

The Day They Shut Down Birmingham

by Patrick J. Sloyan

The federal government intervened for the first time in an air pollution emergency when it stilled the steel works and other industries of Birmingham, Alabama, for 31 hours last November 18. The episode stands as the only test of the new emergency pollution regulations and whether the Environmental Protection Agency, entrusted with carrying them out, can enter a city in crisis and effectively shut down its major polluters to save lives.

Like an environmental Little Rock, Birmingham now has to face the stigma of being the only city where federal muscle has been used to protect people from the imminent danger of being caught in their own poisonous refuse. But Birmingham is not the only city with hazardous pollution, nor the only one subject to the temperature inversions that can trap the gases in the atmosphere long enough for people to start dying. The fact that Birmingham came first is both an accident of nature and of local politics. There was a good chance the honor would have been

bestowed on Chicago a year earlier, and the way Chicago avoided the possibility of shutting down its industry puts Birmingham in more positive perspective. Chicago also makes it worth looking at Birmingham more closely, because Chicago proves that the EPA's ability to prevent pollution disaster is far from automatic.

"We had been keeping a close watch on Chicago air quality because we suspected the city would be reluctant to act in an emergency," said Darryl D. Tyler. Tyler directs EPA's Emergency Operations Control Center in Durham, North Carolina. His suspicions stemmed from the city's response to the pollution that blanketed Chicago with a blue to gray dome November 6-11, 1969. A high pressure system with a ridge of warm air aloft trapped pollutants usually dispersed by wind. Visibility was so bad at one point that O'Hare Airport was closed. Persons with emphysema were crippled. Influenza and bronchitis admissions at Cook County General Hospital increased 10 per cent. Thousands were afflicted with sore throats and eye irritation that caused redness and tears. "This is a crisis," said Dr. Bertram Carnow, professor of preven-

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tive medicine at the University of Chicago. But Chicago Mayor Richard J. Daley disagreed. "We shouldn't be alarmed and panic at the situation," Daley said.

After the weather cleared, some physicians said at least 100 persons died as a result of the five-day episode. Daley's Health Department denied the charge. Republican Governor Richard B. Ogilvie conducted a study of Democrat Daley's efforts to curb the pollution, and the state government concluded that the most notable Daley action was to suppress details of measurements of sulfur dioxide, the most dangerous pollutant in Chicago smog. "Much too little was done too late," said the Governor, who also threatened to withdraw Daley's authority to deal with his own city's pollution.

A month later, William Stanley resigned as Daley's air pollution administrator. "During the episode, we're sure the sulfur dioxide got as high as .62 parts per million," EPA official Tyler said. "That's very high. Some say it got to the emergency level—one part per million—but no one was sure. Then things started again in February, 1970. We saw air quality starting to deteriorate on Friday the 13th. It got worse over the weekend. There was no wind and the pollutants just hung in the air. On Monday, the 16th, our Chicago regional office reported high levels of sulfur dioxide. We didn't act then because the weather forecast predicted high winds to blow the pollution away. But then the forecast was revised—the wind would be delayed. We asked, 'What was Chicago going to do?' Chicago said it wasn't going to do anything because the weather would clear up the situation. We thought action was required then because the bad weather would last at least another day."

Tyler's officials in Chicago insisted that the new city air pollution control administrator, H. Wallace Poston, issue a public warning to "sensitive people." The warning would suggest

that persons with heart and respiratory illnesses remain indoors and refrain from all activities. "Poston refused," Tyler said. "Poston said they were afraid to alarm the public. So, we thought about taking steps ourselves. But first we wanted to get the latest information on pollution levels. The monitoring station was run by the city, and the man who operated the station had gone home. We sent our own man over to the station, but he couldn't get in. The city said they had lost the key." Tyler grinned. "We couldn't do anything until the next day," he said. "By that time, the wind finally did clear the smog away." Poston had a different version. "They wanted me to issue an air pollution alert and I said I would—if they would put it in writing," he said. "They never did, so I went home. I was new at the job and I wasn't going out on a limb."

The Interim Threat

Even without disastrous inversions which demand emergency action, air is harmful in most U. S. cities. On April 30, the EPA issued National Air Quality Standards, above which, scientists determined, there would be adverse effects on humans. The standards establish what percentages of the various kinds of pollutants—sulfur dioxide, carbon monoxide, nitrogen oxides, hydrocarbons, and particulates (dirt, soot, and dust), are permissible in the atmosphere of a specific area. There is still some debate whether the standards have too much or too little margin of safety.

The Clean Air Act of 1970 requires all states to implement plans to achieve these safe air levels by 1975. Most city and state air pollution officials dismiss the standards—and the deadline—as unobtainable goals. Pollutants in their cities routinely exceed these safe levels. But they are taking more seriously the EPA requirements that cities adopt "Alert," "Warning," and "Emergency" plans to head off a public health disaster with the onset

of an inversion. So far, 20 cities have adopted such plans, which involve everything from simple bans on open burning at the "Alert" stage to a complex shutdown of industry and automobile traffic during an "Emergency." All states and cities must have adopted approved disaster plans by January 31, 1972, or the EPA, by federal law, would do it for them. Only four states failed to meet the deadline, and their plans are nearing completion.

Until the long-range standards actually start reducing overall pollution, Tyler's Emergency Operations Center must deal with the interim threat. "Birmingham is the sort of thing the Center will be involved in the next few years," he said. "What we watch for are high pollution levels associated with a developing weather situation that could lead to an inversion. (An inversion is a high-pressure system with a ridge of warm air that traps pollutants into a city's atmosphere.)

Since 1967, the federal government has had authority to seek court orders to enforce pollution controls during such an emergency. But it was not until 1971 that the EPA devised a system to withstand a federal district court judge's conditions for issuing a temporary restraining order stilling the economic heartbeat of a city. A key element of the EPA guidelines is identification of pollution levels considered dangerous. They are:

	Alert	Warning	Emergency
Sulfur dioxide (in parts per million for a 24 hour average)	0.3	0.6	1.0
Particulates (in micrograms per cubic meter for a 24 hour average)	375	625	1000
Carbon Monoxide (in ppm for an 8 hour avg.)	15	30	50
(4 hour avg.)			75
(one hour avg.)			125
Oxidants (in ppm for one hour avg.)	0.1	0.4	0.7
(8 hour avg.)			0.4

These levels are based on scientifically established relationships between pollution and adverse effects on human health as defined by the EPA. None of them can cause a normal, healthy adult to die. "But these levels—the alert, warning, and emergency levels—compromise your ability to withstand other illnesses that may cause death," said Dr. Carl M. Shy. Shy is deputy director of health effects research for the EPA. "Even if you are a healthy adult, these levels will cause respiratory problems—shortness of breath, coughing. In the case of oxidants or ozone, they are very toxic. They can cause your eyes to water, and if you breathe heavily, they can produce chest pains. It is even worse for a significant portion of the population with asthma, emphysema, or other respiratory problems. And carbon monoxide in these concentrations greatly increases the chances of a person with a bad heart to suffer heart failure."

The most important aspect of the guidelines is that they are sanctioned by federal law. They give pollution control officials a clear-cut legal platform to act in an emergency. In combination with a weather forecast of an inversion or similar stagnation lasting at least 12 hours, any one of the pollutants reaching the danger levels at a single monitoring station in a city should trigger the start of abatement plans. "You just can't get on top of a tall building and yell 'Shutdown, shutdown,'" said Tyler. "The main thing is to prevent an episode from reaching the 'Emergency' level. You can be sure people will start dying then. To prevent this, you've got to know where your pollution is coming from ahead of time so you can stop it quickly."

Leprous Hippocrates

Visitors to Birmingham will soon be able to ride up to the head of the 55-foot, cast-iron statue of Vulcan, the mythical god of the forge, perched atop Red Mountain. From Red Moun-

tain, there is a view of the ridges that surround Birmingham and most of its 750,000 residents, who live below on the floor of the Jones Valley. The steel industry is generally situated on the west side of the city. On most days, the wind carries the smoke from the mills from the west to the northeast and it seems to hang over North Birmingham.

The statue of Vulcan, which symbolizes the steel industry, wears a coat of aluminum paint to protect it from the valley air. The air is laden with visible and invisible bits of dirt, carrying lead, cadmium, steel, iron, brass, and other pollutants. According to the EPA's 1975 "safe" air standards, particulates should not exceed an annual mean level of 75 micrograms per cubic meter and, on a daily basis, should not be above 260 more than once a year. Between June 18, 1970, and May 1, 1971, particulates exceeded the 260 level for 54 days in Birmingham. The city's annual mean level was 162, with a daily average in downtown Birmingham of 195. It is worse in North Birmingham, a densely populated poor and lower-middle-class neighborhood. There, a particulate count of 500 is common and the annual mean is 287.

Even on the hottest days in North Birmingham, families keep windows and doors shut. The air attacks house paint, automobile finishes, and soils the wash hung out to dry. No one who combs his hair and looks at the grit on the comb teeth resigns himself to the quality of Birmingham air. No one just "lives" with soot that seeks out crevices in the eyes, ears, mouth, and lungs. The air is impossible to ignore. It is a celebrated topic because it does such things as eating a concrete highway bridge down to the reinforcing rods. When a marble statue of Hippocrates, donated by a Greek beer distributor, was unveiled for the opening of the University of Alabama Medical Center, faculty members debated whether it would take five or 10 years before the air made the features of the first physician unrecog-

nizable.

Hippocrates, too, symbolizes Birmingham, the new metropolis that is proud of its All-American City Award from the now-defunct *Look* magazine. The university medical center will soon occupy 60 blocks downtown. One member of the faculty, Dr. Abraham Russakoff, a professor of clinical medicine, has been concerned about lung ailments during his 25 years in the city. "It's bad, the air is very bad," Russakoff said. "I did a three-year study with a computerized lung function lab, an emphysema test. We'd go from neighborhood to neighborhood testing people well enough to be walking around. In the cleaner neighborhoods, we found only 11 per cent of those tested had a significant, measurable impairment in their ability to breathe. But in North Birmingham, it was 30 per cent of those tested. Auburn University did a study showing that Birmingham people have lung disorders at double the rate of rural people in the state. The recorded death rate from emphysema has increased 200 per cent in the past 10 years. All these things don't prove the air in Birmingham is killing people. But it's a factor, isn't it? Now, I'm not connected with the unions or the companies, but I tell you the air in this town is bad, but it's even worse inside the mills. Those are the guys I feel sorry for. U. S. Steel won't let you go inside to survey their plants to find out what we need to do to protect workers. U. S. Steel is hard to believe."

Dr. Russakoff is part of a growing segment of the Birmingham scientific community engaged in a war against pollution. Another is Cameron McDonald, a graduate student seeking a doctorate in biochemistry. She is an organizer and president of the Greater Birmingham Alliance to Stop Pollution (GASP). Most GASP members are medical students. "U. S. Steel," she said, "is really owned and directed by the people in Pittsburgh, and they just won't do anything about the air in Birmingham."

Blaming the Pollen

U. S. Steel is the largest single employer in Birmingham with a payroll of between 11,000 and 14,000 workers, depending on demand for steel products. At plants in the Birmingham suburbs of Fairfield and Ensley, U. S. Steel produces three to four million tons of steel each year. With raw materials from South America, it makes wire, nails, flat roll, and a variety of other products. The company's stacks for 15 furnaces, boilers, coke ovens, incinerators, and other equipment are the highest in the city and second only in size to Birmingham's 30-story office buildings. There is not a single precipitator or other pollution-control device on U. S. Steel equipment. Most of the mills are old, inherited from its predecessor, Tennessee Coal and Iron.

Because U. S. Steel will not permit scientific measurement of its emissions, its total annual output of particulates is unknown. But the Jefferson County Health Department, which services Birmingham, estimates that the company is responsible for 35 to 50 per cent of the 162,810 tons of particulates from industrial sources in the city each year. According to U. S. Steel, however, it is not involved. Earl W. Mallick, U. S. Steel vice president for the South, has offered a variety of reasons to Birmingham about the city's air quality. Mallick holds an engineering degree from Northwestern University and a law degree from Harvard Law School. His most celebrated explanation was to a Birmingham high school class. Mallick told the class that the particulates being measured in the air were merely pollen. But he scrapped that explanation after Dr. Russakoff, in a public reply, agreed, but noted that someone was apparently turning off trees and flowers on weekends when the particulate count dropped. Mallick then settled for simplicity. "We are only a minor factor in air pollution in Birmingham," he said. This was his standard

reply to questions from members of his Presbyterian church (he is an elder), the Chamber of Commerce, the Associated Industries Council, and a variety of other groups where he was president, director, a member of the executive board, or an active member.

U. S. Steel was also active in the state legislature's consideration of a pollution control bill in 1969 which emerged so weakened that EPA's predecessor, the National Air Pollution Control Administration, refused to approve the plan. But after an April, 1971, pollution crisis in which EPA requests for a voluntary industry shutdown in Birmingham were mostly ignored, especially by U. S. Steel, there was sufficient statewide controversy that the legislature considered another pollution bill. Shortly before the issue was decided, U. S. Steel announced it would install \$12-million worth of pollution control devices at its Birmingham complex. Despite the announcement, the legislature approved what is now considered one of the toughest pollution control bills in the country. The major provisions, however, could not take effect until Governor George Wallace appointed a commission, which would in turn elect a director who could carry out the emergency powers. Wallace had not made the appointments by the October, 1971, deadline.

Little more than a month later, a high pressure system with warm air aloft began enveloping the Jones Valley. On Friday, November 12, it became an inversion. The same day, Dr. George Hardy, Jr., director of the Jefferson County Health Department, issued an advisory: "Persons with a history of heart or lung disorders are advised to remain indoors as much as possible and to avoid unusual exertions." According to Hardy, the warning was lifted Saturday because a weather forecast said a cold front would soon sweep away the polluted air. Instead, a storm in the Gulf of Mexico stalled the front.

Hardy was anxious for the results from the city's six air-sampling sta-

tions when he arrived at work Monday morning. Oddly, all the electric motors that operated the sampling devices at the four most important stations had failed sometime Sunday. By Monday afternoon, they were repaired and some additional stations were set up in other locations. At 2 p.m. Monday, the National Weather Service issued an Air Stagnation Advisory, predicting the inversion would hang over Birmingham at least another 24 hours.

Voluntary Non-Compliance

At 7:45 a.m. the next day, Charles Sellers walked to a windowless white trailer on the Sears, Roebuck and Co. parking lot. Sellers is a chemist for the EPA, the man Tyler assigned to Birmingham after the April episode. He removed filter No. 480 from the particulate monitor inside the trailer. The 8-by-10 filter, white the afternoon before, was now black. His analysis showed 397 micrograms per cubic meter, above the 375 first-stage level for an EPA air pollution "Alert." A similar filter in North Birmingham showed a particulate count of 771, above the second-stage "Warning" level of 625. Sellers telephoned Tyler in Durham. "We'll keep an eye on the situation and see if the local people can work it out," Tyler said.

For the time being, the episode was in the hands of Dr. Hardy, but Hardy was still without any legal authority. The health warning and weather predictions in Birmingham had come to the attention of Governor Wallace in Montgomery, and on Monday, Wallace appointed members of the air pollution control commission. But the commission had no time to meet and elect a director who would have the emergency powers county health director Hardy and Birmingham now needed.

The same day, two hours after the 8 a.m. reading of the particulate count, Hardy formally declared an air pollution "Alert." He and his staff telephoned 23 companies believed to

be the major sources of particulate pollution. "We're simply asking them to take immediate steps on a voluntary basis to reduce emissions," Hardy said.

By 3 p.m. on Monday, Hardy was getting results from particulate filters put in place 24 hours earlier. In North Birmingham, the particulate count was 722. At 4:30 p.m., Hardy moved the episode up a notch by formally declaring an air pollution "Warning," for Birmingham. At the same time, his staff began preparing a formal letter to each of the 23 companies, asking them to make significant reductions and maintain them until the "Warning" period ended. "Specifically, we suggest a reduction on the order of 60 per cent. We also ask for a report in writing within the next 24 hours on the nature of the action taken and the estimate of the amount of reduction which could be expected," Hardy said.

Wednesday dawned somewhat clearer. Sunshine warmed downtown Birmingham and a gentle ground breeze had removed the normal morning haze. There were bits of blue sky. In North Birmingham, the 8 a.m. reading for the previous 24 hours showed a particulate count of 758, down slightly from Tuesday morning, but higher than the Tuesday afternoon reading. The National Weather Service, in a 9:30 a.m. forecast, said the inversion would last another day. The air pollution "Warning" for Birmingham continued.

At 10 a.m. on Wednesday, Paul Pate, an engineer and director of the county Health Department's Environmental Bureau, began telephoning the 23 companies to check on their pollution control efforts. "A majority—19—of the industries contacted assured us they were making reductions ranging from 20 to 90 per cent," Hardy said. "In view of our request for 60-per-cent reduction, it is difficult to classify anything under 20 per cent as a significant reduction. By this standard, four of the industries have not assured us of any significant re-

duction.” The largest of the four recalcitrant firms was U. S. Steel. The top man at that company was gone. His public relations man, Dane Harris, said no one knew where Mr. Mallick was, what he was doing, or when he would return. With U. S. Steel refusing to make a significant reduction, Hardy’s efforts produced at best only a 15 per cent reduction in particulate pollution in the Jones Valley. U. S. Steel was involved in business as usual.

The Feds Arrive

EPA headquarters in Washington had been studying since Monday both the pollution and the politics of the Birmingham episode. Nixon, of course, is worried about the threat of Governor Wallace in the 1972 presidential election. Wallace could look bad if Nixon had to step in and deal with a purely Alabama problem. On the other hand, potential voters could be riled by federal intervention—the sort of thing Wallace was famous for blocking. But there was not a whimper of protest from Montgomery. The final decision by the Nixon Administration for whatever federal action necessary, despite obvious considerations, appears relatively free of politics. EPA Administrator William D. Ruckelshaus sent his own representative to Birmingham after learning that voluntary compliance efforts had failed. But Ruckelshaus left the main job to the EPA regional office in Atlanta and Tyler’s Emergency Operations Center in Durham.

Ruckelshaus’ man was Robert L. Baum, EPA assistant general counsel. Baum, from Rockville, Connecticut, speaks with an accent that is a cross between New York and New England twangs. “What is going on here?” he asked. In Birmingham Wednesday afternoon the visibility was substantially better than it was in Washington, D. C. He walked immediately to the National Weather Service office at the Birmingham airport. There was Tyler, the EPA official, who had just

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all together

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arrived by a Coast Guard plane his agency keeps on standby for such missions. With Tyler were a meteorologist, a physician, and an engineer familiar with steel mills. "The weather may start to clear very slowly tonight," Tyler said. "The cold front is barely creeping. The best outlook is that the air will remain pretty stagnant tonight, but that front could be here tomorrow afternoon. You can't be sure." They were joined by John C. White, a southerner with the EPA Enforcement Division in Atlanta. It was agreed that White's southern drawl would make him the EPA spokesman in Birmingham.

The EPA caravan arrived Wednesday afternoon in two cars at the Jefferson County Health Department where it seemed to be a balmy fall day. Baum craned his neck to look at the blue sky. Inside, they were in time for a 4:30 p.m. news conference. When the television cameras from the local stations were ready, Dr. Hardy read a two-and-a-half page statement, summarizing the week's events, including the arrival of EPA's delegation. His statement ended with the naming of U. S. Steel and the three other companies who had failed to make a significant reduction on a voluntary basis. Was U. S. Steel acting in the interest of public health, an out-of-town reporter asked? "I would say certainly not," Hardy replied. Then White began answering questions directed at the EPA. White emphasized to reporters that Hardy and Jefferson County had not requested EPA action. In the same breath, White noted a request for aid was not needed for EPA to intervene. "But we're still looking at the facts and we haven't made a decision," White said. The news conference ended and Hardy and the EPA delegation moved to a another room in the health department.

"A lot of people," Tyler said, peering into the meeting room. "That's always bad. The weather is a problem, too. It could start breaking up tomorrow afternoon or earlier.

You have to think about these things when you're planning to ask a judge to shut down a city's industry." Baum was having difficulty determining to what extent companies had complied. Hardy's request for a 60-per-cent reduction in emissions was meaningless. "You can't police such a thing or even estimate what the company is doing on a percentage shutdown basis," Baum said. Shortly before 6 p.m. Wednesday, the meeting settled its doubts. "We're going to go," Baum said, sucking in a deep breath.

Paul Pate, director of the county health department's environmental bureau, sat in Hardy's office, waiting for the health director to finish telling the citizens of the county health board what EPA intervention would mean to Birmingham. Pate was watching Wendell Harris of WAIP-TV, an NBC outlet, present the evening news on Channel 13. Hardy flashed on the screen, reading his statement about the companies refusing to comply. Hardy's specific criticism of U. S. Steel was cut out. Instead, the firm's public relations man, Dane Harris, appeared next. Harris stressed that U. S. Steel was responding to Hardy's pleas. "Of our 15 furnaces, only eight were operating today," Harris said. Pate shook his head. "Now, listen to that," Pate said. "He didn't mention that U. S. Steel has been running at 60-per-cent capacity, meaning there haven't been any 15 furnaces running for some time. I don't think they shut one furnace. But they get away with that kind of sly talk all the time. They got terrific clout in this town." A tall, muscular man walked in and handed Pate a letter that explained that U. S. Pipe had only curtailed emissions by 20 per cent. He was Donald Saltsman, vice president and secretary of the firm. He was upset. "We can't have a 60-per-cent reduction unless we shut down completely and lay off 1,600 workers," Saltsman said. "I was up to an EPA meeting in Atlanta and Ruckelshaus said shutdowns would come only as a last resort. Now look at this. They're trying to make an

example of Birmingham." Saltzman got into an elevator just as Hardy emerged from his meeting.

"Right now, during this, you can't be sure what is happening," Hardy said. "We did have eight deaths from respiratory causes during the episode last April. You get a lot of kids brought to the hospital coughing and gagging. You know the emphysema cases can't move even during normal weather. We tell the emphysema victims to move out of the area. I couldn't document it on the witness stand, but I'm certain right now that the air out there is causing serious illnesses, even death. What's really going on? I don't know, but I'll tell you this—we're not going to wait until the bodies start dropping. I'm sticking right with these EPA guidelines until this is over. We're not going to wait until we get a body count. And, that's more than some cities will do. That's why I think it is unfortunate that Birmingham will suffer from the publicity when the problem certainly is not unique to Birmingham. This city is facing up to its problems. No smoke, no jobs—that just doesn't sell here anymore." Hardy felt the night air and it was crisp. He stopped and looked around. "My God, it's clear. Look at those stars."

Telling the Judge

By 9 p.m. on Wednesday, EPA headquarters was situated on the second floor of the Federal District Court building. Tyler was pacing the floor of an office with smudged beige walls. "The judge says he won't meet with us tonight," Tyler said. "He wants us to wait until the morning when he has his law books handy. We can't wait until then. The problem is now and we must act now. If we wait, those plants will be going full blast again." In the corner of the office, someone asked who the judge would be. The reply was shouted from the adjoining office: "Pointer—Sam C. Pointer," said a voice. "When Nixon appointed him, Wallace said he didn't

have the brains to judge a chicken thief. He's young and conservative. If I know my judge, when we show up at his home tonight, he'll say no." Tyler hesitated, then said, "Talk to him again." They waited. It was muggy. The air conditioning was off. Newspapers littered the desk. The story, in the *Birmingham News*, was on the very last page. It was brief, apparently written early Wednesday morning. The early edition of the Thursday morning newspaper, the *Birmingham Post Herald*, had no story at all. Tyler seemed to study a front page box, the weather forecast, which said it would be colder and windy on Thursday with a cold front moving through the city Thursday afternoon or early evening. "The judge says okay for tonight," shouted the voice in the next room.

Judge Pointer lives in Mountain Brook, across Shades Mountain from the Jones Valley. So does Mallick of U. S. Steel, and anyone else who is white and has enough money to afford a home in the suburbs free from the city's pollution. The particulate count in Mountain Brook rarely exceeds 80 micrograms per cubic meter. Pointer was dressed when the EPA delegation arrived before midnight. The local U. S. District Attorney, William Mallard, handed him the documents, including a formal complaint requesting a temporary restraining order against 23 companies in Birmingham to halt their pollution.

The order listed specific steps U. S. Steel and the other major firms would have to take to limit particulate pollution. Nothing in the order required or anticipated a complete shut-down of all facilities. Pointer was also given three affidavits. One dealt with the fact that air was stagnating over Birmingham. A second reported the particulate counts from the city sampling stations. A third, signed by Dr. Douglas I. Hammer of Tyler's EPA staff in Durham, concluded that the air in the Jones Valley was now an "imminent and substantial endangerment to the public health." Pointer

was also told that the state of Alabama and city of Birmingham were unable to deal with the crisis.

The judge seemed most concerned about possible damage to industry equipment. After extensive questioning of Tyler's staff, he was assured that no harm would come to the 40-year-old furnaces at U. S. Steel and other Birmingham mills. At 1:45 a.m., Thursday, November 18, he signed the temporary restraining order and scheduled a hearing for 9 a.m. Friday.

The EPA delegation crammed into their two automobiles and sped back to the courthouse. The first of the firms telephoned was U. S. Steel. The message was the same to every company contacted in the next few hours—failure to comply with Pointer's order would result in contempt of court citations against the corporate violator. Contempt penalties are flexible. The judge could decide on anything from fines to jail sentences for representatives of the firm. A U. S. Marshal would formally serve the court order later in the morning.

By 3:15 a.m., EPA officials Baum and White were sitting in the Krystal Kafe. Baum was staring at a puddle of yellow butter in what looked like a heap of mashed potatoes next to his eggs. "They's grits," White explained. Also at the counter was Leon Billings, clerk of the Senate Subcommittee on Air and Water Pollution. Billings is adviser on pollution matters to Senator Edmund Muskie, who is the subcommittee chairman and was the chief Senate sponsor of the Clean Air Act. Billings was in Birmingham as Muskie's man, keeping tabs on the performance of the Nixon Administration and Baum. Billings had done most of the drudgery aides do in getting such a law through Congress, and now, he was exhilarated after a night of watching his handiwork. "I can't believe it," Baum said. "I just can't believe it. We've implemented the Clean Air Act." When the three had stepped outside the diner, the air had a noticeable chill. The wind rolled a newspaper page along the middle of

the street. "No," Billings said to the wind. "No. Stop."

Stilling the Stacks

A wisp of gray smoke was coming out of some of the stacks, but most of them were quiet at U. S. Steel's Fairfield plant at 8 a.m. Thursday. Television crews were on hand to film U. S. Marshal Johnny M. Towns stalking into U. S. Steel's headquarters with Judge Pointer's detailed orders. "This is the first time the security guards haven't tried to run us off," said John V. Jones, a reporter with WBMG-TV, a CBS outlet. "They're usually after us when we're here to film the junk just boiling out of the stacks." U. S. Steel did not await the formal order. Within six hours after the phone call advising of the court order, the company had curbed mill processes that account for 35 to 50 per cent of the particulates in Birmingham air. Workers who had been told to go home that morning hung around the gate talking with reporters. None of these members of the United Steelworkers Union seemed upset about the mill shutdown. "Figure we're going to choke to death before we starve to death," said E. B. Rich, who worked for U. S. Steel for 15 years. He is now a union official. "About time they started cleaning up these stacks and such. I've got three girls—three, eight, and 13—and they're always getting eye, ear, and throat infections. I asked the pediatrician if it was the air. Says it didn't help. Now, we got about 8,000 or 9,000 members who lost time because of this shutdown. About 4,000 U. S. Steel men lost time. Maybe a day, day and a half. I don't know how much pay. Contract says they can tell us to go home if something happens that is beyond the control of the management. We figure this wasn't beyond the control of management. Precipitators is old stuff. They know how to put precipitators on those stacks. Doing it in Chicago. U. S. Steel got a plant down in Texas and it doesn't

have any pollution that you can see. We figure they're going to have to pay us for lost time because it wasn't beyond their control."

Rich and other officials and members of the Steelworkers local in Birmingham reflect the union's concern about pollution. For the past two years, the Steelworkers headquarters has been conducting an intensive pollution-education program for members. Howard Strevel is the president of the Birmingham local, representing 24,000 members. Strevel summed up the closure of Birmingham plants this way: "For the first time, even the economic excuse for despoiling the air has been made meaningless."

"This is our toughest decision," Baum said. He was attending a 3 p.m. meeting at the health department. "Should we keep the order in effect and wait until Friday morning's court hearing or move to have the order dissolved this afternoon?" The 8 a.m. particulate reading for the previous 24 hours in North Birmingham was 410 micrograms per cubic meter, below the "Warning" stage but still above the "Alert" level. It did not reflect the reduction ordered by Judge Pointer. A better picture of the particulate count was expected from the 2:30 p.m. reading. The EPA session was temporarily stunned when it was even higher, at 461, but a technician explained it was probably due to shifting winds.

Thursday had turned into a sunny, windy, and clear day in Birmingham. The inversion was in the process of breaking up. Weather balloons showed improved vertical mixing, permitting pollution to escape into the upper atmosphere. The National Weather Service predicted the last vestiges of the stagnant air would be removed with a cold front due to pass through the city that afternoon. "People are losing money—the workers and the companies," Baum said. "If we get the order lifted this afternoon, the companies would have time to call in their Friday morning shifts." Baum now turned to Robert A. Kornasiewicz,

Tyler's meteorologist. "Can you guarantee me that cold front will be here this afternoon?" Baum asked. "No," said Kornasiewicz. "Well," Baum said, "then the order stays on." Outside, Baum looked upward. The sky was a brilliant blue. He shook his head and kept walking.

The cold front, windy and rainy, did not move through Birmingham until Friday morning. The worn white marble steps at the courthouse glistened. A small band of livid corporation lawyers marched up them for the 9 a.m. hearing in Pointer's courtroom. It was an unruly hearing. Most of the attorneys did not identify themselves, obviously, because the judge knew who they were. Particularly the lawyer who could not understand "how you did this without consulting me." Another said it was all "terribly damaging to the community." A fourth bobbed up and said it was, "unthinkable." Most of the lawyers were neighbors of Judge Pointer, all residents of Mountain Brook. Included was the lawyer who called the whole affair an "advertisement of a crisis grossly overstated and temporary at the most." U. S. District Attorney Mallard spoke: "Now with improving atmospheric conditions, our medical and pollution experts believe the emergency has passed. We request the order be vacated." Pointer nodded. "The temporary restraining order is dissolved," he said. The lawyers scrambled from the courtroom to telephone their clients. After 31 hours of pollution control, U. S. Steel and the other firms resumed production and pollution of the air in Birmingham. The 8 a.m. reading covering the particulate count for the 24 hours of relatively clean air in North Birmingham was 216 micrograms per cubic meter, only 44 micrograms less than what the EPA believes is unsafe under 1975 air quality standards. Baum left Birmingham in an Air Force plane. It banked after take-off and wheeled over the billowing smokestacks of U. S. Steel. "My God," Baum said in his harsh accent. "Look at that. Incredible." □

POLITICAL NUMBERS:

The Emerging McGovern Majority

by Michael Rappeport

George McGovern is quietly but steadily moving into a position to capture a plurality of the first-ballot votes at the Democratic convention in July. With a victory in California's winner-take-all primary on June 6, I predict that McGovern will receive 1,180 to 1,200 delegate ballots on the first count at Miami. Since 1,509 votes are required for nomination, the other candidates will deny McGovern's bid to win on the first ballot, but he will be commanding the largest number of delegates—and the most committed ones—for the tough political bargaining on subsequent ballots.

My conclusion does not come from any complicated analysis of voter sentiment or political strategies, but from a simple counting of delegates. McGovern's first ballot total would break down as follows:

Committed through Wisconsin	100
California	271
About 75 per cent of the New York delegation	209
Indicated from caucuses in Washington and Minnesota	40
About 40 per cent of the midwest and mountain state vote (Oregon, Dakotas, Nebraska, Idaho, etc.)	100
Massachusetts, Connecticut, Rhode Island	120-140

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About 27 per cent of the vote in Michigan, New Jersey, Ohio, and Pennsylvania	165
Southern delegates	75
Miscellaneous (Indiana, Maryland, Kansas, Hawaii)	100
Total	1,180-1,200

McGovern delegates are often being elected in unlikely places as a result of efforts by the best group of local organizations since F. Clifton White's Goldwater operation in 1964. For example, he is winning delegates in such states as Virginia, where he will get from 15 to 20, Georgia (7-12), and Kansas (12-18). (This "committed minority" strategy is ironic for a man who has done so much to make the party reflect popular majorities.) In addition, the McGovern campaign is focusing on congressional districts with clear liberal majorities (such as four of the major counties in New Jersey) or with large university populations (such as Ann Arbor, Michigan, and Columbus, Ohio). This strategy accounts for his projected 27 per cent of the delegates in Michigan, New Jersey, Ohio, and Pennsylvania.

McGovern's best chances for the 300 additional votes he needs to win on later ballots are among Muskie delegates who liked McGovern but didn't think he could get the nomination, or who simply do not want Humphrey again. He should also pick up some scattered votes from delegates committed to "non-major" candidates like Shirley Chisholm.