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W. P. MARSHALL, PRESIDENT

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LSB042 SSA 085

1954 MAY 15 AM 5 08

L LLW123 LONG GOVT NL PD=WUX LOS ANGELES CALIF 14=

DR L B HITCHCOCK PRES SOUTHERN CALIFORNIA AIR POLLUTION

L FOUNDATION=DO NOT FWD LOSA= *204 Hwy*

ACTION COPY DR L B HITCHCOCK PRES SOUTHER CALIFORNIA A=R

POLLUTION FOUNDATION LOS ANGELES CALIF INFO COPY A D LITTLE

CAMBRIDGE MASS INFO COPY COMMANDING OFFICER SCEL

FORTMONMOUTH NJ SIG 3281 FROM SIGGG-M-1/ REF YOUR TWX 12 MAY.

DR VONNEGUT OF A D LITTLE INC MAY DISCUSS UNCLASSIFIED

ASPECTS OF DA CONTRACT 36-032-SC-42585 INVOLVING KNOWN

TECHNIQUEE WITH YOUR METEOROLOGICAL SECTION. THIS HAS BEEN

DISCUSSED WITH DR VONNEGOT=

CHIEF SIGNAL OFFICER WASHINGTONDC 141800Z=

Handwritten mark

3281 SIGGG-M-1/ 12 DA 36-0329-SC-42585 141800Z=.

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7-12-54

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Los Angeles Smog Problem

There appear to be two general methods for alleviating the smog problem in the Los Angeles basin. These are: (1) Prevent the introduction into the atmosphere of those gases or aerosols that cause the smog; and (2) Dissipate the smog or smog producing substances after their release into the atmosphere. Neither of these two methods appears to be simple or attractive. If the smog producing materials are to be prevented from escaping into the atmosphere it must first be established what these substances are. When this has been done it will be necessary to devise and install equipment to prevent their production or their dispersal into the atmosphere. If such measures can be devised it seems certain that they will be costly to establish and maintain. If, as it seems probable, individual automobiles and incinerators are an important source of smog, then the further problem will arise of policing the large numbers of potential individual sources.

The second general method of attacking the smog problem is to remove the smog. Usually the smog is not severe because ~~material~~ natural winds carry it away. However, when the base of the inversion is low and when there is little wind the accumulation of fog becomes serious. Brute force methods such as removing mountains or installing an enormous ventilating system are clearly prohibitively expensive. However, it may be possible to ~~side~~ devise more subtle and practical schemes. The problem of controlling smog is certainly sufficiently difficult and important that the possibility of smog dissipation should be given serious considerations.

It is proposed that Arthur D. Little, Inc. concern itself with a study of the possible solution of the problem.

It is visualized that a study of this sort might be divided into two parts. The first of these would be a study of how the smog is carried away under normal conditions. Some estimates should be obtained of the

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natural flux of smog or smog producing materials out of the Los Angeles Basin. It appears that although a considerable amount of work has been done in measuring wind trajectories of air masses within the basin there is little information on the movement of air out of the basin. There must always be a steady flux of air and smog out of the basin whose magnitude depends on such variables as the speed and direction of the wind at various altitudes and the thickness and strength of the inversion. If rough estimates can be obtained of how the smog is removed naturally and how this rate of removal is affected by various weather conditions, this information will serve as a sound basis for evaluating the possibility of smog dissipation.

The second ~~part~~ part of a study of ~~gas~~ fog removal will involve consideration of possible methods for promoting the natural movement of smog out of the basin. One such method is to promote ^{con?}corrective activity ~~and~~ and mixing by utilizing solar energy. This might be done by releasing heat absorbing smokes in such a way as to increase the rate at which smog is removed from the basin. Rough calculations indicate that carbon black suitably dispersed will absorb in about two seconds as much solar energy as it would produce if it were burned. This indicates that by the use of this technique it may be possible to increase significantly the heating of selected air masses.

In order to explore this aspect of smog removal it is proposed that preliminary theoretical calculations and laboratory work be carried out to determine the best methods of producing radiation absorbing smokes. It is also proposed that a preliminary study be made of the behavior of the carbon black smokes released into the atmosphere by carbon black manufacturing plants. It has been reported that solar heating of these smokes frequently

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causes penetration of inversions and the foundation of cumulus clouds. Time lapse photography of this phenomenon in conjunction with information on meteorological variables at the time would provide preliminary data on the basis of which this technique of smog removal could be evaluated.

It is proposed that personnel of the Arthur D. Little~~x~~Co., will make periodic visits to Los Angeles to confer with the staff of the Air Pollution Foundation on the possibilities of smog dissipation. During these visits it is hoped to make observations that will give indications as to the best methods for attacking this problem.

Although it is expected that the activities of Arthur D. Little, Inc. will initially be concerned primarily with the possibility of smog prevention, it is anticipated that as this company becomes increasingly familiar with ~~various smog~~ the smog problem it will be able to make significant contributions along other lines as well.

SOUTHERN CALIFORNIA AIR POLLUTION FOUNDATION
704 SOUTH SPRING STREET
BURT LEIPER MA 6-9441

IMMEDIATE RELEASE
TUESDAY June 29

AIR POLLUTION FOUNDATION SELECTS

INVENTOR KETTERING AS TRUSTEE

Charles Franklin Kettering, world-famous inventor and research scientist, late today (TUESDAY) was elected to the Board of Trustees of the Southern California Air Pollution Foundation.

The board agreed unanimously on Kettering, who has long been identified with the automobile industry, as the new member of the group dedicated to the elimination of smog in the Los Angeles basin. Dr. Fred D. Fagg, junior, chairman of the board, made the announcement at the Foundation's headquarters, 704 South Spring Street, in Los Angeles.

Kettering's selection follows several consultations with the auto industry by Dr. L. B. Hitchcock, president and managing director of the Foundation, both here and in Detroit. Kettering's nomination was submitted by the Automobile Manufacturers Association in Detroit. The Foundation board acted on that nomination late today.

Kettering, director and research consultant for General Motors Corporation, lives in Dayton, Ohio.

Dr. Hitchcock said "Kettering's selection is an encouraging indication of the attitude of the Automotive Industry. I interpret this as an indication that the Automotive Industry is plunging into the serious task of the reduction of pollution by the auto."

(KETTERING BIOGRAPHY ATTACHED)

Southern California Air Pollution Foundation
704 S. Spring Street, Room 818
Los Angeles 14,
BURT LEIPER

HOLD FOR RELEASE

MA 6-9441

BACKGROUND
CHARLES FRANKLIN KETTERING

Charles Franklin Kettering, Vice-President and Research Consultant of General Motors Corporation, was born on a farm near Loudonville, Ohio, August 29, 1876. He was educated in the county district school, Wooster College, and Ohio State University, graduating in 1904 with the degree EE in ME. He was elected to the honorary fraternities Sigma Xi and Tau Beta Pi.

Following his collegiate work, Dr. Kettering became designer and inventor for the National Cash Register Company, remaining with that organization for five years. He was inventor of the electric cash register, the telephone credit system, and numerous improvements in accounting and calculating machinery.

In 1909, he became associated with Edward A. Deeds in the organization of the Dayton Engineering Laboratories Company (Delco) for the purpose of developing electrical starting, lighting, and ignition apparatus which he had invented. His invention of the Delco-Light farm Electrification system was also completed during this period.

In 1916, he established a private research laboratory which was taken over in 1920 by General Motors and in 1925 moved to Detroit as the Research Laboratories Division of General Motors Corporation. The latter organization, operating under Dr. Kettering's supervision, has been responsible for a large number of important contributions to automotive transportation, including Ethyl gasoline, Duco lacquer, crankcase ventilation, and others.

Another of Dr. Kettering's developments was the two-cycle Diesel engine, which has found wide application in the railway and industrial fields. His most recent work has been concerned with high-compression engines for automobiles. In June, 1947, he announced the development of a gasoline engine of 12.5 to 1 compression ratio, giving 35 to 40 percent better fuel economy than conventional engines. He is the recipient of 174 patents on automotive and related inventions.

Dr. Kettering's widespread interests have led him into many other technical fields. He is the inventor of a fever machine which has proved effective in the treatment of heretofore incurable diseases. For most of his life, Mr. Kettering has been actively interested in photosynthesis and the problems related to improvement of soils and agriculture in general. In 1929, he established the Charles F. Kettering Foundation, which has carried on research in photosynthesis, cancer, and venereal diseases treatment. He has actively supported soil conservation and soil research, particularly in the field of the use of trace elements.

In addition to his association with General Motors, Dr. Kettering is a Director of the National Cash Register Company, the Flexible Company, and the Mead Corporation. He is Chairman of the Winters National Bank and Trust Company. During World War II, he was Chairman of the National Inventors Council and

the National Patent Planning Commission. He is a Trustee of Ohio State University.

Noteworthy among the honors that have come to him are the Sullivant Medal, the John Scott Memorial Award, the Franklin Gold Medal, the Gold Key of the American Congress of Physical Therapy, the Honor Medal Award of the A.S.M.E., and the John Fritz Medal Award. He is the recipient of honorary degrees from 25 different universities and is an honorary fellow of the National Academy of Sciences. He is Past-President of the American Association for the Advancement of Science and the Society of Automotive Engineers.

On August 1, 1905, Dr. Kettering married Miss Olive Williams of Ashland, Ohio, who died in May, 1946. He has one son, Eugene Williams Kettering, married and living in Hinsdale, Illinois. Three grandchildren, a boy and two girls, make up the Kettering family.

While Dr. Kettering's accomplishments in various fields of science and research have won him many honors and degrees, he esteems most highly the tag which his fellow workers hung on him years ago and which has clung to him ever since ---
"Boss Ket."

October 30, 1950

June 21, 1954

Dr. Lauren B. Hitchcock, President
Southern California Air Pollution Foundation
704 South Spring Street
Los Angeles 14, California

Dear Dr. Hitchcock:

C-59186

I am sorry not to have been able to reply to your letter of June 2 until now. I have read over the notes made on our two day meeting as you requested and I find them satisfactory. The only addition that I feel might be made concerning my own remarks is in connecting my idea of using a black smoke. I believe that it may be worthwhile to include remarks that I recall being made to the effect that even if the black smoke doesn't break the inversion it may be of some value in causing contaminants released with the smoke to concentrate at the inversion base, rather than being dispersed through the layer beneath the inversion.

Since writing my last letter to you I have heard about a very interesting meteorological phenomenon that is observed near large plants that produce carbon black. It appears that some of these operations are quite inefficient, with the result that rather large amounts of black smoke are released into the atmosphere. According to the reports I have heard the increased heating of the air containing the smoke causes the development of updrafts that create cumulus clouds down wind from these plants. I feel that photographs of this phenomenon along with meteorological data might give considerable information on the possibility of using this method.

I hope to be able to obtain more information on this phenomenon and when I do I will let you know.

Sincerely yours,

Bernard Vonnegut

/jr

BV:jr:l

May 24, 1954

Dr. Lauren B. Hitchcock
President and Managing Director
Southern California Air Pollution Foundation
704 South Spring Street
Los Angeles 14, California

Dear Dr. Hitchcock:

I wish to thank you and your staff for your hospitality and for my brief but very interesting and stimulating visit with you in Los Angeles.

I have succeeded in locating several reprints of the papers on techniques for tracing airborne particles that I discussed with Dr. Rogers. They are being sent under separate cover to you.

On my flight back I noticed several instances in the East in which dark sooty air appeared to be concentrated in a thin layer beneath an inversion. I continue to feel that by the controlled use of dark smoke it may be possible to cause industrial waste products from Los Angeles to concentrate in a layer beneath the inversion where they will not cause trouble on the ground and where they will have a good opportunity of being carried away. I have taken some photographs of the black smoke haze at the inversion and hope that they come out. If they aren't satisfactory I will attempt to get some more better ones and I will send them to you.

Thank you again for having invited me to the conference. It was a pleasure to meet with you and your group.

Sincerely,

Bernard Vonnegut

SOUTHERN CALIFORNIA AIR POLLUTION FOUNDATION

PROJECT NO.
SCAPF 10-54-3

CONFERENCE ON
THE METEOROLOGY OF THE LOS ANGELES BASIN

MAY 17 - 18, 1954

CONFEREES

F. N. Frenkiel	Applied Physics Laboratory The Johns Hopkins University Silver Spring, Maryland
E. W. Hewson	Department of Civil Engineering University of Michigan Ann Arbor, Michigan
J. Kaplan	Department of Physics University of California at Los Angeles Los Angeles, California
W. A. Perkins	Department of Chemistry Stanford University Stanford, California
O. G. Sutton	Director, Meteorological Office, Air Ministry London, England
J. Thompson	International Airport Forecast Center Los Angeles, California
B. Vonnegut	Arthur D. Little, Inc. Cambridge, Massachusetts
H. Wexler	U. S. Weather Bureau Washington, D. C.
L. B. Hitchcock	President & Managing Director, SCAPF
W. L. Faith	Deputy Director & Chief Engineer, SCAPF
M. Neiburger	Senior Meteorologist, SCAPF
N. A. Renzetti	Senior Physicist, SCAPF
L. H. Rogers	Senior Chemist, SCAPF
E. M. Liston	

SOUTHERN CALIFORNIA AIR POLLUTION FOUNDATION

Project No.
SCAPF 10-54-3

Dr. Hitchcock opened the meeting with a brief summary of the Foundation's plans for its "aerometric" survey.

Dr. Sutton reported that the British committee on air pollution has been functioning since before the war and now has a complete network of reporting stations for measurements of SO₂ and particulates. He defined English "smog" as being polluted fog, the major portion of the contaminants being SO₂ and smoke. He has never known of eye irritation as such or high oxidant concentrations being associated with London "smog". Deaths caused by London "smog" are due mostly to bronchitis or heart failure, with the doctors disagreeing as to whether the SO₂ (H₂SO₄) or the cold is the more deadly agent.

Two questions that he feels need to be answered are: (1) How does the pollutant concentration rise and fall on a street? (2) What is the composition of auto exhaust? To accomplish this first end, he plans to install automatic sampling stations along a section of Regent Street to measure the CO concentration. He stated that the entire London Transport System runs on diesel with very close check being kept on engine operation primarily to conserve gasoline. For publicity, he has made a model to demonstrate the effect of an inversion. He accomplishes this simply by heating the roof of a large plastic box containing a smoke generator. ^{1/}

Tracer techniques were discussed with several methods being proposed:

1. biological agents
2. fluorescent particles
3. charged air particles
4. triggering of supersaturated solutions
5. balloons

Of these methods, the fluorescent particle was regarded by the conferees to be the best for our purposes. Much work has been done by the Chemical Corps of the Army using this agent, and Dr. Perkins suggested that there is a possibility that the Foundation might be able to borrow the necessary equipment from them. Dr. Sutton pointed out that this method would also give the vertical integration necessary for a true check of the surface trajectories.

1/ Meteorological Magazine, May 1954

Project No.
SCAPF 10-54-3

Biological agents (B-subtilis) have been used in France with good results. The agents used are completely harmless, and the method is very sensitive. The use of charged particles as tracers was proposed by Dr. Vonnegut. It is in an experimental stage and has the disadvantage that the charge decay time is less than one-half hour. The use of supersaturated solutions to detect individual particles of the tracer is also in the experimental stage. Dr. Perkins has found constant altitude balloons to be fairly difficult to control. Dr. Sutton pointed out that with a balloon as the tracer, a positive answer is significant, but a negative answer does not necessarily mean that the computed trajectories are wrong.

It was the general opinion of the group that the main purpose of any tracer study should be the testing of the validity of using surface wind observations to determine the trajectories of pollutants, with the checking on the contribution of any particular source being secondary. There are two ways that these studies could be run: (1) A single line of sample stations running across the Basin perpendicular to the cloud movement would give a "yes or no" check on the validity of the surface trajectories. (2) A deep pattern of sample stations in the predicted path of the tracer cloud would not only test the surface trajectories, but it would also furnish diffusion data for the calculation of the mean diffusion coefficient. This test presupposes an ability to predict surface trajectories -- something which at present cannot be done with certainty, but which Dr. Neiburger hopes to be able to do with fair accuracy in the near future.

Dr. Sutton reported that, as a rough approximation, the cloud would be from one-third to one-fourth as wide as the distance over which it had travelled.^{1/} He suggested that the particle source be left on for a long time in relation to the sampling time, i. e., at least an hour. He feels that before the Foundation does any tracer studies, it should have a great deal more information concerning the frequency of the various wind trajectories and which trajectories are the most important. After this is known he believes that it will only take five or six tracer runs either to prove or disapprove the validity of surface trajectories (he expressed the personal opinion that they are all right). Once these trajectories are verified and if the mean diffusion coefficient could be determined, as suggested by Dr. Frenkiel (he would like to see a second part to Dr. Neiburger's report including data on the character of wind fluctuations), it would be possible to calculate directly the probable contribution of each particular section of

^{1/} Dr. Perkins, in a communication subsequent to the conference, wrote that there are a number of examples under night conditions in which the width is less than one-tenth the downwind distance.

SOUTHERN CALIFORNIA AIR POLLUTION FOUNDATION

Project No.
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the city at any particular time to any other part of the city at any particular time. If, however, the surface trajectories were not verified, it would be necessary to take the upper winds into account and the problem would be greatly complicated.

Dr. Frenkiel stated that the basic knowledge of turbulent diffusion is sufficient to evaluate the relative contribution of any particular pollution source under given atmospheric conditions provided adequate data is available concerning (1) the general wind velocity pattern and (2) the nature of the atmospheric turbulence. Extensive data on the character of turbulent fluctuations may be difficult to obtain, but even partial results, consisting of records of fluctuations of wind direction and speed at a few stations in the area, would be of value. Using these data, one will be able to determine the theoretical distribution of pollutants from any one source of an idealized model of the Los Angeles Basin. Experimental measurements with appropriate traces could then be used to evaluate the validity of the theoretical results. When the theoretical methods are confirmed for a single source of pollution, they may be used with more confidence to study a large number of sources and attribute to each its degree of responsibility for contamination at each point of the Los Angeles Basin.

Dr. Sutton mentioned that an almost fool-proof integrating radiometer for the measurement of radiation was available at a cost of approximately \$200. Further information can be obtained by writing Dr. Wilkins, Fuel Research Station, Greenwich, London. Dr. Rogers suggested that some reflection spectra be taken on the smog. Dr. Vonnegut suggested that the albedo of the smog be measured, as its heat absorption might prove to be a very important item in its dispersion. Dr. Sutton mentioned that some Germans have done a lot of work on the fluctuation of the absorption spectra of the atmosphere (he has asked Dr. Wexler to forward the literature citation). Dr. Frenkiel agreed that a microwave absorption study of the atmosphere proposed by Professor Hershberger would prove valuable. Dr. Sutton felt that it would take too long; the first work would be principally concerned with development of the method.

Dr. Vonnegut proposed the possibility of causing the polluted air to rise through the inversion by adding black smoke which would absorb solar radiation. This rising cloud would cause a local stirring of the inversion with the possibility of, at least temporarily, breaking a hole through it. The question of whether the solar heating would be sufficient to produce this effect was discussed. Dr. Sutton felt that this was worth a mathematical analysis to see if it would work. However, he was disturbed by the fact that there is no strong wind shear just above the inversion (he would like about a fifty-percent increase of wind velocity). He said that methods for

SOUTHERN CALIFORNIA AIR POLLUTION FOUNDATION

Project No.
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dispersing this cloud are well-known to the Chemical Corps. It was pointed out that even if the black smoke doesn't break the inversion, it may be of some value in causing contaminants released with the smoke to concentrate at the inversion base, rather than being dispersed through the layer beneath the inversion.

Dr. Wexler was very interested in knowing if the top of the smog always coincided with the bottom of the inversion. He wondered if anyone had observed during the course of the day's heating whether the top of the smog pushed above the base or even the top of the inversion such as has been noticed in the case of haze-layers over the Egyptian desert.^{1/}

Dr. Sutton felt that Dr. Neiburger's report was not a true micro-meteorological report but more of a very detailed meteorological report of a small area. He said this because of the lack of turbulence data and wind fluctuation data. He felt, however, that if the wind trajectories could be verified, it would not be necessary to obtain any more detailed information than is presented in the report.

It was suggested that vertical temperature profiles and pollution concentration profiles be taken with a helicopter during the tracer runs and possibly as a routine matter.

Notes taken by E. M. Liston
Edited by M. Neiburger
9/1/54

^{1/} Quarterly Journal of the Royal Meteorological Society, 1935,
C. S. Durst

TELEGRAM

ARTHUR D. LITTLE, Inc.
RESEARCH-ENGINEERING-INVESTIGATIONS
CAMBRIDGE 42, MASS.

DR. LAUREN B. HITCHCOCK
SOUTHERN CALIFORNIA AIR POLLUTION FOUNDATION
704 SOUTH SPRING STREET
LOS ANGELES 24, CALIFORNIA

WILL ARRIVE LOS ANGELES SUNDAY, MAY 16 AT 6:15 PM ON AMERICAN AIR LINES
FLIGHT 5.

BERNARD VONNEGUT

BV:jr
Sales 4201

CONFIRMATION

B. Younquist

SOUTHERN CALIFORNIA AIR POLLUTION FOUNDATION

704 SOUTH SPRING STREET
LOS ANGELES 14, CALIFORNIA
Tel.: MAdison 6-9441

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President and Managing Director

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- REESE H. TAYLOR
- P. G. WINNETT

•
LEROY A. GARRETT
Secretary of the
Foundation

May 15, 1954.

CONFERENCE ON

VEHICLE COMBUSTION PRODUCTS AND OTHER EMISSIONS

The Foundation requests your participation in the proposed conference, to have the benefit of well-informed and authoritative guidance in (1) reviewing and summarizing all pertinent information, in order that (2) our group may gain a better comprehension of the several problems involved, thereby facilitating (3) the planning and carrying forward of worthwhile research under the auspices of this Foundation, in such a way as not to conflict with relating projects which may be now, or will be in the future, going forward aggressively elsewhere.

Place: Huntington Hotel, Pasadena, California

Time: August 19-21 inclusive (Thursday-Saturday)

Attendance: Attendance will be by invitation only. Meetings will be in the nature of clinical technical sessions, closed to the public. Invitations will be extended to individuals who, by virtue of training and experience, are in a position to intelligently discuss one or more of the subjects listed below. Names to be invited will be chosen primarily upon recommendation of the Coordinating Research Council, and of included or affiliated scientific and engineering societies.

Reservations: Reservations should be made directly with the manager, Huntington Hotel, Pasadena, California, mentioning the name of this Foundation. This hotel is one of the finest resort hotels in this country, has very comfortable accommodations, beautiful grounds, and a fine swimming pool. Some of the rooms are air-conditioned. It has been famed as a year-around resort for many years.

SOUTHERN CALIFORNIA AIR POLLUTION FOUNDATION

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Tentative Program:

The general plan of conference procedure is to have a series of panel sessions, attended by all, to take up in succession the following subjects:

1. Composition and analysis of automobile exhaust gases.
2. Composition and analysis of diesel exhaust gases.
3. Automotive engineering design and control devices.
4. Effect of fuel, and fuel and lubricant additives.

The order in which these topics is taken up is subject to change, and the topics themselves may undergo some modification before the program is printed.

Panel Members:

Nominations for panel members for each of the four proposed subjects are solicited, and it is hoped suitable recommendations will be made to the Foundation promptly. It is suggested that we plan on about four panel members to lead discussions for each of the four subjects. Presumably such panel members would wish to prepare informal written introductory remarks in advance of the meeting.

Publication:

No publicity is desired in connection with this conference. The Foundation assumes that a record of the panel sessions should be kept for its own guidance, as well as for the benefit of the conferees. It is suggested that a preliminary record be circulated among the panel members for editing, and then to prepare a summary report with distribution to conferees.

Final Program:

The Foundation would like to be able to distribute to its invitation list for this conference a final program by July 1, listing those who will attend, and a more detailed statement of the conference program.

This Foundation hopes that, in its role of research and fact-finding as an independent body, it may be able to contribute significantly toward the solution of the problems in this particular area, and therefore invites your counsel at this conference for its guidance.



L. B. Hitchcock
President & Managing Director

Issued jointly by the

L. A. COUNTY AIR POLLUTION CONTROL DISTRICT
434 S. San Pedro St., Los Angeles 13
MAdison 9-4711

Detention
B. Donnegal

{ FOR RELEASE:
{ Monday a.m.'s and p.m.'s
{ April 25, 1955
{

and the

AIR POLLUTION FOUNDATION
704 S. Spring St., Los Angeles 14
MAdison 6-9441

TO THE CITIZENS OF LOS ANGELES COUNTY:

Officials of your County Air Pollution Control District and officers of the privately-supported Air Pollution Foundation are aware that a degree of confusion exists regarding the separate identities of these two agencies which are fighting side by side in the battle against smog.

Even among those who recognize that the one is a tax-supported arm of government and the other an independent nonprofit scientific research organization, some confusion exists as to the roles and responsibilities of each.

Just as smog itself is of vital concern to the public, so is it important that the public understand how the two major agencies working for the elimination of smog operate and what each is striving to do.

It is for the purpose of clarifying the functions of the Control District on the one hand and of the Foundation on the other, that this joint statement is issued by the undersigned in behalf of these two agencies.

As will be shown, the work of the one agency complements the work of the other, with no duplication of effort or overlapping of activity.

The single objective of both the Control District and the Foundation is the elimination of smog as it is known in the Los Angeles Basin.

The Control District is working toward this objective first by developing and applying rigid control measures against all known sources of air pollution. As an important second step Control District efforts are leading to the enactment of new rules and regulations as research uncovers new sources of smog and indicates new remedies.

The Foundation is working toward this objective through intensive scientific research into the components of smog and the sources of emission, plus painstaking checking and evaluation of all work done by others in the field of air pollution throughout the country.

All findings of the Foundation are turned over to the Control District to aid the county agency in drafting new rules and regulations for smog control.

Currently, the Control District is pursuing many interim objectives aimed at immediate reduction of smog. High on the list of such objectives are the elimination of all single chamber incinerators, more stringent regulation of multiple chamber incinerators, elimination of open fires for weed abatement and industrial purposes and for burning of agricultural rubbish during low inversions.

In formulating these objectives, which call for systematic collection and sanitary disposal of all combustible rubbish, the Control District was greatly assisted by the Foundation. The Foundation last year called a conference on incineration and refuse disposal which was attended by authorities from all over the nation. The results of this conference, which were provided to the District by the Foundation, pointed up the need in the Basin for banning incinerators and the burning of waste products.

Along this same line, the Foundation meanwhile is conducting scientific experiments to determine the composition and amounts of gases emitted into the air by typical incinerator usage. These new experiments will supplement previous research conducted by the District. It is accepted that smoke from incinerators reduces visibility and sometimes adds a stench to the atmosphere, but this project will provide further information as to what noxious gases are added to the air by burning of newspapers, cartons, garbage and other refuse. The project is being carried out at the laboratories of Battelle Memorial Institute, Columbus, Ohio, at a cost of \$25,000 to the Foundation, and all information obtained will be given to the Control District without charge.

Also on the list of Control District interim objectives is greater control of pollutants from industrial and commercial sources, and better service to such firms through more prompt processing of applications and permits for construction and operation of control equipment.

In this regard, day by day findings of the Foundation will continue to be turned over to the Control District. An example of service already performed for the District is the independent audit made last year by the Foundation of hydrocarbon emissions from refineries. This audit showed the gainful results of the District's action in requiring new vapor recovery equipment and control devices on the part of the refineries.

Another interim objective of the Control District is an energetic search for a device or method which will eliminate pollutants from vehicle exhausts. Here, the

(MORE)

Control District is analyzing and testing devices in its own newly established automotive combustion laboratory, while the Foundation is supporting Control District activities by conducting comprehensive 20,000-mile road tests of the Houdry catalytic converter, subjecting six Houdry mufflers to rigid examination under actual driving conditions.

The Control District also is pushing for such research projects as offer immediate potential toward reduction or elimination of individual contaminants or their sources, as well as for longer range research and for stepped up emphasis on radiological studies on potential contaminants from use of atomic energy for industrial power. The Foundation stands ready to consult and advise in each of these fields and, where desired by the county, to conduct specific research projects under nonprofit service contracts.

Elsewhere on the Control District list of interim objectives is the implementation of an emergency plan for protection of the public in event of an extreme smog period which might produce a health hazard. This warning system has been made possible by the county's decision to purchase \$126,500 worth of accurate measurement instruments recommended by the Foundation. The Foundation is assisting the Control District without fee in drawing plans and specifications for some of these devices, which were conceived by Foundation scientists and must be designed and then manufactured.

Still another interim objective of the Control District is to bring about greater understanding and cooperation by the public through a broadened information and education program. The Foundation joins in this objective. While the District is informing the public on control measures and enforcement, the Foundation is proceeding along a parallel path, informing the public of its own activity in the field of scientific research which ultimately will point to new control steps.

The Foundation, as an independent privately financed research organization, has no part in the field of enforcement, but it applauds the District's interim objective of a progressively emphasized enforcement program based on additional fact-finding and more strict statutes, rules and regulations.

The Control District is operating on the theory that it is far better to undertake positive control and enforcement steps today with a population of 5,000,000 and an industrial census of 15,000, than to allow the public welfare problem to reach disastrous proportions with a 6,500,000 population and 20,000 industrial and commercial census predicted for the year 1965.

The Foundation agrees with this theory, and accordingly is spending no time or

(MORE)

money in the construction of laboratories, which could only duplicate facilities throughout the nation which are readily available to the Foundation.

Instead, the Foundation's team of scientists -- men recognized nationally in the fields of chemistry, physics, meteorology and engineering -- are utilizing to the fullest degree their years of intimate contacts with the country's various scientific societies and the nation's finest universities and private laboratories and research institutions.

It is through long established relationships with the directors and operating heads of these various facilities that the Foundation scientists are able to contract at low cost for important research work in air pollution.

In the manner above described, the Control District and the Foundation are accomplishing those portions of the big job which each can do best.

Together, these two agencies are blazing separate but parallel trails through the wilderness of all the unknown about smog. These two agencies, working in harmony on separate aspects of the air pollution problem, hope to build a road which will lead to a rediscovered land of clear skies and pure air.

Respectfully,

/s/ S. Smith Griswold
S. SMITH GRISWOLD
Air Pollution Control Officer

/s/ L. B. Hitchcock
L. B. HITCHCOCK
President, Air Pollution Foundation

Times Office: 202 West First Street, Los Angeles 53, Calif. MADison 5-2345

Take Smog From Politics, Pittsburgh Leader Tells L.A.

Relates Pride in Enforcing New Ordinance

Dr. Edward R. Weidlein, director of the Mellon Institute, a leader in Pittsburgh's successful fight against smoke, advised Los Angeles County yesterday to divorce smog from politics if it wants to win the fight for pure air.

"It has been said that we licked the smoke problem in five years in Pittsburgh," Weidlein reported. "That's not true. We fought smoke for 40 years but it took us 35 years to get it out of politics."

Dr. Weidlein was the principal speaker at a luncheon given in the Ambassador by County Manager Arthur Will. In attendance were representatives from most phases of civic and business life.

Dr. Weidlein pulled no punches as he told the Pittsburgh story.

Committee of 17

It began, he said, with a committee of 17 persons, nonpolitical, with but one purpose — to get rid of smoke. It included leaders at top level of all of the city's most powerful groups.

Among the representatives were three union presidents, the president of a railroad, the president of a steel company, the president of a utility company, a newspaper publisher and similarly placed individuals from other major institutions.

This committee, Weidlein implied, carried sufficient weight to obtain commitments of support from both political parties.

Ordinance Drafted

With this political support, the doctor continued, the committee spent two years in drafting an antismog ordinance which they felt could do the job. When it was done, it was handed over to what corresponds here to our Board of Supervisors, Weidlein said.

The politicians passed it without question, the visitor recalled.

"Since that time," Weidlein said, "the smoke issue is never mentioned by campaigning politicians. On the question of smoke, there is no political party involved."

The committee, Weidlein said, is completely responsible for enforcement of the smoke ordinance.

Few Complaints

"The odd thing," Dr. Weidlein commented, "is that we have had virtually no complaints regarding compliance with the smoke ordinance."

He said that since the ordinance was passed the entire community has taken a personal interest in seeing that the ordinance is obeyed.

"Now," he said, "there is a pride in Pittsburgh."

He told of the Pittsburgh approach at the beginning.

"We cleaned up wherever we found smoke," he said. "And I mean everywhere."

Householders were given a four-year period to convert from smoky bituminous coal to other types of fuel which smoke less, Dr. Weidlein said. They all complied, he added, even though it raised their fuel bills. As to the other sources of smoke, the committee set up subcommittees — one within the railroads, another within the steel companies and others within whatever type of business was producing the smoke.

Dr. Weidlein said these subcommittees have spent thousands, and in some cases millions, of dollars in constructive research that has led to the alleviation or elimination of smoke.

Take Personal Interest

As the smoke that once had blackened Pittsburgh to the point where it turned day almost into night subsided, the people of the city began to take a personal interest in the program.

They began to see, said Weidlein, that each of them was in one way or another to blame for the over-all problem. And each in turn began taking a personal pride in doing his part to eliminate the smoke.

The committee, he said, has never spent more than \$90,000 in any one year, but it has been responsible for some 2 billion dollars worth of improvements since the anti-smoke program began. He said the success of the program has resulted in a substantial reduction in taxes.

Smog and Speed Control Urged for Autos in State

The smog situation is serious and as our population increases it will be increasingly bad.

There is no doubt that much of the smog comes from automobile fumes.

It is impossible to abolish the use of automobiles and trucks in California. They are a necessary part of the industry and life of the State, but they are not properly controlled.

The National Safety Council reports that 38,000 Americans in the United States were killed last year. Many times that number are injured each year. California alone had about 30,000 accidents and nearly 46,000 injured in 1953. Motor vehicles are now a decided menace to the lives and health of Californians. There are 6,000,000 motor vehicles registered in California.

★

It is within the power of the State of California to abate a large part of the smog menace and the accident toll directly attributable to motor vehicles of all kinds by the following means:

Let the Legislature pass a law to the following effect:

1—After a reasonable interval subsequent to the passage of the law no new automobile may be sold or used in California that does not have an exhaust control preventing the escape of gasoline vapors and other automobile gases. There are several such devices at the present time and such a law would stimulate the manufacturers to intense effort to improve them.

2—That no new automobile may be sold in California that can physically travel faster than—say 60 m.p.h. Police, Highway Patrol and physicians should be exempt from the speed limit upon certificate of necessity from the State, renewable every year. That speed limit is certainly

sheer murder to place in the hands of drivers from the age of 16 years up and of various mentalities and temperaments a car with such an engine. Before any such cars are used in California an automatic stop should be forced on the manufacturer by the State limiting the speed to 60 m.p.h. and the same thing should apply to all makes of motor vehicles for the 1955 trade.

3—After a certain date to be fixed by the Legislature no automobile bearing the license of any other State will be permitted to enter California unless it also has the same construction speed limit or an automatic stop at that speed and the same escape gas prevention that are provided in said law.

It is entirely within the power of the State to make such a law and enforce it in respect to traffic within the State. Of course, such action will require alterations in existing California traffic laws, but that also is entirely within the power of the State.

★

Such a statute will meet objection from the "speed-crazy" individuals and perhaps at first some automobile manufacturers. But almost immediately a large amount of smog, death and injury of Californians by motor vehicles will begin to disappear and the disappearance will be progressive.

Moreover, since automobile manufacturers will not have to compete in making cars with greater and greater speeds the competition in sales of various makes will take the form of better body work, more reliable engines, etc.

In fact, the sale of automobiles with these restrictions will probably increase because reasonable individuals who form the great body of car users will appreciate such restrictions. In any event the health

Dr. Krick Would Carry Fumes to Higher Levels

This guy had a dream!

A new way to reduce part of the Los Angeles smog is suggested by Dr. Irving P. Krick, former head of the Caltech meteorology department.

"Cities that lie in basins rimmed by mountains or high hills," he writes in a book released yesterday, such as Los Angeles and Salt Lake City, may have only themselves to blame.

"An overhead 'sewer line' could be constructed in such cities that would connect with some of the offenders among the largest industries. This sewer line could carry many of the pollutants up to some high hill above the inversion layer whence the higher level air currents would blow them away.

"Such a system would only be turned on when smog

threatens. But, of course, it would not take care of some offenders such as household trash burners and the automobile. However, it would remove some of the most unhealthy pollutants.

"For another practicable suggestion, chemicals might be introduced at the source of major pollution which would neutralize the toxic effects though smoke would remain. Or, such chemicals might be dispersed into the air by machines such as those used to seed clouds with silver iodide to increase rainfall."

The new book, "Sun, Sea and Sky," is published by J. B. Lippincott Co. Dr. Krick, in a foreword, credits William S. Barton, Times science editor, for material in one of the chapters.

Dowley.

Smog Danger

Robert L. Daugherty's report on automobile exhausts was excellent

The nearest his article obtained to the lead in gasoline, which certainly gets into the air, was mention of "aldehydes."

There seems a reluctance in reports to use the word lead, present in all gasolines.

This seems to the writer the real danger of smog.

FERN McLELLAN,
Pasadena.

New Microscope to Aid in Research on Smog

SC School of Medicine Given \$5000 to Buy Instrument for Minute Studies

More concentrated activity in the field of smog research was promised yesterday by the University of Southern California School of Medicine through use of a new high-powered electron microscope with a magnification capacity 50,000 times greater than the human

The instrument, which has a magnification power 50 times greater than the common light microscope, will permit minute studies of ultrathin plant and animal tissues under the new microtome process developed by Dr. Baker and Dan C. Pease of the SC School of Medicine several years ago.

Although the school's re-

E. James Lee and Francis Packard, cochairmen, made the request in a letter which they said would be presented to the grand jury today. Grand jurors last week deadlocked on whether to hold a public session on its smog investigation.

"We are respectfully ask-

Turn to Page 3, Column 3

Monday
6:55 p.m.



WAR ON SMOG SPURRED—Dr. Gordon Goodhart, dean of SC School of Medicine, right, and Dr. Richard Baker, associate professor, left, explain to Oscar Trippet, president of Moore-White Medical Foundation, magnification powers of common microscope. Foundation has given electron microscope to school to aid in war on smog.

SMOG

Continued from First Page

ing you not to allow an open hearing on smog enforcement to be killed by a tie vote," the letter said in part.

Ask Use of Powers

"In making this request we are not asking you to . . . persecute anyone or to place the blame for smog," the letter said. "We merely ask that you use your great power to bring the facts out into the open. We feel that the gravity of the smog situation merits granting the public this minimum consideration."

Committee officials said the group now represents citizens of more than 30 communities having a population of more than 1,000,000 persons.

SMOG IDEAS TOSSED AT KNIGHT HEARING

Ideas on smog control were fired like shotgun pellets—zinging in all directions—when Gov. Knight and some 40 Southland State legislators discussed the air pollution problem yesterday in the State Building.

After more than two hours it was apparently agreed, more or less, that the smog fight should be kept out of politics.

There also seemed to be a meeting of the legislators' minds that the problem of routing smog is primarily for the scientists and technicians.

Gov. Knight opened the meeting by reviewing various steps he has taken in the smog control fight and suggested finally that perhaps consideration should be taken of a bill to empower the Board of Supervisors to close down industry in event of a dangerous smog emergency.

Called by Knight

No conclusion was reached. Gov. Knight called the lawmakers together "in the interest of exploring all possible channels of State assistance in controlling smog."

Among the channels which various legislators suggested for exploration were:

Appoint a committee of scientists to study the problem, then report its findings to the Legislature in January for possible action.—Assemblyman Charles E. Chapel (R), 46th District, joined in by Assemblyman William Munnell (D), 51st District.

Extend Air Pollution Control District to a regional basis.—Assemblyman Munnell.

Remove smog control responsibility from Board of Supervisors, provide for election of smog commissioners to take charge.—Assemblyman Stanford C. Shaw (D), 72nd District.

Federal Help Wanted

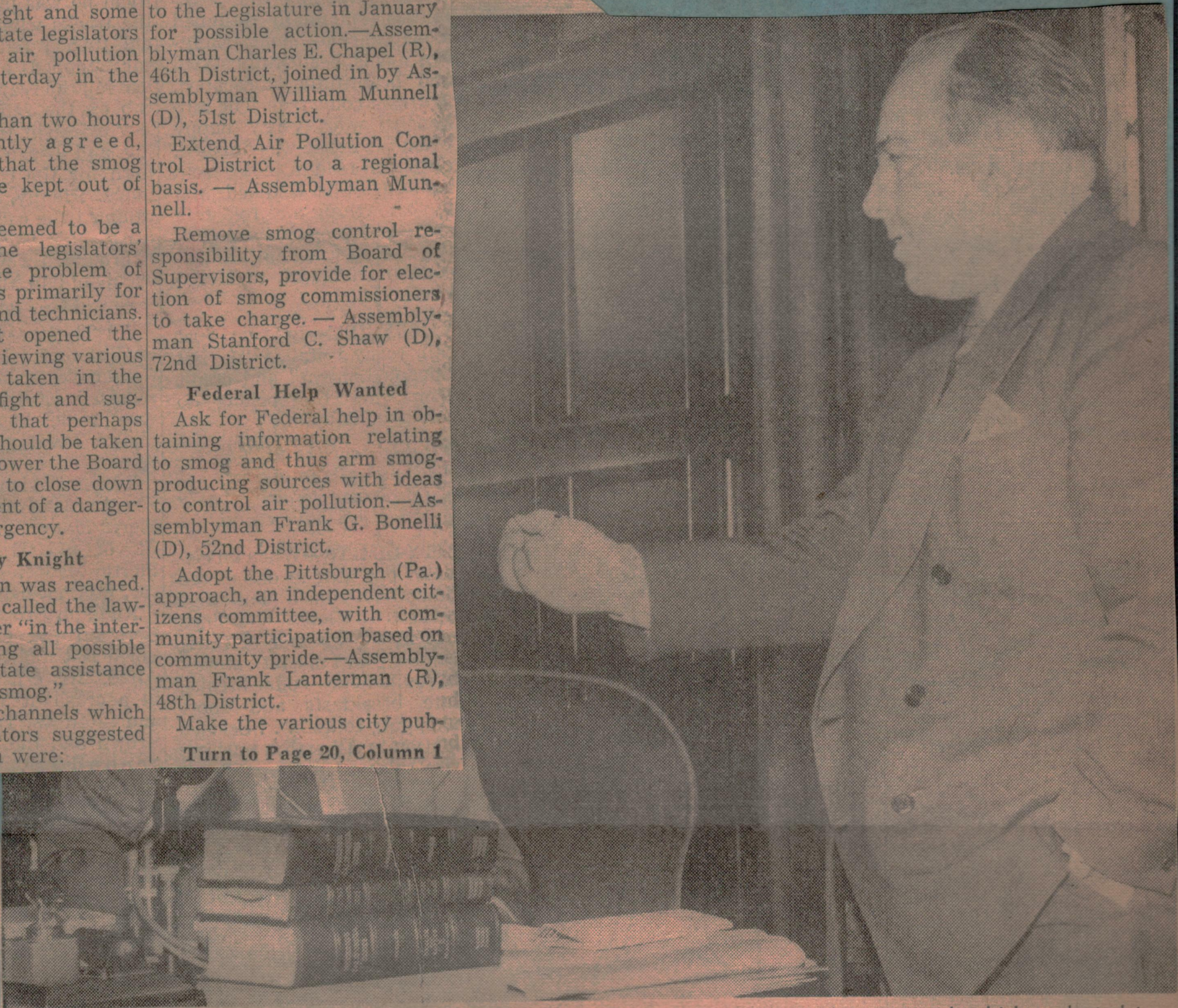
Ask for Federal help in obtaining information relating to smog and thus arm smog-producing sources with ideas to control air pollution.—Assemblyman Frank G. Bonelli (D), 52nd District.

Adopt the Pittsburgh (Pa.) approach, an independent citizens committee, with community participation based on community pride.—Assemblyman Frank Lanterman (R), 48th District.

Make the various city pub-

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es Times



URGES INDEPENDENT SMOG SURVEY—Assemblyman Frank Lanterman, right, as he told Gov. Knight and 40 Southland legislators at smog hearing that an

independent citizens committee should be selected to utilize the smog-combating ideas which led to clearing up of air pollution in Pittsburgh (Pa.) steel area.

Times photo

SMOG MEETING

Continued from First Page

lic health officers ex-officio members of the Air Pollution Control District.—Assemblyman Patrick D. McGee (R), 64th District.

A nonhysterical approach to the problem, a call for patience as the solution may be years away.—Assemblyman A. I. Stewart (R), 47th District.

Send Smog to Desert

We'd better get some facts before we move in any direction. And we haven't got the facts at this time."

Muffler Bill Hearing

man said, "we'll have another meeting in Los Angeles and again request the automobile industry to be heard."

Meanwhile, yesterday the Board of Supervisors invited Mayor Poulson to join in a combined study of methods to collect and dispose of combustible rubbish on a county-wide basis.

Evening Burning

The city of Los Angeles, as well as the cities of Pasadena and South Gate, will begin a 90-day trial period of 4 p.m. to 7 p.m. burning hours for backyard incinerators instead of in the morning.

County Manager Arthur J. Will and County Counsel

The sites presumably would be spotted throughout the county.

The Board of Supervisors also voted to order the printing of an additional 2000 copies of a legal compendium on smog control and responsibility, authored by Kennedy.

Pamphlets containing a resume of smog control background have been enclosed by the county in tax statements to residents.

Pamphlets Criticized

These pamphlets drew critical fire yesterday by the Citizens Antismog Action Committee, which branded them as propaganda... "using the taxpayers' money to defend a course of inaction..."

On another front, Mayor Poulson advised the City

URGES INDEPENDENT SMOG SURVEY—Assemblyman Frank Lanterman, right, as he told Gov. Knight and 40 Southland legislators at smog hearing that an

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SMOG MEETING

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Send Smog to Desert

Some way should be found to help nature get the smog out of Los Angeles into the desert, something to be done between here and the Mojave Desert. Assemblyman Thomas J. Doyle (D), 45th District.

Long-term loans, perhaps Federal aid, to small industrial contributors of smog—Assemblyman Vernon Kilpatrick (D), 55th District.

The State to move in, spend whatever necessary to hire the best minds in the nation, or the world, to work on the problem until a solution is reached. Assemblyman John L. E. Collier (R), 54th District.

Charge It to State

The State should take over the burden of the cost of whipping the smog situation. Assemblyman G. Delbert Morris (R), 63rd District.

The State to take over, inasmuch as the Board of Supervisors has done an excellent but nonetheless inadequate job. Senator-elect Richard Richards (D), Los Angeles County.

Assemblyman Harold K. Levering (R), 60th District, had virtually the last word at this point.

"It seems to me," he said, "that we seem to be moving fast in a dangerous direction—with the State taking over from the county.

"The suggestions," he said, "are precipitous this morning. We'd better get some facts before we move in any direction. And we haven't got the facts at this time."

Muffler Bill Hearing

Lanterman announced that a subcommittee hearing on his muffler bill would be heard today in Richmond. He said the bill, originally only concerned with noise, has been expanded to include exhaust fumes.

He said that the Automobile Manufacturers Association has been requested to send a representative to testify at today's subcommittee hearing.

"If one is not sent"

man said, "we'll have another meeting in Los Angeles and again request the automobile industry to be heard."

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County Manager Arthur J. Will and County Counsel Harold W. Kennedy pointed to the possibility of a bond issue to raise funds for purchase of rubbish disposal sites for the cut-and-fill method.

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On another front, Mayor Poulson advised the City Board of Public Utilities and Transportation to give "far-reaching scrutiny" to a re-

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Trash-Burning Law Blocks SC Bonfire

"Hidden" provisions of a new law effective today changing the hours of backyard incinerator use fanned unexpected flames yesterday and superheated some tem-

The stringent provisions resulted in revocation of a Fire Department permit for a huge bonfire planned in Los Angeles Memorial Coliseum tonight as a feature of the University of Southern California Home-coming Week.

Reinstatement Sought

This, in turn, caused Councilman Harold A. Henry, sponsor of the legislation, to do a slow burn and to turn the heat on the department to reinstate the permit. SC students are pretty hot under the collars, too.

"This is stupidity," Henry said. "The Fire Department is straining at gnats."

"The Council never intended anything except to change the legal hours of incinerator burning from the morning to afternoon to lessen smog. We never intended to prohibit celebration bonfires."

Trash Burning Switch Leads to Confusion

The switch from morning to evening hours for backyard incinerator burning made its debut yesterday in Los Angeles, Pasadena and South Gate with no apparent result except confusion.

Well-informed householders, spying on forgetful or unknowing neighbors, called the Fire Department and the Police Department to report illegal morning fires in adjoining yards.

Others Phone Police

Asst. Chief W. R. Goss of the Fire Department said 150 such complaints were received during the morning. The Fire Prevention Bureau dispatched investigators in each case, Goss said.

An additional 24 telephoned complaints were received by the Police Department, which passed them on to the Fire Prevention Bureau.

Goss said that another 900 telephone callers sought information regarding the change in burning hours.

Hours for burning, formerly from 6 a.m. to 10 a.m., are now from 4 p.m. to 7 p.m.

The new hours are to be in effect for a 90-day trial period during which, it is hoped, air pollution control officials will

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Plans New Resolution

Raymond Hill, deputy chief of the Fire Prevention Bureau, said that the new law eliminates provisions providing for exceptions to the hours of burning.

"We'll change that. Pronto." Henry told Hill. "I'll introduce a resolution into Council tomorrow repealing these stringent provisions. This new section is contrary to the intentions of the Council. The only thing we wanted to do was to co-operate in fighting smog and someone slipped in these other provisions."

Chief Hill said that if the Council today acts to repeal the unwanted provisions, the permit for the festive fire will be reinstated.

Planned for 90 Days

The new law provides that trash may be burned in home incinerators between 4 and 7 p.m. instead of from 6 to 10 a.m. as formerly.

The plan will be effective for 90 days and if successful, will be made permanent.

In asking the Council to enact the legislation Henry pointed out that smog builds up its density during morning hours and that a change in time incinerators are in use would decrease the volume of smoke in the air at the peak period.

The Board of Supervisors also agreed to the Council's request to adopt similar measures to make the test more effective. The change in county territory, which will follow the same hours, will take place Dec. 3.

Smog Blame

It is high time that someone speak up against the current political campaign being conducted in the war on smog.

Gordon Larson has become the whipping boy of Messrs. Legg and Poulson, who, in trying to shift the blame from their own shoulders, have thrown mud at Mr. Larson.

Why don't we get down to facts? The cause of smog is well known to anyone who takes the time and effort to find out. It is automobiles and practically nothing else.

I have seen this problem develop since 1936. There was a considerable contribution made by industry toward the infiltration of our skies but that was as nothing compared to the tremendous number of automobiles that have been moved into Los Angeles County. Every time a car engine turns over more smog is generated.

The other day one of the news services released a photo which purported to show a great belching of "smoke" rising from a Southern California refinery. That was an utter miscaption designed to mislead those who are not familiar with the oil industry. What was shown was the steam vapors drifting away from cooling towers.

Industry in Southern California has contributed much to Los Angeles County. This contribution has not, of late, included smog.

The politician is helpless to do anything. He has not appealed to the automobile driver or owner or designer to design attachments to those cars so as to prevent their billowing into the air those venomous fumes of carbon monoxide that escape the exhaust pipes.

MASON GILMORE,
Long Beach.

Grand Jury Abandons Smog Problem Probe

Opposition to Open Hearings Blamed for Action by Foreman

The county grand jury announced last night it intends to abandon all further deliberations, both public and secret, on the smog problem.

The action came shortly after Superior Court Judge Harold W. Schweitzer issued a stern warning against jury tampering by outside persons attempting to influence grand jurors opposed to an open public hearing on smog to switch their votes.

Further Study Useless

In a statement agreed upon last night Foreman Pro Tem W. Blake Fairweather said:

"Because only nine jurors were in favor of a public hearing, even if further secret hearings were held and sufficient evidence presented to satisfy them, it is obvious that further deliberations on smog are useless, particularly in view of the fact that the instructions of the judge were that a minimum of 14 jurors is necessary to conduct a public hearing."

Jury Tampering Charged

Fairweather said the statement was meant to be "all-inclusive," applying to both secret and open public hearings.

Earlier, Judge Schweitzer,

considered since their vote against an open public hearing.

One juror complained yesterday, it was learned, that he was given the threat: "You will be made to look like a clown if you don't change your position on the smog hearing question."

At the same time the judge indicated that one grand juror—not identified in a bluntly worded communication handed the grand jury yesterday—may be prosecuted for violating his oath of secrecy by divulging how each of his colleagues voted on the smog question.

Liability Limited

Additionally, Judge Schweitzer called attention to the fact a grand juror—also not named—released to the press a copy of the proposed petition requesting a public hearing.

"The document was not a public document," the judge's letter went on, "and therefore is not privileged. As a result any statements made therein might be found to be libelous, and subject a member of the grand jury to civil liability."

The judge also was irked by press relations of the grand

Judge Warns of Tampering in Smog Probe

Continued from First Page

likewise fall in the same category," the judge's letter went on. "I therefore respectfully caution the members of the grand jury that a grand juror's immunity to civil liability is limited."

Dist. Atty. Roll, after being notified of the communication, instructed Dep. Dist. Attys. Fred Henderson and William B. Ritzi, grand jury counselors, to question each juror to determine, if possible, who had been contacted by outsiders, who the callers were, as well as the contents of their "pitch" on the smog matter.

Refers to Statement

Results of the grand jury "poll" will be written up in a report and submitted to Judge Schweitzer for possible action, Roll said.

The copy of the petition referred to was a statement by a member of the pro-public hearings grand jury faction. The document discussed the series of hearings looking toward opening the inquiry to the public as well as the resultant findings (which were not adopted by the entire grand jury, but lost by a tie vote).

In the statement by the defeated faction, the Board of Supervisors was identified as being empowered to act as Air Pollution Control Board of Los Angeles County and that "the said members and each of them have been negligent and careless" in that they failed to develop a comprehensive plan for emergency measures in the event a killer smog invaded the area.

Jurist's Warning

Following is the pertinent part of Judge Schweitzer's letter to Fairweather:

"It has been reported to me that at least four members of the grand jury who voted against the public session have been approached by outsiders who have endeavored to convince them that they should change their vote. It is not my concern as to how each member of the grand jury votes, but I call your attention to the fact that any outsider who attempts to influence a grand juror in his voting is guilty of a felony,

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Fairweather said the statement was meant to be "all-inclusive," applying to both secret and open public hearings.

Earlier, Judge Schweitzer, in charge of the 1954 grand jury, instructed Dist. Atty. [Name] to investigate fully complaints by several grand jurors that they had been phoned repeatedly by out-

siders since their vote against an open public hearing.

One juror complained yesterday, it was learned, that he was given the threat: "You will be made to look like a clown if you don't change your position on the smog hearing question."

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Turn to Page 21, Column 1

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"I am also advised that some member of the grand jury has released information to outsiders as to how each member of the grand jury voted on the smog question. The voting of grand jurors is secret and it is a penal offense for any member to divulge to an outsider how a particular member voted.

"I have directed the District Attorney to investigate fully the foregoing with respect to possible violation of law, and action will be taken

based on the outcome of investigation.

"I understand that last week one member of the grand jury released to the press a copy of the proposed petition requesting a public hearing. The document was not a public document, and therefore is not privileged. As a result, any statements made therein might be found to be libelous, and subject a member of the grand jury to civil liability.

"Several oral statements have been made recently to members of the press which likewise fall in the same category. I therefore respectfully caution the members of the grand jury that a grand juror's immunity to civil liability is limited."

NOVEMBER 2, 1954

NO OXYGEN**Smog Held
Earth's First
Atmosphere****BY WILLIAM S. BARTON**

Life started on the earth when the planet was covered with smog and no oxygen existed, according to Dr. Kalervo Rankama of the University of Helsinki, Finland. He spoke yesterday at the opening of the annual meeting of the Geological Society of America and allied groups in the Statler and Biltmore.

"We now believe," the Finnish scientist said, "that the earth, as a planet, has existed for some four and a half billion years. Life probably started about three billion years ago when there was smog but no oxygen.

Covered With Gases

"This form of life that could go on without oxygen must have been quite peculiar. The fact that it did go on suggests that Mars, despite its lack of oxygen, still may bear some rudimentary form of living things. The oldest rocks we have found in Africa and in Canada indicate that the earth's rocky structure dates back at least three billion years. And, some of the earliest carbon discovered appears to be of biological origin, contained originally, perhaps, in water-laid sediments. Before there was any free oxygen the earth appears to have been covered with smoglike gases."

Gold is still more valuable than uranium, it was pointed out by Ernest Gordon, Atomic Energy Commission scientist who is stationed at Grand Junction, Colo.

AEC Uses Planes

"But the AEC," he reported, "continues to want all the uranium it can get. Many tens of millions of dollars worth of the atomic fuel have been discovered in the United States, both north and south of the Colorado Plateau. We pay something like \$3.50 a pound for uranium as it is found in ores. The ore, however, must be as rich as two-tenths of 1% of uranium. Or, there must be at least four pounds of uranium per ton.

"Gold is worth \$35 an ounce, a lot more than uranium, but the latter is worth over 10 times as much as the 30 cents a pound paid for copper. The AEC has nine air planes looking for uranium in the western part of the country. They fly within 50 feet of the ground and have been successful with the aid of new scintillation counters."

The AEC never has had to

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tell you about the pennies-a-day plan.

SMOG AID PLEDGED

Continued from Second Page

ducted in co-operation with the Bureau of Standards, soon will be analyzed by an electronic computer.

Dr. McCabe, who has continued to serve the local Air Pollution Control District as a consultant since he resigned the director's post, said additional tests soon will be made on automobile engines at the government's internal combusting testing center at Bartlesville, Okla.

He reported that the automobile industry now is "beginning to turn loose a lot of talent on the smog problem."

Help for Larson

Dr. McCabe will return to Washington following the meeting of the Air Pollution Control Association's semi-annual technical conference, Thursday through Saturday, at the Biltmore.

Gov. Knight emphasized that his purpose in aligning Federal and State anti-smog effort was not to usurp responsibility for smog control from the county.

"This meeting was called," he said, "for the purpose of organizing and co-ordinating efforts heretofore going on in separate theaters.

"But we will be in the position of aides to Mr. Larson,

under the law. We are not trying to infringe on the Board of Supervisors. Our purpose is simply to aid.

"All of this is a serious and earnest attempt to help Los Angeles County solve the smog problem."

Gov. Knight closed the conference by saying he was more firmly convinced than ever that the oil refineries should close down voluntarily during the next smog attack.

The refineries turned down his request for them to close last Oct. 22.

Will Repeat Request

"I know I have no legal power to close them," he said, "but I will again request them to shut down when the smog becomes bad. Then we could find out once and for all just how much they contribute to the smog."

Meanwhile in Sacramento, Commissioner Bernard R. Caldwell of the California Highway Patrol was preparing to come to Los Angeles where tomorrow he will be nominated before the Board of Supervisors for temporary duty as smog law enforcement officer.

On loan from the State, upon order of Gov. Knight, he will serve in the newly created post pending appointment of a permanent head for the department.

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