supplies are sold on the first floor, yogurt makers are not sold on the fifth floor, and Ms. Othamar received the French oven as a birthday present, what did each of these women buy?

Answer: To find the answer, simply list the names of the women in a column in the order given in the problem; then, to the right of these names, list the names of the items in the order given in the problem. The item each lady bought will appear to the right of the lady's name. (NOTE: the first letter of each name and the first letter of each item will spell out the name of a famous stack-sampler.)

# PUT YOUR MONEY WHERE YOUR IS!

A woman cries uncontrollably for "no good reason." A little boy stares blankly at the wall, unresponsive to his surroundings. Over the past year or so a middle-aged businessman has had increasingly frequent episodes of what might be called "temper tantrums."

These hypothetical cases might be examples of an increasingly common illness in America--mental illness. Or, these behavior problems could have underlying physical causes. Only competent medical diagnosis could determine the real causes and treatment necessary.

If you're taking bets, though, you'd probably be safer betting on mental illness as the culprit in the above cases. Present statistics indicate that in the U.S. one person in ten will be directly affected by mental illness at some point in his life, either personally, through the illness of a member of his immediate family, or through the illness of a close personal friend.

The Durham County Mental Health Association, one of the two newest United Fund agencies, exists as an "advocate for the mentally ill" according to LUDIE WHITE, the enthusiastic president of the non-profit volunteer group.

The year-old organization, which boasts well over 100 members, is involved in two major areas, rehabilitation, and in-patient care.

To aid in rehabilitation, two social clubs have been organized to help patients recently released from Umstead through the sometimes difficult readjustment period. These two clubs currently serve approximately

40 former patients. There are some 700 after-care patients in Durham County alone. Association members can also be found assisting staff members of the two half-way houses.

The "adopt-a-patient-plan" is another project of the group. Through this program civic groups, church groups, or even individuals, are urged to adopt a patient at Umstead. For the church or civic group it means little more than remembering a birthday or an occasional visit, but for the patient it means they haven't been forgotten. Also, when and if the patient is discharged, the sponsoring group or individual helps the former patient readjust.

The biggest project for the association, however, is "Operation Santa Claus," a drive aimed at supplying Christmas gifts for patients of the eastern unit at Umstead (the Durham County unit). And, if successful, the drive will mean not only Christmas gifts but gifts for birthdays or Bingo prizes, too.

All kinds of volunteer talent can be utilized, said Mrs. White. One volunteer, a retired librarian, donates several hours a week in the Umstead library. Soon it is hoped volunteers can be found to staff a clothing shop at Umstead.

This, then, is an overview of just one of the United Fund agencies. Multiply this one agency by the 29 different organizations supported by United Fund and you'll have some idea of what your "Fair Share" means to someone who needs a helping hand.