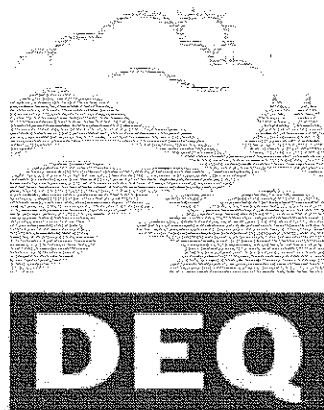


1951-1954
OREGON AIR POLLUTION
AUTHORITY MINUTES



State of Oregon
Department of
Environmental
Quality

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AIR POLLUTION AUTHORITY
MINUTES OF THE FIRST MEETING

August 24, 1951

Salem, Oregon

The first meeting of the Air Pollution Authority of the state of Oregon was called to order by the Secretary at 1:45 P.M., on Friday, August 24, 1951, in the Board of Control room of the State Capitol Building at Salem, Oregon.

Members of the Air Pollution Authority present were Dr. Harold M. Erickson, Carl E. Green, Oren L. King, Harold F. Wendel; and Curtiss M. Everts, Jr., Secretary. Also present were Chester K. Sterrett, Industrial Manager, Portland Chamber of Commerce, and Mrs. Grace Lundquist, stenographic assistant.

ELECTION OF OFFICERS

With the consent of the members present, Mr. Everts assumed the office of chairman pro-tem and asked for nominations for Chairman.

Mr. King nominated Mr. Green for the office of Chairman. It was MOVED by Dr. Erickson, seconded by Mr. Wendel that the nominations for Chairman be closed and that a unanimous ballot be cast for Mr. Green as Chairman. MOTION carried.

The chairman pro-tem then turned the meeting over to the new chairman, Mr. Green.

The Chairman then asked for nominations for vice-chairman. Mr. Wendel nominated Mr. King for Vice-chairman. Dr. Erickson MOVED and Mr. Wendel seconded that the nominations for vice-chairman be closed and that a unanimous ballot be cast for Mr. King for Vice-chairman. MOTION carried.

POLICY AND PROGRAM

The secretary reported that he had already received complaints of atmospheric contamination and requests for investigations, and that some potential industries had also inquired as to their status in relation to the law. He requested

the Authority to consider the adoption of an initial program as a basis for considering the proposed budget and for guidance in answering inquiries.

Dr. Erickson expressed an opinion that new industries should be prepared to comply with the act and inquired as to whether any standards for atmospheric cleanliness had been developed which could be used by the Authority.

Mr. Wendel suggested that the Authority should first secure the services of a qualified engineer to head the technical work, provide the necessary stenographic help, and in the meantime accept complaints and requests as they are submitted while the Authority formulates a more definite long range program.

After further discussion of the matter, it was MOVED by Mr. Wendel, seconded by Dr. Erickson, that the secretary with the advice and consent of the Chairman be authorized to employ a competent engineer to supervise the technical program, and, if necessary, a secretary. MOTION carried. It was Mr. Green's opinion that the Authority would experience difficulty in obtaining the properly qualified person for the salary indicated for the position.

In the discussion that followed, it was pointed out that it might be possible to recruit other members of the proposed staff before the supervisory engineer was selected. It was agreed, however, that action on this matter could be deferred until the next meeting of the Authority which would be held within the next two months.

At this point, the Honorable Douglas McKay, Governor, entered the meeting and discussed briefly his views on the approach to air pollution control activities in the state. The Governor complimented the Sanitary Authority on the progress made in water pollution control, and stated that the problem of air pollution control was quite similar. He also suggested that the present

approach should be one of study and investigation and cooperation, rather than retaliatory.

After offering the full cooperation of his office in working out the air pollution control program, the Governor withdrew from the meeting.

Mr. King requested that the discussion on program and policy be continued and recommended that as soon as a staff was assembled studies be undertaken to determine the nature of air pollution problems, and establish standards. He also suggested that new industries be advised that standards were in the process of preparation and that they should take every precaution to reduce to a minimum any atmospheric contamination that might be discharged.

Mr. Wendel suggested that until standards could be established, any new industry should be furnished with a copy of the law with the advice that the program was just getting underway and that until such time as standards were established, new industries should do everything possible to minimize air contamination.

The Chairman then recommended that some work of the Authority be undertaken by committees who could concentrate on certain activities. Among the committees he suggested were Public Relations.

Dr. Erickson believed that the Board should work as a unit until a special problem presented itself, and he suggested that the Authority avail itself of the services of the Health Education Section of the State Board of Health for its public relations work.

Mr. Wendel thought that the idea of subcommittees would be a good organizational plan when special problems became too complicated to be undertaken by the whole commission.

The Chairman then asked if the services of the Industrial Hygiene Section could be made available, and Dr. Erickson replied that arrangements had already been made to requisition the service of the Industrial Hygiene Laboratory.

It was MOVED by Dr. Erickson, seconded by Mr. King that the Air Pollution

Authority undertake a program to establish reasonable standards for air pollution control and that industry should then be expected to comply with the standard adopted, MOTION carried.

The Chairman then notified the Authority that it was the intention of the city of Portland to request the Authority to undertake a study in the Portland area.

BUDGET 1951 - 1953

After a discussion of the proposed budget, it was MOVED by Mr. Wendel, seconded by Mr. King that a tentative budget of Salaries & Wages, G.O.M., and Capital Outlay be adopted for the period ending June 30, 1952. MOTION carried.

The secretary was directed to confer with Dr. Robin Moser, Industrial Hygiene Section, State Board of Health, regarding the laboratory equipment which should be ordered in the near future.

FISCAL PROCEDURES

The secretary requested authorization from the Authority for the Business Manager of the Oregon State Board of Health sign vouchers drawn on the Air Pollution Authority budget, explaining that the Business Management Section was adequately equipped to handle such matters. MOVED by Dr. Erickson, seconded by Mr. Wendel, that the Business Manager of the State Board of Health be authorized to sign vouchers for expenses incurred in behalf of the Air Pollution Authority. MOTION carried.

OTHER BUSINESS

The Chairman then asked Mr. Chester K. Sterrett, Industrial Manager, Portland Chamber of Commerce, and a member of the Portland Air Pollution Committee if he would care to make any remarks to the Authority.

Mr. Sterrett stated that he believed the Air Pollution Authority was approaching the problem on a sound basis and that industry would cooperate

on the program. Mr. Sterrett also stated that the Authority should give careful consideration to the selection of its field staff, and that under the present air pollution control act the state could undertake a program of study and investigation leading to the establishment of standards later.

The secretary then brought to the attention of the Authority, a request from the Portland City Council for a study and report on an alleged atmospheric contamination problem in the vicinity of the Smithwick Concrete Products Company plant on Columbia Blvd., Portland. The Authority directed the secretary to advise the Portland City Council that due to lack of a field staff the Authority could not undertake the investigation at the present time.

The secretary was authorized to order such office supplies as were necessary to carry on the business of the Authority.

The next meeting was scheduled for Friday, October 26, in Portland, Oregon.

There being no further business, the meeting adjourned at 3:15 P.M.

Respectively submitted,

Curtiss M. Everts, Jr.,
Secretary

August 31, 1951

SECOND MEETING
of the
OREGON AIR POLLUTION AUTHORITY

October 26, 1951

The second meeting of the Oregon State Air Pollution Authority was called to order by the chairman at 2:00 P.M. Friday, October 26, 1951, in the offices of the Oregon State Board of Health at 1022 S.W. 11th Avenue, Portland, Oregon. Those present were Carl E. Green, Chairman; Merle S. West, Oren L. King, and Dr. Harold M. Erickson, Members; and Curtiss M. Everts, Jr., Secretary.

MINUTES: The secretary read the minutes of the first meeting of the Air Pollution Authority. MOTION by Dr. Erickson, seconded by Mr. King and carried, that the minutes be approved as read.

PERSONNEL: The secretary reported that as yet no person having the necessary required qualifications had been employed.

Secretary also reported on the visit of Mr. Henry Doyle, Senior Sanitary Engineer, U.S. Public Health Service at Salt Lake City, at which time Mr. Doyle indicated the Public Health Service had an engineer whom they might assign to the state for a period of two years. The secretary said he would talk further with Mr. Doyle and Dr. Seward E. Miller, Medical Director and Chief of Division of Occupational Health, PHS, in San Francisco during week of October 29. He also advised the members of the Board that the PHS wanted to know if the Authority would pay up to \$6,000 per year salary for such a person for the two year period.

After some discussion about the possibility of recruiting an engineer to head the Air Pollution Control program during the APHA annual meeting in San Francisco, MOTION was made by Mr. King, seconded by Mr. West, and carried that the expenses of Mr. Everts' trip to San Francisco for the purpose of interviewing possible applicants be paid by the Authority.

Mr. Everts while in California was going to contact Mr. Robinson, who is a meteorologist, and who made application for the position.

Mr. Everts advised the members of the Authority he did not anticipate too much trouble in recruiting junior assistants for this work.

COMPLAINTS:

Macleay Garbage Disposal Organization (Marion County Garbage Dump):**

The secretary read a complaint dated August 3, 1951, made by the Macleay Garbage Disposal Organization against the Marion County Garbage Dump, which was signed by twenty-three persons, alleging that the maintenance of this dump created conditions of air pollution which were injurious to human, plant, and animal life.

After some discussion of this complaint, it was the opinion of the members that these complainants should be advised that garbage disposal is primarily a health problem, and the matter should again be referred to the local health department; and that they be notified that the Air Pollution Authority was not set up to handle air pollution problems at this time.

M & S Cannery, Milwaukie: The secretary also brought to the Authority's attention a complaint alleging air pollution by the M & S Cannery at Milwaukie, Oregon. The attorney representing the plaintiffs had conferred with the secretary relative to a hearing before the Authority. Mr. Everts reported that he had explained to the attorney that such a hearing should be discouraged until the Authority was properly staffed and prepared to handle such matters.

Pennsylvania Salt & McCormich & Baxter Creosoting Company, Portland:

The Secretary reported that Mr. Wiggins of the Portland Bureau of Health had brought to the attention of the Authority the matter of complaints against the Pennsylvania Salt and other companies alleging that noxious and toxic odors

and vapors which were being discharged into the air were affecting the health of the residents of that district. The secretary advised the members of the Authority that the City Nuisance Division had been advised that the Authority planned to undertake survey in the area and would want to consult with them further regarding this matter.

Western Door & Plywood Company, Milwaukie: The secretary read a complaint against smoke from the Western Door & Plywood Company. He reported that attorney for these complainants was advised that the Authority was not ready to handle complaints at this time, but an investigation would be made as soon as staff was available.

MISCELLANEOUS:

Mr. King advised the members of the Authority that he had been authorized by the City Council of Eugene to go ahead and draw up a model ordinance for air pollution abatement. He now has a committee working on this matter.

Space in new office building: Secretary reported that he had contacted the Secretary of State and now has space reserved in the new State Office Building for the Air Pollution Authority on the 7th floor, and that arrangements have been made for laboratory work to be performed in the Industrial Hygiene Laboratory.

Re expense accounts for members of the APA: The secretary called attention to the fact that he has never received any claims for expense accounts for the August 24 meeting. The members were advised of procedure for placing such accounts.

Date of next meeting: Next meeting date was set for Friday, December 21, at 2:00 P.M., in the New State Office Building.

There being no further business, the meeting adjourned at 3:05 P.M.

Respectfully submitted,

CURTISS M. EVERTS, JR.,

Secretary

MINUTES OF THE THIRD MEETING

of the

OREGON STATE AIR POLLUTION AUTHORITY

December 21, 1951

The Third meeting of the Oregon State Air Pollution Authority was called to order by the Chairman at 2:00 P.M., Friday, December 21, 1951, in Room 936, State Office Building, Portland, Oregon. Those present were Carl E. Green, Chairman; Dr. Harold M. Erickson, Merle S. West, Oren L. King, and Harold F. Wendel, Members; and Curtiss M. Everts, Jr., Secretary.

MINUTES: The minutes of the Second meeting of the Authority having been prepared and distributed to the members in advance, MOTION by Dr. Erickson, seconded by Mr. Wendel, and carried -that the minutes as prepared by the secretary be approved.

COMPLAINTS:

Reynolds Metals Company, Troutdale-Corbett Area: Mr. M.B. McKay, a resident in the Troutdale area, appeared before the Authority to present the problem of alleged damage caused by fluorine on plants and livestock in the Troutdale-Corbett area, and to request that a study of this condition be made as early as possible. He advised the Board that the residents in the area affected were also concerned over possible effects on human life as well as on plants and livestock. Mr. McKay assumed that the fluorine being discharged into the air originated from the Reynolds Metals Company, inasmuch as when this plant was closed in 1946 and again in 1948, conditions of plant and animal life were noticeably improved. He also reported that studies on this subject have been made by the Experiment Station at Oregon State College, and the Department of Agriculture, and that the reports are now filed in the Portland Library. Mr. McKay suggested that perhaps since some studies have already been conducted by the Experiment Station, the studies of the Authority could be carried on jointly with the College.

After the presentation by Mr. McKay, the secretary of the Authority was instructed to obtain copies of the Oregon State College reports on the Troutdale-Corbett studies from the Portland Library. He was also instructed to confer with Dean Earl Price and Mr. Ralph Bessie on the work done by the Agricultural Experimental Station.

Mr. King suggested that the delegation from the Troutdale-Corbett area be assured that just as soon as a staff could be assembled for the work, an investigation of the matter would be made.

LANE COUNTY AIR POLLUTION COMMITTEE: Mr. King then introduced to the Board members Judge Day T. Bayly, County Judge of Lane County, and Mr. L. B. Bartlett, City Manager of Springfield. Judge Bayly said that the Weyerhaeuser Timber Company wanted to locate another pulp mill in Lane County to utilize the wood wastes and the county wanted more paper mills; but while everything should be done to encourage industry, at the same time the residents of the area should be assured that everything possible was being done to control air pollution problems caused by industry.

Judge Bayly advised the Authority that Lane County Court had appointed a committee consisting of the District Attorney, the County Health Officer, and Dr. Kunz, Head of the Chemistry Department, Oregon University, to study air and water pollution in the county and report the facts to the County Court together with recommendations. Judge Bayly said that they had been assured by the Weyerhaeuser Company that their company would do everything possible and would spare no expense in solving their pollution problems. The Judge also believed that constant checking of industry for sources of possible pollution should be maintained.

Mr. Green advised the representatives from Lane County that just as soon as the Air Pollution Authority was sufficiently staffed, investigations of conditions would be undertaken. He stated that the Authority was just getting under way and fully realized the complexity of the problems confronting it.

He cited the fact that Dr. Erickson, Mr. Wendel, and Mr. Everts, members of the Air Pollution Authority, were also on the Board of the State Sanitary Authority, who had functioned so ably in that much has been accomplished in the matter of water pollution abatement in the state, and he believed that over a period of time, the Air Pollution Authority would function as efficiently as did the Sanitary Authority.

A discussion then followed, in which Mr. Everts suggested that in approaching the problem of air pollution on the Troutdale-Corbett area, all matters pertaining to same should be investigated very carefully, and more information obtained on the matter. Mr. Everts suggested that it might prove helpful to invite Dean Price or Mr. Bessie from Oregon State College to the next meeting in order to find out what type of work they are doing and what the need for additional studies may be.

The secretary was instructed to invite Dean Price and Mr. Bessie, and representatives of the Reynolds Metals Company to attend the next meeting of the Authority so that more information on fluorine in the Troutdale-Corbett area could be obtained.

PERSONNEL

Mr. Everts reported on his contracts at the A.P.H.A. meeting in San Francisco regarding the employment of personnel, and advised the members that he had met with no success in the matter. He then reviewed his efforts, since then, to employ proper personnel, only to find that the starting salary of \$513 per month was in the low price range for such qualified personnel. Mr. Everts stated that it might be necessary to employ a graduate engineer just out of school and train him for the job, which would necessitate using one of our engineers presently employed in other work to handle the administrative duties. Mr. Wendal asked whether it would be possible for Mr. Spies to work with any young engineer graduates who might be employed.

Mr. Green suggested that the Authority should take immediate action to ask for more money for personnel, and asked who would be the proper persons to see regarding this matter, and was advised that they were Mr. Harry S. Dorman, Director of Finance; Mr. James M. Clinton, Director of the Civil Service Commission; and Governor McKay. MOTION was made by Mr. Wendel that the matter of reviewing the possibility of changing the rating and salary of personnel be studied by Mr. Green, Mr. Everts, and Dr. Erickson, and that they constitute a committee on this problem, and be authorized to proceed in the matter. Mr. Green suggested that perhaps the committee could arrange for a meeting with the three state officials at which time the matter could be presented. Dr. Erickson suggested that if the Board attended such a meeting in a body, it would perhaps carry more weight than if just a few persons represented the Board. He made the suggestion that the next meeting of the Authority be held in Salem and that arrangements be made to meet with the state officials on the same day. He also suggested that the committee develop a program and plan in advance and place it in the hands of other members before scheduling the meeting in Salem.

After some discussion on this matter, the MOTION was amended to read as follows: That a committee consisting of Dr. Erickson, Mr. Green and Mr. Everts be appointed to prepare a planned program for submission to the Governor, the Director of the Department of Finance, and the Director of Civil Service Commission having to do with changes in personnel classifications and salaries, and that arrangements be made for a meeting of the Air Pollution Authority with the three state officials, and that copies of the prepared program, or plan, previously developed by the committee be sent to the state officials at the time a meeting was requested. Motion seconded by Mr. King, and carried.

LABORATORY EQUIPMENT:

Mr. Everts reported on the status of laboratory equipment to carry on field investigations. He estimated that the cost of the equipment would be from \$8,000 to \$10,000, and requested advice as to whether the equipment should be purchased before personnel was available to use it. Dr. Erickson suggested that the purchasing of equipment should proceed, except trucks. MOTION by Mr. Wendel, seconded by Mr. West, and carried - that the matter of purchasing be left to the discretion of the chairman and secretary.

The question of the secretary investigating a little further the matter of equipment before placing an order was raised, but the matter was tabled until next meeting.

COMMUNICATIONS:

Mr. Everts then advised the Board of communications received concerning the M and S Cannery and the Western Door & Plywood Company, both of Milwaukie. The secretary was instructed to advise complainants that just as soon as a staff is obtained to carry on the work of the Authority, they will be asked to appear before the Authority, and will be advised of the date and place of meeting.

No date was set for the next meeting.

There being no further business, the meeting adjourned at 3:50 P.M.

Respectfully submitted,

CURTISS M. EVERTS, JR., SECRETARY
Air Pollution Authority

FOURTH MEETING
OF THE
OREGON AIR POLLUTION AUTHORITY

June 11, 1952

The fourth meeting of the Oregon State Air Pollution Authority was called to order by the chairman at 2:10 P. M. Wednesday, June 11, 1952, in the offices of the Oregon State Board of Health at 1400 S. W. 5th Avenue, Portland, Oregon. Those present were Carl E. Green, Chairman, Merle S. West, Dr. Harold M. Erickson, Mr. Harold Wendel, Members; and Curtiss M. Everts, Jr., Secretary.

MINUTES: The minutes of the Third meeting of the Authority having been prepared and distributed to the members in advance, MOTION by Dr. Erickson, seconded by Mr. Wendel and carried that the minutes as prepared by the Secretary be approved.

PERSONNEL: The Chairman stated that the search for a well-qualified engineer to direct the technical program was continued during the period between meetings. The decision was made on Mr. Evert's recommendation to place in charge of the program Mr. R. E. Hatchard who has been employed for several years by the Public Health Engineering Section, State Board of Health, and who was Sanitary Engineer for the Oregon State Civil Defense agency. All major universities in the country who had courses in public health, industrial hygiene and some with Air Pollution Control had been contacted and the Civil Service Commission tried to recruit an engineer but with no success.

Mr. Hatchard was then introduced to the board by the Chairman. The matter of program was discussed and the Chairman asked Mr. Hatchard to outline the program he planned to recommend and to discuss briefly the major items.

COMPLAINTS:

Milwaukie Residents Re: Western Door and Plywood Corporation: The Au-

thority then considered the petition signed by seventy-one Milwaukie residents and property owners in which it was alleged that emissions from the Western Door and Plywood Corporation were creating a nuisance in the neighborhood. Mr. B. G. Skulason, Attorney, and resident of Milwaukie, appeared before the Authority in behalf of the signers of the petition to present the problem caused by this industry and called on some of the residents to state the situation.

Mrs. John E. McGee, 436-32nd St., Milwaukie, located approximately two blocks northeast of the Western Door and Plywood Company, presented a sample of the material which fell on her porch during just one night and stated that the material comes down on laundry, covered outside lawn furniture, and filled the air and causes throat irritation and coughing. At night when the windows are open it fills the room, causes burning and coughing and makes room cleaning very difficult. She stated that this situation has existed in the area since the plant began operation approximately two to three years ago. Mrs. McGee also reported that in addition to the black smoke and debris an additional problem was created by a lower pipe of some sort and that emitted material that smelled like creosote and that there was a downblow that should be contained in an underground concrete tank but the noise from steam which occurred at intervals of about fifteen minutes awakened them at night. The plant is in the city limits.

Mrs. Z. A. Olson of 916-29th St., located southwest of the plant complained that these conditions occurred at her home all summer. Mrs. Olson also submitted a sample of the material collected from her steps and back porch and stated that wind carried the material to her property and the south wind carries it to Mrs. McGee's property. Mrs. Olson also stated that the plant operates twenty-four hours per day and an odor is wafted in on the breeze, and that when she complained to the local authorities they told her that it

was caused by trains which run near her home and they were of no help.

Mr. Owen Nichols of 2935 Harrison Street, Milwaukie, located about one block S. W. of the plant stated that his property receives the debris and odor when a northeast wind blows; that he just recently washed the house and now it seems to have another covering of greasy, oily substance which also settles on one's clothes when outdoors. He reported that the material could not be brushed off, but leaves an oily streak and settles on cars at night and that if a dew has fallen or a light rain has descended the material sticks all over the car.

Mr. Skulason then stated that he has complained to the industry but nothing was ever done.

Mr. Nichols further reported that a real estate agent has estimated a 3 to 3500 dollar depreciation of the property and that a Mr. Clark, who planned to sell his home was offered \$9,000 loan but after the loan agency representative investigated the site he offered \$1,000 less on the loan.

Mrs. B. S. Eremeff, (Mr. Skulason's daughter) 721-34th St., Milwaukie, who lives two blocks from the plant stated that she had nothing further to add other than what was said by the other complainants but that all laundry is ruined, every plant and leaf is coated with an oily substance and that this condition has been going on for about two years.

Mr. Skulason stated that the Western Door and Plywood have taken the attitude of "public be damned".

Mrs. Howard Hamlin, 514-32nd St., Milwaukie, located three blocks from the plant, stated that she has lived there for eleven years; that there is a great deal of smoke that settles on the patio at her home; that the sawdust blower emits sawdust and she claimed that it is very detrimental to her children's health.

Mr. Green stated that he thought that the Authority had enough data to warrant an investigation.

At the request of Mrs. McGee, Mr. Skulason presented his experience with the problem and stated that he had observed accumulations of debris on the window sills and that his room is on the N. W. corner of the house so one window was exposed directly to smoke from the factory. One night about one year ago he woke up and was certain he was about to expire for he could not get his breath and suffered orthopnea. The window on the north side of the house was open. He got up and found that the room was full of some sort of noxious vapor even though it was a balmy, bright moonlit night. He searched for the source of the odor and found that smoke from the plant was responsible.

MOTION: It was MOVED by Mr. Wendel, seconded by Dr. Erickson and carried that the Authority immediately put an investigator on the scene to study this complaint and if the situation is as described by the complainants, that an order to cease and desist be considered at the next meeting.

Columbia Boulevard, Portland Re: Burning Refuse Dump:

Mr. Wm. C. McCulloch and Mr. Meyers, attorneys, for National Biscuit Co., were present.

Mr. Meyers appeared before the Authority and presented a letter to the Members relative to smoke and odors from a garbage dump north of the National Biscuit Company Plant on Columbia Boulevard. Mr. Meyers stated that it is located on the north bank of the Columbia Slough and has been operated for a number of years by Mr. Henry Seivert who has been in and out of trouble with County Authorities. He reported that in December 1951, the National Biscuit Company asked them to do something about the dump which is burned openly for the wind carries refuse across the road and it settles over their new plant and grounds. Mr. Meyers had investigated the situation and determined then the best procedure was to go before the Board of County Commissioners with the request that an abatement order be issued. A number of property owners signed a petition governing the operation of the dump and the petition is before the Board of County Commissioners to be heard. Mr. Meyers also

reported that raw household garbage is not burned at the dump area. Since the petition has been filed, the operator of the dump is a little more careful than in the past, but the black smoke and debris affects the National Biscuit Company plant which operates around the clock and that homes and motels in that area and everyone within a mile are affected by the smoke and debris. They would appreciate an investigation.

Mr. Green asked if it has been approached as a public nuisance. Mr. Meyers replied that it had been alleged in a petition that it was a public nuisance; that the District Attorney is handling it on that theory and turned it over to the County Health Department for consideration.

Mr. Wendel asked if this is a collector of domestic refuse. Mr. McCulloch answered that his impression is that Mr. Sievert has a dump of substantial area there and that he did not collect the refuse but charged a fee to collectors for use of the dump as a disposal area and that the main complaint is the burning of refuse which produces smoke and fumes all the time.

Mr. Allen, Manager of National Biscuit Company, thanked the Members for their consideration of this situation and stated that it is a very serious problem for a considerable amount of material is deposited on cars and when rain and dew cover the cars it makes a plaster-like substance. Mr. Allen stated that his company would cooperate with the Authority.

Dr. Charlton, member of the Portland Chamber of Commerce, Recreation and Natural Resources Committee reported as to what the proceedings and complaint were.

MOTION: It was MOVED by Mr. Wendel, seconded by Dr. Erickson and carried that the complaint be investigated and that if conditions are as alleged we proceed with appropriate action.

Nu-Bora Soap Company:

Mr. Hatchard quoted briefly from a report from the Industrial Hygiene Department of the State Board of Health on their investigation of a complaint

alleging atmospheric pollution by the Nu-Bora Soap Company.

Mr. B. F. Dalton, representing Oregon Transfer Company appeared before the Authority and stated that the transfer company has an office building and parking lot opposite Nu-Bora Soap Company; that a fine soap-like substance comes out of the top of the stack and filters over the top of the cars; that it comes through the windows of the office building and causes considerable throat irritation and that one of the tenants is now home sick from the soap which has filtered into the office. Mr. Dalton thought that if the soap company had some sort of filter on the ventilator it would prevent the soap from escaping and getting into the office or on cars for when it rains the soap mars the paint on the cars.

MOTION: It was MOVED by Mr. West and seconded by Dr. Erickson and carried that the complaint be investigated and that a report be furnished to the Authority.

Dr. Charlton's laboratory has made some examinations of specimens collected from the automobiles. A number of cars had to be repainted. The insurance company has been concerned about this.

Mr. Everts reported a complaint in which it was alleged that paint on cars located in the vicinity of the Hyster Company had been damaged by some atmospheric substance. He summarized the report of the Industrial Hygiene Section, State Board of Health.

MOTION: It was MOVED by Dr. Erickson, seconded by Mr. West and carried that the matter be investigated and a report furnished the Authority.

Reynolds Metals Company, Troutdale-Corbett Area: Mr. Harold Zey, Chemist.

Fred A. Yerke, Attorney representing Reynolds Metal Company appeared before the Authority, and stated that he would be glad to answer any questions.

After a brief discussion of the status of damage suits, Mr. Green requested Mr. Hatchard to review the data on fluorine assembled by the Oregon State

College Agricultural Experiment Station and submit a report to the Authority at the next meeting.

Mr. Everts then discussed the 1952-53 budget with Members of the Authority. It was recommended to the Business Manager of the State Board of Health not to attempt to make any changes in the budget until the program is developed more in detail.

Date of next meeting: The Chairman was authorized to call a meeting during the month of August.

There being no further business the meeting adjourned at 4:15 P. M.

Respectfully submitted,

CURTISS M. EVERTS, JR., SECRETARY
Air Pollution Authority

FIFTH MEETING
OF THE
OREGON AIR POLLUTION AUTHORITY

September 11, 1952

The fifth meeting of the Oregon State Air Pollution Authority was called to order by the Chairman at 3:10 P.M., Thursday, September 11, 1952, Room 720 State Office Building, 1400 S. W. 5th Ave., Portland, Oregon. Those present were Carl E. Green, Chairman, Merle S. West, Dr. Harold M. Erickson, Mr. Oren L. King, Members; and Curtiss M. Everts, Jr., Secretary. Also present were Mr. R. E. Hatchard, Chief, Air Pollution Control Section, and Mr. W. J. Whitsett, Associate Sanitary Engineer.

MOTION RE: MINUTES OF PREVIOUS MEETING:

The minutes of the fourth meeting of the Authority having been prepared and distributed to the members in advance, it was moved by Dr. Erickson, seconded by Mr. West and carried that the minutes as prepared by the Secretary be approved.

MOTION RE: ELECTION OF OFFICERS:

The chairman then notified the members that through an oversight the Authority had failed to elect officers at the beginning of the present calendar year. It was moved by Dr. Erickson, seconded by Mr. West and carried that the minutes of the third meeting be corrected to state that the Authority officers were elected as of January 1952.

OSWEGO RESIDENTS RE: CINDERS, FLY ASH AND CEMENT DUST:

Mr. Chester A. Ferguson, 350 State Street, Oswego, the owner of Chet Ferguson's Furniture and Gift Shop appeared before the Authority to submit a complaint relative to cinders, fly ash and cement dust in the city of Oswego. Mr. Ferguson stated that he had attended the meeting as a representative of Mr. Chas. A. Needham,

the Mayor of Oswego, who had requested him to present information on air pollution conditions in that city. Mr. Ferguson reported that the Oregon Portland Cement Company plant is located across the highway from his store; that the plant is operated twenty-four hours a day and that a considerable amount of cement dust was emitted from the plant. He also complained of cinders and soot from the Huddleston Lumber Company Mill and the Oswego Planing Mill. He stated further that the Oregon Portland Cement Company installed a filter system in 1944, to remove cement dust but since that time the plant capacity has tripled and that according to reports the filters were not always operated. Mr. Ferguson claimed that the cement dust damaged the finish on automobiles and that the cars of shoppers in the city were often covered with cinders and sawdust within thirty minutes after they had parked in the business district.

The Chairman then asked whether or not the staff had made any investigations in the Oswego area and Mr. Hatchard reported that a preliminary survey had been made which showed that the area was covered with the material described by Mr. Ferguson but that laboratory reports on the analysis of material collected by "particle fall-out jars" had not yet been received.

Mr. Henry Davis who stated that he operates a pharmacy on State Street in Oswego confirmed Mr. Ferguson's description of conditions created by cement dust, fly ash and cinders in Oswego.

Mr. King then asked how long the Oregon Portland Cement Company plant had been operating in Oswego and Mr. Ferguson stated that he was not certain but that it had been there for many years.

Mr. O. C. Roehr stated to the Authority that he represented Mr. Frank McCaslin, President of the Oregon Portland Cement Co., that he was not familiar with all of the details concerning the operation of the Oregon Portland Cement Company plant; that he was present to listen to the statements that were being made. Mr. Roehr mentioned, however, that the plant has been operating in Oswego for over thirty

years and that it was his understanding that the City Council in Oswego invited the Oregon Portland Cement Company to locate in Oswego.

Mr. Ferguson then stated that the city of Oswego was not a first class residential area thirty years ago and that newcomers to the city remain only about thirty days and then move away due to the nuisance created by cement dust.

Mr. R. B. Hopkins, Manager of Oswego Planing Mill, reported last year his mill had constructed a new waste burner which had been approved by the Fire Underwriters and by the State Fire Marshal and requested a copy of any report that the Air Pollution Authority might make which would contain recommendations for the elimination of fly ash and cinders from their waste burner. Mr. Hopkins stated that Mr. Jack Huddleston of the Huddleston Lumber Co., at Oswego had intended to be present but could not attend the meeting of the Authority and that he was also representing Mr. Huddleston.

Mr. King then asked if the Oregon Portland Cement Co., was endeavoring to alleviate the dust problem and Mr. Roehr stated that in 1944 electrostatic precipitators were installed to collect the dust and that since he was not familiar with the operation of the plant and he did not feel able to answer Mr. Ferguson's statement that the filters were not operated at night.

The Chairman then reported that the engineers on the Air Pollution Authority staff are studying the area and will furnish the Authority with a report and recommendations. The Chairman also stated, for the benefit of those present, that the Authority planned to request the various lumber associations in the state to appoint a committee to work with the Authority and its engineers in a comprehensive study of the problem of controlling emissions from lumber and wood products plants.

MOTION RE: OSWEGO CINDERS, FLY ASH AND CEMENT DUST:

After a further brief discussion of the matter, it was moved by Mr. King and seconded by Dr. Erickson and carried that the Authority's engineers continue their

study in Oswego and report in detail to the Authority at the next meeting.

KLEMAN ORCHARDS RE: KEISER SAND AND GRAVEL COMPANY, KEISER DISTRICT NORTH OF SALEM.

Mr. Max Kleman, owner of the orchard, appeared before the Authority to submit a complaint regarding damage to his crops caused by emissions from the asphalt plant operated by the Keiser Sand and Gravel Company. Mr. Kleman stated that the asphalt plant was located approximately 300 feet north of his orchard and that the plant began operating this spring. He claimed damage to his apple, pear and berry crop.

Mr. Kleman reported that after first noting the damage that he had observed the direction of the wind and was surprised how frequently the northerly wind carried the plant emissions over into his orchard. Mr. Kleman asked that the photographs taken by Mr. Whitsell during the complaint study be shown to the Authority since he believed the pictures would describe conditions and show the effect on the crops more clearly.

Mr. Hatchard reported on the complaint investigation and showed the photographs of Mr. Kleman's orchard to the Authority. He further stated that a letter was sent to the Central Paving Co., owners of the Keiser Sand and Gravel Company, stating that the plant emissions violated the provisions of the Air Pollution Act and recommended corrective action. Mr. Hatchard then brought to the attention of the Authority a letter from Mr. F. E. Price, Dean of the School of Agriculture, OSC, to which there was attached a report written by H. Hartman and Dr. Hanson of the Horticultural Dept., O.S.C. and which described the damage to the crops and predicted the effect on the orchard if the emissions continue for an extended period of time.

Mr. Arthur Woods, partner in the Central Paving Company, was present at the meeting and asked if it was the purpose of this meeting to establish a claim for Mr. Kleman's alleged damages.

Mr. Green answered that the Authority is required to investigate complaints involving

air pollution and that the statute specifically covers the discharge of air contaminants causing damage to plants or animals. He further stated that the function of the Authority is to require correction of excessive emissions but the Authority certainly was not concerned with establishing the basis for a claim of damage caused from a particular air pollution problem.

Mr. Woods then stated that he could not understand how the plant discharge could effect only Mr. Kleman's orchard since other orchards in the area are healthy.

He stated that he believes Mr. Kleman's orchard has not actually been damaged by the plant emissions and that he would take exception to this statement regarding the prevailing northerly winds at this time of the year. He conceded that occasionally the wind came from the north but not every day. Mr. Woods stated that the complaint from Mr. Kleman is the only one received by the Keiser Sand and Gravel Company. He further stated that he is aware that they have a dust problem and that if it is determined the plant is in the wrong they will make an attempt to correct the situation. A service engineer from the company which manufactured the asphalt plant equipment was expected to visit the asphalt plant in the near future. If a practical control system could not be provided, Mr. Woods explained that as a last resort the plant could be moved to an isolated location. Mr. Woods stated that he did not wish to mislead the Authority members regarding the time required to correct the problem, however he expected by fall to have some plans formulated.

Mr. West requested that when the Keiser Sand and Gravel Company has a proposed plan available that the information and plans be submitted to the Authority for review.

MOTION RE: KEISER SAND AND GRAVEL COMPANY:

It was moved by Mr. King, seconded by Mr. West and carried that the field investigation be continued and that a report would be submitted at the next meeting regarding any corrective measures which the Keiser Sand and Gravel Company may have developed.

MILWAUKIE RESIDENTS RE: WESTERN DOOR AND PLYWOOD, MILWAUKIE:

Mr. Hatchard summarized the area study carried on since the last Authority meeting and explained in detail what the plant management had done to reduce the emissions. Mr. Hatchard stated that the plant management had succeeded in reducing heavy black smoke and other materials emitted from the plant.

Mrs. John E. McGee 436-32nd St., Milwaukie, accompanied by four other ladies was present at the meeting. Mrs. McGee stated that she had not noted any appreciable improvement and that the same conditions which were described at the last Authority meeting still occurred but not quite as bad due to a change in the wind. Mrs. McGee continued that in the mornings at about 7 A.M. and in the evenings at about 6 P.M. the plant discharges a heavy black smoke that is deposited on the clothes and window sills.

Mrs. Probst, Milwaukie, Oregon, stated that just before the last rain there was considerable smoke which returned to the ground level and that even with the windows closed one could smell the fumes inside of the house. She stated that sawdust emission decreased. Mrs. Probst also maintained that the conditions at night are worse than during the day.

MOTION RE: WESTERN DOOR AND PLYWOOD, MILWAUKIE:

It was moved by Mr. King, seconded by Mr. West and carried that the engineering staff continue the study and submit a report at the next meeting.

Nu-BORA SOAP COMPANY, N. W. 12th and Hoyt Sts., Portland, Oregon.

Mr. Hatchard summarized the field work activities to investigate this complaint and reported that the plant management had retained the services of the American Sheet Metal Company to develop collection apparatus, and that Mr. B. A. Crouch, Plant Supt., is working with the American Sheet Metal Co., to develop a venturi-tube

and steam curtain system to collect the soap dust. Mr. Hatchard further stated that the plant owner indicated a willingness to make necessary corrections as long as the cost is within reason and the space required for the equipment will fit in their present building.

COLUMBIA BOULEVARD, PORTLAND. RE: BURNING REFUSE DUMP.

Mr. Hatchard reported that the operator of the refuse dump on Columbia Blvd., is now taking reasonable precautions to prevent burning of materials that would create excessive smoke. It was pointed out, however, that an open burning refuse dump can not be operated in a community without creating nuisance conditions unless a properly designed incinerator is provided. The question was raised whether it was the intent of the Air Pollution Act to provide for abatement of this type of nuisance since existing nuisance statutes likely would cover this situation. It was decided to submit the question informally to the Attorney General's office for comment.

S.E. 8th and Taylor, PORTLAND, OREGON. PAINT DAMAGE.

Mr. Hatchard advised that the damage to paint on automobiles has not been occurring as frequently as the complaint indicated. A preliminary survey of this area indicated that more than one plants' discharge could be responsible and that special sample equipment which is required for more detailed field study by the staff has been ordered but has not yet been delivered.

QUARTERLY REPORTS.

Mr. Everts stated that the Air Pollution Control Section had not previously prepared a Quarterly Report due to the date that the section began operations. Much of the information and data which was reported today will be contained in the Quarterly Report. This report will be mailed to the Authority members and will reduce the amount of details to be discussed at the meetings.

FUTURE PROGRAM

The need for industry-wide study of air pollution problems effecting many similar

plants was discussed and the suggestion was made that the Authority invite industries to organize committees for the purpose of studying problems and co-operating with the Authority in developing information which would be of assistance to the industry in the correction and prevention of any air contamination problems.

MOTION RE: EFFORT TO SECURE INDUSTRY-WIDE COOPERATION:

It was moved by Mr. West and seconded by Mr. King and carried that the Secretary be authorized to contact the lumber, pulp, foundry and other industrial associations in an effort to secure industry-wide cooperation in the study of air pollution problems.

Mr. King stated that the city officials need recommended rules and regulations so that municipal ordinances may be considered and in the meantime, the investigation of complaints should be delayed until the recommended rules and regulations have been prepared. Mr. King further stated that considerable field work will be required to develop these recommendations for municipal control. Mr. Everts added that the magnitude of the state-wide problem has not yet been determined and also there is a need to continue study of equipment and laboratory procedures which will be required to further the Air Pollution Control activities. It was the opinion of the Authority that if the basic data for air pollution control activities were to be collected the staff could not spend considerable time on the investigation of individual complaints.

Laboratory and field equipment that has been ordered or studied was also discussed and it was directed that additional equipment be ordered when it is determined that the items would be necessary.

Mr. Green suggested that the district engineers of the State Board of Health who are stationed in Pendleton, Eugene and Grants Pass be relied upon to make initial field investigations and report their findings to Mr. Hatchard and that if the particular complaints were very important that additional investigations could be

undertaken.

MOTION RE: DISTRICT ENGINEER SERVICES FOR AIR POLLUTION CONTROL WORK.

It was moved by Mr. King and seconded by Mr. West and carried that arrangements be made for the district engineers' services for air pollution control activities and to budget one district engineer's salary and expenses for this work.

EDUCATIONAL PROGRAM.

Mr. Hatchard suggested that a pamphlet be prepared which would briefly explain the Air Pollution Act and control activities for public information.

Mr. Green suggested that information be prepared for a newspaper article and that the Health Education Staff, State Board of Health, collaborate on this material.

Mr. King suggested that it would be a good plan for the future to have a member of the staff speak on air pollution control activities before service clubs, Chambers of Commerce and other interested groups before the end of the year.

DATE OF NEXT MEETING.

The Chairman was authorized to call a meeting for December 3, 1952. There being no further business the meeting adjourned at 5:30 P. M.

Respectfully submitted,

Curtiss M. Everts, Jr., Secretary
Air Pollution Authority

SIXTH MEETING
OF THE
OREGON AIR POLLUTION AUTHORITY

December 3, 1952

The sixth meeting of the Oregon State Air Pollution Authority was called to order by the Chairman at 3:10 P.M., Wednesday, December 3, 1952, in Room 936, State Office Bldg., 1400 S.W. 5th Ave., Portland, Oregon. Those present were Carl E. Green, Chairman; Oren L. King, Harold F. Wendel and Merle S. West, Members; Curtiss M. Everts, Jr., Secretary; R. E. Hatchard, Chief of the Air Pollution Control Section; W. J. Whitsell, Associate Sanitary Engineer; and Frank Terraglio, Chemist.

MOTION RE: MINUTES OF PREVIOUS MEETING:

The minutes of the fifth meeting of the Authority having been prepared and distributed to the members in advance, it was moved by Mr. Wendel, seconded by Mr. West, and carried that the minutes as prepared by the Secretary be approved.

NATIONAL TOBACCO RESEARCH LEAGUE RE: SMOKING IN PUBLIC PLACES:

Mrs. John Stanley Dull, 1753 N. W. Aspen Ave., Portland, Oregon, representing the National Tobacco Research League, appeared before the Authority to request the Authority to assume jurisdiction over the problem of smoking in public places, particularly restaurants and public buildings. Mrs. Dull read parts of an article from the December 1952 Readers' Digest, to show the danger to public health from inhaling tobacco smoke. Mrs. Dull stated that the League desires legislation to prohibit smoking in public places. The League members believed that an appeal to the Air Pollution Authority was justified, and hoped that the Authority will determine what can be done about this problem. Mrs. Dull requested that a report be sent to the National League of Tobacco Research concerning the action taken.

The Chairman stated that the same request was made to the Authority about a year ago and at that time it was assumed that the Authority did not have jurisdiction over air pollution within buildings. Mr. Wendel called attention to the section of the Air Pollution Control Act which in part reads, "to prevent the pollution of the air with impurities menacing the health and general welfare of the people of the State of Oregon", and that no mention was made whether this referred to the air inside buildings or outside.

MOTION RE: ADVICE OF ATTORNEY GENERAL CONCERNING CONTROL OF SMOKE INSIDE PUBLIC BUILDINGS.

It was moved by Mr. Wendel, seconded by Mr. King, and carried that the advice of the Attorney General be secured to determine whether the Air Pollution Control Act gives the Authority the responsibility for control of air pollution within buildings.

Mrs. Dull was advised that the Authority would investigate this matter and report would be made to the National Tobacco Research League.

STATUS OF AIR POLLUTION SAMPLING STATIONS:

Mr. Hatchard, Chief of the Air Pollution Control Section, explained the overall plan for locating particle fallout stations in the State and stated that the purpose of the initial sample collection is to collect information showing the present air pollution conditions. At present only the material falling out of the air is being collected and that additional air samples will be collected at the same stations to determine the quantity and quality of the small sized particles that remain suspended in the air. Certain gaseous concentrations will be measured in the future when the field equipment is on hand, he pointed out.

There are now 137 stations in 36 communities operating in the State of which 27 are located in the Portland area. Roofs of schools or other public buildings are being utilized as locations for sample stations. It was necessary to develop simple

equipment and procedures to carry on the study throughout the State.

Mr. Hatchard introduced Mr. Terraglio, Staff Chemist, who then explained to the Authority the equipment that is being used and the procedures that were developed for collecting the fallout samples.

INDUSTRIAL AIR POLLUTION ACTIVITIES:

Mr. Hatchard reported that 344 questionnaires had been mailed to lumber and wood working companies to secure information regarding waste wood disposal and that 115 replies had been received. State Board of Health district engineers assisted with this work by reviewing the county industry list and making additions or deletions.

The Western Pine Association and the West Coast Lumbermen's Association had been contacted regarding the formation of an industrial air pollution committee and it was learned that one committee appointed by the Associated Forest Industries could be arranged that would represent both the fir and pine industries. Mr. C.E. Ogle, Secretary for the Associated Forest Industries, promised to appoint such a committee.

OSWEGO RE: CINDERS AND CEMENT DUST:

Mr. Whitsell reported on the analyses of the particle fall-out samples collected in the Oswego area as follows:

<u>Location of Sampling Point</u>	<u>Total Solids expressed in Tons per Square Mile per Month.</u>
Pinafore Restaurant 230 N. State St.,	56.3
Dahl House 41 S. State St.,	138
Grocery 365 S. State St.,	40
Residence 250 Furnace St.,	44.3
Bontys Plumbing 442 First St.,	47.7

Chevrolet Agency
George Calder

54

Control Point

20.2

Accumulation of more than 25 tons per square mile per month indicates a dust problem in the area. It is possible to determine the general quality of the major constituents of the fall-out samples, and this will be done in the future.

Mr. Green asked if the Authority had sufficient information available regarding the dust condition to consider action for its abatement. Mr. Hatchard replied that it would be necessary to have laboratory analyses that would show the amount of dust from the major sources.

At this time the chairman asked Mr. H. R. Shipley, representative of the Oregon Portland Cement Company, if he desired to make any statements. Mr. Shipley replied that he was attending the meeting as an observer; however he did wish to point out that the cement plant is located within approximately 1/4 mile of three lumber and wood products plants and that it would be necessary to determine the quantity of material coming from these plants, road dust and other possible sources.

The Chairman pointed out to Mr. Shipley that the Authority and its staff were willing to work and cooperate with industries on air pollution problems and that the Authority was charged by law with certain duties and responsibilities, and that the Authority desires to discharge such duties to the best of their ability and in cooperation with all concerned; and requested that Mr. Shipley convey to his company the action taken by the Board and the attitude of the Authority in handling such problems.

The Authority members discussed procedure to follow in this type of problem in view of the fact that there was not sufficient data at this time and that the industries concerned have shown interest in working out a solution to the problem.

MOTION RE: INTERIM NOTIFICATION OF THE CONTRIBUTORS TO AIR POLLUTION.

It was moved by Mr. Wendel, seconded by Mr. King and carried that when complaints involving certain alleged offenders are supported by evidence that there is substantial air pollution, then the industries suspected of being contributors shall be notified of the conditions and be given the data that has been collected thus far so that the management will be advised.

NORTH SALEM RE: KEIZER SAND AND GRAVEL COMPANY:

Mr. Whitself reported that the Keizer Sand and Gravel Company had moved the hot-mix asphalt plant on October 1, 1952, to Klamath Falls temporarily and would not be operating again in the Keizer community until about June 1st. The management had consulted with the manufacturers of the plant equipment in Los Angeles and learned that the plans for a wet collection system are available. Before plant operation is resumed in the Keizer district, the collection system will be installed. Plans for the collection system will be submitted to the Authority prior to construction.

The Chairman stated that as long as the company was making progress with their plans to collect the dust, no further action was necessary at this time.

MILWAUKIE RE: WESTERN DOOR AND PLYWOOD COMPANY:

Mr. Whitself reported that no additional study of the complaint concerning the Western Door and Plywood Company, Milwaukie, had been made since the last meeting due to the staff's work on air sampling stations throughout the State. Three sampling stations are now operating in Milwaukie, but it will be necessary to locate additional stations closer to the Western Door and Plywood Company.

After discussing this complaint, the Secretary was instructed to write a letter to the Western Door and Plywood Co., calling their attention to the conditions.

PORTLAND RE: NU BORA SOAP COMPANY, N. W. 12th and Hoyt St.,

Mr. Whitself stated that a wet collection system had been planned at the Nu Bora

Soap Company by Mr. Crouch, Supt, however, Mr. Crouch had recently left the company. Mr. Easson, owner of the Nu Bora Soap Co., had advised that the soap dust problem no longer existed due to operational changes. Tenants in the Pihl Transfer Co., Building located immediately north of the soap plant, claim that conditions are just the same as previously.

After discussing the complaint the Authority instructed the staff to continue its investigations of the problem, and report at the next meeting.

PORTLAND RE: BURNING REFUSE DUMP, N. E. COLUMBIA BLVD:

The informal advice of the Attorney General had been requested to determine if the Authority was responsible for investigating and abating smoke and fly ash from the N. E. Columbia Blvd., dump and other similar complaints. The Secretary read the reply received from the Attorney General which stated that the Authority does have jurisdiction and that the Authority should adopt rules and regulations embodying or clarifying the procedures outlined where they appear vague in the Act.

Mr. Everts pointed out that complainant should furnish proof that property was actually damaged before the Authority take any action.

The Authority directed the staff to continue the investigation of this complaint and report at the next meeting.

BIENNIAL BUDGET 1953-55:

Mr. Everts explained the proposed biennial budget 1953-55 as set up and pointed out that the amount is \$5,000 less than the budget allowed by the 1951 legislature for the 1951-53 biennium. The matter had been discussed with the State Budget Director, and none of the items were questioned. The Secretary recommended that the legislature be requested to consider legislation which would return to the general fund unobligated balance as of June 30, 1953, to simplify the accounting and budgeting

procedure.

MOTION RE: BIENNIAL BUDGET 1953-55.

It was moved by Mr. Wendel, seconded by Mr. West, and carried that the budget as prepared be approved.

OUT-OF-STATE VISITS TO STUDY AIR POLLUTION CONTROL TECHNIQUES:

Mr. Everts explained the necessity for out-of-state visits by the engineers of the Air Pollution Control Section to confer with air pollution officials of other states and requested the approval of the Authority for such travel. He reported that he would like to have Mr. Hatchard visit Detroit-Windsor area sometime in the future; however the trip would not be scheduled until March or April 1953. After discussion, the Authority decided it would be wise to have Mr. Hatchard visit other agencies having to do with air pollution control in order to benefit by their experience.

MOTION RE: ELECTION OF OFFICERS:

It was moved by Mr. Wendel, seconded by Mr. West, and carried that the present officers be reelected for 1953; namely, Carl E. Green, Chairman, and Oren L. King, Vice Chairman.

PROGRAM FOR THE NEXT QUARTER:

Mr. Hatchard stated that the staff would be engaged in the following activities during the next quarter.

1. Preparation of preliminary report on the evaluation of the potential air pollution problem in Oregon.
2. Continue investigation of complaints which have been received.
3. Stimulate organization of air pollution industry committees.
4. Develop additional field techniques for measurement of air pollution values and continue study of equipment for laboratory and field use.

5. Prepare a report on the standards of atmospheric contaminants based on available reports.
6. Cooperative work with cities and counties wherever the establishment of air pollution control or zoning regulations are being considered.

Mr. King pointed out that there is a need for a study of the combustion of wood-waste as a fuel and suggested that this work might be done at Oregon State College. Mr. Green stated that he would discuss this matter with George Gleeson, Dean of the School of Engineering, O. S. C. in the near future.

LABORATORY AND FIELD EQUIPMENT:

Mr. Hatchard advised the Authority that the material that had been ordered in August was now coming in slowly. The staff is continuing to study equipment on the market for this work and will order necessary units when it is determined that the equipment can effectively be used.

DATE OF NEXT MEETING:

The tentative date for the next meeting was set for February 18, 1953.

ADJOURNMENT:

There being no further business, the meeting adjourned at 5:00 P.M.

Respectfully submitted,

Curtiss M. Everts, Jr., Secretary
Air Pollution Authority

SPECIAL MEETING
OF THE
OREGON AIR POLLUTION AUTHORITY

January 7th, 1953

A special meeting of the Air Pollution Authority was called to order by the Chairman at 12:30 P.M., Wednesday, January 7, 1953, in Room 3, Aero Club Bldg., Portland, Oregon. Those present were Carl E. Green, Chairman, Dr. Harold M. Erickson, Oren L. King, Harold F. Wendel and Merle S. West, Members and Curtiss M. Everts, Jr., Secretary, also present were R. E. Hatchard, Wilbur J. Whitsell, and Frank Terraglio, Air Pollution Authority staff, and George W. Gleeson, Dean, School of Engineering, Oregon State College, and Cecil Quesseth, Assistant Attorney General, State Sanitary Authority.

MINUTES OF PREVIOUS MEETING:

The reading of minutes of the sixth meeting of the Authority was dispensed with since the minutes had been prepared and distributed to the members in advance.

POLICY RE: CONTROL OF AIR POLLUTION WITHIN CITIES:

The Chairman opened a discussion on the future policy of the Authority with regard to participation in air pollution control activities in cities throughout the state.

It was Mr. West's opinion that the Authority should cooperate with cities on problems of air pollution control, and that the Authority should gather information on the subject and make it available to cities. In smaller cities that cannot carry on a program, the Authority could furnish some assistance when serious problems develop, but cities should be advised that the Authority will expect them to carry on their own air pollution control programs.

Mr. King stated that as a city manager he was particularly interested in the policy

developed by the Authority and that he had discussed the relationship with Mr. Herman Kehrli, Executive Secretary, Mr. Mark Westling, Public Works Consultant and Mr. Raymond C. Coulter, Legal Consultant, all of the League of Oregon Cities. Mr. King reported that it was their belief that the Authority should preserve local autonomy in the field of air pollution control and that the laws under which the Authority functions would not prevent a city from adopting air pollution control ordinances to handle local problems. It was Mr. King's belief that the Air Pollution Authority should consult with and furnish technical advice for cities.

Mr. Wendel stated that he had raised the question of state-city relationship initially to make certain that in the conduct of the state program that duplication of effort would be avoided and that air purity could be effected with the least cost to the tax payer.

Mr. Green made reference to the letter, signed by Francis Hill, Bruce Morrison and Edward Huffs Schmidt representing a committee of the Columbia Empire Industries Inc., and addressed to the Portland Air Pollution Committee in which the establishment of an air pollution control program in Portland was opposed on the grounds that the State Air Pollution Authority could and should handle such matters. It was Mr. Green's opinion that neither the staff nor the operating funds of the Air Pollution Authority would ever be sufficient to control or supervise the thousands of individual sources of air contamination which exist or would potentially exist in a city as large as Portland. It was Mr. Green's belief that such sources of air pollution could best be controlled by an adequate municipal program.

Dr. Erickson thought that the prime responsibility for control of local air pollution problems should rest with the cities and that they could adopt ordinances with standards equal to or higher than those established by the Authority.

He also recommended that in drafting a reply to the letter from the Portland Air Pollution Committee that the historical background that led to the creation of the

Authority should be outlined and it should also be mentioned that at no time during the preparation of the law was it contemplated that the Air Pollution Authority would be responsible for the abatement of air pollution originating in cities unless the city should fail to correct the problem. He also suggested that it be pointed out to the Portland committee that the Air Pollution Authority has the responsibility for the control or abatement of air pollution which originates outside of cities or in adjacent areas over which local authorities have no control.

Dean George Gleeson then asked if the Air Pollution Authority was empowered to delegate its authority to a city that adopted an appropriate ordinance.

Attorney Queseth did not believe that the Authority could relieve itself of any responsibility but that in so far as he could determine there was nothing to prevent a city from adopting an ordinance for local control of air contamination and the Authority could probably exercise jurisdiction if local authorities failed to enforce such ordinances.

MOTION RE: CONTROL OF AIR POLLUTION WITHIN CITIES:

It was moved by Mr. Wendel and seconded by Mr. King and unanimously carried that the policy of the Air Pollution Authority with regard to the control of air pollution in cities would be as follows.

1. To preserve and encourage local autonomy on matters of air pollution control to the extent that cities would be expected to carry on local programs for air pollution control with such technical assistance and advice from the Air Pollution Authority as may be necessary.
2. Cooperate with cities in the furtherance of local air pollution control programs.
3. Collect and disseminate information to cities on the prevention and control of air pollution.

STUDY OF COMBUSTION PROBLEMS OF WOOD MATERIALS AND WASTE:

The Chairman then requested Dean George W. Gleeson to open the discussion on the subject of combustion of waste wood.

Dean Gleeson reported that the Oregon State College had undertaken a study of this problem several years ago and had arranged for use of a full scale burner at one of the local lumber mills. In addition studies had also been planned using a pilot unit at the college. He stated that when the professor in charge of the investigation left the college the studies were dropped.

When the matter was again brought to his attention in a letter from the Chairman of the Authority about a month ago, he was of the opinion that the investigation might be undertaken by the Forest Products Laboratory at the college. He learned later, however, that the Forest Products Laboratory had no authority to undertake such studies.

It was the Dean's opinion that a solution to the problem might be obtained by either the improvement of combustion in existing facilities or the development of a new type of burner. Of the two he believed that the former offered the best possibility. He stated that in his experience that smoke and particulate matter could be eliminated from plants in which smoke stacks were used but that open burners were somewhat more of a problem.

Mr. Green asked if information was available which could be disseminated to industry; and the Dean reported that it was not.

Dean Gleeson suggested, however, an educational approach to the problem and that any further studies to be conducted by the college would require additional personnel and funds.

The concensus of opinion was that it should not be the policy of the Authority to

solve such problems for industry, but to encourage industry to finance their own investigations and studies. Dean Gleeson supported this policy and suggested that the matter be brought to the attention of the industry committee now being formed by the Associated Forest Industries of Oregon located in Salem.

QUARTERLY ACTIVITY REPORT:

Mr. Hatchard spoke briefly on the activities of the staff during the last quarter of 1952.

Mr. Whitsell summarized the results of analyses of samples collected at particle fallout sampling stations located in Portland, Milwaukie, Oswego, Oregon City, Corvallis, Astoria, North Bend and Coos Bay.

AUTHORIZATION FOR EQUIPMENT PURCHASE:

The Secretary requested authorization for the purchase of needed field and laboratory equipment as follows:

Automatic Filter Paper Sampler
Directional Particle Fallout Unit
Wind speed and direction recorders
Additional stands for 30 fallout stations.

MOTION RE: EQUIPMENT PURCHASE:

It was moved by Mr. King, seconded by Mr. Wendel and carried that authorization for purchase of the equipment be granted.

PROPOSED LEGISLATIVE ACT RE: TRANSFER OF UNOBLIGATED FUNDS:

The Secretary then read the proposed legislative act which would transfer unobligated funds from the 1951-1952 Air Pollution Authority account to the general fund after July 1, 1953. The principle of the bill was approved.

PORTLAND RE: BURNING REFUSE DUMP, N. E. COLUMBIA BOULEVARD:

The Authority then reviewed the report prepared by Mr. Whitsell on the burning of garbage and refuse at a site in the vicinity of N.E. Columbia Blvd., outside the city limits of Portland.

MOTION RE: SEIVERT REFUSE DUMP N. E. COLUMBIA BOULEVARD, PORTLAND:

After hearing a report of additional complaints which property owners had made to the staff, and learning that the problem could not be corrected unless the open burning of refuse is stopped; it was moved by Mr. West, seconded by Mr. King and carried that Mr. Seivert be cited to appear before the Authority and show cause why action should not be instituted against him to abate the nuisance caused by the burning of refuse along N. E. Columbia Boulevard near the City of Portland.

INTERSTATE AIR POLLUTION PROBLEMS:

The matter of handling interstate air pollution problems was then discussed. It was pointed out that the State of Washington had no air pollution laws, but that it was expected that the legislature in that state would attempt to establish a program this year.

The Secretary was then directed to bring to the attention of the Governor of Oregon and the Columbia Basin Interagency Committee the potential interstate air pollution problem and recommended that the matter be brought to the attention of appropriate authorities in the State of Washington to encourage the adoption of legislation.

DATE OF NEXT MEETING:

The date for the next meeting was announced as February 18, 1953.

ADJOURNMENT:

There being no further business the meeting was adjourned at 2:30 P.M.

Respectfully submitted,

Curtiss M. Everts, Jr., Secretary
Air Pollution Authority

SEVENTH MEETING
OF THE
OREGON AIR POLLUTION AUTHORITY

February 18, 1953

The seventh meeting of the Oregon State Air Pollution Authority was called to order by the Chairman at 3:00 P. M. Wednesday, February 18, 1953, in Room 720, State Office Building, 1400 S. W. 5th Ave., Portland, Oregon. Those present were Carl E. Green, Chairman; Harold F. Wendel, Merle S. West, Members; Curtiss M. Everts, Jr., Secretary; R. E. Hatchard, Chief of the Air Pollution Control Section; W. J. Whitsell, Associate Sanitary Engineer; Frank Terraglio, Chemist, and T.M. Gerow, District Engineer, Oregon State Board of Health.

MOTION RE: MINUTES OF PREVIOUS MEETING:

The minutes of the sixth meeting of the Authority and those of the special meeting held on January 7th, 1953, having been prepared and distributed to the members in advance, it was moved by Mr. Wendel, seconded by Mr. West, and carried that the minutes as prepared by the Secretary be approved.

PORTLAND RE: BURNING REFUSE DUMP, H.M. SEIVERT Property, N. E. Columbia Boulevard.

The Secretary read the original letter of complaint and the chronology of the investigation and study of the nuisance conditions created by a burning refuse dump, located in the vicinity of Portland between Union Avenue and Vancouver Avenue north of Columbia Slough and operated by H. M. Seivert.

The Chairman stated that the purpose of discussing the matter at this meeting was in an attempt to reach an amicable settlement. He stated, however, that if the nuisance conditions were not eliminated it would be necessary in the future to hold a public hearing under the provisions of Chapter 425, Oregon Laws 1951 and the Authority would then enter a formal order. The Chairman asked Mr. Seivert if there was information that he desired to present to the Authority.

Mr. Seivert and his attorney, A. E. Prag, stated that refuse burning operation was a land filling operation; that Mr. Seivert has resided in the area for forty years in which time twenty-two tenants have established business on the reclaimed ground; and that business establishments located adjacent to the dump had not suffered ill affects from the operation of the dump. It was also stated that no complainants had contacted Mr. Seivert directly regarding the conditions and Mr. Seivert denied that any air pollution other than ordinary smoke from burning wood, paper and trash was coming from the dump. He reported that there are many other industries in the area causing disagreeable odors. The prevailing wind in the area is either northwesterly or southeasterly according to Mr. Seivert and therefore the refuse dump could not cause odor and fly ash complaints at the National Biscuit Company plant which is located directly south of the dump.

Mr. Wendel stated that according to the Air Pollution Control Act excessive smoke is air pollution and that although there are other sources of air pollution in the area, they were irrelevant to the consideration of the emissions from Mr. Seivert's dump.

The Chairman asked if any complainants present desired to make any statements.

Attorney R. L. Myers stated that he represented twenty complainants who own businesses or reside within one mile of the refuse dump and are affected by the smoke, fly ash and odor. In his investigation of conditions he has observed smoke and fly ash being carried from the dump to his clients' property. He stated that samples of the material and photographs of the conditions would be made available to the Authority upon request.

Mr. E. O. Struznik, a complainant residing at 910 N. E. South Shore Road, pointed out that the emissions from the Seivert dump have caused nuisance conditions for many years; that at times, the burning is done 24 hours a day and the smoke and fly ash made living conditions very annoying. He reported that there are now some 250

permanent residents living in this area and that the population is increasing. He stated that the smoke collects in the low land and under certain weather conditions the prevailing winds did not cause much mixing and while there have been previous attempts to reduce the nuisance no relief has been obtained.

The Chairman asked Mr. Hatchard to summarize the field work that the staff has carried on in this matter. Mr. Hatchard stated that the first inspection of the refuse dump was made in July 1952, and that six subsequent inspections have been completed. He reported that the complainants and Mr. Seivert were contacted and recommendations were made to eliminate the burning of certain types of materials in order to reduce the generation of dense smoke. Later visits to the dump site, however, had disclosed that excessive smoke and fly ash emissions were coming from the dump and that while some improvement was observed after Mr. Seivert had reduced the amount of the material being burned which generally causes dense smoke, the experience in other areas had shown that open burning near business and residential areas will continue to cause nuisance conditions until either the burning is stopped or a properly designed incinerator is provided.

The Chairman asked Mr. Seivert if he had ever considered installing equipment to burn the refuse. Mr. Seivert replied that the filling operation will be completed by November 1, 1953, and that he would be willing to sign a letter to that effect.

Mr. West stated that he had visited the refuse dump earlier in the afternoon and had noted waste oil on the land north of Schmeer Road. Mr. Seivert stated that this material would be covered with dirt and would not be burned.

MOTION RE: H. M. SEIVERT BURNING REFUSE DUMP:

It was moved by Mr. Wendel, seconded by Mr. West and carried that Mr. Seivert be directed to abate the nuisance conditions created and existing by virtue of the

emissions from open burning at the refuse dump within the next thirty days or to appear and answer formal charges as to why proceedings should not be instituted requiring him to abate the nuisance.

It was also agreed that if within the thirty day period Mr. Seivert can give some assurances or commitments to the Authority that will indicate that the nuisance is being abated, then the order to appear will not be issued, if the Authority believes Mr. Seivert is proceeding in good faith.

PORTLAND RE: NU-BORA SOAP COMPANY, N. W. 12th and Hoyt Streets:

The Secretary read the chronology of the complaint investigation and study of the nuisance conditions caused by the soap-dust emission from the Nu-Bora Soap Company located at 1240 N. W. Hoyt Streets.

Mr. Don Lewis, representing Mr. Easson, owner of the soap company, stated that they thought the dust problem had been solved in early January by a change in the process. However, it has not been possible to control the moisture content of the soap to consistently prevent the discharge of soap dust. He acknowledged that the soap dust emission still existed and stated that they are planning now to build another dust collection house.

Mr. Wendel asked when they expected to complete the installation so that the nuisance would no longer be present.

Mr. Lewis said they hoped to have the unit working within thirty days, but that plans and specifications for constructing the dust house have not been prepared.

Mr. Wendel pointed out that if plans were not available the thirty day period seemed short and that probably sixty days would be required.

The Chairman asked if the Authority's staff had any comments. Mr. Hatchard stated that during one of the plant inspections a sample of the soap dust was collected.

The laboratory analysis of the sample showed that a large percentage of the soap dust particles were under one micron in size and that a gravity settling chamber could not be expected to remove this small sized material but that there were several wet-type collection processes that could be provided for this purpose.

The Chairman asked if any of the complainants present desired to make any statements. Mr. George Talbott, representing the Oregon Transfer Company located at 1238 N. W. Glisan, one block south of the soap plant, said that the soap dust is a real annoyance to the tenants in their building, that dust affects the employees during the work day and that at times the dust deposits on their automobiles parked in the company's parking lot immediately south of the soap plant. He did not think there had been any improvement in the nuisance conditions.

Mr. Ward R. Schafer, Jr., representing Schafer-Wright Company located in the Pihl Transfer Company building at 1231 N. W. Hoyt, stated that the soap dust is a serious nuisance, that the employees in the building are affected by the dust and that during the summer the windows must be kept closed, in spite of the heat, to keep out some of the soap dust.

The Chairman advised Mr. Lewis to employ an engineer experienced in these problems so that the soap dust collection system would operate properly.

Mr. Wendel requested the management to submit plans to the Authority before starting construction.

MOTION RE: NU-BORA SOAP COMPANY, PORTLAND:

It was moved by Mr. Wendel, seconded by Mr. West and carried that Nu-Bora Soap Company be directed to abate the soap-dust nuisance within sixty days or appear to answer formal charges as to why proceedings should not be instituted requiring them to abate the nuisance.

It was also agreed that if within the sixty day period Mr. Easson, owner of Nu-Bora Soap Company, can give some assurances or commitments to the Authority that will indicate that the nuisance is being abated, then the order to appear will not be issued.

PORTLAND RE: NORTHWEST NUT GROWERS:

Mr. James P. Nelson representing Northwest Nut Growers appeared before the Authority in regard to air pollution conditions affecting their new plant at 1601 N. Columbia Blvd. He stated that the Charlton Laboratory was retained to make a preliminary study of the conditions and that in their report, completed in January 1953, the recommendation was made that the situation should be investigated to determine the sources of the air pollution. He also stated that the company had brought the matter to the attention of the Multnomah County Board of County Commissioners in December 1952.

The Secretary stated that a request for a field study was received from Mr. Dan Dibble, Chief Deputy, Civil Dept., and that a field investigation is now scheduled for early March 1953.

PROPOSED WEATHER CONTROL LEGISLATION:

The Secretary summarized the provisions of Senate Bill No. 103 and House Bill No. 266 which have been introduced into the Legislature to control the activities of weather modification operations. He reported that Senate Bill No. 103 would require the Air Pollution Authority to review the weather modification plans in a specific area and consider approval within a ten day period. The Authority believed that the ten day period would be too short if new materials were being used which would require the staff to gather information on the matter.

The Authority directed the Secretary to write to Senator Ben Day, the sponsor of Senate Bill No. 103 to suggest the substitution of "a reasonable length of time" for the ten day period.

ATTORNEY GENERAL'S ADVICE RE: TOBACCO SMOKING IN PUBLIC PLACES:

The Secretary read the Attorney General's letter relating to jurisdiction over tobacco smoking in public places. The Authority directed the Secretary to inform the National Tobacco Research League that the Authority does not have jurisdiction in this matter.

ACTIVITIES OF THE AP CONTROL SECTION:

Mr. Green reported that Messrs. Everts, Hatchard and he attended the February 18, 1953 meeting of the State Natural Resources Committee and discussed the initial air pollution control program. Governor Patterson and the committee members indicated that they were pleased to learn of the progress thus far.

Mr. Hatchard reported that (1) the preliminary report of the first particle fallout results were complete from 118 stations located in 38 communities, but that unusually heavy rainfall and winds caused considerable emergency field work to maintain the stations. (2) Arrangements have been made with Dr. Yunker, Head of the O.S.C. Physics Department to have spectrographic analyses made of fallout samples from selected industrial areas, and it is hoped that semi-quantitative data regarding the presence of specific elements will be obtained in this manner. (3) The City of Eugene is now preparing a general type smoke control ordinance. The Air Pollution Authority staff has conferred with city officials regarding the proposed ordinance, and that the Springfield Planning Commission requested their City Manager to contact Eugene regarding coordination of the air pollution activities in both cities.

DATE OF NEXT MEETING:

The tentative date for the next meeting was set for May 20, 1953.

ADJOURNMENT:

There being no further business, the meeting adjourned at 4:50 P. M.

Respectfully submitted,

Curtiss M. Everts, Jr., Secretary
Air Pollution Authority

EIGHTH MEETING
OF THE
OREGON AIR POLLUTION AUTHORITY

R.E. Hatchard
Returns to
Hatchard

May 20, 1953

The eighth meeting of the Oregon State Air Pollution Authority was called to order by the Chairman at 2:00 P.M., Wednesday May 20, 1953, in Room 36, State Office Building, 1400 S. W. 5th Avenue, Portland, Oregon. Those present were Carl E. Green, Chairman, Dr. Harold M. Erickson, Harold F. Wendel and Merle S. West, Members, and Curtiss M. Everts, Jr., Secretary, Ceoll E. Quesseth, Legal Advisor, R.E. Hatchard, Chief of the Air Pollution Control Section; W. J. Whitsell, Associate Sanitary Engineer and Frank Terraglio, Chemist.

MOTION RE: MINUTES OF PREVIOUS MEETING:

The minutes of the seventh meeting of the Authority held on February 18, 1953, having been prepared and distributed to the members in advance, it was MOVED by Dr. Erickson and seconded by Mr. West and carried that the minutes as prepared by the Secretary be approved.

TROUTDALE RE: CONSIDERATION OF COMPLAINTS:

Mr. M. E. McKay, an owner of agricultural land in Troutdale, appeared before the Authority and stated that the air pollution was adversely affecting certain types of crops. He asked if the Air Pollution Authority is now set up to study conditions in the state and adopt acceptable standards. Mr. McKay urged that the Authority proceed with field studies that would determine what the present air pollution conditions are in the Troutdale area and whether the air pollution is affecting agriculture or livestock.

Mr. Green stated that there are several damage suits now involved in litigation and

asked Attorney Quesseth if it would be proper for the Authority to begin field studies at this time.

Mr. Quesseth stated that we should not enter into suits now in court but there was no objection in conducting independent investigations in the area.

F. E. Price, Dean of the School of Agriculture, Oregon State College, informed the Authority that his department would be very happy to collaborate with the Air Pollution Authority and work in any manner to assist in the proposed study. He stated the problem would be to determine what additional data should be collected to answer the questions now presented. Furthermore, it would be necessary to consider what agency or personnel could be used.

Mr. Green asked if this would mean Mr. Price needed additional staff to cooperate in the study. Dean Price stated that first he would have to know how much additional data would be required; however the leadership of a staff is now available.

Mr. Green asked if the Air Pollution Authority or Oregon State College Experiment Station should have additional funds to carry on the field investigation.

Dean Price thought that the college would need additional funds. The charges for chemical analyses have been definitely established and that they could outline a program and submit an estimated cost in the near future when the Authority has determined what additional information is desired.

The Secretary suggested that if the Board wished to proceed with the matter that it designate one of its staff or members to confer with Dean Price to determine if we are in a position to take on such a program.

MOTION RE: TROUTDALE AREA;

It was MOVED by Mr. West, seconded by Dr. Erickson and carried that we authorize

the staff to proceed with the field study and cooperate with the college in this activity.

LUMBER AND WOOD PRODUCTS INDUSTRIAL AIR POLLUTION COMMITTEE:

Mr. Charles E. Oglo, Secretary-Manager, Associated Forest Industries of Oregon, Salem, Oregon, which represents the lumber and paper industries in the State of Oregon stated the organization had appointed an air pollution committee and was ready to work with the Authority to determine what can be done to alleviate air pollution conditions. Mr. Oglo introduced the following members of the Committee to the Authority and stated they were present to learn about existing problems and to become acquainted with the Authority's activities:

1. Mr. Irving P. Rau
2. Mr. Truman W. Collins
3. Mr. J. R. Frum

The Secretary read a letter from Associated Forest Industries of Oregon dated February 13, 1953, which listed the names of the members on their Air Pollution Committee.

NORTH BEND RE: CINDER AND FLYASH COMPLAINT PETITION:

The Secretary read the petition signed by approximately 1200 North Bend residents, and Resolution No. 578 adopted by the North Bend City Council and signed by Mayor I. N. Hertley.

Mrs. Ben Flaxel representing the North Bend petitioners regarding the flyash problem stated that she and Mrs. I. Pittam had circulated petitions among the residents who live in the affected area in North Bend. She stated that the North Bend City Council had promised, over a year ago, that something would be done but nothing has been accomplished to date. She said that no particular industry is at fault but the petitioners believe that all of the industries should endeavor to correct the problem.

She stated that the conditions are so acute in North Bend that it is injurious to health and property values.

Mr. A. O. Karlen, Mgr., Weyerhaeuser Timber Company, North Bend, Oregon, stated that they are aware of the problem but believe they are not the sole offenders. The timber company has conducted two stack emission tests. The first measurement was made in December 1951, using Western Precipitation Company equipment. The engineer reported the plant was emitting about 50% of the cinders allowed by the American Society of Mechanical Engineers dust discharge code. In January 1952, the Richfield Oil Company ran a combustion efficiency test. Six weeks ago another stack emission test was run but was made by the Combustion Engineering Company; however results have not been received. This information will be made available to the Air Pollution Authority as soon as Weyerhaeuser receive it. Mr. Karlen stated that the Weyerhaeuser plant is about two years old and that they have no dutch oven, forced draft or mechanical stoker. The stack test was made to determine just how much cinder and flyash was being emitted and whether or not the company could justify spending about \$150,000 to collect the emissions. Mr. Karlen stated that Weyerhaeuser Timber Company is very anxious to comply with all rules and regulations adopted by the Authority.

Mr. C. R. Leever, Chief Engineer, Mt. States Power Company, Albany, Oregon, stated they felt they were fairly innocent regarding the excessive cinders and flyash in North Bend especially since each burner stack at their plant has a cyclone type cinder collector and these units have been operating for many years and apparently are doing a good job. He reported, however, that Mt. States Power Co., is willing to cooperate in any possible way with the Authority and do whatever the Authority thinks should be done to correct the conditions.

Mr. Wendel asked if Mr. Leever had conferred with the other three companies regarding a cooperative effort to have stack emission measurements made.

Mr. J. W. Asplund, Mgr., Mt. States Power Company, Coos Bay, Oregon, stated as yet nothing has been agreed upon but the proposal had been discussed. Mr. Asplund stated that it would be desirable to get the same firm to make the measurements so that a standard procedure would be used.

Mr. Green asked whether the study was to determine conditions around the plants or to determine the stack discharges.

Mr. Asplund informed the Authority that the study would be in connection with combustion since it was the burning of wood residue that caused the cinders.

Mr. James Boynton, Fire Chief, North Bend, Oregon, represented Mayor Hartley who was unable to attend. Mr. Boynton stated that he has lived in North Bend thirty-one years and the cinder problem has come up three or four previous times. In the past years the Fire Department took care of this situation since it was then called a fire hazard. Some years ago, the Mt. States Power Company emitted cinders and flyash and the Fire Department brought the matter to their attention; cinder collectors were installed and the condition was alleviated. Other industries have now moved in. The cinder prevailing now is sort of a moon-shaped cinder that seems to have an oily surface.

Mr. John L. Hawkins, General Manager, Irwin-Lyons Lumber Company, North Bend, Oregon, stated his firm desired to do everything possible to improve the conditions. Their plant is the oldest there and perhaps are contributing a lot to the problem. They have a wood waste burner which is an additional problem for Irwin-Lyons. Arrangements are being made for measuring the emissions and as soon as the study is complete a copy will be sent to the Authority.

Mr. Hatchard summarized analyses of samples collected from the six particle fallout stations in North Bend as follows: Four series of fallout samples have been collected since November 1952 and the average fallout in North Bend was found to be 80 tons per

square mile per month. However, in the vicinity of Sherman and Oregon Streets an average fall of 500 tons per square mile per month was found. The prevailing wind during the sampling period greatly affects the area fallout. During trips to North Bend, plant visits have been made to determine what operational changes could be made to reduce the emissions. In April 1953, a letter was sent to the four industries pointing out the cinder and flyash and recommending that stack emission measurements be made and requesting a copy of the report by August 1, 1953. Replies have been received from the industries concerned stating they are interested in having the stack sampling done.

The Secretary asked about how long would it be to accomplish this study, and Mr. Green wondered if the industry representatives cared to speak on the matter as of this date.

Mr. Loeber added that each plant has its own problem to eliminate and it was very difficult since they all are operating in such close proximity, and all of the industries pick up their steam loads about 7:30 in the morning.

Mr. Wendel asked if the cinder problem was caused by burning the wood for fuel and as a waste material and had any study been made of the amount of fuel burned for both purposes.

Mr. Hatchard stated that hog fuel is burned at the four industries to operate steam boilers and Irwin-Lyons and Menasha Plywood plant operated wood waste burners. The cinder emissions originate from both burning operations. However, field measuring equipment to determine the quantity of cinders from each operation falling in the area has not been available. A directional particle fallout unit was ordered in January and delivery is expected next week. He stated that the emissions from the steam plants can be controlled by a combination of operational procedures and suitable collection systems. However, the cinders from the waste burners present a problem that has never been studied to determine what improvements will provide better

combustion and less cinder and flyash.

Mr. Wendel stated that he would like to know if the wood waste burning could be reduced by hauling to low ground and requested the staff to determine the quantity of wood waste burned for disposal purposes rather than for steam generation.

Mr. Mowry Smith of Menasha Plywood Corporation, North Bend, reported that they are planning to install a new stack during the last week in August. He wanted to know if that was an adequate improvement or if there was something else they could do and asked that Mr. Hatchard go over the proposed work with their engineer.

Mr. Green advised him to employ engineers competent to do the work and the Authority's staff would cooperate. Mr. Green stated that inasmuch as we have these petitions indicative of the problem we should indicate to North Bend residents what is going to be done to correct the conditions.

Mr. Wendel suggested that the operators of the various mills do what they can to correct the individual problems between now and the next Authority meeting and at that time present a report on what has been accomplished and what is proposed for the future.

MOTION RE: NORTH BEND CINDER AND FLYASH COMPLAINT PETITION:

It was MOVED by Mr. West, seconded by Mr. Wendel and carried that the industries concerned with this problem proceed with their investigational work and pursue improvements and report to the Authority regarding the progress and that the industries of the City of North Bend and other interested parties be notified of this action.

PORTLAND RE: SEVERT REFUSE DUMP, N. E. COLUMBIA BOULEVARD:

A public hearing was conducted regarding the excessive smoke and flyash from the

burning refuse dump located between Union and Vancouver Avenues, north of Columbia Slough.

Mr. R. L. Meyers, attorney for the complainants, stated that the excessive smoke and flyash emissions have continued after April 1, 1953, which was the deadline that Mr. Seivert was given to reduce the emissions in accordance with the Authority's action at the February 18, 1953, meeting. Mr. Meyers requested that the Authority adopt an order to abate this nuisance condition.

Mr. E. E. Nelson, Sanitation Department, National Biscuit Company, stated that the smoke and flyash causes excessive maintenance to keep the plant and grounds clean and submitted photographs, flyash samples and smoke and odor observations as exhibits.

W. J. Whitwell and R. E. Hatchard presented a summary of the field investigations of the dump operations and stated that excessive smoke and flyash emissions have continued.

Mr. Kenneth Gustin, owner of the Union Avenue Motel, stated that the smoke and flyash has been a nuisance in the area for many years and that previous petitions presented to the Multnomah County Board of County Commissioners have not removed the nuisance. He further requested that the Authority enter an order to abate the nuisance condition.

Mr. H. M. Seivert stated that the refuse dump has been leased to Matheny and Bacon Inc., effective June 1, 1953, and will be used as a building materials storing yard.

MOTION RE: SEIVERT REFUSE DUMP:

It was MOVED by Mr. Wendel, seconded by Dr. Erickson and carried that findings of fact be made and that an order be adopted requiring H. M. Seivert to discontinue all burning at the refuse dump located between Vancouver and Union Avenues north of Columbia Slough until combustion facilities are provided to burn the material without producing nuisance conditions.

BEFORE THE AIR POLLUTION AUTHORITY

OF THE

STATE OF OREGON

In the Matter of Air Pollution from)
 H.M. Seivert's Burning Refuse Dump) ORDER
 located between Vancouver and Union)
 Avenues in the State of Oregon.)

This matter coming on regularly for final hearing on the 20th, day of May 1953,
 before the Air Pollution Authority of the State of Oregon consisting of Carl E. Green,
 Chairman, Harold M. Erickson, M. D., Harold F. Wendel and Merle S. West and Curtiss M.
 Everts, Jr., Secretary and the Authority having heard all persons and parties inter-
 ested and having given full consideration to oral and written evidence submitted at
 such hearing and having studied and considered the reports of its engineers pertain-
 ing to the smoke and flyash pollution of the air from the burning refuse dump owned
 by H. M. Seivert, and having heretofore on the 20th of May 1953, entered its findings
 of fact and now being fully advised in the premises,

IT IS HEREBY ORDERED:

1. That from and after June 10, 1953, H. M. Seivert shall discontinue all burn-
 ing at the refuse dump located between Vancouver and Union Avenues, North of Columbia
 Slough until combustion facilities are provided to burn the refuse without producing
 nuisance conditions.

2. That the Secretary of this Authority be and hereby is directed to serve a
 certified true copy of this order together with the findings of fact pertaining to
 said matter, upon H. M. Seivert and R. L. Meyers, Attorney for the complainants.

DATED this 29th, day of May 1953.

OREGON AIR POLLUTION AUTHORITY

By _____
 Chairman

ATTEST:

 Secretary

BEFORE THE AIR POLLUTION AUTHORITY

OF THE

STATE OF OREGON

In the Matter of Air Pollution from)
 H. M. Seivert's Burning Refuse Dump)
 located between Vancouver and Union)
 Avenues in the State of Oregon.)

FINDINGS OF FACT

WHEREAS, the above entitled matter came on for final hearing on the 20th, day of May 1953, before the Oregon Air Pollution Authority consisting of Carl E. Green, Chairman; Harold M. Erickson, M. D., Harold F. Wendel and Merle S. West and Curtiss M. Everts, Jr., Secretary, all members being present throughout said hearing; and,

WHEREAS, due notice was given of the time and place of said hearing by registered mail upon H. M. Seivert, 5 N. E. Columbia Boulevard, owner of the refuse dump, and,

WHEREAS, the following appeared and were heard, H. M. Seivert, owner of the refuse dump, Robert L. Meyers, Attorney for the complainants, Elmer E. Nelson, Chief, Sanitation Department, National Biscuit Company, Kenneth Custin, owner, Union Avenue Motel, Wilbur J. Whitsell, Associate Engineer, Richard E. Hatchard, Chief, Air Pollution Control Section, and,

WHEREAS, the said parties and all persons interested were given full opportunity to be heard and oral and written statements and evidence pertaining thereto were received considered and filed by this Authority and,

WHEREAS, Chapter 425, Oregon Laws, 1951, declares it to be contrary to the public policy of this state to discharge into the air solids, liquids or gases so as to cause such injury to human, plant or animal life or to property as constitutes a public nuisance:

Now, THEREFORE, the Authority having given full consideration to the statements and evidence submitted by all interested parties at said hearing and having studied and considered the reports and investigations made by its engineers pertaining to

the smoke and flyash pollution of the air from the burning refuse dump owned by H. M. Seivert and now being fully advised in the premises makes the following findings of fact to wit:

1. H. M. Seivert is the owner of the land located between Vancouver and Union Avenues north of Columbia Slough and is the owner of a refuse dump at this location.
2. Miscellaneous waste material is brought to the dump by trucks or trailer for which a fee is charged for the disposal service. Garbage is not accepted at the dump. The combustible material is burned more or less continuously along the edge of the dump.
3. A petition signed by twenty-four property owners was presented February 1952 to the Multnomah Board of County Commissioners who ordered the Health Department to investigate the health menace. The County Health Department investigation concluded that the dump was not an actual or potential health problem.
4. A complaint petition from twenty property owners was presented to the Authority June 11, 1952, requesting removal of this source of air pollution. Subsequent field investigations by the Authority's staff disclosed that excessive smoke and flyash were originating from the burning dump and that the smoke and flyash discharge was in violation of the public policy of the State of Oregon as expressed in Chapter 425, Oregon Laws 1951.
5. At the informal authority hearing February 18, 1953, Mr. Seivert was directed to abate, within thirty days, the nuisance conditions caused by open-burning at the dump or to appear and answer formal charges.
6. On March 17, 1953, a letter was received from H. M. Seivert outlining his proposed plan of operations which consisted of accepting only trash and refusing materials which produce flyash or odors when burned.

7. Letter was received March 25, 1953, from Mr. Seivert stating that the dump was to be closed April 1, 1953, except for some lumber mill products to clean up left over brush on the dump.
8. Nine field investigations between April 2, and April 22, 1953 indicated that the dump was not closed. Trucks and trailers were observed discharging miscellaneous refuse. Large fires extending the full length of the dump causing heavy smoke and flyash discharges were noted. Complaints from adjacent property owners have continued.
9. Particle fallout stations were located at four points in the area. The fallout was found to be heavy.
10. In other areas where air pollution control laws are in effect the open burning refuse dump adjacent to other business and residential use has had to be curtailed. It has been necessary to either operate a dumping land fill dump or to burn refuse in an incinerator properly designed to produce complete combustion and minimize flyash.
11. That the discharge of heavy smoke and flyash into the air by H. M. Seivert, his agents and employees, as aforesaid, is contrary to the public policy of the State of Oregon, as declared and set forth in Chapter 425, Oregon Laws, 1951.

DATED this 29th, day of May 1953.

OREGON AIR POLLUTION AUTHORITY

By _____
Chairman

SAUVIES ISLAND RE: FLUORIDE EMISSIONS:

Mr. R. W. Fraser, Sauvies Island, appeared before the Authority to present a complaint regarding fluoride emissions from the Alcoa plant. He stated that this was a problem that covered the whole city of Portland and created serious contamination inasmuch as cattle are dying from it, humans are affected and crops can not successfully be raised. Mr. Fraser told the Authority that Oregon State College has conducted experiments which show that the fluoride emission is still causing extreme damage. He realizes that the source is a plant on the Washington side of the river but asked if we have some power to require controls to stop this nuisance.

Mr. Quesseth suggested they seek voluntary cooperation from the company. Mr. R. W. Fraser stated the company has already been in Federal Court and even though he secured a judgment against them fluoride contamination still exists. He tried to secure an injunction against the plant and it was said that due to the war and the need for aluminum all plants must be operated.

Mr. Quesseth stated that as far as a Washington offender was concerned this Authority could do nothing directly. However, perhaps sampling could be made of the air on the Oregon side and we could then take the matter up with the officials in the State of Washington.

Mr. R. W. Fraser stated that he would very much like to see some sort of a resolution passed by the Authority to conduct an investigation in the city of Portland to see that people are not being harmed by the plant.

Dr. Erickson stated the State Board of Health had cooperated with the University of Oregon Dental School and had made a study of some sixty children living on Sauvies Island. This study found no evidence of fluoride toxicity, no changes in teeth or bones; however this was the only study regarding fluoride damage the Board of Health

had carried on.

In reply Mr. R. W. Fraser stated that doctors had advised people to move out of the area and his own doctor had given him like advice.

Mr. William M. Fraser, Sr., reported that he owns 600 acres on Sauvie Island and already has lost about 250 head of cattle and he further stated that Dr. Foskett, Pathologist at Emanuel Hospital, advised him not to eat any of the contaminated cattle or any of the vegetation.

Mr. William Fraser stated all that was asked of Alcoa was to eliminate their fluoride discharge and while they spent one million and a quarter to put on controls, it was testified in court that they were letting escape 1150 pounds of fluoride a day. He also stated that Alcoa employs a veterinarian who claims they can not find any fluorosis in the cattle. The trouble, claimed Mr. William Fraser, is that very few people have enough money to fight Alcoa and he urged that the Authority take some action. Mr. Fraser informed the Authority that there was considerable data available to study.

Mr. Green stated that if this data is now available and can be obtained by our staff he could see no reason why this Authority could not take up the matter with the aluminum company or the State of Washington and get some action.

It was MOVED by Mr. Wendel, seconded by Mr. West and carried that the Authority collect such data as it can and with the advice of the Attorney General's office take any and all action that may elicit the cooperation of the Aluminum Company of America and any and all official bodies in the State of Washington from whom we can secure assistance.

PORTLAND RE: REYNOLDS ALUMINUM PLANT, TROUTDALE, OREGON.

Mr. Robert S. Strebin, Troutdale, Oregon, appeared before the Authority and stated

that he is a cattle raiser in this area and has suffered very heavy losses due to fluoride poisoning. He stated that a year ago or more facts were given to the Secretary regarding this nuisance. At that time Mr. Strebins stated that the Authority gave assurances that this nuisance would be one of the first studies undertaken but nothing has been done. Mr. Strebins stated that four of his horses had recently died and showed pictures of a bull which he reported would perhaps have been a prize winner at the fair but has been so badly affected that he will soon be destroyed. He further stated that he can not use the hay grown in that area for feeding purposes and the animals now are not fit for human consumption. He stated that the aluminum company at Troutdale does not deny emitting about 700 pounds of fluoride a day and he doubts that their controls are operating a good part of the time.

Dr. Erickson assured Mr. Strebins that we intend to take action to cooperate with the college to extend studies previously made so that the present conditions would be known.

Mr. Wendel stated that the Authority is concerned with this problem and he added that he thought that the complaint representations made today against this plant was by far the most serious complaint in the state and that we should begin study of this problem immediately.

Mr. Green recalled that in a previous meeting the Chief Chemist for the Reynolds Aluminum Company was present and he had stated that extensive improvements to the fluoride collection system had been provided in 1949 and 1950. The improvements may have improved conditions some but apparently have not alleviated them altogether.

Mr. Wendel reiterated the fact that this case should be investigated at once and that if the allegations are true then we should take appropriate action to gain compliance with state statutes.

MOTION RE: REYNOLDS ALUMINUM COMPANY, TROUTDALE, OREGON:

It was MOVED by Mr. Wendel, seconded by Dr. Erickson and carried that the Reynolds Aluminum Company be notified that complaints have been made charging the Company with serious contamination of the air, detrimental to human, animal and plant life; that the Air Pollution Authority intends to make an investigation of this situation and that if conditions are found as alleged the Authority will have no alternative under Chapter 425, Oregon Laws 1951, than to take such action as necessary to enforce the said statute.

MULTNOMAH COUNTY RE: ZONING PROVISIONS IN THE UNINCORPORATED AREAS:

Mr. Lloyd Anderson, Sr. Planner, Multnomah County Planning Commission, appeared before the Authority and stated that a Planning Commission had been approved in the last election to regulate land use in the unincorporated areas. Mr. Anderson advised that the zoning regulations are now being prepared to establish the districts and the Zoning Commission desires a policy-statement from the Authority regarding the administrative procedures to handle the air pollution problems in the districts. He requested advice whether or not the zoning regulations should state specific requirements regarding air pollution in the land use districts or whether these matters should be referred to the Authority for review.

The Secretary asked Mr. Anderson if the Planning Commission had ordinances ready to adopt. Mr. Anderson stated that he hoped before the next Authority meeting to have adopted zoning ordinances.

Mr. Green advised Mr. Anderson that the Authority had not yet adopted standards since it was in the process of gathering data and it may be some time before we do have

sufficient data to warrant the adoption of standards.

Dr. Erickson stated that he believed that all the County Zoning Commission could do was refer industries with possible air pollution problems direct to the Air Pollution Authority and when we develop standards the requirements could then be written into the zoning ordinances. Dr. Erickson further suggested that perhaps the County could screen cases, delete certain types of industry and refer only the questionable cases to the Authority.

Mr. Green suggested that the new industries who possibly have an air pollution problem be required by the Multnomah County Planning Commission to submit their data to the Air Pollution Authority for approval.

MOTION RE: MULTNOMAH COUNTY PLANNING COMMISSION PROVISIONS FOR AIR POLLUTION IN UNINCORPORATED AREAS:

It was MOVED by Dr. Erickson, seconded by Mr. West, and carried that the Secretary prepare an administrative policy statement for submission to the Multnomah Planning Commission that will bring to the attention of new industries planning to locate in Multnomah County that there is a State Air Pollution control law, that industries must meet the Authority's requirements, and that the Multnomah County Planning Commission should first examine the permit requests and refer only the cases with possible air pollution problems to the Authority for consideration and action.

Mr. Green directed that the Secretary submit the policy to the Authority members by mail for approval before the Authority meets again, if that is necessary; otherwise have it ready for consideration at our next meeting.

LABORATORY AND FIELD EQUIPMENT:

The Secretary requested authorization for buying needed laboratory and field equipment.

It was MOVED by Mr. West, seconded by Dr. Erickson and carried that necessary laboratory and field equipment be purchased before June 30, 1953.

Date for the next meeting was to be set upon call by the Chairman.

Respectfully submitted,

Curtiss M. Everts, Jr., Secretary
Air Pollution Authority

NINTH MEETING
OF THE
OREGON AIR POLLUTION AUTHORITY

October 9, 1953

The ninth meeting of the Oregon State Air Pollution Authority was called to order by the Chairman at 2:15 P. M., Friday, October 9, 1953, in Room 36, State Office Building, 1400 S. W. 5th Avenue, Portland, Oregon. Those present were Carl E. Green, Chairman, Mr. R. P. Dixon, Dr. Harold M. Erickson, Harold F. Wendel and Merle S. West, Members, and Curtiss M. Everts, Jr., Secretary, Thomas Enright, Legal Advisor, R. E. Hatchard, Chief of the Air Pollution Control Section, W. J. Whitsell, Associate Engineer and Frank Terraglio, Chemist.

MOTION RE: MINUTES OF PREVIOUS MEETING.

The minutes of the eighth meeting of the Authority held on May 20, 1953, and the minutes of the special meeting of the Authority held August 11, 1953 having been prepared and distributed to the members in advance, it was MOVED by Mr. Wendel and seconded by Mr. West and carried that the minutes of these meetings be approved as prepared by the Secretary.

ELECTION OF OFFICERS.

The Chairman then announced that in view of the resignation of Mr. Oren L. King a vacancy existed in the office of vice-chairman of the Air Pollution Authority. It was MOVED by Mr. Wendel and seconded by Mr. West and carried that Mr. R.P. Dixon be elected Vice Chairman of the Air Pollution Authority.

CONFIRMATION OF APPOINTMENT OF LEGAL COUNSEL

It was MOVED by Mr. West and seconded by Mr. Wendel and carried that the appointment of Mr. Thomas Enright as legal advisor for the Air Pollution Authority be confirmed

and that the Secretary so advise the Attorney General.

GOLD HILL, RE: COMPLAINT OF DUST AND OIL VAPOR DISCHARGE FROM PAVING PLANT.

At the request of the Chairman Mr. Enright summarized the legal actions which were undertaken to stop excessive dust and oil vapor discharge from the paving plant located at Gold Hill which was operated as a joint venture of the Central Heating Company, Eugene, and the F. L. Somers Company, Klamath Falls. Mr. Enright stated that a preliminary injunction was served but was set aside when the Circuit Judge granted a Writ of Review. He also reported that due to a completion of its contract the operation of the paving plant was discontinued before the appointed hearing date. Mr. Wendel asked if the Authority's action taken in the Gold Hill complaint would have any effect should the paving operation plant resume operation in another location. Mr. Enright stated that the operation of this paving plant in another location would be a separate matter and must be treated as such.

NORTH BEND: RE. STATUS OF CINDER AND FLYASH PROBLEM.

Mayor I. H. Hartley, North Bend, advised that he was present at the Authority meeting to secure information regarding the Authority's progress on the cinder and fly-ash problem in North Bend. Mayor Hartley described the continuing nuisance conditions from the cinders and soot which has been present during the past 2-1/2 years and stated that property values have declined and that residents will be moving away from North Bend if conditions do not improve. Mayor Hartley asked if the Authority expected North Bend to handle the local situation or if the Authority planned to handle it alone. In either case, the City of North Bend would do everything to cooperate but the city could not solve the problem without assistance.

The Chairman informed Mayor Hartley that the State Air Pollution Authority has certain responsibilities which they propose to perform; but that the Authority believed that cities, particularly the larger ones having complex and numerous air pollution control

problems also have some responsibility of their own and the cities could assist greatly by reviewing plans and issuing permits for the installation of proper combustion equipment and the necessary air pollution control facilities.

The Chairman explained that the Authority must gather basic information and facts and cooperate with cities. Mr. Hatchard was asked to review the status of the problem.

Mr. Hatchard advised the Authority that an interim report on North Bend's cinder and flyash problem had been prepared by the staff and he then summarized the activities on the North Bend cinder problem. Mr. Hatchard stated that the study in North Bend began in November 1952. In April 1953 a volunteer committee circulated petitions and secured 1125 signatures of citizens asking for immediate abatement. The Authority's staff contacted the industrial plants to secure information. In April the Authority requested each of the four industries to have a stack emission study made in order to find out how much material was being discharged. Mr. Hatchard stated that the Authority had requested that the reports be submitted by August 1, 1953, but the only report received thus far was from the Meyerhaeuser Timber Company. The Mountain States Power Company report has not yet been received and the Authority has been advised that the Irwin-Lyons Lumber Company emission study was scheduled for the week of October 19, 1953. He reported that the Menasha Plywood Corporation had asked if it was necessary that a study be made of their particular plant since they had planned to modify boiler equipment and install appropriate cinder collection equipment. The company had also advised the Authority that estimates from contractors and engineering firms were received but as yet no decision has been made when the cinder collectors or other modifications will be provided.

Mr. Hatchard pointed out that the summary of each of the fallout stations in North Bend showed wide variations during various seasons of the year and displayed a Wind Rose chart prepared from the U. S. Weather Bureau records together with the correlation

of the wind record and the particle fallout found in North Bend.

Mr. Green asked what had been accomplished from a tangible point of view to reduce air pollution in North Bend.

Mr. Hatchard replied that operational controls had been tried at plants to reduce smoke and cinder discharges but that the area studies had not shown any significant improvement from these efforts.

Chief Engineer C. R. Leever of Mt. States Power Company then submitted to the Authority the cinder emission report for their North Bend steam plant. Mr. Leever stated that his company did not believe that they were big offenders; that they are discharging a minor portion of the cinders in the area and believe that the test report will bear this point out. He stated if there is anything further his company can do to alleviate this situation they would be happy to consider it.

The Chairman directed the Authority's staff to review the report and furnish the Authority with comments and recommendations at the next meeting.

Mr. Whitself stated that Mrs. Robert Pittam had telephoned from North Bend to report that the cinder fall on the morning of October 9, was extremely heavy and that it appeared worse than any previous time.

Mayor Hartley said that the streets are literally covered with oily soot but that previous to about 2-1/2 years ago there were just cinders and sawdust but now there also is a heavy black soot.

Mr. Green asked if this condition coincided with the beginning of operations of a new industry and Mayor Hartley replied that it did.

Mr. Wendel wanted to know if we had to wait for the Menasha Plywood report before we could go any further since he said it seemed to him that we could proceed on the

information at hand.

Mr. Green asked if the technical staff had sufficient data to determine the source of the trouble.

Mr. Hatchard said that the staff would like to have an opportunity to study the cinder discharge reports of the Mt. States Power Company and Irwin-Lyons Lumber Company.

Mr. West asked if we had any complaints from Coos Bay, and Mr. Hatchard replied that no direct complaints had been received from Coos Bay residents.

Mr. Green asked if there were any further data that the staff needed to secure from the particular plants and Mr. Hatchard stated he did not believe plant information other than the cinder emission reports would be needed.

Mr. Everts stated there are four industrial plants in North Bend burning woodwaste and if all four are causing the trouble then the Authority's action should be directed to all four. However, if the staff's study shows there are one or two plants creating the problem then the Authority's action should be directed to the particular plants. Mr. Everts advised that the staff's studies should indicate the source of the excessive cinder discharge.

Mr. Green wanted to know how long would it take the staff to proceed after reports are obtained from the industrial plants concerned.

Mr. Hatchard replied that it would depend on how many other communities in the state demanded attention at the same time. However, he believed it would not take a great deal of time to study the reports and correlate the data with the area study.

Mr. Everts read to the members a letter from Menasha Plywood Corporation dated October 7, and signed by Mr. Mowry Smith. Mr. Green asked if any communication had

been received from Weyerhaeuser Lumber Company and Mr. Hatchard replied that we had received additional data requested after reviewing the cinder discharge report but nothing else. Mr. Green asked what the conclusions were in the report and Mr. Hatchard said the conclusion stated in the report that as long as the steam plant operation was maintained under 60,000 pounds of steam per hour they met with the American Society of Mechanical Engineers dust loading code requirements.

Mr. Wendel then wanted to know how soon the staff could make recommendations to the Authority regarding the North Bend problem.

Mr. Hatchard advised that recommendations could be made shortly after the Irwin-Lyons cinder discharge report was received.

Mr. Wendel asked Mr. Enright what course of action should be pursued after the staff had the necessary data.

Attorney Enright informed the Authority that as far as the procedure goes it would be proper to inform the management of each plant of the causes of complaint and notify them what corrections are expected. At the same time a hearing should be scheduled twenty days after the date of the notice thus giving the parties an opportunity to appear and present their case. Attorney Enright also stated that after presentation of evidence and statements the Authority could then adopt an order directing responsible parties to comply with the state law. Upon failure to do so, the Authority could then proceed to secure court action to enforce compliance.

MOTION RE: NORTH BEND

It was **MOVED** by Mr. Wendel and seconded by Mr. Dixon and carried that after the cinder emission reports are received and reviewed that the Secretary be directed to communicate with the management of plants that are discharging excessive material and request that they take necessary action to reduce emissions to tolerable levels and report their

progress to the Authority at its next meeting.

SAUVIES ISLAND COMPLAINT RE: FLUORIDE EFFECTING CATTLE.

Mr. Earl Reeder of Rt. 1, Box 124, Portland, Oregon, appeared before the Authority to describe the condition of his dairy cattle he alleged are affected by fluorides from the Aluminum Corporation of America Plant at Vancouver, Washington. Mr. Reeder stated that the operation of a dairy on his land had been carried on since 1853; that they never had experienced any trouble until the aluminum plant began operations. He then started losing cattle. Their teeth were affected, the legs of the animals became swollen and finally developed into split hoofs. He called in veterinarians and they didn't know what the trouble was but one said it might be due to fluorine. Mr. Reeder stated that he conferred with representatives of the aluminum company and they said it was hoof rot although five other veterinarians said it was not hoof rot. In one winter, Mr. Reeder stated, fourteen heifers died and that he finally made a half settlement with Alcoa. Mr. Reeder reported that when Alcoa officials said that fluoride controls were operating at the Vancouver plant and there was no reason why a herd could not be raised he bought a herd of cattle but didn't have them on the farm over six months before they began to show signs of upset and now they are all "going to pieces". Mr. Reeder stated that he now is treating the cattle for split hoofs and claimed that his cows are getting fluorine out of the clover pasture which once was good for the cattle. He stated further that Alcoa claims there is no fluorine and that Washington State College and Oregon State College have been employed by Alcoa to make tests and that no fluorine has been found. Mr. Reeder said he has gone to the County, City and State but so far has received no help. Mr. Reeder stated that he took a cow to Oregon State College to be checked for fluoride poisoning and seven years later got a report that the cow had 1300 ppm of fluorine and he stated that the Bureau of Animal Industries is the only agency that has ever given any help. Mr. Reeder requested the Authority to do something about this matter.

Mr. Wendel told Mr. Reeder that he was of the opinion that the State of Washington has no statutes in that state on air pollution control and that the only recourse then would be civil action and then asked if there is anything the Oregon Air Pollution Authority could do in taking the matter up with the Authorities in the State of Washington.

Mr. Dixon asked Mr. Enright regarding the legal aspects of the case. Attorney Enright stated that he had not studied the law on such matters but thought such a case would have to go to the Federal Court because it involved a matter between states. Mr. Enright promised the Authority he would investigate the law and advise later.

Mr. William M. Fraser, Rt. 1, Box 118, Portland, Oregon, stated that he had lost additional cattle since he appeared before the Authority during the May 20 meeting, and that forty-six head of cattle have died since the first of the year. Mr. Dixon asked if Mr. Fraser had legal proceedings underway. Mr. Fraser stated he did.

The Chairman asked Mr. Reeder to submit to the Authority a letter briefly covering the situation described.

MOTION RE: SAUVIES ISLAND

It was MOVED by Mr. Wendel and seconded by Mr. Dixon that we submit our findings and write a strong letter to the Governor of the State of Washington protesting the fluoride discharge from the Aluminum Company of America. The Authority discussed the motion and considered other procedures.

Mr. Enright offered to investigate the legal aspects of the matter and submit recommendations to the Secretary who in turn would ask for an opinion of the State Attorney General regarding the proposed action.

Mr. Green asked Mr. Enright to proceed on this basis and report to the Secretary.

TROUTDALE RE; FLUORIDE EFFECTS

The Secretary reported that the staff has collected a series of random samples in the Troutdale area; that in order to make use of this data it appeared necessary to correlate the findings with the studies that Oregon State College experiment station has been conducting since 1948. Mr. Everts explained that he and Mr. Whitsett had conferred with Dean Price and Dr. Compton to discuss the Troutdale fluoride problem and that as a result of this meeting it was decided that a future meeting should be arranged so that representatives of the Oregon State College experiment station, agricultural property owners in Troutdale and the Authority staff could develop future plans for collecting data. Mr. Everts advised the Authority that this meeting had recently been held; that Dr. Compton and Mr. Henderson of the Oregon State College experiment station and Dr. N. B. MacKay from Troutdale and members of the Authority staff were present. At this meeting Dr. MacKay brought out the fact that the residents of Troutdale-Corbett eventually desire the Authority to adopt standards to limit the discharges from industrial plants and that continuous air sampling be carried on to collect necessary data. At this meeting it was decided that the Authority staff would select certain sampling stations in the Troutdale area; that in the near future would discuss these stations with Dr. Compton to determine which locations would produce a maximum amount of fluoride air concentration reports which Dr. Compton and his associates could correlate with their test plot experiments.

Mr. Green asked if dairy and livestock operations are carried on in the Troutdale area. Mr. Everts replied that there was a dairy west of the plant and that livestock are raised south and east of the aluminum plant. Mr. Everts advised that the studies of the fluoride effects on livestock or dairy cattle were being carried on by the Washington State College Institute of Technology. Mr. Green asked if there was a

study underway to secure data from the Reynolds Aluminum Plant in Troutdale.

Mr. Everts advised that additional technical help was needed if this problem and other pressing matters were to be investigated. He added that the staff would get as much data as possible with available staff. The Secretary advised that the budget would permit the addition of one engineer.

RESOLUTION RE: ADDITIONAL ENGINEER

It was MOVED by Mr. Wendel, seconded by Mr. Dixon and carried that the Air Pollution Authority employ an additional engineer.

Mr. Robert Strebin, land owner, Troutdale, Oregon, appeared before the Authority and stated that his property is south of the Reynolds aluminum plant and that his crops and cattle are being damaged. Mr. Strebin further stated that his cattle and horses and thoroughbred stock are now useless due to the fluoride poison; that only last Sunday one of his prize colts had to be killed. Mr. Strebin advised that he has arranged to have parts of the kidney and liver tested. Mr. Strebin advised the Authority that Mr. Head, who is an attorney for Mr. Paul Martin, a livestock operator in Troutdale, has a complete transcript available covering Mr. Martin's civil suit against Reynolds Metal Company. Mr. Strebin reiterated that in this transcript Reynolds Metal Company admits discharging 750 pounds of fluorine daily and that unless something is done about this condition Mr. Strebin feels that farmers will be put out of business.

Mr. Wendel asked if the Authority believed it was necessary to collect additional data in view of the fact that the aluminum company admits the discharge of this quantity of fluoride. Mr. Wendel suggested that possibly Mr. Haright could review the evidence that is now a matter of record to determine whether some action could be based on these facts.

The Chairman stated that such evidence should be submitted to the Authority for consideration.

Mr. Wendel asked Mr. Strebin if he had an attorney working on his case and if a suit had been filed. Mr. Strebin stated that his attorney has a suit prepared and expects to file an action within the next week.

MOTION RE: TROUTDALE FLUORIDE EFFECTS.

It was MOVED by Mr. Wendel and seconded by Mr. West and carried that we request our staff and attorney to determine what evidence is available, to what extent the Authority may act upon the evidence, and that the Authority schedule its next meeting tentatively five weeks from today.

In the discussion of the motion Mr. Sports stated that the complainants should formally present their evidence against the industries involved at a future meeting of the Authority and that the Aluminum Company of America, Reynolds Metal Company, Oregon State College, Washington State College and any others concerned should have an opportunity to present information and data on the matter of fluoride in the Troutdale and Sawies Island areas.

PORTLAND COMPLAINT RE: DUST AND OIL VAPOR FROM THREE HOT-MIX ASPHALT PAVING PLANTS.

The Secretary read a petition dated 8-5-53 signed by 75 complainants requesting the Authority to take abatement action against three hot-mix asphalt plants located near N. E. Columbia Boulevard and Gully Road.

Mr. Green asked if any investigation had been conducted to gain factual information.

Mr. Hatchard advised the Authority that the owners of the paving plants were notified immediately after the complaints were received and an area survey was made. Mr. Hatchard stated that nuisance conditions exist similar to other paving plants that the Authority

had considered. The three paving plants involved are permanent units which have been operated for a considerable time.

Mr. L. M. Rhodes of 5737 N. E. 72nd Street appeared before the Authority and stated that up until two years ago there was no asphalt processed in the area; that gravel was being removed but it was not a nuisance then.

Mrs. J. F. Wilson of 5709 N. E. 72nd Street stated that the dust and smoke is terrible and can be seen on the residences and gardens in the area and one can't put out washing and expect it to stay clean.

Mrs. L. M. Rhodes stated that her husband has been under the care of a doctor the past three months with a cardiac condition and while the operation of the asphalt plants did not bring this cardiac condition on, it now makes it almost impossible for her husband to breathe and that she wished to also bring out the health problem in this locality.

Mr. Green asked what was needed in the way of data to advise the plants to make corrections.

Mr. Hatcher said that air sampling is not needed since the area affects are so evident that the owners should be requested to install adequate dust and oil control equipment.

Mr. Wendel asked if it was not proper to notify the owners to cease their air pollution activities.

Attorney Enright advised that the letter requesting corrections be sent at least twenty days before the next meeting so that a hearing could be set if corrections were not being arranged and that the Authority could then designate part of the meeting as a hearing, prepare Findings of Fact, and adopt an Order.

MOTION RR: ASPHALT PLANTS.

It was MOVED by Dr. Erickson and seconded by Mr. Wendel and carried that we follow the advice of our attorney and if after due notice the owners of the paving plants do not comply that a public hearing be arranged at the next meeting.

TIGARD COMPLAINT RE: DUST AND OIL VAPOR FROM HOT-MIX PAVING PLANT.

The Secretary read a complaint petition dated September 10, containing 44 signatures requesting the Authority to abate the nuisance created by the operation of a hot-mix asphalt plant in the vicinity of Tigard.

Mr. Hatchard advised the Authority that several field visits were made; that the plant owners were notified; that control equipment would be required and that the owners stated that they intended to install appropriate dust control facilities. Mr. Hatchard also reported that the plant had ceased operations at the Tigard location on October 6.

Mr. A. L. Jaquens of 6550 S. W. McEwan Road, Oswego, stated that in regard to the Pacific Asphalt Paving Company plant there were no operations going on today. However, he stated that he served as a Commissioner of the Forest Park Zoning District and it was their desire that any future plants located near their area be equipped with dust and asphalt control equipment.

Mr. Green directed the Secretary to advise the State Highway Commission of this problem and request their cooperation in road contracts and specifications in a manner which would prevent air pollution from such plants. Contacts with county and city officials were also recommended.

Mr. Dixon advised that all of the paving plant owners bid on Highway Commission contracts and that arrangements with the Highway Commission would include all of the major paving plants operating in Oregon.

11.

PORTLAND RE: COMPLAINT STATUS: NU-BORA SOAP COMPANY, N.W. 12th and Hoyt Streets.

Mr. Hatchard requested the Authority's policy regarding former Portland complaints such as the Nu-Bora Soap Company on which the staff started working in May 1952. He reported that some corrections have been made by the installation of a makeshift cloth filter but nuisance conditions still exist from the soap dust.

It was agreed that future complaints about conditions created by this plant should be referred to the city until some cooperative plan could be worked out with the city.

RAGWEED PROBLEMS.

Dr. Erickson advised that Oregon had not been previously troubled with Ragweed but the last two or three years it has started growing in several locations in the state and that he wanted the Authority to be aware of the problem for if ragweed control is not started the Authority will receive complaints in future years. Dr. Erickson advised that ragweed is now infesting Clackamas, Douglas, Josephine, Lincoln and Marion counties but it is fairly easily controlled by 2-4-D applications. Dr. Erickson advised that the Legislature passed a control act but didn't appropriate funds and that the Emergency Board had not granted funds for eradication. Dr. Erickson suggested that the Authority send a letter to the Emergency Board requesting that funds be granted. It was agreed that Dr. Erickson and the Secretary would prepare an appropriate letter to be forwarded to the Emergency Board.

DATE OF NEXT MEETING

The next Air Pollution Authority meeting was tentatively set for November 13, 1953.

ADJOURNMENT:

There being no further business, the meeting adjourned at 5:10 P. M.

Respectfully submitted,

CURTISS M. EVERTS, Jr., Secretary
Oregon State Air Pollution Authority

TENTH MEETING
OF THE
OREGON AIR POLLUTION AUTHORITY

December 16, 1953.

The tenth meeting of the Oregon State Air Pollution Authority was called to order by the Chairman at 2:00 P.M. Wednesday, December 16, 1953, in Room 36, State Office Building, 1400 S. W. 5th Avenue, Portland, Oregon. Those present were Carl E. Green, Chairman, Mr. R. P. Dixon, Vice Chairman, Dr. Harold M. Erickson, Merle S. Vest, Members, and Curtiss M. Everts, Jr., Secretary, Thomas Enright, Legal Advisor, R. E. Hatchard, Chief of the Air Pollution Control Section, W. J. Whitsell, Associate Engineer and Frank Terraglio, Chemist.

MOTION RE: MINUTES OF PREVIOUS MEETING

The Secretary read the minutes of the ninth meeting of the Authority which was held in Portland on October 9, 1953.

The Chairman then declared that if there were no corrections or additions the minutes would stand approved as read.

SAUVIE ISLAND AND TROUTDALE FLUORIDE COMPLAINTS

The Chairman then announced that at previous meetings of the Authority that complaints had been made alleging that fluoride damage had occurred to livestock on Sauvie Island. He stated that in order to obtain information on all aspects that all parties had been invited to the meeting. He then called on Mr. Hatchard to summarize the situation on Sauvie Island. Mr. Hatchard summarized the memorandum report dated December 4, 1953 in which it was stated that (1) In November 1947 the Oregon State Emergency Board appropriated \$40,000 for use by the Oregon State College to initiate investigations of the industrial fume damage reported to affect crops and livestock in Multnomah and Columbia counties. (2) This study was undertaken early in 1948 by the Oregon State College Agricultural Experiment Station Staff. (3) An additional \$60,000 to continue the study was appropriated by the 1949 Legislature. (4) This investigation undertaken

to determine the following facts

a. The presence, concentration and distribution of fluorine complaints in the vicinity of the aluminum reduction plants.

b. The amounts of fluorine absorbed by certain agricultural crops at varying distances and directions from aluminum reduction plants.

c. The affects of fluorine upon agricultural crops grown in the field under controlled experimental conditions.

d. The occurrence and distribution of fluorosis in livestock.

(5) The conclusion reached from these investigations was: (a) that fluorosis existed in cattle in the area prior to the installation of the fluorine collection system by the Aluminum Company of America (Alcoa) at its Vancouver, Washington, works in 1949. The exact extent of the damage and the geographical boundaries, however, were not determined.

Mr. Hatchard reported further that: (1) In 1950 Alcoa made available \$49,000 to Oregon State College and \$22,000 to Washington State College for investigations on Sauvie Island to determine whether fluorides discharged from the Vancouver aluminum plant subsequent to December 1, 1949 were impairing the health of livestock in that area. (2) In these investigations Oregon State College studied the pasture, herbage, hay and the nutritional status of the livestock, and Washington State College investigated the physical conditions of the livestock in the veterinary medicine area. (3) Six progress reports have been prepared by Oregon State College and Washington State College staff. A final progress report should be completed and available to the Authority about January 1, 1954. Conclusions based on the entire study are now being prepared and will be available for consideration by the Authority in the near future.

In 1952 a preliminary investigation was made by the University of Oregon Dental School in cooperation with the State Board of Health to determine if fluorides on Sauvie Island had affected the teeth of the Sauvie Island children. It has been established

that the first detectable effect of an excessive fluorine intake would be the mottling of the enamel of the teeth of the children living in the area. Visual examination of the teeth of Sauvie Island resident children revealed no mottling of the teeth.

Mr. Hatchard also reported that the staff had reviewed the Oregon State College Experiment Station reports on the fluorine investigations on Sauvie Island, technical reports from other sources pertaining to fluorosis in cattle and had conferred with the Oregon State College Experiment Station Staff regarding their present fluorine investigations. Three air sampling stations have been established by the Air Pollution Authority personnel on Sauvie Island properties of the Oregon Game Commission. The fluoride air concentration of random samples range between 0 to 2.0 parts per billion, an amount not considered detrimental to humans or animals.

The Secretary advised the Authority that a letter dated December 8, 1953 had been received from Mr. Earl Reeder regarding the effects on his cattle which he attributed to fluorosis.

Mr. C. S. Thayer, Mgr., Northwest Operations, Aluminum Company of America, Vancouver, Washington, advised the Authority that he believed the report just read covered the matter very adequately, and that he was certain the Authority would be interested in the conclusions reached by Oregon State College and Washington State College after the study of the dairy and livestock operations on Sauvie Island. Mr. Thayer stated that the conclusions would be available within a few weeks but that the report would not include either Mr. Fraser's or Mr. Reeder's property since they were not willing to grant representatives of the two colleges permission for access to their properties in order to have studies made. He stated further that it was the practice of the State Colleges to make the progress reports at joint meetings of representatives of the farmers on the island and representatives of Alcoa and that six such reports have been made and that the whole study by the State colleges has been a cooperative effort on the part of the farmers and Alcoa to find the true answer to the fluoride situation on

the island. Mr. Thayer said that his company has every confidence that these test results will produce findings that are accurate and true.

Mr. Thayer informed the Authority that prior to the work done by the State colleges The Aluminum Company of America had engaged Stanford Research Institute to make studies on the Fraser farm in connection with a damage suit which was heard in the U.S. District Court at Tacoma, Washington, in 1950. He reported that the Stanford Research staff spent about a year studying the situation and that a copy of the complete report would be available to the Authority if they wish it. Mr. Thayer recalled that this report showed evidence of some poor herd management but that no fluoride poisoning was found.

The Chairman then requested that a copy of the Stanford Research Institute studies on Saurvie Is/and be furnished to the Authority for review.

Mr. Robert M. Johnson, Rt. 4, Box 127, Portland, Oregon, appeared in behalf of his father and he stated they had been led to believe that after fluoride controls had been installed by the Aluminum Company at Vancouver, Washington, in 1949 there would not be any more fluorine gas emitted. He reported that it seemed that there had been less fluorine but that in the fall of 1953 the prevailing winds seemed to carry something to the Lilac and Snowball trees that burned the foliage. He also advised the Authority that they have 40 cows and claimed that four are suffering from abnormal hoof conditions which seem to be similar to the symptoms of fluorosis. Mr. Johnson stated that during the past year, 10 or 11 head of cows have become lame and that it definitely was not hoof rot. Mr. Johnson stated that fluorine is definitely present regardless of what any report of Oregon State College or Washington State College may show.

The Chairman requested Mr. Johnson to send a letter to the Authority describing the conditions and outlining his complaint. Mr. Johnson promised he would prepare the letter.

The Chairman then asked the members if further consideration of the matter should be deferred until the conclusions reached by Oregon State College and Washington State College were available. It was agreed by the members present that further consideration should be deferred until reports from Oregon State College and Washington State College were available for study.

TROUTDALE

The Chairman then called on the Secretary to summarize the data in connection with complaints from the Troutdale area.

The Secretary summarized a memorandum to the Air Pollution Authority members dated December 11, 1953, in which it was stated that the Oregon State College Agricultural Experiment Station studied the fluoride effects in the Troutdale area beginning in 1948 and continuing to the present. The conclusions drawn from those investigations were as follows:

1. Fluorosis was found in dairy cattle. However, the area involved was rather limited.
2. General fluorine contamination in certain areas adjacent to the aluminum reduction plant was found. The most severe injury occurred in plants southeast of the Troutdale aluminum plant.
3. Grasses from three pastures situated three miles west and southeast of the Troutdale plant contained excessive amounts of fluorine compared to grasses on land located a similar distance directly south of the plant.

He also reported that the Oregon State College Agricultural Experiment Station has continued the fluorine investigations through the 1953 growing season and that:

- (1) Investigations conducted from 1951 to 1953 show the leaf injury to gladioli considerably reduced over that prevailing from 1948 to 1950.
- (2) The grass samples from the pastures indicated that the concentration of fluoride is below the level which

would affect livestock except in the pasture land located about one half mile west of the aluminum plant. (3) The Agricultural Experiment Station's staff considers fluoride concentration in excess of 30 parts per million in forage crops to be above the tolerance level for dairy livestock.

The Secretary stated that the Authority's staff had collected random twenty-four hour fluoride air samples from four stations in the Troutdale area as follows:

<u>LOCATION</u>	<u>FLUORIDE CONCENTRATION AIR</u>
Roof of the U.S. Corps of Engineers Testing Laboratory 1/4 mile S.E. of the aluminum plant.	Twelve samples collected from June 25, to July 24, 1953. Median fluoride concentration 3.9 parts per billion.
OSC test Plot No. 9 2-1/2 miles S.E. of the aluminum plant	Oct. 27, 1953 0.3 parts per billion Oct. 28, 1953 1.8 " " "
OSC test Plot No. 11 4 miles S.E. of aluminum plant	Oct. 26, 1953 1.3 parts per billion Oct. 27, 1953 1.8 " " " Oct. 28, 1953 1.9 " " "
OSC test Plot No. 17 4 miles south-SE of aluminum plant	Oct. 26, 1953 0.4 parts per billion Oct. 27, 1953 0.3 " " " Oct. 28, 1953 3.2 " " "

Mr. F. A. Yerke, Attorney representing Reynolds Metals Company, stated that the aluminum reduction plant has been operating approximately twelve years; that it was constructed originally by Alcoa in 1941 and 1942 and that the pot lines started operating in 1942 and continued until 1945. During this time no fume control was provided in the plant. In the summer of 1946, Mr. Yerke continued, the Reynolds Metals Company secured the plant from the Federal Government and began operating in 1946. Before resuming the plant operation Mr. Yerke advised the Authority that the Reynolds Metals Company installed a dust collection system including water spray units on the roof of each of the pot line buildings in order to remove as much of the escaping fluorides as possible. This collection system was about 60 to 62% effective and in 1949 and 1950 further efforts were made to increase the efficiency of the fluoride removal system. Plant studies made since 1950 show fluoride reductions of 90 to 92%.

Mr. Yerke stated that at the October 9, 1953 meeting of the Authority Mr. R.S. Strebins advised the Authority that the fluoride discharge from the plant was about 750 pounds per day and while this figure agreed with the plant measurements Mr. Yerke brought out the fact that the size and type of plant operation should also be considered together with the fluoride concentrations found in the area. Mr. Yerke informed the Authority that the Aluminum plant operates twenty-four hours a day and on this basis only about 30 pounds per hour of fluoride are being emitted.

Mr. Harold Zeh, Chief Chemist, Reynolds Metals Company, advised the Authority that the test runs of the atmospheric fluoride concentration made during the summer of 1953 showed two parts per billion at a distance of two and a half miles from the plant. Mr. Zeh referred to a report, "The Nature of Atmospheric Pollution in a Number of Industrial Areas" by Jacob Cholak, Kettering Laboratory, University of Cincinnati, Ohio, in which it is stated that the fluoride concentrations in the atmosphere of the following cities were found.

Baltimore Industrial area	1950	18 parts per billion.
Baltimore Residential area		8 parts per billion.
Cleveland Industrial area	1949-50	14 parts per billion.
Donora	1948-49	8 parts per billion.
Donora	1949	6 parts per billion.
Los Angeles	1948	8 parts per billion.
Cincinnati	1946-51	
All areas		5 parts per billion.
Rural area		4.7 parts per billion.
Residential area		6 parts per billion.
Industrial and commercial areas		5 parts per billion.
Charleston	1950-51	3 parts per billion.

Mr. Yerke stated that the fluoride concentration information must be correlated with the fluoride levels that cause damage to agriculture and livestock. He stated that since 1946 the Reynolds Metals Company had operated a number of pasture grass sampling stations in Washington and Oregon from which monthly samples were collected and analyzed. About 8,000 samples have been collected each year and the total now represents 55,000 samples.

He stated that Dr. O. C. Compton, Oregon State College Plant Horticulturist, advised them that a fluoride concentration in the pasture grass less than 10 parts per million is normal. Mr. Yerke stated that the grass on Mr. Strebin's land located three miles south-southwest of the plant had not been sampled but that the Reynold's sampling station No. 2A was located one half mile from Mr. Strebin's property and that grass samples have been analyzed from this station for fluorides since 1949. He reported that pasture grass samples from Station 2A for the past year show the following fluoride concentrations.

Dec. 5, 1952	8.2 parts per million
Jan. 6, 1953	10 parts per million
Feb. 3, 1953	12 parts per million
Mar. 5, 1953	9.0 parts per million
Mar. 21, 1953	11 parts per million
May 1, 1953	8.4 parts per million
June 11, 1953	7.5 parts per million
June 25, 1953	10 parts per million
July 27, 1953	20 parts per million
Aug. 24, 1953	21 parts per million
Sep. 28, 1953	15 parts per million
Nov. 2, 1953	13 parts per million
Nov. 23, 1953	4.3 parts per million

Mr. Yerke stated that the Oregon State College Agricultural Experiment Station Staff had reported that in order to have any livestock damage from fluorine the fluorine content of pasture grass would have to be about 30 parts per million and that studies have been carried on in other parts of the country where dairy livestock were fed a high fluorine diet without loss in milk production. Mr. Yerke also stated that south-east of the plant the nearest livestock were located at a distance of two and a half miles and that urine samples from 30 to 40 animals in this area show fluoride concentrations averaging 3.5 parts per million, the highest with 5.1 parts per million. Mr. Yerke referred to a report, "A Critical Study of the Literature on Fluoride Toxicology with Respect to Cattle Damage" by H. J. Schmidt, D.V.M. and W. E. Rand, published in the American Journal of Veterinary Research, January 1952, in which it is stated that cattle grazing on uncontaminated pasture show a fluoride content of the urine of less than 5 parts per million and that if the cattle had fluorosis that quantity of fluorides found in the urine would be well in excess of 10 parts per million.

Mr. Yerke asserted that the Reynolds Metals Company believes that they have one of the best collection systems available to control the fluorine emissions; that the initial collection system cost over \$200,000, the improved installation \$2,150,000. Mr. Yerke stated that from 1946 to 1953 the company spent \$1,200,000 to operate the fume control system. Mr. Yerke concluded with the statement that based on their study of present conditions they do not believe there is basis for complaint; however the company believes the Authority should make further investigations.

Mr. C. A. Chapman, Rt. 2, Troutdale, Oregon, asked if Mr. Yerke's statements concerning the fluoride content found in the urine of cattle mentioned was from his herd. Mr. Zeh replied that the samples were not; however, Mr. Chapman's herd had been sampled but he had not brought the report of these samples with him.

The Chairman asked Mr. Zeh if he would furnish this information to the Authority on Mr. Chapman's cattle. Mr. Zeh agreed to send this data to the Authority.

Mr. R. S. Strebins of Troutdale, Oregon, again appeared at the meeting and informed the Authority that the Reynolds Metals Company did not inspect the cattle or grasses on his property and the transcript of the trial of Paul Martin against the Reynolds Metals Company contained lots of evidence. Mr. Strebins said he wished the Authority would get this transcript and study it.

The Chairman advised Mr. Strebins that the complainants who appeared at the last meeting were requested to furnish evidence and data for use of the Authority but that so far no data had been submitted. Mr. Strebins said he would request his attorney, Mr. Mead, to send the transcript of the Paul Martin trial to the Authority if it was available.

Mr. Thomas Enright, Legal Advisor, informed the Authority that it would be quite expensive for the Authority to secure a copy of the transcript and also that such transcripts are very limited in value since so much of the information applies to

previous periods and that one has to consider the frame work in which the testimony was advanced. Mr. Enright stated he believed it was up to us to get our own information and not accept the testimony of other bodies and courts.

Mr. West suggested that the Authority continue the matter until all of the data is available to the Authority.

The Chairman and the members present agreed with this suggestion.

OSWEGO RE: CINDER AND CEMENT COMPLAINT AND FINDINGS.

Mr. Hatchard summarized the memorandum of December 15, 1953, pertaining to study of the Oswego complaint by the Authority's staff. He stated that: (1) In April 1952 the Oswego City Council had requested the Authority to make a study of the air pollution conditions in Oswego. The major complaint had been based upon the deposition of particulate material. (2) This study was not started, however, until July 1952 since no technical staff was available. (3) The results of a preliminary investigation during the summer of 1952 showed that excessive particle fallout was occurring and that further study was needed. (4) Eight particle fallout stations were placed at representative locations in Oswego to determine the nature and quantity of the material settling out. These stations were operated for over a year and the following conclusions based on this study were made.

- a. The fallout found in Oswego is excessive from the weight standpoint alone.
- b. The laboratory analyses of the fallout samples showed that 70% of the material is of mineral nature which contains a high percentage of calcium oxide (lime) which shows that a substantial part of the fallout is cement dust that originates from the Oregon Portland Cement Company's plant in Oswego.

Mr. Eugene Crampton, Attorney for the City of Oswego, appeared stating that the City would appreciate an expression of the Authority's policy regarding the control of air pollution from sources within Oswego. Mr. Crampton said that the tentative policy of

the council is one forced upon it by the continuing complaints from residents of the city. The Council feels that if the cement company has taken every measure reasonably expected and the fallout continues to exist in spite of every measure perhaps a re-examination of the Council's position may be desirable.

Mr. F. E. McCaslin, President, Oregon-Portland Cement Company, replied that the cement company has done everything possible to alleviate dust conditions. He stated that the plant has been operating in Oswego from 1916 to 1947 with a one kiln unit and that in 1947 a second kiln was installed. He reported that an electrostatic precipitator was installed in 1947 at a cost of \$200,000 and was about 90% efficient. He stated that other dust collectors have been installed in the crushing plant, grinding department and clinker storage building etc., at a cost of \$75,000 and that these collectors eliminated a substantial portion of the dust which might otherwise be carried by the wind outside the plant area. Mr. McCaslin advised the Authority that the dust conditions are being studied by Western Precipitation Corporation of San Francisco but the reports of their study had not yet been received.

Mr. McCaslin requested the Authority to describe what was meant by "excessive" in the Authority's report on the Oswego dust survey dated December 15, 1953, in order for his company to meet all requirements. Referring to Table I of the report, the data shows a fallout of 39 tons of dust per square mile per month. Table II showed 8 tons per square mile per month of cement dust. Mr. McCaslin asked what action was proposed by the Authority for the other 31 tons which was falling in Oswego from other sources of pollution.

Mr. McCaslin stated that the Oregon Portland Cement Company wants to be a good neighbor and that their study of dust conditions would be continued.

Mr. Hatchard informed Mr. McCaslin that if a fallout is above 25 tons per square mile per month nuisance conditions begin to appear and that this figure applied to dusts in

general. A fallout of considerably less than 25 tons per square mile per month of cement dust will cause nuisance conditions. Mr. Hatchard stated that the data shown in Table II of the report was a comparison of the calcium oxide (lime) found in the Oswego fallout samples compared with calcium oxide found in samples collected in other Oregon cities. The lime content of the samples was used as a tracer to indicate the dust origin since lime is a major material used in the manufacture of cement.

Mr. Hatchard pointed out that the data in Table II does not show the total portion of the fallout originating from the cement plant but instead reports the quantity of calcium oxide.

The Chairman asked Mr. McCaslin if there was any other collection system that would remove additional amounts of dust. Mr. McCaslin replied that the Western Precipitation Company is studying the possibility of installing some equipment ahead of the electrostatic precipitator in order to improve the collection efficiencies.

Dr. Erickson suggested that the cement company get together with the City of Oswego and the Authority's staff to study the problem in order to determine practical corrections.

MOTION RE; OSWEGO RE; CINDER AND CEMENT COMPLAINT AND FINDINGS.

It was MOVED by Mr. Dixon and seconded by Dr. Erickson and carried that the Authority request the industry to obtain the additional information regarding the removal of dust from its plant discharges; to confer with the Authority's staff and to have a report before the Authority at its next meeting.

PORTLAND RE; NEED FOR MUNICIPAL ACTION ON AIR POLLUTION PROBLEMS.

Commissioner W. A. Bowes, City of Portland, appeared before the Authority and stated that the City is aware of the fact that the 1951 Legislature passed an Air Pollution Control Act and that at about the time the proposed Portland Air Pollution ordinance

was being prepared for submission to the City Council in 1953 the city received a letter from the Authority advising Portland of its responsibility on air pollution matters. Commissioner Bowes said the most important matter to the city was to determine from the Authority just what policy would be followed regarding air pollution within cities and what standards would be adopted. He asked if the city would be expected to take care of its own problems.

The Chairman reminded Commissioner Bowes that the Authority had discussed this matter in considerable detail in 1953 and had adopted a policy that the larger cities of the state should be expected to carry on their own air pollution control programs with such assistance as the state Authority could provide. Mr. Green stated further that the Secretary expressed the position of the Authority in a letter dated September 24, 1953, addressed to the Mayor and City Council. Mr. Green explained that the Authority expected the City of Portland to carry on its proper share of the control work and that the Authority would cooperate with and assist the city in technical problems, gathering of basic data, etc.

Commissioner Bowes asked if the Authority was going to issue orders to cities similar to those issued by the Sanitary Authority in connection with sewage disposal.

The Chairman explained that in the matter of air pollution there are innumerable points of discharge within the cities from all kinds of combustion and industrial activities and that we have a multitude of sources to deal with and not just a single one. The problem is much more complex than that of water pollution control.

Commissioner Bowes stated that if it was going to be the policy of the Authority to look to the City of Portland to clean up its own air pollution then he believed there should be a well defined statement of policy showing the relationship of the city to the Authority.

Dr. Erickson added that the Authority had to adjust its activities to the budget available and that it became apparent early that the Authority's activities should be

directed towards gathering data regarding existing conditions and establishing standards. He also stated that the Authority should assume jurisdiction in the areas outside of city boundaries where city government could not provide air pollution control. He pointed out that the Authority's program has been developed with the understanding that the city would control pollution within its boundaries and that the Authority would cooperate with cities, conduct surveys, establish standards and make every possible effort to reduce air pollution both inside and outside and the Authority also expects to cooperate with adjoining states and other agencies.

Mr. Bowes was advised that air pollution differed greatly from stream pollution because the cities in the state were one of the major sources of water pollution and that air pollution sources are largely from private operations and city officials should have an interest in their control.

Commissioner Bowes asked if the Authority would take action against the cities.

Dr. Erickson stated that if cities pollute the air the Authority certainly would have to consider taking action.

Commissioner Bowes stated that the State Air Pollution Authority was just passing this responsibility on to the city.

Dr. Erickson said in explanation to Commissioner Bowes that this Authority is a Division of the State Board of Health. The state law provides ^{that} County and City departments of health shall enforce health laws.

NORTH BEND RE: STATUS OF CINDER AND FLYASH PROBLEM

The Secretary reported that a letter dated December 14, 1953 had been received from Mr. A. O. Karlen, Manager, Coos Bay Branch, Weyerhaeuser Timber Company, which advised the Authority that plans for the installation of a cinder collection system had been prepared; bids for the equipment had been requested and they plan to proceed with the

installation at the earliest practical date.

The Chairman advised the Weyerhaeuser representatives present that the Authority appreciated this progress and evidence of their voluntary cooperation to eliminate their portion of the air pollution in North Bend.

The Secretary also reported that a letter dated December 15, 1953 had been received from the Irwin-Iyons Company which advised the Authority that the company was securing proposals from the Western Precipitation Corporation and the Seattle Boiler Works to reduce the cinder emissions.

The Secretary then quoted from a letter dated December 14, 1953 received from the Menasha Corporation advising the Authority that the stack emission studies were now under way and would be completed during the week of December 14, 1953. The Secretary further stated that the Authority advised the Mountain States Power Company that the Authority was not ready to make any recommendations until further area studies were completed by the Authority's staff.

Mayor Hartley, North Bend, stated that he had no additional comments other than that he was certain the residents of North Bend would be extremely pleased to learn that the Weyerhaeuser Timber Company will be proceeding with the installation of cinder collection units.

STATE HIGHWAY COMMISSION RE: WATER AND AIR POLLUTION CONTROLS PROVIDED IN SPECIFICATIONS.

The Chairman advised Mr. W.C. Williams, Assistant State Highway Engineer that the Authority believed the dust control at asphalt paving plants could best be handled by the State Highway Commission by appropriate provisions in its specifications and contracts.

Mr. W. C. Williams stated he was in accord with what had been proposed. He stated that their present specifications and contracts required compliance with all laws. It was his opinion that many of the contractors were not aware of the air pollution

law. Mr. Williams said the Highway Commission would cooperate but that it could not bar a paving contractor from bidding on a contract because his asphalt plant did not have certain specified dust collecting equipment appliances.

Mr. Dixon asked Mr. Williams if the State Highway Commission would close a plant until all dust control requirements were met if a situation similar to the Gold Hill problem of last summer should arise.

Mr. Williams stated if the Authority notified the Highway Commission that the law is being violated it would be the obligation of the Commission to stop the contractor until all requirements were complied with.

The Secretary stated that he thought if the Authority could maintain that type of relationship with the Highway Department that the Authority should assure the Highway Commission that any notice regarding a contractor violating the Air Pollution Control Act would be accompanied by supporting data.

The Secretary suggested that the Authority send to the Associated General Contractors or any other similar organization copies of the statute and other available information on procedures to follow in the removal of excessive dust discharges from the paving plants.

Mr. Williams said that such information would help considerably to bring attention to the dust problems.

Mr. Dixon asked how many contractors were qualified for bidding on Highway Commission paving projects. Mr. Williams replied that there were about twenty doing asphalt paving work but about a dozen do most of the work.

Attorney Emright was instructed to contact Mr. C.W. Enfield, Chief Counsel for the Highway Commission, and discuss what information should accompany any future notice

that a paving contractor was violating the Air Pollution Control Act in order for the Highway Commission to order a contractor to cease work until appropriate air pollution control equipment was provided and satisfactorily operated.

NYSSA RE: PRELIMINARY SURVEY OF FLYASH DEPOSITION

Mr. Hatchard summarized the memorandum report of December 15, 1953 regarding the fly-ash deposition in the City of Nyssa. Mr. Hatchard stated that the original complaint was received in March 1952 from Dr. C. M. Tyler, Chairman, Sanitation Committee, Nyssa Chamber of Commerce. (1) He reported that the preliminary investigation was made by District Engineer Patterson in the fall of 1952. (2) Two particle fallout stations have been operated in Nyssa for over one year. (3) The fallout shows no substantial difference during the seasons of the year. (4) The largest industry in Nyssa is the Amalgamated Sugar Company's sugar beet refinery which is operated from October to February each year. When this plant is operating about 340 tons of coal is burned each twenty-four hours. (5) The fallout is shown by twenty-four hour samples collected at five representative locations in Nyssa which show considerable flyash deposition in certain sections of Nyssa. (6) Visits have been made to the sugar refinery in order to determine what control measures have been provided and it was learned that from 1950 to 1951 \$100,000 had been expended in providing a cinder collection system for the two main boiler units. (7) The management of the sugar refinery believed that emissions from their plant have been greatly reduced and that the railroad activity is now probably a major source.

Mr. Hatchard stated that conferences with the City Manager of Nyssa disclosed that no complaints had been received by the city during the past two years and the city believes that conditions were now greatly improved. Mr. Hatchard stated that Dr. Tyler has requested the Authority to take definite action to reduce the flyash deposition.

Mr. Hatchard requested the Authority to consider what activities the staff should take

in the future since an intensive area survey would be required in Nyssa to apporition the sources of the remaining flyash.

The Chairman asked if it was possible for District Engineer Patterson to gather the data. Mr. Hatchard replied that it would be necessary for special equipment including the directional fallout unit and the wind direction recorder to be used and this would require the truck and one of the staff to work with the District Engineer in Nyssa.

The Chairman asked if there were any more improvements which could be provided at the sugar refinery to reduce the flyash problem.

Mr. Hatchard replied that the boiler serving the beet waste recovery operations was not provided with cinder collection equipment and it is probable that flyash from this source could be reduced.

The Secretary stated that obviously there may be sources of atmospheric pollution which could definitely be city-controlled such as the emissions from locomotives. Inasmuch as the Authority could not keep an engineer in Nyssa to check constantly this should be controlled by local authorities.

Mr. Green stated that since the railroad goes through the city of Nyssa and the plant is outside the city it would be feasible to at least discuss the matter with the Union Pacific representatives in Portland. Furthermore, he stated that we could not expect the City of Nyssa to do anything about the beet plant outside of the city limits. The Secretary was directed to write to the Union Pacific Railway Company regarding this problem.

The Chairman suggested that all possible information be secured from the District Engineer but that area studies now under way in other parts of the state should not be interrupted.

DATE OF NEXT MEETING.

To be scheduled when the Oregon State College and Washington State College conclusions are available on their Sauvie Island fluoride effects studies.

ADJOURNMENT.

There being no further business, the meeting adjourned at 5:15 P. M.

Respectfully submitted.

CURTISS M. EVERTS, Jr., Secretary
Oregon State Air Pollution Authority

ELEVENTH MEETING
OF THE
OREGON AIR POLLUTION AUTHORITY

July 14, 1954

The eleventh meeting of the Oregon State Air Pollution Authority was called to order by the Chairman at 2:00 P.M., Wednesday, July 14, 1954, in Room 36, State Office Building, 1400 S. W. 5th Avenue, Portland, Oregon. Those present were Carl E. Green, Chairman, Mr. R. P. Dixon, Vice Chairman, Dr. Harold M. Frickson, Harold F. Wendel, Merle S. West, Members and Curtiss M. Everts, Jr., Secretary, Charles D. Burt, Legal Advisor, R. E. Hatchard, Chief of the Air Pollution Control Section, W. J. Whitsell, Associate Engineer and Frank P. Terraglio, Chemist.

MOTION RE: MINUTES OF PREVIOUS MEETING

The Secretary summarized the minutes of the tenth meeting of the Authority which was held in Portland on December 16, 1953.

The Chairman then declared that if there were no corrections or additions the minutes would stand approved as prepared by the Secretary.

PORTLAND RE: PETITION FROM KENTON DISTRICT

The Secretary read a letter from D. W. Carter, 8206 N. Fenwick Ave., Portland, Oregon, transmitting petitions signed by approximately 200 residents in the Kenton District alleging that cinders, ash and smoke from the M & M Woodworking Company, Nicolai Door Mfg., and Portland Shingle Company were causing nuisance conditions.

The Chairman advised that no field investigation had been made since the complaint had been received only a few days ago.

MOTION RE: PETITION FROM KENTON DISTRICT

It was MOVED by Mr. Wendel and seconded by Mr. West and carried that this complaint be referred to the staff for investigation and that a report be made to the Authority at the next meeting.

NORTH BEND RE: STATUS OF THE CINDER AND FLYASH CONTROL MEASURES.

The Chairman requested the staff to report on the efforts of industries in North Bend to reduce the cinder and flyash deposition.

Mr. Whitsell stated that the area sampling has continued uninterrupted in the North Bend area. The directional particle fallout collector was removed from the Roosevelt School to the Sherman Apartments. He explained that we intend to continue the area sampling as a check upon the improvements effected and also to show whether or not additional control measures will be needed at the Mt. States Power Company's steam generation plant.

Mr. Whitsell also reported that the Menasha Plywood Corporation had submitted its stack emission report in January and in March the Authority advised the company by letter that the report together with our area studies showed that the plant was adversely affecting the area north of Montana Ave., and that it was recommended that the company proceed with appropriate plans to reduce the stack emissions. The company has secured proposals from three engineering or contracting firms regarding the installation of cinder and flyash collecting equipment and the cost for this work was from approximately \$23,000 to \$27,000. Mr. Whitsell stated that a proposal was received from the F. E. Balden Company involving certain changes to the combustion chamber at an approximate cost of \$7,000.

Mr. Whitsell explained further that there has been considerable correspondence between the plant, F. E. Balden Company and the Authority involving the guarantee for cinder reduction. Unfortunately it developed that the proposed boiler changes would not accomplish the degree of cinder reduction required in order to remove nuisance conditions in the area effected by the plant. Mr. Whitsell reported that the Menasha Plywood Corporation has been constructing a wood flour plant which utilizes the sander dust that previously was burned in the boiler and that it is hoped by the plant management that the removal of this fine material will improve the combustion conditions. In their letter of July 12, the company advised that the wood flour plant would be in operation by August 1, 1954.

Mr. Whitsell advised the Authority that the management of Irwin-Lyons Lumber Company had taken no specific action on plant cinder and smoke control since the Western Precipitation Corporation completed the study of the stack discharges and the Authority's staff has conferred with the management several times since the last Authority meeting but as yet no new activity has developed.

Mr. Whitsell stated that the installation of cinder collectors at the Weyerhaeuser Timber Company's mill in North Bend was expected to have begun by July 1, 1954; however, the lumber strike had caused postponement. Mr. A. O. Karlen advised the Authority in his letter of July 9, 1954 that all the equipment and materials for the cinder control system are at the plant site and that the installation will be completed about six weeks after the end of the lumber strike.

Mr. West asked about the status of Mt. States Power Company's cinder and flyash control situation.

Mr. Whitsell explained that Mt. States Power Company had previously installed cinder collectors and after the improvements are completed at the mills, it will then be determined whether the present collection system at the power plant is satisfactory.

Mr. Wendel asked if the Menasha Plywood Corporation was making adequate progress.

Mr. Hatchard explained that it was the hope of the management that substantial cinder reduction would occur by removing the sander dust from the combustion chamber and using it as a by-product. Mr. Hatchard advised the Authority that the change ought to considerably improve the smoke problem but it was doubtful if there would be a considerable reduction in the cinder fallout in the area affected by the plant and that it would be about the end of October before any changes in the fallout could be determined from our sample stations. Mr. Hatchard stated that the management was making some progress and that if the present change did not accomplish sufficient reduction then other measures would have to be considered.

Mr. Wendel asked if the complaints were seasonal in North Bend.

Mr. Hatchard replied that during the fall and winter the prevailing wind is from the mills towards town and that is the time of year complaints are made.

Mr. West wished to know if Irwin-Lyons promised to do anything to overcome the fallout of cinders from their plant.

Mr. Hatchard informed the members that Irwin-Lyons Company had contacted the engineering department of Western Precipitation Corporation and the Seattle Boiler works. The company has taken no action, however.

Mr. Dixon suggested that the Secretary write the Irwin-Lyons Company and advise them that the Authority is still awaiting a solution to this matter.

The Chairman urged that this matter not be delayed and agreed that the Secretary should advise the company that more satisfactory progress should be made.

REPORT ASSOCIATED FOREST INDUSTRIES OF OREGON AIR POLLUTION COMMITTEE.

Mr. Charles M. Sanford, assistant to Mr. Charles E. Ogle, represented Associated Forest Industries of Oregon. He explained that the association is not an operating company but is made up of lumber, plywood and pulp companies throughout the State of Oregon and that they do not have the membership of all such mill owners but they do represent 30 to 40% of the operators. There are a number of committees within the association, one of which is the Air Pollution Committee. Mr. Sanford informed the Authority that representatives of the Committee recently met with the technical staff of the Authority to orient itself as to the procedure before the Authority and to give assistance where possible through its organization to its members. As a result of the meeting a few days ago it was decided that Mr. Ogle should learn from the manufacturers of wood burning equipment and others regarding the cinder and flyash reduction features and have this data available for the benefit of the engineering staff of the Authority and the committee. Mr. Ogle has corresponded with the manufacturers of waste wood burners and has secured 4 or 5 replies.

Mr. Sanford stated that when all the correspondence on this subject is received he will submit it to the Authority's staff for their use. At that time the committee will be in a position to cooperate with the Authority.

The Chairman asked if this meeting was the first one and Mr. Sanford replied that it was the first meeting held with the Authority's staff but that the committee had held other meetings previously.

Mr. Sanford further explained to the Chairman that it is the intention of the committee to search out such situations as exist in the North Bend community and give assistance to the operators. He stated, that as he saw it, the Association would urge the operators to take action on their own volition.

The Chairman stated that it is the Authority's policy that industries who create an air pollution problem should find the solution for it.

Dr. Erickson suggested that a considerable saving in time and cost would be affected if the problem were solved by industry-wide measures rather than by individual mill operators.

Mr. Sanford stated he hoped to submit a progress report at the next meeting of the Authority.

Mr. C. Russel Rees, Rees Blower Pipe Manufacturing Company of San Francisco, California, stated that his company had 40 years experience with the design and construction of waste burners and that while the problem of cinder and flyash carry-over is not entirely solved, they do have the answers to many situations. Mr. Rees explained that very frequently the waste burner is overloaded since the expenditure to the mill owner is not a productive item, and there is a tendency to install units which are too small.

Mr. Larry Supove, member of the City of Portland Air Pollution Committee, and a registered mechanical engineer, stated that he felt this was a problem that an association of mill operators could take care of on the basis of what is known.

Mr. Hatchard said this problem has been before the Authority several times since many

complaints are based on cinder emissions, etc., from waste burners and the staff has observed a number of experimental attempts to correct the smoke and cinder discharge. However, Mr. Hatchard pointed out that technical information regarding the operational nature of the many types of burners is not available upon which changes can be made to improve smoke and cinder discharges. He stated that the Authority's staff was not acquainted with the Rees Company's waste burners and would appreciate securing pertinent description.

Mr. West reminded the Authority that G. W. Gleeson, Dean of Engineering, Oregon State College had advised the Authority that the waste burners are a problem but that it was not insoluble.

OS-REGO FF: REPORT OF OREGON-PORTLAND CEMENT COMPANY

The Chairman stated that at the last meeting the Authority requested the Oregon-Portland Cement Company to make a progress report on their efforts to reduce the cement dust discharge.

Mr. Frederic Yerke, Attorney representing Oregon-Portland Cement Company reported on the activities of the company since the last meeting of the Authority and also reviewed some of the information transmitted to them by the Authority's staff and presented his interpretation of what the information meant.

The operation of the cement plant commenced about 38 years ago and one kiln was in operation from 1916 to 1947, Mr. Yerke explained. In 1947 the second kiln was placed in operation. However, he pointed out that prior to the installation of the second kiln no dust control equipment had been installed. In 1947 the company consulted with the Western Precipitation Corporation regarding installation of dust control equipment for the kilns and the electrostatic precipitator unit was installed when the second kiln was placed in operation.

He advised that at the same time other means of eliminating the dust emissions were also considered; that there are presently installed six bag-collectors which prevent dust from various parts of the plant from escaping into the atmosphere. Mr. Yerke explained that the first unit was placed in operation in 1946 in the raw-grind department and that the gas

volume for this unit was 10,000 cubic feet per minute. Two similar units were installed in 1947 to serve the crusher and cement-grind operations. In 1951 another bag collector was installed in the cement grind department with a gas volume capacity of 11,000 cubic feet per minute.

Since the last Authority meeting Mr. Yerke advised that the company has been installing two additional bag-collectors which have greater capacity than those previously installed. One of these collectors will serve the klinker storage department with a capacity of 12,500 cubic feet per minute and the other bag collector will serve the packing department with a capacity of 12,500 cubic feet per minute. The cost of each unit is about \$12,000. In addition to these fume collection devices he said that a multiclone unit is in operation on the effluent from the rotary kiln.

The raw lime is delivered in railroad cars, ground and then burned, Mr. Yerke explained, and that the company endeavors to wet the lime with water so the raw dust will not escape and be carried away by the winds and that the rock is also wetted down in the railroad cars and is dumped wet.

Mr. Yerke said he understood that the work of the Authority's staff commenced in the early part of 1953 and that the Oregon-Portland Cement Company had been furnished with records indicating particulate fallout found in the city of Oswego at eight stations. Fallout for the February 9, 1953 to March 26, 1953 period ranged from 15 to 60 tons per square mile per month. For the period March 26, 1953 to June 1953 it was 17 to 48 tons per square mile per month, and for the period June 3, 1953 to October 19, 1953 it was 30 to 59 tons per square mile/month. Mr. Yerke stated that the lime concentrations found in the fallout samples was from 17 to 37% compared with lime contents of less than 5% in areas where there is no industrial lime discharge. He concluded that the Oregon-Portland Cement Plant is obviously one source of industrial effluents. However, there are effluents coming from sources other than the Oregon-Portland Cement Company. He stated that the Oregon-Portland Cement Company alone, in terms of calcium oxide, is not producing a nuisance condition and if the plant were to shut down there would still be a fallout most of the time in excess of 25 tons per square mile per month.

Sometime ago the company had contacted the Western Precipitation Corporation of Los Angeles and they were to send a representative to run tests to determine if the dust control equipment was functioning properly, Mr. Yerke explained. Two days after the last Authority meeting Mr. McCaslin, President of Oregon-Portland Cement Company, wrote the company again requesting this study, however, it was two months later before the Western Precipitation Corporation could start the study. Mr. Yerke stated that on March 26, 1954, Mr. Leche wrote Western Precipitation Corporation and asked for their recommendations and proposals concerning installation and additional equipment and the Western Precipitation Corporation replied that the information could not be provided until May 1954. He replied that this report from Western Precipitation Corporation arrived on May 17, 1954, and included preliminary sketches and proposals, however, additional information is needed.

Mr. Yerke stated that Mr. Leche had a representative of the Koppers Company, Inc., visit the plant and reviewed the data available concerning the operation of the plant and control equipment. On May 27, 1954, Mr. Leche wrote the Koppers Company to learn when their proposals would be received. This information arrived on June 23, 1954 and indicated the need for a meeting with the Koppers representative from San Francisco. Mr. Leche has now been advised that a San Francisco representative will not be able to come to Oswego until about August 1, 1954. Mr. Yerke stated that on August 1, 1954, they will confer with a representative of Koppers Company Inc., to consider the proposals together with the plant limitations such as physical lay-out, area available, cost of operating, etc. Mr. Yerke said it would help considerably if the members of the Authority would indicate what standards would be applied in Oswego.

The Chairman asked if a representative of the City of Oswego was present and would like to make any comments.

Mr. Lee Stidd, member City Council, Oswego, stated that he was present as an observer interested in Mr. Yerke's report and the dust report of the Authority's staff. He stated

that it appeared that Mr. McCaslin has made a very sincere effort to alleviate conditions.

The Chairman called on Mr. Hatchard to make some comments regarding the interpretation of particle fallout limits, etc.

Mr. Hatchard said that the Authority's staff was pleased to learn that an additional collection system had been installed since the last meeting. He pointed out that unfortunately there is not enough experience of our own or in other areas of the country to consider a standard for area fallout of lime, but that the important fact is that nuisance conditions are present in Oswego; that it is causing a real disturbance to the residents and causes loss to business, particularly the automobile sales agencies. Many complaints originate with the owners of apartment houses who are unfortunately in the prevailing wind direction during certain seasons.

A series of samples were collected from the roof of the Elementary School at Church and State Streets in Oswego during the period April 29, to May 20, 1954. This station is located approximately 1200 feet southwest of the cement plant. A high volume sampler with an accordion pleated filter and the electrostatic precipitator sampler were used. Total particulate matter found at this station varied from 83 to 530 micrograms per cubic meter, and the amount of the particulate material that was lime (calcium oxide) varied from 11 to 28%. Portland type cement in this area contains about 62% lime (calcium oxide).

Mr. Wendel asked if we were receiving many complaints at the present time.

Mr. Hatchard stated that the City of Oswego received most of the complaints but that the Authority also was receiving a few complaints.

Mr. Lee Stidd stated that the City of Oswego was receiving complaints spasmodically depending upon weather conditions and that these complaints have been received for several years. The problem has been before the City Council many times and the Council is interested in the status of the dust control measures and what is going to be done to remove the nuisance

conditions.

The Chairman wanted to know if the area fallout of cement dust was caused by over-loading the dust control system.

Attorney Yerke stated it was not and that the situation is no different now than when the second kiln and the electrostatic precipitator was installed.

The Chairman asked if further reduction of the cement dust discharge could be obtained.

Mr. Yerke replied that the question was how much improvement could be made in view of the cost and space limitations at the plant.

Mr. Wendel stated that he believed that the company is making a sincere effort to meet the problem and would do everything that could be done to improve the conditions.

MOTION RE: REPORT OF OREGON-PORTLAND CEMENT COMPANY

It was MOVED by Mr. Wendel and seconded by Dr. Erickson and carried that the matter be continued and that the company submit a report at the next Authority meeting.

PORTLAND RE: MUNICIPAL AIR POLLUTION ORDINANCES.

Mr. A. M. Westling, League of Oregon Cities, Eugene, Oregon, reviewed the relationships between the Air Pollution Authority and the League of Oregon Cities. He stated that in January C. M. Everts, Jr., and R. E. Hatchard attended a League's Director's meeting and discussed some of the air pollution problems and the Authority's policies regarding air pollution problems within cities. He realized that it was the hope of the Authority that the cities would assume more responsibility for carrying on air pollution control problems within their boundaries. In order to assist cities in getting ideas in mind as individual communities the League requested the Authority's staff to prepare a report describing the relationship of the Authority to cities and also to give them some idea what is involved in air pollution control and how it may be handled. The Authority's staff has prepared a preliminary draft of a report and Mr. Westling hoped the Authority would publish this

information so it would be available to the cities. Mr. Westling asked if it would be possible for the League and the Authority to cooperate on the preparation of a model air pollution ordinance. He explained that he excluded the City of Portland since they could have sufficient personnel to carry on their own projects and was thinking what could be done to assist the smaller Oregon cities so they could care for air pollution problems within the municipal boundaries.

The Secretary stated that the relationship of the Authority to Oregon cities has been discussed to quite an extent and that it was his impression that it was the policy of the Air Pollution Authority that many problems involving air pollution on the local level should be handled by municipalities within their limitations of staff, technical advice and personnel. He stated that it was on that basis that we met with the Board of Directors of the League of Oregon Cities to determine their opinion regarding this approach. The Secretary stated his impression was that those League officers present believed that the local city officials would prefer to receive complaints on air pollution and make efforts to handle those within their boundaries. Then, if additional technical advice was needed perhaps the cities could depend on the Air Pollution Authority for such assistance. The Board of Directors indicated that they wished to discuss this proposed arrangement with the officials of other cities not represented at their meeting.

The Secretary asked Mr. Westling if there were discussions about air pollution control at the annual regional conferences with the League of Oregon Cities staff and city officials which were held this spring.

Mr. Westling stated there was not considerable discussion of the subject but felt that cities would be willing to assume more responsibility if there was available a procedure, which the city officials could adapt to the local situation. He advised that if this information was available the city concerned would have to develop a program that one of their regular employees could carry on the extra activities since the size of Oregon

cities, except for Portland, would prevent employing a specialized air pollution control staff.

The Secretary explained that the Authority has been generally referring the complaints received involving air pollution within the city boundaries to the City Council concerned and then if assistance was requested the Authority tried to provide it.

DUST CONTROL: ASPHALT PAVING PLANTS

Mr. Hatchard stated that the Authority had received written complaints involving the dust and asphalt vapor discharges from approximately nine paving plants in the state. He explained that the location and status of the complaints are as follows:

<u>LOCATION</u>	<u>PAVING PLANTS</u>	<u>STATUS</u>
<u>Portland</u> Vicinity of NE Cully & Columbia Blvd.	Warren Northwest Parker Schram Porter Yett	Dust control system improved. Dust control system improved. No change but not established that plant causing nuisance condition.
<u>Salem</u> Keiser District	Central Paving Company	Plant moved. Damage to orchard settled out of court - \$7,500.
<u>Tigard</u> Forest Hills District	Pacific Asphalt Paving Plant	Plant moved.
<u>Eugene</u>	Central Heating Company	Improved dust control system, Air samples show improvement not adequate.
<u>Eugene</u> Glenwood Vicinity	T.M. Wildish Paving Plant	Considering improvements to dust control system.
<u>Gold Hill</u>	Central Heating Company Eugene and F. L. Sommers, Klamath Falls.	Temporary improvements to control system, plant moved.

Mr. Hatchard further explained that informal complaints have been received regarding paving in Portland (SW)Canby and Cornelius. He stated that the staff had made studies to determine the range of nuisance conditions and recommended that more attention be given to the pre-

vention of this problem rather than waiting until a condition was created that must be corrected.

Mr. Porter W. Yett, representing Portland Chapter Associated General Contractors advised the members there are many reasons for the nuisance conditions such as wind direction and change of material standards. He pointed out that materials often specified by the Oregon State Highway Commission affected this problem, and that it would take some engineering study to determine control methods. In some locations the plants are permanent installations while others are only portable. The problem of dust control, he felt, was a simple matter if water was available, however, it is impossible to do anything with the dust without water. It was his feeling that the Highway Commission's plants were not as well protected as the private contractors.

Mr. Yett stated that he operates a permanent plant near N.E. Cully and Columbia Blvd., and that corrections can be made if needed. He explained that the plant had been operated there for 25 years, and that they own 20 acres and believe that very little dust gets off their own property. He remarked that other plants have moved into the area and at present only two companies are operating on the area, Parker-Schram and Porter-Yett since Warren Northwest had recently moved.

Mr. Yett stated that in their own plants they investigated various dust control systems and have consulted the manufacturers of paving plants which have been built with a dust control of some type for many years. He added that in the case of the Tigard plant the material which the contractor was forced to use in that area was considerably over-graded into a type of dust which was almost impossible to collect. Porter-Yett is still working on collectors and have contacted manufacturers in the Los Angeles area regarding this. Mr. Yett felt this equipment must be at least within 80 or 85% efficient, however, in the permanent plants he felt even higher dust collection efficiencies could be provided.

Mr. Carl Schram, member of Associated General Contractors, stated he felt Mr. Yett covered

this subject well and added that it was their sincere desire to cooperate in every way possible to eliminate this nuisance.

The Chairman added that the problem was not really solved by moving a plant from a specific location to another site unless the new site was far enough from other land uses so that no new nuisance was created.

Mr. West commended Messrs. Yett and Schram for their fine spirit of cooperation.

Mr. Ray L. Beeler, safety man, Associated General Contractors, stated he attended as an observer but wanted the Authority to know that he had visited a number of construction plants throughout the state of Oregon and assured the Authority the contractors are working on the problems discussed today, especially the owners of permanent paving plants.

WASHINGTON STATE COLLEGE AND OREGON STATE COLLEGE REPORT OF FLUORINE.

Mr. Hatchard summarized the combined report published by Oregon State and Washington State Colleges after completion of their Sauvie Island fluoride project. The study period involved was from December 1951 to December 1953 and the basic purpose of the study was to determine if the aluminum reduction plant in Vancouver, Washington was impairing the health of livestock on Sauvie Island. Their study procedure was to determine by physical examination the condition of the cattle and to evaluate analyses of urine samples, teeth, bone and soft tissue. This phase of the study was handled by Washington State College. The determination of fluorine content of pasture herbage, indicator plants and grain concentrate, etc., was conducted by Oregon State. Control areas for livestock and agricultural fluoride studies were operated in locations remote from sources of fluoride.

Since the last Authority meeting Mr. Hatchard reported that the staff has operated air sampling equipment on Sauvie Island and collected seventeen samples during the period of February 24, to May 17, and air concentrations ranged from a trace less than 0.10 part per billion to 1.6 part per billion with a median of 0.4 ppb.

Mr. Wendel asked if the staff had seen the evidence accumulated by Mr. Fraser. Mr. Hatchard

stated that since the last meeting the Authority had not received additional reports from any Sauvie Island residents.

Mr. Robert Fraser, Sauvie Island, was present and informed the Authority the reason that there were no other people present was that at the last meeting they were not allowed to be heard.

The Chairman emphatically denied this statement and explained that everyone present had the opportunity to be heard at the time this matter was being discussed.

Mr. Fraser disagreed entirely with the report presented by Mr. Hatchard and stated that evidently Oregon State College and Washington State College came to Sauvie Island to tell people who lived there that their cattle were not dying from fluorine poisoning, and that at a public meeting in April 1954 at the Sauvie Island school it was asked how many people believed their cattle were dying of fluorine poisoning and all present responded to the affirmative.

Mr. Fraser stated that two dairies on Sauvie Island nearby had recently gone out of business and one that did stay in business receives a milk check for only \$25.00 from 35 cows.

Mr. Fraser reported that he has moved all his breeding stock out of the area so that not so many are dying now and there is at the present 1,000 tons of hay going to waste. He stated further that since the meeting Washington State College has admitted fluorine in two different herds on the Island.

The Chairman asked if it were not possible that some of the fluoride may be coming from other sources.

Mr. Hatchard replied that well could be, that it has never at any time been reported at zero and that there was always a trace or tenths.

The Chairman asked if any representatives of the Aluminum Company of America wished to be heard.

Mr. C. S. Thayer, Mgr. Northwest Operation, Alcoa, stated that he had nothing further to add to their statements expressed at the Authority's meeting of December 16, 1953. He felt there was some fluoride concentration everywhere and believed that even the concentrations found on Sauvie Island could be found in Portland, Eugene or Salem and other cities.

Mr. Hatchard stated the staff collected samples in Portland area and found a fluoride concentration from 1/2 to 2 parts per billion. For comparison purposes the industrial hygiene standard for 8 hour exposure of workers is 3,000 ppb.

Mr. Wendel stated he had seen the cattle and knew they are in bad shape and asked if the Authority had ever requested a veterinarian's opinion concerning the condition of the cattle.

Mr. Green suggested that we might find out from representatives of the two colleges when they could meet with us in the near future and have those concerned present to ask questions.

Mr. Wendel heartily agreed.

Mr. Green wanted the Authority to have all the facts and not over-look any source of information.

Mr. West asked if there were more accurate, scientific information than that given by the agricultural college.

Mr. Fraser replied "yes, that things at Oregon State College are not the same there as it used to be". He stated that a veterinarian from Cornell University inspected Sauvie Island cattle and claimed that it was fluorine poisoning.

The Chairman asked if he could get a statement from the Cornell veterinarian.

Mr. Fraser stated he could.

The Chairman stated that until the Authority is shown otherwise the Authority will assume that the staff and those employed by Oregon State College and Washington State College are presenting factual information.

Mr. Fraser asked if his only recourse was to go through court.

The Chairman impressed upon him if he could have evidence to substantiate all that has been said it would not be necessary to go to court.

Mr. Wendel asked if Mr. Fraser could prove what he was saying before this Board.

Mr. Fraser said he had brought material to Mr. Hatchard's office and it always ended in an argument.

Mr. Hatchard explained that the Authority had received copies of three laboratory reports of fluoride concentrations for specimens from animals and that no interpretation of the reports by a veterinarian was provided indicating whether fluorosis was present. Copies of these reports were included with the staff reports which each Authority member had received.

The Chairman said we should look to veterinarians and experts in this field to give us advice and of necessity must take that evidence until it is proven faulty and that the Authority would like a letter from the Cornell veterinarian and also would like to know if he is qualified to make such statements.

Mr. Wendel suggested that the Sauvie Island residents be given the opportunity of presenting additional proof at a special meeting of the Authority if they believed the findings of the colleges are wrong and recommended that the residents be represented by counsel. He also stated that in the absence of such a presentation of facts we will assume these findings by the colleges are correct.

Mr. Green stated the Authority would hold a special hearing and wanted to know how soon the Sauvie Island residents could be prepared.

Mr. Fraser replied that they could be ready in about a month.

The Chairman stated he would instruct the Secretary to communicate with Oregon State and Washington State College and agree upon a date for the special meeting in approximately one month and that the Secretary would then contact Mr. Fraser to secure a date convenient to all concerned.

Mr. Fraser asked the Chairman what the Authority would do about it after the special meeting was held.

The Chairman informed Mr. Fraser that the Authority has a legal advisor who would advise us what could be done.

Mr. Fraser wanted to know "what could be done before I go through all this".

The Chairman replied to Mr. Fraser that he was now jumping to conclusions and that first it would have to be shown at the special meeting that fluoride was damaging livestock and agriculture.

Mr. Wendel stated that it would depend upon whether the Authority found that there was a nuisance condition, and further that the Alcoa Company was the responsible agent for the condition. If these facts were determined then the matter of the interstate agreement would be the next step and he felt certain that such an agreement could be worked out to take steps to alleviate the nuisance if such a nuisance were found to exist.

TROUTDALE-CORBETT FLUORIDE SURVEY

The Chairman requested the staff to report on the Troutdale-Corbett fluoride study. Mr. Whitsell reported on the fluoride air samples that have been collected in the area, and he informed members that the staff had operated stations at the McKay farm, Willoughby farm and Schutze residence. The fluoride air concentrations found at these stations from March 30, 1954 to April 18, 1954 ranged from a minimum of 0.4 part per billion which was common to several of the stations to a maximum of 2.1, at the Willoughby farm 2-1/4 miles west of the aluminum plant. At the present time, Mr. Whitsell stated, we have the automatic impinger operating at the Schutze residence, one mile S.E. from the plant. Nineteen samples have been collected in the current series; two samples are secured each day, one during the day and the other at night.

Dr. M. B. McKay of Troutdale, Oregon, asked if the wind direction during the sampling period affected the fluoride concentrations found.

Mr. Hatchard replied that special wind observations are made by the Troutdale Airport Weather station when the Authority's staff are collecting samples and that this data is tabulated with the fluoride concentrations found at the various stations.

The Chairman asked if there were representatives of the Reynolds Metals Company present who wished to be heard.

Mr. F. Yerke, attorney, stated that Mr. H. W. Zeh and he were representing the Reynolds Metals Company today. Mr. Yerke explained that they are continuing their test plot program with three test plots being operated this year. This work has been underway for the past 5 years and last year the Authority's staff observed the project. Mr. Yerke extended an invitation to visit their test plots again this year. He stated that the highest fluorine concentration found in gladioli foliage samples was 114 ppm on the Lampert property, but that this concentration seems high it does not affect the bulb size. Reynolds Metals Company had Dr. Lewis Massey and Dr. Zimmerman make inspections of the Lampert bulb plantings and both gentlemen believed that no damage had been done as far as the bulbs were concerned.

Mr. Hatchard explained that some time ago the staff had met with Dr. Compton and Dr. McKay to plan the future area fluoride studies. He reported that the results of the Oregon State College Agricultural Experiment Station test plot data showed that fluoride concentration in the foliage had been high at stations F-SE of the aluminum plant. Mr. Hatchard stated that the staff will again meet with Dr. Compton and Dr. McKay to plan future studies.

The Chairman asked if any studies were made of the affect on cattle in that area.

Mr. Hatchard replied that several years ago the Oregon State College Agricultural Experiment Station studied the cattle in the area but we have not seen reports of recent investigations. However, he continued the Authority has received no written complaints from residents in Troutdale-Corbett regarding fluorosis in cattle.

MOTION RE: TROUTDALE-CORBETT FLUORIDE SURVEY

It was MOVED by Dr. Erickson and seconded by Mr. Wendel and carried that the staff continue investigations of this matter and present a report at the next Authority meeting.

LA GRANDE-AMERICAN PRODUCTS COMPANY

Mr. Hatchard stated that the American Products Company operates a rendering plant in the northwest area of LaGrande and that adjacent property owners had secured an injunction in the fall of 1952 which required the plant to close from June 1, to October each year. The Authority has not taken any action in the matter since no complaints had been received from property owners. The Authority had been requested this spring by the attorney for American Products Company to make a survey of present conditions for American Products Company. Following a survey a report was prepared and the attorney was advised that the Authority would be glad to present the report to the circuit court. In the meantime, however, the Air Pollution Authority had been drawn into the action. Mr. Charles D. Burt stated that inasmuch as the Authority was not a party to the litigation he had appeared before Circuit Court Judge Hubbard in LaGrande to explain the Authority's position and at that time the court heard arguments on both sides, from Carl Keller, et al and Gibson Packing Company, owners of the American Products Company. The court continued the matter until July 1, 1954 to secure additional information. Since then an affidavit has been prepared and signed by Dist. Engineer Patterson explaining facts based upon the surveys and this was submitted to court.

Mr. Burt stated that he has had no further word from the court as to the disposition of this case so he assumed that the original injunction is still in effect, however, he stated the Authority is no longer a party litigant in this matter.

The Chairman wanted to know if this case established any precedent.

Mr. Burt replied that he thought not since the Authority could not of its own volition have taken any action without holding a hearing first and it was assumed we could not be a party of the litigation without first holding a hearing.

BEAVERTON FE: ODOR PROBLEM

The Secretary read a letter dated July 13, 1954 to the Authority from H. H. Rossi, Mayor,

City of Beaverton regarding the odors from the Pacific Adhesive Plywood Plant located in the main business district. In the letter Mayor Rossi requested an investigation of the odor and a report be submitted to the Council prior to their September 3, 1954 meeting.

The Chairman directed the staff to proceed with investigations and prepare a report prior to September 13, 1954.

BIENNIAL BUDGET -- 1955-57

The Chairman requested the Secretary to explain the 1955-57 biennial budget request.

The Secretary explained that the Authority's previous biennial budgets compared with the proposed budget were as follows.

	<u>1951-53</u>	<u>1953-55</u>	<u>1955-57</u>
Salaries and Wages	\$ 46,740.00	\$ 61,190.00	\$ 80,694.00
General operating & Maintenance	8,516.71	20,518.66	26,356.00
Capital outlay	<u>9,299.00</u>	<u>1,249.00</u>	<u>4,000.00</u>
	\$ 64,555.71	\$ 82,957.66	\$ 111,050.00

Dr. Erickson stated that Governor Patterson had requested that each department limit their request for additional personnel to an absolute minimum. However, Dr. Erickson continued if there is an urgent need the Authority must make this need known.

The Secretary explained that the additional engineer would be needed to assist with area surveys within city boundaries, particularly in the smaller cities and also the Authority expects to have more plans and specifications to review as the program develops. He pointed out that new industry is entering Oregon and the present staff will not be able to handle this additional work.

MOTION RE: BUDGET--1955-57

It was MOVED by Mr. Dixon and seconded by Dr. Erickson and carried that the Secretary prepare justifications of the biennial 1955-57 budget and submit the report to each member and that each member will submit his comments to the Secretary.

UNIVERSITY OF MICHIGAN SYMPOSIUM ON "AIR SAMPLING EQUIPMENT".

The Chairman requested Mr. Whitell to report on the University of Michigan Air Sampling

Symposium. Mr. Whitsell explained that approximately 500 public health personnel, engineers, manufacturers and educators in the industrial hygiene and air pollution fields attended the meetings. The Sessions were of a general nature but with interesting discussions concerning equipment development and use. Mr. Whitsell pointed out that it was interesting to note that others working in the air pollution control field have strikingly similar experiences to ours in Oregon. During the symposium, there was a large number of displays and it was possible to talk with equipment manufacturers' representatives and secure information on the new developments. Mr. Whitsell concluded that we are informed of latest developments and are at least keeping pace with others and are ahead of some in our thinking and planning.

MOTION RE: ELECTION OF OFFICERS

It was MOVED by Mr. Dixon and seconded by Dr. Erickson and carried that Mr. Green be re-elected Chairman.

It was MOVED by Mr. West and seconded by Mr. Wendel and carried that Mr. Dixon be continued as vice chairman.

DATE OF NEXT MEETING:

The Secretary was instructed to arrange for a special meeting in approximately one month when the Oregon State College and Washington State College representatives can attend the meeting.

ADJOURNMENT

There being no further business, the meeting adjourned at 5:20 P.M.

Respectfully submitted,

CURTISS M. EVERTS, Jr., Secretary
Oregon State Air Pollution Authority

SPECIAL MEETING OF THE
OREGON AIR POLLUTION AUTHORITY

September 28, 1954

The special meeting of the Oregon State Air Pollution Authority was called to order by the Chairman at 10:00 A. M. Tuesday, September 27, 1954, in Room 36, State Office Building, 1400 S. W. 5th Avenue, Portland, Oregon. Those present were Carl E. Green, Chairman, Mr. R. P. Dixon, Vice Chairman, Dr. Harold M. Erickson, Merle S. West, Harold F. Wendel, Members and Curtiss M. Everts, Jr., Secretary, Charles D. Burt, Special Assistant Attorney General, R. E. Hatchard, Chief of the Air Pollution Control Section, State Board of Health, W. J. Whitsett, Associate Sanitary Engineer, State Board of Health and Frank P. Terraglio, Chemist, State Board of Health.

Chairman: This is a special meeting scheduled for the purpose of hearing testimonies regarding flucyline at Sawvie Island. The plan of procedure which we will follow, Mr. Fraser and others from Sawvie Island, is for you to present such material as you wish and then following the representatives from Oregon State College and Washington State College will be heard and others who might wish to present material and data may likewise do so. I don't know your plan. Will you have counsel present this or what is your pleasure. Someone should assume the charge of your presentation.

Mr. Fraser: I brought all this, here are copies of reports.

Chairman: Mr. Fraser, we will leave it to you and your group the manner in which you wish to present your material but I think someone should assume the charge of it and I believe it is the plan to take it down on tape recorder so if you would come forward and give your name and address and come by the mike so we can take it down, please.

Mr. Fraser: My name is Robert Fraser and here are copies of reports. I will read you the findings of fact in this case. So far this is a supplemental complaint that we have filed in the District Court of the United States for The Western District of Washington,

Southern Division. William F. Fraser, Marie Fraser, plaintiffs against The Aluminum Company of America, defendants. On December 11, 1950, this Court entered Findings of Fact in this case including the following:

- A. That between September 1940, and December, 1949, between 1412 and 7075 pounds of fluorine as fluorides were discharged each day from defendant's plant.
- B. Prior to December 1, 1949, fluorides released from the reduction of alumina to aluminum in the defendant's plant were deposited upon the forage growing upon the plaintiffs' property in amounts sufficient to injure the plaintiffs' cattle grazing thereon and plaintiffs' cattle were injured as a result of the consumption of such forage.
- C. Prior to December 1, 1949, fluorides so deposited upon plaintiffs' property rendered the crops and natural vegetation thereof unfit for consumption by animals and injured and killed animals grazing and feeding thereon, lowering their productivity and diminishing the quality of said animals and their products.
- D. The symptoms of fluorine poisoning include not only tooth and bone lesions, but also diarrhea, emaciation, loss of spirit, loss in milk production, an impairment of reproductive capacity, and, in extreme cases, the death of the animal. All of the foregoing symptoms, in a greater or lesser degree, have been present in plaintiffs' herd since March, 1947.
- E. That as a result of the foregoing, plaintiffs suffered loss and injury for the period between March 31, 1947 and July 1, 1950 in the sum of \$60,000.00.

Mr. Fraser: This is the supplemental complaint. "On December 11, 1950, this court also entered an order in this case to the effect that plaintiffs might, within two years thereafter, offer further evidence and make an additional showing upon the question whether, since December 1, 1949, fluorides have continued to be discharged from defendant's plant and be deposited upon plaintiffs' farm in amounts sufficient to cause any further continuing or permanent damage to plaintiffs and to the market value of plaintiffs' farm.

Since December 1949, fluorides have continued to be discharged from defendant's plant and such fluorides have continued to be deposited upon the forage growing upon plaintiffs' farm in amounts sufficient to injure the plaintiffs' cattle grazing thereon, and since December 1949, the fluorides so deposited have continued to render the crops and natural vegetation growing thereon unfit for consumption by animals and have injured and killed animals feeding thereon, lowering their productivity and diminishing the quality of said animals and their products and resulting in the same symptoms as stated above and found to have been present, in a greater or lesser degree, for the period prior to December 1949. In addition it has since been discovered by plaintiffs that as a result of the discharge by defendant of fluorides upon plaintiffs' farm the consumption by animals on plaintiffs' farm of forage contaminated as a result thereof, excessive amounts of fluorine and fluorides have been deposited in the internal organs of said animals and that as a result of said fluorine poisoning said internal organs have been caused to degenerate and have been seriously and permanently damaged."

/s/ Hicks, Davis and Tongue
 Collier, Bernard, Bernard and Edwards
 L. B. Sulgrove
 Attorneys for Plaintiffs.

Mr. Fraser: The death and loss in our cattle has been so great that we moved our breeding stock off the ranch a year ago away from the fluorine area. Here is an answer to an Air Pollution letter, September 23, 1954.

Mr. Green: I would like to ask our Attorney and members of the Board if we have a clear understanding of this procedure. As I understood it we were to have received evidence and data regarding this condition about which the complaint is registered and so far - - -

Mr. Fraser: It is all on your desk right there.

Chairman: Is this procedure we are following proper, Mr. Burt? This is a reading of a complainant or basis of action in court rather than presentation of evidence as I see it so far.

Mr. Fraser: It is purely evidence.

Mr. Burt: Mr. Fraser: What date is this Finding of Fact?

Mr. Fraser: December 11, 1950.

Mr. Burt: Since that time was there any change in the Finding of Fact.

Mr. Fraser: No.

Mr. Burt: Is this matter still under litigation?

Mr. Fraser: Yes.

Mr. Burt: Do you intend to follow this report of detailed information?

Mr. Fraser: Yes, I have it all right here ready to go.

Mr. Burt: What is the latest report you have here?

Mr. Fraser: September 25, 1954.

Mr. Burt: That is your latest report? Are you introducing the other material as a means of explaining the more recent data that you are going to introduce?

Mr. Fraser: Yes.

Mr. Burt: I see no reason to deny him from introducing background information.

Mr. Fraser: This is a letter dated August 6, 1954. "Mr. William M. Fraser, Rt. 1, Box 118, Portland, Oregon. Dear Sir: In reply to your letter of August 3, I have examined my report that I made of your cattle on September 30, 1952, and find that sufficient clinical evidence of fluorine ingestion was present at that time to certainly make a diagnosis of both acute and chronic fluorosis being present in your herd. As you well know I have examined your herd numerous times over the last six or seven years and each and every time this same condition has been found. I have examined this herd with

such men as Drs. Udall, Menaul, Holden and Gaurd and each of these men agreed with me on this diagnosis.

You and the Air Pollution Authority might be interested in the fact that I examined Mr. Carl Baker's herd, who lives only a short distance from you, and found evidence in the teeth to indicate fluorine intake in sufficient amounts to cause staining in the teeth that erupted this year."

/s/ Keith P. Keller
Capt. V.C.
U. S. Army

Mr. Fraser:

September 30, 1952

"This is a summary of my findings on the examination of cattle owned by Mr. Fraser on Sauvie Island." * * * * *

Mr. Fraser: That report gives the condition of each of the 23 animals examined in the chute. "In addition there were 17 young calves in this group that were very rough and in poor condition, several had diarrhea. Fecal examinations were taken from several calves which were negative for parasites. Seven bulls were seen and all were stunted and rough appearing. The pasture was excellent and consisted of clover and rye grass. It is my opinion that several of the animals examined showed syndromes of fluorosis. This group did not appear in as good condition as they should have considering the luxuriant pasture that they were on and which Mr. Fraser said had been good all summer".

Respectfully yours,

/s/ William Menaul

Mr. Fraser: Here is a letter from Dr. Udall dated November 8, 1950. "Mr. Wm. Fraser Rt. 4, Box 118, Portland, Oregon. Dear Mr. Fraser: In compliance with instructions from Mr. Hicks I am enclosing a statement for the examination of your herd, and am writing him that I am unable to recognize any significant change in the cattle since my examination made last May and June. Apparently the amount of diarrhea, and unthriftiness of the young, are about the same.

I shall be interested in the decision of the Judge on the amount of your indemnity.

With best regards to the Frasers, from"

/s/ D. H. Udall

Mr. Fraser: That is the veterinarian from Cornell University.

Mr. Fraser: Here is an answer to request No. 2. (in the Authority's letter of September 23, 1954)

"Evergreen Animal Clinic
6816 Highway 99
Vancouver, Washington

September 25, 1954

Dear Mr. Fraser:

After examining the reports submitted by the pathologist and the chemical analyses of the several samples taken by me and submitted for examination, it is my opinion that the specimens show an excessive amount of fluorine, much higher than that considered normal."

/S/ William Menaul, D.V.M.

Mr. Dixon: What is the date of that last letter?

Mr. Fraser: The date is September 25, 1954.

Mr. Fraser: Here are copies of the pathological report (dated May 1, 1952). I can't pronounce the words in it but I can read the summary. "Examination of specimens of tissue delivered to me by Dr. Menaul and labeled specimens from horse of Mr. William Fraser" * * * * * Summary: Examination of liver and kidney tissue reveals parenchymatous degenerative changes and cell necrosis of toxic origin, the nature of which is not apparent by histological examination."

/S/ H. H. Foskett, M. D.
Pathologist

Mr. Fraser: Here is the chemical analyses of the same samples.

University of Nevada
Reno, Nevada

Consulting Chemist:
R. J. Morris, Ph.D.
The Ohio State University

Fluorine determination - No. 1.

Subject: Horse

Sample Received: April 23, 1952

Analysis completed: May 2, 1952

Result: All values tabulated below are reported in parts per million (P.P.M.) on a fat free, dry weight basis.

Sample:

Outside bone	1305
Inside bone	1255
Kidney	44
Liver	16

Submitted May 2, 1952

/S/ R. J. Morris

Mr. Fraser: Here is a report also from the University of Nevada.

Fluorine Determination: No. 2.

Subject: Two year old heifer
Tateo #102 Ear tag #K 490649 Chain tag #4

Sample received: May 13, 1952

Analysis completed: May 29, 1952

Sample

Tooth	908
Jaw	1130
Kidney	74
Liver	40

Submitted May 29, 1952

/S/ R. J. Morris, Ph. D.

Mr. Fraser: Here is Northwest Laboratories dated December 3, 1952.

Sample

Parts per million fluoride basis dry, fat free sample

Mandible (including teeth)	515
Metacarpal	369
Liver	107
Kidney	123

Northwest Laboratories

/S/ Thomas H. Williams

Mr. Fraser: I believe I have turned in other copies before. Some of these reports were taken to your office. Now that answers your 1, 2 and 3 questions. (Authority's letter of September 23, 1954.)

Mr. Fraser: That is all I have.

Chairman: Mr. Fraser, is there anyone else from Sauvie Island who would like to be heard?

Mr. Fraser: Who will be first?

Chairman: Would you give us your name?

Mr. Carl A. Baker, Rt. 1, Box 117, Portland, Oregon. I have the one letter that I would like to read to the Board and the people present. "This letter is for the purpose of giving a short report of fluorine poison in your herds so that you can convey it to the Air Pollution Authority. I have examined your herd at least yearly over the last six or seven years. Each time I have found conclusive evidence in the cattle so as to give a diagnosis of both acute and chronic fluorosis. Many other veterinarians have accompanied me on these examinations. The most notable of these being Dr. D. H. Udall. You might be interested to know that your herd was herd No. 2 in the article written by Dr. Udall and myself. The most recent examination of your herd was made in 1953 at which time the same diagnosis of both acute and chronic fluorosis was made as in previous examinations. It is my sincere hope that the Air Pollution Authority can be some help in this problem that has been such a financial handicap to you for so long."

Sincerely,

/s/ Keith P. Keller
 Capt. V.C.
 U. S. Army

Mr. Baker: I also would like to tell the Board that I am now out of the dairy business; that after raising all the replacements that could be raised from the stock that I had on the ranch and plus buying additional cattle each year and I continued to decline in cattle numbers and milk production to the point where it was not feasible to operate further so I sold my herd and my ranch is idle.

Mr. Fraser: The next person is Mr. Cashdollar.

Mr. George Cashdollar, Rt. 1, Box 151, Portland, Oregon. We had some trouble with our cattle and we didn't know what it was so we called in some veterinarians. We got one report from a gentleman who claims we have twelve teeth of five cattle in the herd grade No. 2 which mean slight changes probably due to fluorine and they haven't found no bone change, but there is teeth change. They also say in this letter it is probably due to fertilizer that we are using. We have a lot of cracks on the hoofs.

Chairman: Mr. Cashdollar, wouldn't it be best if you would read the letter so we have it for evidence, please?

Mr. Cashdollar: I don't know if I want all this read.

Mr. Green: What is our position in this matter?

Mr. Burt: If he doesn't want the entire letter, I don't see how you can simply quote from it.

Mr. Cashdollar: All right that is fine and dandy.

Mr. Cashdollar: "Full examination of your herd is enclosed as requested. The results of the analysis of the urine has not been received from the clinical laboratory. The cracking of hoofs in your herd is unusual and abnormal that I have not incurred previously. I have not found any other herds being affected with this/^{high}hoof crack. The cause is probably some external factor because the thinning of the hoof which appears to be beside the cracks mainly in the front portion where the hoof is rubbed over the grass when the cattle walks. We have considered the possibility that fertilizers you are using might have a direct corrosive action in the hoofs. If you wish to send me several pounds of fertilizer, I will try to determine if it has a corrosion action by rubbing it on to some of the hoofs of the cattle. Twelve teeth of five cattle in your herd were graded No. 2 which means slight changes probably due to fluorine. The low and slight degree of dental changes and absence of special bones indicate normal fluoride intake for most of the animals only slightly above normal during the rest of the several years." This is

signed by G. R. Spencer, Professor and Chairman of the Department of Veterinary Medicine, Washington State College.

Mr. Cashdollar: We also have a fertilizer man here who we would like to have come up here and have something to say that there wasn't fertilizer causing this damage.

Mr. W. R. Charleton, Oregon Washington Fertilizer Company. Frankly, this is a new side of the thing, fertilizer damage inasmuch as talking with George Cashdollar, he didn't use any fertilizer on the pasture in which his cows grazed. Another thing involved, in most of the areas of the United States they recommend the dairy farmers, different colleges in the country recommend this, to place the fertilizer directly into the gutters in the barn to catch the ammonia fumes and as a result when they put the barnyard manure on the ground they come out with a complete or semi-complete fertilizer. It is a recommended practice. Another factor, in the U. S. the state of South Carolina where they use in the neighborhood of millions of tons of fertilizer a year as compared to 130,000 tons of all types in the State of Oregon, no one has ever made a complaint against the fertilizer industry or any damage to any cattle or any livestock of any kind. I can't help but believe this man was dreaming or grasping in the dark. I don't claim to be an expert, I'm just basing my thought here on observations I have made. I see no reason why he could possibly claim fertilizer damage. We've never heard of such a thing anywhere in the United States at this time. Take in England where they have been using commercial fertilizer for 100 years, no one has ever made such a statement. The whole thing is preposterous to my way of thinking. Are there any questions anyone would like to ask me.

Chairman: Does anyone on the Board want to ask any questions?

Mr. Burt: Did you say Mr. Cashdollar did not use any fertilizer on your land?

Mr. Charleton: He didn't use any commercial fertilizer on his pastures. I sold him commercial fertilizer for use on his cabbage he is raising for a sauerkraut concern here and I sold him some fertilizer for his barley and wheat. No fertilizer used this year on that pasture ground. He had plenty of pasture without using fertilizer. We had a good wet year and he had all the pasture he needed. Now what he had done previously I can't

say. But this year I know he didn't use any.

Mr. Charleton: Another thing I would like to bring up. The common practice in the state of Oregon is to use 200 to 300 pounds of fertilizer on pastures here and in such states as the north east states and the south states they use as high as 1,000 pounds to 1,500 pounds a year without any adverse effects. In other words out here we are just scratching the surface.

Dr. Erickson: Has anybody examined the hoofs in the other states? Has the question ever come up?

Mr. Charleton: You take here in these states where they are using it in the gutters the cows are standing it.

Dr. Erickson: But you couldn't say whether the hoofs had been examined to determine-----

Mr. Charleton: I could say this, if there had been cracking someone would be checking it by now. It is like a man when his feet start cracking. He would do something about it.

Chairman: Is there anyone else now who would like to present any other material?

Mr. Cashdollar: Just one thing I would like to make clear. Where these cattle have been pastured there hasn't been no added fertilizer put on that ground, not where these cattle have been pastured this year. There never has been no fertilizer put on that ground at all.

Mr. Fraser: Mr. Earl Reeder would like to be heard.

Mr. Earl Reeder, Rt. 1, Box 124, Portland, Oregon. Well, I have no written reports, only what you fellows have got from the two colleges, Oregon State and Washington State College. I got, I think I have this urine sample, stool samples and bone and I never got no report from either college. What I did get I had to call up to get them. They were awful slow about sending the reports out. Dr. Garlick he went through and tested twenty-two head and found several of them with fluorine on their teeth - positive fluorine but he won't give me a report. I says I want to know why he won't give me a report. He said

well, you wouldn't let us examine your complete herd. I said "that don't make sense. What makes the difference - you examine 20 some head or go through 50 or 80 head. You saw what was there, why can't you give me a report". He said, "I won't do it because you won't let us examine the complete herd." He admitted fluorine on three of the teeth but he won't give me a report. What reports I have got you gentlemen got.

Mr. Reeder: In talking about this hoof cracking. I never use commercial fertilizer. I have cows do the same thing. Here during this last south wind and rain we had last week I had four hobbling who could hardly walk. One now that hasn't cured up but the rest got over it when the good weather came on. When Oregon State College and Washington State College came down to investigate we threw the gates wide open-they were going to find out why the cattle go this way-why don't they find the cause? I still haven't heard the cause - what we can do to remedy these cows. They was going to tell us just what was wrong and fix the cows up in good shape. I haven't heard but the cows are still going to hell. This is still going on. Cows are dropping production. There for awhile about 3 fresh cows a month, went a whole month. Now we have had some fresh ones lately, still got them so I wish they would tell me what is wrong with them if it isn't fluorine.

Mr. Archie Hall, Rt. 1, Box 148, Portland, Oregon. This is a problem that we have lived with for many years on the Island. I am here today to speak as one of the committee of three. The other two gentlemen are not present. This committee was selected by the people on the Island for the purpose of collaborating with the two colleges in carrying on the experimental work and the research that was done. In connection with this fluoride problem, we start with certain admitted facts here. I am going to try to tell you the way that I interpret the feeling of many of the Island people who fought this situation. One of the basic facts that we start with is that it was judicially determined in the trial of the Fraser law suit to which Mr. Fraser has referred here, that there was an escapement of fluoride being permitted from the Alcoa Aluminum Plant in Vancouver in an amount of approximately 1100 pounds a day of the element fluorine and it was also shown at that time that the various arresting methods and control devices had been installed and that was the

maximum or optimum condition that the aluminum company felt could be created. In other words they felt they could go no further to reduce that escapement. I participated with the various gentlemen, Dr. Spencer, etc., and participated in their sessions which took place about every 3 months over a period of several years here, and shaped the investigation along the line which I felt the people would like to have it directed. We feel, that the investigation has not gone far enough in the matter of degree nor the matter of time. We feel that this is a long range proposition, that the amounts of fluorine that are being deposited now are such that it may take a period of several years for the ingestion of these fluorides to show up to observable levels. The experiment was carried on for a matter of something like a year and a half or two years, I have forgotten the exact time and in view of the lessened contamination by virtue of the various control measures we feel that it may take a much longer period of time for these things to reach an observable damage at an economic level. However, there is great dissatisfaction among the people there as you see some of them are here today. I don't think it was fully understood that this was to be in the nature of a legal proceeding or a matter where evidence was to be presented but that if necessary can be done and these various doctors and veterinarians and so on can be called before you people if that is the contention of the thing. These Island people, I think, are here to state the position that they have observed and have seen in their own herds of cattle and from reports they have had from various veterinarians that have been presented to you. The damage is still being done to those cattle, and this damage is based by the fluorine contamination. Now we feel that something further should be done, we feel that we haven't yet gotten to the crux of this matter and these people have come here to tell you that they think that the damage is still taking place. This committee, of which I am a member, suggested that the investigative proceedings be carried on over a longer period of time and the committee also suggested that perhaps the toxic element with which we are dealing is some form different in kind from that with which we have been running tests. There may be something that we aren't reaching yet. But the position of the Island people, I think the majority of them is

that the problem is not solved yet, that we are still being damaged from this contamination.

That is all. Thank you.

Chairman: Mr. Hall, you stated that you didn't understand that evidence was to be presented here today. I think our Secretary should read a letter from the Authority addressed to Mr. R.W. Fraser, dated August 12, 1954, which I think covers that point.

Mr. Hall: I received a copy of that letter. I am familiar with that. What I meant was whether you wanted a showing of the evidence as has been given you here or whether it was necessary to bring in evidence.

Chairman: Might as well read the letter so it will be clarified.

Secretary: On August 12, 1954, the Authority sent the following letter to Mr. Robert W. Fraser, Rt. 1, Box 118, Portland, Oregon. "Dear Mr. Fraser: Reference is made to your appearance at the July 14, 1954 meeting of the Air Pollution Authority and your statement that dairy and livestock owners on Sauvie Island are being damaged by fluorine which is allegedly discharged from the aluminum reduction plant operated by the Aluminum Company of America near Vancouver, Washington, as well as your statements that you disagreed with the conclusions contained in the "Summary Report of Fluorosis Investigations in the Sauvie Island Area in Oregon from December 1, 1951 to June 30, 1953", by the State College of Washington and Oregon State College.

The members of the Authority discussed the matter at the meeting and it was decided that a special meeting would be scheduled at which time the residents of Sauvie Island would have the opportunity of presenting any factual information to substantiate the statements which you have made with regard to the report. Chairman C. E. Green pointed out that in order to obtain factual information it would be necessary for each Sauvie Island representative to present his statements in accordance with the following procedure:

1. Allegations regarding damage to livestock or plants caused by air contaminants must be substantiated by authoritative opinion such as a veterinarian or a plant horticulturist.

2. Laboratory analyses of animal or plant specimens showing concentrations of a contaminant present must also include an interpretation by a person who is technically qualified to render an authoritative opinion.

3. A copy of all laboratory reports of contaminants found in specimens together with the interpretation of the data must be filed with the Secretary at the meeting.

4. Representatives of Washington State College and Oregon State College fluorine research projects have been requested to attend the meeting as well as representatives of the Aluminum Company of America plant at Vancouver, Washington. The meeting will be open to any other group that is interested in the matter.

5. Questions or comments by the representatives present pertaining to the fluorine study on Sauvie Island will be directed to the Chairman of the Authority who will then forward the question or comment to the appropriate Washington State College or Oregon State College representative.

The special meeting will begin at 10:00 A. M. September 8, 1954, in Room 36, State Office Building, 1400 S. W. 5th Ave., Portland, Oregon.

The Authority members have suggested that you have the statements presented by counsel. Please advise this office if the date for the meeting is convenient and whether or not there will be residents of Sauvie Island present to present factual information to the Authority. "

Very truly yours,

/S/ Curtiss M. Everts, Jr., Secretary
Oregon State Air Pollution Authority

A copy of this letter was sent to Messrs. Earl Reeder, R. M. Johnson, Wm. M. Fraser, County Agent Wm. S. Averill, A. Hall, B.D. Molinary and F.E. Peterson

Secretary: The date for the special meeting was subsequently changed to September 28, 1954.

Chairman: I thought that the Secretary of the Authority had tried to indicate that we wanted factual data presented.

Mr. Hall: The evidence you have, I am sure is factual. I assume that these gentlemen have presented whatever they care to in that line.

Chairman: I said this because of the statement you made, Mr. Hall, that you didn't understand that that was the case.

Mr. Hall: Well, I was referring more to the nature of the method of presenting the evidence, whether you needed the veterinarians and those gentlemen here or not. That's all I have.

Chairman: Thank you.

Mr. Fraser: Mr. Cashdollar would like to make a statement.

Mr. Cashdollar: On that hoof cracking how that happened to come about they called in the college to try to find out what was causing these cracked hoofs. So, they haven't given me no answer to this date. I think there was 21 head out of 36 head of milk cows. So the cows went down and the veterinarians done what they thought was right - they couldn't do no good for them, the cows are still in a bad condition. We went out and bought \$8,000 worth of cows and brought them in there; now I don't know how they're going or what they are going to do but these other cows are not getting any better. The college told me that they'd give me some stuff to give these cows to see if that would straighten them out but they've never been back with no minerals or nothing to give them so I don't know, I've done what they - I agreed to do anything that they wanted to do and they haven't come forth and told me what to do yet, and so I should kind of like to know to let you know that it cost me \$8,000 to go out and buy cows and production is off about 60% on some of them cows. Some of them went dry, hoofs cracked and naturally they got sore footed and they couldn't walk around.

Chairman: Is there anyone else in the audience who would like to be heard on this matter as far as Sauvie Island is concerned, that is who lives there or who has any material to present for the people who live there? If not I think we will next call on the repre-

representatives of the Oregon State College and the Washington State College to, if they wish, answer any statements that might have been made or amplify their report or data or to take it as they see fit. We have present F. E. Price, Dean of the School of Agriculture, Oregon State College, Dr. Compton of Oregon State College, Dr. Spencer of Washington State College.

Chairman: Gentlemen, what's your pleasure?

Mr. Wendel: Mr. Chairman, would it be proper to ask the Aluminum Company if they cared to say anything first?

Chairman: Well, I had in mind that we might ask them later but if you want them second or third it will be perfectly all right with me. The charge was being brought against the aluminum company. I see Mr. Thayer and some others here representing the Alcoa people, if you like you have an opportunity to be heard.

Mr. Biggs: Just one minute, Mr. Green.

Chairman: Yes.

Mr. Wendel: I would like to ask the representative from the Attorney General's office -----

Mr. Burt: Sir, I don't feel that there is any advantage changing the procedure as long as both have an opportunity to speak. Personally I think that if the questions regarding the report from the state colleges should be clarified, the questions that have been raised -----

Chairman: I think primarily the allegations were made because of their disbelief of the findings in the report, that's why I thought the college representative should be called next.

Mr. Biggs: Is it still your desire that we have anything to say, Mr. Chairman, we say it now?

Chairman: Well, I would just as soon have the college people speak. Is that agreeable to you?

Mr. Biggs: Oh perfectly, yes each of them.

Chairman: Dean Price, Dr. Compton, Dr. Spencer, would any of you like to make a statement?

Dean Price: Since this meeting is called for the purpose of supplying additional information I think I shall keep it within that area, to report on the Summary Report of the fluorosis investigation on Sauvie Island here in Oregon for December 1, 1951 to June 30, 1953, which has been filed with your Secretary and you have copies of that. The investigating staff working on this, I think, are particularly well qualified to do a very excellent technical job, and they have worked conscientiously to arrive at what they think is a fair answer. So far as examination of every herd on the Island, that did not occur. We made a few spot checks on the island and that is summarized very well in the report. So, I think that unless there are specific questions it would not be particularly appropriate for us to go into a long discussion of this report. Conclusions are summarized and the purpose of the undertaking is clearly stated.

Dean Price: I might clear one point that Archie Hall referred to, the investigation was to determine whether or not fluorine emissions from this factory were currently impairing the functioning or health of livestock in the area with particular reference to Sauvie Island. The investigation was to cover the period after December 1, 1949 which does not refer to matters of economics as indicated.

Dean Price: In regard to a statement made by Earl Reeder, regarding the special study they agreed to make of his herd, in view of the fact it was quite well established he was having difficulty with the herd, we made this examination. Among the first findings were that this herd had rather severe case of hoof rot. We recommended that that be cleared up as the first step in the program of treating the health of his animals. We further agreed after consulting with others concerned that, while this would not establish a precedent for dealing with others, because it was agreed that he seemed to have a rather special problem with his herd - that in view of the fact that there was no question, I believe in his mind at least so I understand, whether that condition could be cleared up, that he secure a veterinarian of his choice to treat this herd and it would be charged and paid for by the over-all study on Sauvie Island. That offer was made before the first of July, and we sincerely think that was a sound recommendation and that procedure

should be followed and as yet we have not had a proposal from Mr. Earl Reeder selecting a veterinarian to do this job, and we still think that is the number one step in the program of treating his herd and getting it into condition and so that any other program of treatment will be a matter of following active progress of correction of this problem, hoof rot.

Dean Price: Insofar as the reference to the Cashdollar herd is concerned, visiting with those who had inspected the herd from our staff it is a condition that I think we can summarize quite briefly - has not been observed in other herds and I don't think there is any person that knows the cause of that condition, if it is common on the Island it hasn't been seen on the herds where the regular examination has been going on. I think that is a statement of fact, and as far as fluorine situation is concerned, while no one knows the cause of it, it is not typical of the herds of the Island and we have to stop at that point without an answer. I think there is nothing else that we would have to say for the State College unless there are some questions. Dr. Spencer, I believe, would like to clear up one point. Dr. Spencer of Washington State College.

Dr. Spencer: I think that I'll agree with Dean Price that our main conclusions and our data are presented in the report which you have. There are several special points that might be brought out; the project continued after this report was made and continued until June 30 of this year making a total of about 31 months of examination on the Island. Now during all that time and for two or three months before the investigation began we had a veterinarian on the island regularly and he was either living in Portland or living on the island and then at periodic intervals some of the veterinarians from the Veterinary School of Washington State College, including myself, went down and made special investigations. The decision as to whether fluorosis was a problem in the area, in my opinion, should be based on an over-all investigation such as we made - not just a few analyses here and there. One or two mean very little; you have to have the over-all picture including both the changes in the teeth and the bones and the chemical analysis to make

an accurate and reliable decision and in my opinion that is what we did in the report. And now in regard to some of our special problems, we examined Mr. Cashdollar's herd the latter part of June of this year. This examination was made in an effort to help him specifically in regard to this problem of cracking of hoofs of the cattle. The hoofs apparently became thin - that is the wall of the hoof, the horny part became very thin on the front part of the hoof and in a few instances cracked and I think at the time we examined them two cows were slightly lame in that herd. The rest of the animals - I don't recall exact figures at the present time - but there were a number of animals that had small cracks but only two were lame at the time we examined them and we felt that probably that the lameness in those two was not of sufficient significance to lower their productivity or reduce their ability to get out and get some feed. Now we don't have the answers as Dean Price indicated for that foot condition. It wasn't seen on any of the other herds on the island including herds immediately around and close to this herd of Mr. Cashdollar's. The letter that he refers to was the letter reporting, according to his request, our investigation and we were attempting to search at that time for the cause for this hoof cracking which is apparently a new condition that we have never seen before under dairy cattle conditions or in any animal husbandry that I have had any experience with. Now this suggestion about the fertilizer was made because the only common chemical I can think of that will cause a solution of the horny part of hair or hoofs is a sulphide. Most sulphides, soluble sulphides, will produce a solution of the horny part of the horn or the hoof or the hair and dissolve that material that forms that horny part. Now sulphides are rather unusual around a farm and we couldn't think of any source and in talking with Mr. Cashdollar about his operations and his feeding we couldn't think of any source of sulphides that would explain this particular condition. After I went back to Pullman, it occurred to me that we should have taken samples of his fertilizer that perhaps he was adding fertilizer to the pasture and the suggestion I made in the letter - I did not say the fertilizer caused the solution of the hoofs, I just said we were considering the possibility and I did that so Mr. Cashdollar would send me some fertilizer so that we could test it on a number of hoofs

and see if his particular fertilizer had any dissolving effect. He did not answer my letter or send us any fertilizer so we couldn't make any more investigation along that line.

Dr. Spencer: Now I'll be glad, as Dean Price indicated, to answer any specific questions particularly the analyses that you've been presented with here by the people from Savvie Island have been principally soft tissues and in my opinion the analysis of soft tissues is of little value in establishing whether or not you have fluorosis. Soft tissues are extremely erratic in their content of fluorine; the analytical procedure for soft tissues is difficult because of many other constituents found in soft tissues and high chloride content and so on. I think it is well recognized that analyses of teeth and bones and urine provides the best and most reliable evidence whether fluorosis is occurring. We have many analyses of all the tissues that we could collect of that type from the Island including many analyses of bone and many of teeth in herds scattered over the Island and also we have many thousand analyses of urine from the Island and they all point in one direction; mainly, that the levels of fluorine in the animals or in the tissues, or in the urine of the animals on the island is only very slightly above that of the surrounding areas that we examined as control areas and the levels are certainly not anywhere near those levels that have been reported as being associated with fluorosis in animals now, so the conclusions that we have from that is one given in the report that there is no damage from fluorosis in the area.

Dr. Spencer: Now regarding the teeth, I might clear up another point. We have a grading or classification of the teeth. The teeth are very sensitive indicators of fluorosis and any intake of fluorine above that found in ordinary cattle rations will produce a mild mottling or observable change on the teeth. Long before anything else in the animal will be damaged those changes will occur in the teeth providing the fluorine is taken in at the time the teeth are being formed, that is in the young cattle. Now, a grading of "1" on our classification means that there are some slight abnormalities there that do not resemble the fluorine particularly but are abnormalities in the teeth. A grading of "0" is perfectly normal, a grading of "2" were changes that we suspected were probably due

to an intake of fluorine above the usual amount; a grade of "3", we call moderate fluorosis; grade of "4", severe fluorosis. Practically all of the teeth that were examined that had been formed after December 1, 1949 were grading of "0", in other words perfectly normal and a few were grading "1", a very few a grading of "2" and "3". The teeth alone on Sauvie Island are a good indication that by and large the intake of fluorine is at a relatively normal level and the grading of teeth on the Island cattle is very similar to the grading of teeth that we found in the areas in other parts of Washington and Oregon distant from any industrial contamination. Thank you.

Chairman: Any members of the Board like to ask any questions of the Washington or Oregon State college people or any of those that have-----

Mr. West: I would like to ask Dr. Spencer if it has ever been determined here or elsewhere if fluorine caused any hoof cracking.

Dr. Spencer: To my knowledge no. It has never been described as a symptom of fluorosis or either in the animals naturally poisoned from industrial sources or in the animals fed fluorine in experimental procedures. I have never seen it in any of the reports in the literature nor have I seen it in any of the animals we have seen with fluorosis in other areas.

Chairman: I'd like to ask a question. Have you conducted investigations of this kind elsewhere wherein fluorosis has been found?

Dr. Spencer: We have conducted a small investigation in one area which we did find fluorosis. As part of the report, as mentioned in the report, a group including both the Oregon State College and Washington State College people have traveled to different sites around the country where they are doing experimentation in fluorosis or where they have the problem in fluorosis from natural sources. The group had the opportunity to see animals fed a known amount of fluorides and also animals which were exposed to fluorides from water and some from industrial sources. So we have seen fluorosis in a number of areas. We have made a small investigation of fluorosis in one area.

Chairman: In the State of Washington?

Dr. Spencer: Yes

Dean Price: Would you name the general scope of that tour, Dr. Spencer, to give the folks a general idea? I don't know if you remember off hand all of them but perhaps you do - the general areas that you visited checking on other experimental work dealing with this problem.

Dr. Spencer: The first trip was made in 1951, as I recall in March, and it included Modesto, California, where an experimental feeding was going on with sodium fluoride in dairy cattle; then the group went on to Phoenix, Arizona where we examined some herds exposed to the high water fluorides and from the natural under ground water wells. Then the group went on to Tennessee where they examined animals that had been exposed to sodium fluoride feeding and also to natural industrial contamination from an aluminum plant. Then the group went on to Cincinnati and Washington, D. C. and to Michigan to talk with people who had worked with fluorosis and also see some laboratory experimental work in Cincinnati. Then they came back through Madison, Wisconsin and talked with Dr. Hall Phillips who had conducted an experiment, several years previously, feeding rock phosphate containing high fluorides to cattle. That was the first trip.

Dr. Spencer: The second trip was one to Lubbock, Texas, to examine the cattle that were effected with fluorosis as a result of drinking water high in fluorides. Then the group went on the next trip, the third trip, last March and the group went to Modesto, California, and then to Utah. I should have mentioned at the second trip that they also went to Utah, where we observed the animals exposed to fluorides from an industrial concern in central Utah. The third trip we went to Modesto, California, and Utah. Then the fourth trip we went to Tennessee where we again saw the experimental feedings at that time - that was a year ago last March, we saw animals that had been on 100 ppm and less of sodium fluoride for a period of five years without detectable economic damage or detectable reduction in production. Then we went to see experiment herds at Madison, Wisconsin, where Dr. Phillips is now conducting another experiment of feeding dairy cattle sodium fluoride.

Chairman: I would like to ask one more question. You mention seeing fluorosis in cattle

at several points. At those locations was there or is there data regarding teeth, bones and urine which might serve as a means of comparison for the findings at Sauvie Island

Dr. Spencer: Yes, there are numerous data concerning the fluorine levels.

Chairman: Would you care to comment regarding the relative differences between the two situations.

Dr. Spencer: Summarizing briefly where there is a definite fluorosis and animals will be injured one usually finds the urine values from 15 to 40 or 50 ppm. The urine levels vary from time to time but most fall between 15 and 50 ppm. The bone levels in relation to that are usually from 3,000 to 10,000 ppm and sometimes as high as 18,000. Urine on Sauvie Island averaged between four to five ppm and bone averaged 475 or less than 500 ppm. The teeth are slightly lower than the bones. In general teeth and bones run from 10 to 20 times higher in animals with fluorosis regarding fluoride than they are in normal animals. In other words the fluoride in teeth and bones in animals with fluorosis is 10 to 20 times higher. That is why the teeth and bones are such a good indication of past intake over a period of months.

Chairman: Would the Board like to ask any questions regarding the reports?

Mr. West: I would like to ask Dean Price if fluorine builds up in the soil from year to year or is it dissipated?

Chairman: Let Dr. Compton take that, he is our specialist for that area of the study.

Dr. Compton: The fluorides would be deposited in the soil, yes. But in normal soil, fluorides would be precipitated out as calcium fluoride. Plants do not take up very much fluorine from calcium fluoride even though that calcium fluoride may be very high. Otherwise it would take a very large amount of fluorine deposited on normal soil such as that on Sauvie Island for any appreciable amount to be taken up by the plants from the soil. That can be disregarded in this case or in practically all cases.

Chairman: All right that will be all.

Mr. Wendel: Mr. Chairman, I am perplexed - those who have looked at the cattle over there have evidence before their eyes and it seems that the preponderance of the evidence

presented by the veterinarians, acquainted with the situation, indicated a contamination by fluorine. At the same time we have the higher authorities representing the state colleges who feel that it does not indicate contamination by fluorides. Now how can we reconcile this? What is the reconciliation?

Dean Price: May I make a statement?

Chairman: Yes

Dean Price: The only thing I can say is that this is subject, of course, to the acceptance by the people with their own viewpoints and opinions. But I feel that the large number of samples that were taken and the varied skill and the procedures that were used in the fluorine determination during our studies and - as a matter of fact we held up our staff for several months spending a considerable amount of money until we could even get our chemist to check on chemical analyses procedures to the point that when they would take a sample they could check it in three different laboratories and they would come out practically the same. The large numbers of samples taken, the large numbers of examinations that have been made on and off Sauvie Island is the basis for the conclusions taken by the colleges' staff. We have no desire to challenge others who have come to the Island and have made examinations who have made analyses of individual samples but we have made hundreds and hundreds of analyses and that is the basis for the conclusion so I only submit that in general to the point that you have presented. That will not entirely solve your problem of some confusion, I am sure.

Mr. Wendel: I take it that, Dean Price, you have inspected the cattle themselves for example on Mr. Fraser's ranch. Have you seen them yourself?

Dean Price: No, I have not. Not to our knowledge. None of our staff have worked with that herd.

Dr. Spencer: May I say a word in that connection - in regard to teeth examinations our plan was set up to examine all teeth of all cattle on Sauvie Island. We also made examinations of bones and other characteristic on it. In two different instances I instructed Dr. Garlick, our veterinarian, on the Island, to visit Mr. Fraser and request that he be

allowed to examine Mr. Fraser's animals and in both instances the request was denied so we made the attempt to examine his herd and were denied a visit.

Mr. Fraser: May I make a statement in that regard? It seems that Oregon State has never been refused to come on our ranch. Washington State, a man named Dr. Garlick who at the time he came there hadn't any experience at all with fluorine. Was coming there to learn about it - I believe it was 1951. He came out to the corrals where we were and we showed him a whole group of dead trees, they were all dead on the side of the aluminum plant and on the other side they weren't. He said he was supposed to take notes of anything unusual and report it. Well, he said he would write us a letter to the effect that he saw these trees dead on one side and not dead on the other. We have yet to receive that letter. He didn't come that time for any cattle examination. He came back another time when the aluminum company had been conducting cattle examinations periodically on our ranch and he came back another time previous and said that his boss, Mr. Spencer, had told him the aluminum company is going to conduct an examination and he would like to be present. He came in to our place where we asked him to have something to eat. He told us who he was, we didn't remember. He said that he was Dr. Garlick and said that - - oh, we asked him about this letter he was going to write. He said he never said he was going to write a letter to us and, of course, that made my dad pretty mad, he doesn't like to have people lie to him. So, he told him to get off. He already told a neighbor he couldn't write such a letter as that, that he would lose a \$600.00 a month job.

Mr. Fraser: Would it be all right if I asked Dr. Spencer some more questions?

Chairman: I think questions pertaining to the material presented here today or -----

Mr. Fraser: It is pertaining to some statements he just made.

Chairman: You direct the questions to the chair and we will refer it to the proper person.

Mr. Fraser: Mr. Green, Dr. Spencer made innumerable statements here about calcium fluoride being different from sodium fluoride but what I am most interested in right now is the statement he made about going down to Tennessee near another aluminum plant finding fluorine in the cattle there, as to his comparison - well that is something I would like

to know about because they have the same controls on that plant as they have on this plant over here although I understand now they are tearing those controls out because they recently paid a Mrs. Lucy Austin who lives six miles from that plant damages and she has to move her whole herd out of that place to North Carolina.

Chairman: Mr. Fraser, I think that the questions before us today should pertain to our local situation and that particular instance of Tennessee doesn't concern us other than it might be illustrative of fluorosis or something of that sort. Am I right, Mr. Attorney? Please guide us in this matter.

Mr. Burt: I believe the question should relate to the situation at hand - Sauvie Island particularly.

Mr. Fraser: The only reason I asked you was just to have this statement that he had seen fluorine in that area with the same controls on that plant as they have on this one.

Chairman: Mr. Burt, will you please advise us how to proceed with this question?

Mr. Burt: I don't believe that question is pertinent to our examination of the matter - as variances between two plants would be too great as far as I am concerned. If it is a matter entirely of curiosity with you ----- Mr. Fraser, I am sure the gentleman would be glad to answer your question but the fluorosis problem we are facing ----- I don't think it has any bearing on the local problem.

Mr. Fraser: I would like to ask Dr. Spencer, through Mr. Green, why when Dr. Spencer went out to hire men to investigate the fluorine problem on Sauvie Island, why he didn't pick some experienced men who had training along that line who also had graduated from Washington State in previous years and had had lots of experience instead of getting some man who knew nothing about it down there and then using their report that was printed in 1934 on rock phosphate fluorine as the basis of their conclusion in their report and not using sodium fluoride. I want to ask one other question too about pathology.

Chairman: Let's limit our questions one at a time, Mr. Fraser, so we aren't too confused.

Chairman: Dr. Spencer, do you care to answer the last?

Dr. Spencer: I will answer the first question regarding why we hired the individuals we

did. At the time we took hold of this job we were rather short of help and took it on with the understanding from our superiors that we would have to get additional help for urine collection and routine examination on the Island. It was manifestly impossible for us to teach school up at Pullman, 400 miles from Sauvie Island and still be on the Island all the time so we attempted to hire the best man we could get and we canvassed the field to find what was available for what we could afford to pay at state college rates and think we got the best man we could at the time. I didn't really hire the man myself, that was done by the acting Dean of the Department of Veterinarian Medicine at that particular time and by the director of the experiment station at Washington State College - I did help to locate or attempted to locate a man. We got the best man we could for the job, it's true that Dr. Garlick, until that time, had not had any experience with fluorosis. Before Dr. Garlick took the job - we did take him on this trip around the country, and we also had him at Washington State College and had him review the literature on fluorosis. He saw a great deal of fluorosis before he went on Sauvie Island. I am sure everyone will have to agree that it is better to get a man that is open minded who will start with the facts at hand than to start with a man that has already fixed opinions. We certainly had no one available at the time we hired Dr. Garlick that was an experienced man in fluorosis that we could have hired that we knew of. That is my impression in the matter.

Dean Price: What was the relationship between the other staff members and Dr. Garlick as far as handling the project?

Dr. Spencer: I was made Director of the project. The committee including present Dean Stone, and Dr. Gordon Quenn, Head Surgeon, Washington State College, we were administering the project. We established the policies and Dr. Garlick merely carried them out. He was our field man. He went out and collected urines from the cows and he made most of the examinations. We set up the conditions under which he made the examinations and we developed forms for the examinations so he was essentially our field worker in the area. We were in charge of it, in other words.

Mr. West: The chemical analyses were made where?

Dr. Spencer: Chemical analyses were made at Division of Industrial Research, Washington State College. D. F. Adams was the Chief Analyst.

Mr. West: Then Dr. Garlick didn't have anything to do with this, the analyses were made elsewhere?

Dr. Spencer: This is correct, he shipped the analyses to the Division of Industrial Research or to me and I in turn sent them to Division of Industrial Research.

Chairman: Is it not true that representatives of Oregon State College did participate directly in the field work on the Island also - Dr. Compton and others?

Dean Price: We had two phases of the work, the plant sampling program and the field program and they were coordinated operating under separate groups.

Chairman: There was another question raised by Mr. Fraser which I think should be answered if possible, and that is the analogy between calcium fluoride and sodium fluoride and what is referred to as rock fluoride using one yardstick for comparison against another. Did you get that question clear, Dr. Spencer.

Dr. Spencer: Not absolutely clear but I presume Mr. Fraser refers to the experiments reported on feeding animals fluoride of various kind, for instance rock phosphate. Now in the 1920's and 30's rock phosphate was used as a source of calcium phosphate for animal feeding and they ran into trouble with fluorosis and many of the early experiments were performed with rock phosphate, studying the fluorosis. However, our report was not based simply on those reports, our report was based on all the evidence we obtained at that period including the evidence from sodium fluoride and from rock phosphate. We also had the advantage of observing animals that were affected with fluorosis from sodium chloride from the effluent from industrial plants as well as the animals' poisoning from rock phosphate. Now regarding calcium fluoride, that is a relatively insoluble form of fluoride. I mean the general opinion would be that it would be less toxic than other forms of fluoride because it would not be readily available to the animals. As you go down in dose of fluoride these different kinds of fluorides begin to resemble each other in toxicity, in other words a very high dose of sodium fluoride would be much more toxic than rock phosphate,

or calcium fluoride. As it goes down to a minimum level then the toxicities approach each other and they are quite similar. Calcium ^{fluoride}~~chloride~~ isn't a problem here and I can't see its pertinence in the discussion.

Mr. Wendel: I think it is very unusual that Mr. Fraser never requested Oregon State College to come down and help him out.

Mr. Fraser: They started on our place and quit for some reason, we don't know why.

Mr. Wendel: Oh, I thought Dean Price stated that they had never been invited to come to your place.

Mr. Fraser: They worked one year on our place after the controls were on but we haven't seen those reports.

Chairman: Just a moment please. In answer to those last statements is there any question you gentlemen would like to ask?

Dean Price: I am not sure I heard him exactly.

Chairman: It had to do with Mr. Wendel's question of whether Oregon State College had ever been invited to conduct an investigation on the Fraser place. Perhaps Mr. Fraser should restate his question regarding the matter of work or lack of work on your place by the Oregon State College people.

Mr. Fraser: They worked a year at our place after the controls were on. We have not received those reports.

Dr. Compton: We did start work on the Fraser farm sampling both pasture and some indicator plants, the information of which was put in one of these reports that we had sent out to the farmers on Sauvie Island.

Chairman: Was it identifiable as to source of samples?

Dr. Compton: I think we indicated on the report each farm by number and a map.

Chairman: Wasn't Mr. Fraser given a copy?

Dr. Compton: No, I don't have anything to do with that but I know he got a copy.

Mr. Wendel: What was the date of that project?

Dr. Compton: The first summary report, January 9, 1952.

Mr. Wendel: Is it possible to make a generalization from that report as to either fluorosis or lack of fluorosis on the Fraser place -----

Dr. Compton: No, these samples are all plant samples. I wasn't studying fluorosis in animals.

Dean Price: May I make a general statement.

Chairman: Yes

Dean Price: The particular reasons that we have not worked on the Fraser place are two: One is the Frasers have bitterly attacked the whole proposition of the colleges - the Washington State College and Oregon State College - well, principally Oregon State because the project planning hadn't been worked out for conducting any part of this research reported in this document. In a public meeting held on Sauvie Island, I asked them if they were interested in such a survey - such a research investigation - because we could not carry it on without cooperation of the people on the Island and it was only facts as applied to their Island and no place else and as a result of the leadership of that opposition at the public meeting on Sauvie Island, the plan was abandoned. I advised them that we would not plan to continue the research because it would not be advisable without cooperation of the people on the Island. Subsequently, others on the Island in the majority petitioned Oregon State College to go on with the investigation as outlined that evening and after several months delay we were able to build up a staff and get under way because this was a rather large undertaking. That's the background of the situation and we have never been asked to carry on work on the Fraser herd following the re-activation of that research project. It was a bitter opposition and we respect his wishes and we would not be on his farm because we have no desire to be on his farm if he does not desire us to be there. So that's the general summary of the situation just as true as can be.

Chairman: The dates involved are what, Dean Price, when did this occur?

Dean Price: The activation of this project was in 1951. We got the program going in 1950. The decision of whether or not the college should participate in the investigation to secure additional information to settle this issue in which there was a difference of opinion.

And it was following - We'll take the period beginning December 1949, it was the time the

improved scrubbers were installed; we were to test the period after the new scrubbers were put in and not involve the period previously which was involved in litigation and covered a period in which the emissions from the plant were admittedly larger than the later period that we were working on the scrubbers were installed; and it was also admitted that the scrubbers did not remove 100% of the fluorine from the stacks.

Mr. Hugh Biggs: May I ask Dean Price a question, Mr. Chairman, or have you ask him a question?

Chairman: You may do so, your name is?

Hugh Biggs, representing Alcoa.

Mr. Biggs: I would like to ask him if this is the proper procedure, Mr. Chairman, whether or not at the inception of this work a letter was sent to all the farmers on Sauvie Island, including Mr. Fraser asking whether they would be willing to cooperate in this program by permitting the colleges to make such examinations on their particular places as the colleges might be advised to make, and if such a letter was sent to Mr. Fraser.

Dean Price: I don't believe so. It had been made very clear at the meeting previous to that that Mr. Fraser was not interested and desired that they not participate in the program. I don't believe that I sent such a letter to Mr. Fraser.

Chairman: Would you give me your name and address, please.

Mrs. Fraser: My name is Mrs. Fraser.

Mrs. Fraser: Dean Price said it was December 1950, but he is wrong, it wasn't until 1951, because our trial began in June and ended in August 1950, the 10th day of August and our decision didn't come until December 11, 1950.

Dean Price: Well, I've given this from memory. I'd be glad to send you the documents of the meeting and the petition of the folks that were sent because it was taken before the project was started and the project was started before November of 1951. My contention, of course, is it was held in advance of the beginning of this study.

Chairman: I think that is important.

Dean Price: That is the point I am making. December 1951, it could have been of that year, I will check my records. It was not so much the date as the fact it was preceding in the

investigations on our part as reported in this summary report.

Mrs. Fraser: Mr. Chairman, Oregon State did have test plots on our place during 1951.

Mr. Fraser: I think I had better correct Dean Price's words. I should give you the background of that meeting which was held at Sauvie Island where the people were invited. There had been some money appropriated by the state to continue investigation. We were perfectly willing for the state to go along as they had done before and continue on their program. This special meeting was held to decide whether they should accept money from Alcoa, to conduct this investigation. After going through a trial with Alcoa and knowing their underhanded methods we just knew what would happen. So, we were much opposed to them accepting the money from Alcoa mainly because for one example Dean Price was assistant Dean down at Oregon State. During the trial we had a Dean Schoenfeld. Alcoa sent Mr. Spencer (not this Mr. Spencer) one of their attorneys who also has a farm on Sauvie Island down to Oregon State College to get Dean Schoenfeld to come to the trial. Well, Dean Schoenfeld came to the trial but when he saw what he had to testify to he backed out and went back. They went down to -----

Chairman: Just a moment, Mr. Fraser. I wonder if these matters are pertinent to the case before us.

Mr. Burt: I don't feel that they are inasmuch as they explain your personal feelings.

Mr. Fraser: Well, I was just trying to point out they tried to bribe -----

Chairman: Just a moment, Sir.

Mr. Fraser: We have evidence in court record which is open to everybody.

Chairman: It isn't the position of this Air Pollution Authority, as I see it, and the attorney will give us advice, to hear allegations of collusion, bribes or anything else. Our problem is to listen to and obtain facts pertaining to air pollution. That is the only thing we are concerned with. If you have allegations about former Dean Schoenfeld or anyone else this is not the place for you to be making those statements and I for one am not going to listen to it.

Mr. Fraser: Then I would like to ask Dr. Spencer here a question about pathology.

Chairman: Go ahead.

Mr. Fraser: I understand that Dr. Spencer has taken pathology. Is that correct? I want to know if that is correct before I ask him the question because if not it wouldn't do any good to ask him the question.

Chairman: I personally am not familiar with the background of training of these gentlemen. I assume they are qualified -----

Dr. Spencer: I'll be glad to give my qualifications.

Mr. Fraser: If he has studied pathology I would like to know. I heard him say there that it shows up in the teeth before it shows up in the internal organs. Well, I should think that the report we have from Dr. Foskett who is an M.D., who is a pathologist, shows that the current contamination is in the internal organs. I think that anybody who has studied pathology should know that it would effect the insides and could kill an animal before it would ever show up in the teeth.

Chairman: Mr. Fraser, I would like to make this observation. We originally requested you and your people to present facts and opinions by people qualified to give them and express them. None of us here are pathologists or veterinarians or anything of the sort. We also believe that you are not. Now if you have statements of that sort to be made it seems to me that they should come from people competent to make such statements. Am I not right, Mr. Attorney?

Mr. Burt: I believe we should have opinions other than written reports, opinions from veterinarians and pathologists.

Mr. Fraser: The opinion is from Dr. Foskett -----

Chairman: Now is it his opinion a matter which you are stating? It seems to me if that is the case he should be here testifying.

Mr. Fraser: That is current contamination.

Chairman: I think those people who have such statements to make should come here and present them and not someone else indirectly for them. Am I not right?

Mr. Fraser: Well, sure but-----

Chairman: This is hearsay, we should have specific statements from those who are qualified.

Chairman: Am I wrong? I wish the Board would correct me if -----

Mr. Wendel: I don't see the relevancy of it anyway.

Chairman: I don't either.

Mr. Fraser: I think that I complied with all of your questions that you sent to me. They all have the proper answers. There are a lot of questions I would like to ask you people but if it isn't going to make any difference in that regard we'll just let it go and take it to the courts.

Chairman: Dr. Erickson, do you want to ----

Dr. Erickson: I was just going to support your statement. I have a little knowledge of pathology, and certainly these are technical matters - conditions vary so much - I think only having the authorities here to clarify his position would give us some data to make decisions on. Talking as we have - does not get at the facts.

Chairman: I would like to refer to a document which you presented earlier today. It has to do with a report on the horse of Mr. Wm. Fraser. The date is 5-1-52, copy signed by Dr. Foskett, Pathologist. I think it is obvious that it is rather difficult for we who are not expert on this matter to properly remember and absorb all the material that is thrown before us over a period of an hour or two and become experts ourselves. We have to look to those who are, of course, for interpretation.

Dr. Erickson: Just from a hurried glance at this I wouldn't be able to draw any conclusions related to fluorosis at all from Dr. Foskett's statement. If he was here he might explain further-----

Mr. Fraser: Possibly I should read this again, that part that shows the trained man that he is to put those chemical analyses and pathology report together.

Dr. Erickson: From Dr. Foskett?

Mr. Fraser: Yes

Chairman: By whom is this statement?

Mr. Fraser: This is by a doctor of veterinarian medicine, Dr. Wm. Mensaul.

Chairman: I have no objection to his reading it again. Do you, members of the board?

Mr. Fraser: After examining reports submitted by the pathologist and the chemical analyses of the several samples taken by me and submitted for examination, it is my opinion that the specimens show an excessive amount of fluorine much higher than that considered normal. There is also the tooth ----- I didn't read that because I didn't want to take the time.

Chairman: That was the end of that statement?

Mr. Fraser: Yes.

Chairman: Just a moment. Is that evidence sufficient to reach a conclusion, Dean Price?

Dean Price: The question is, isn't there data available to support that. You may have a very strong statement there. But the date that the chemical determinations were made are lacking. That ought to be very valuable data for whatever followed there. That is the only point I would suggest - that is to help you folks.

Mr. Fraser: That one was on the horse, that particular pathology report.

Chairman: The statement you are going to read is by whom?

Mr. Fraser: Yes, by Dr. R. J. Morris, Chemist, Ohio State University, University of Nevada, Reno, Nevada.

Chairman: Is he a veterinarian?

Mr. Fraser: No, he is a chemist.

Dr. Erickson: Do you have a copy of that?

Mr. Fraser: Yes, a copy is right here (dated 5-2-52.) All values tabulated reported in ppm are on a fat free, dry weight basis. "The outside bone, 1305, inside bone, 1255, kidney 44, liver 16".

Chairman: Dr. Spencer, would you care to comment regarding those results reported in that determination?

Dr. Spencer: In regard to the bone, 1305, would be approximately twice that that we found on the other animals on Sauvie Island, or from animals in the outside area. We did find, I think, two particular bone samples over 1,000 on Sauvie Island. However, it is more than normal but I still think that it is not nearly enough to indicate that the animal had fluorosis, in my opinion. If those samples are reliable now, I don't know anything about the Chemist who did them, I don't know anything about his controls, I don't know how many

fluorine samples he has run, but if those reports are reliable I would say that the report on the bones indicate the animal does not have fluorosis.

Mr. Fraser: This question was not concerning bones, it was concerning the pathology report. I read the pathology findings of the kidney and liver.

Dr. Spencer: Regarding the kidney and liver, as I mentioned before, the results we have gotten from Sauvie Island and other areas too have been extremely erratic as have the results in the literature reported. In my opinion the values reported for soft tissue such as kidney and liver are unreliable, they are not to be depended upon as values.

Chairman: Mr. Cashdollar.

Mr. Cashdollar: Well, I would like to ask Mr. Spencer one question. Did you find any fluorine in our cattle?

Chairman: Any fluorine - you don't mean any -----

Mr. Cashdollar: That is just the question I asked.

Dr. Spencer: I'll take the first answer in a slightly facetious manner. We can't see fluorine. We can only see the effects of it when we examine the cattle and in his herd, I would say, the results of the over-all examination indicated that this herd was not affected with fluorosis. He did have a few animals, as he mentioned and I reported to him in the letter, a few animals that were graded #2 in the teeth in relation to lesions of fluorosis. That means a slight effect from fluorosis. Now we have seen the same thing in animals in other herds - the Oregon State College herd. The Oregon State College dairy herd has much worse signs in the teeth than those of Mr. Cashdollar's and the probable source, as far as we can tell, and we know that this is the rock phosphate in the concentrate grain ration. The evidence we have in the report, that is that the principal source of fluorine for those herds on Sauvie Island where the level was above average, the principal source was rock phosphate and my interpretation would be in regards to Mr. Cashdollar's herd would be that the animals were receiving more than the usual amount of fluorines during a period when their teeth were formed and in some instances that grade was after December 1, 1949. However, that amount was not sufficient to produce other signs and symptoms of

fluorosis. In my opinion it could be disregarded as a factor in health in the animal.

Mr. Cashdollar: Gentlemen: I had talked to a man who is head of White Star Feed Concentrate and he said that in the mineral we were using there was absolutely no fluorine in it. That is what he told me this morning on the phone.

Mr. Cashdollar: It is a bone-making mineral, is what it is. The White Star people handle it right here in Portland.

Dr. Spencer: I would like to remind you again the effect on teeth is at the time they are formed and when we see it too -- it is marked by evidence of past intake of fluorosis and that marking had occurred previously, a number of months or years previously when that tooth inside the gum is being formed. That is the time the tooth is marked, so the teeth changes do not indicate how much the animal is getting at the time that you examine the tooth. It indicates how much the animal was getting at the time the teeth were being formed. In that regard further I would like to say that normal bone meal has 500 or 600 ppm fluorine, normal bone meal that is used routinely for feed. The Washington State College, Department of Dairy Science, has investigated - not in connection with fluorosis alone - has investigated animal feeds and they have found evidence that rock phosphate of very high fluorine content was being sold as bone meal. The probable source of fluorides in many of the herds we examined in outside areas, as near as we could tell on examination of their feed was this rock phosphate but in some instances it is passing as bone meal and in some instances is actually sold. The man who says he has no fluorine in his feed is making a foolish statement, in my opinion, because fluorine, a small amount of it is everywhere and I think in every feed and I think Dr. Compton will probably bear me out, there is a little fluorine, there is a little fluorine in every breath of air that we and cows draw and there is a little more fluorine in all coal smoke and so on. So, to say that there is no fluorine is a foolish statement, as there always is some. It is the relative amount that is important and that is what we are attempting to establish in this investigation.

Mr. Cashdollar: Mr. Chairman, I want to ask one more question. Do you admit there is a slight amount of fluorine in cows? I want you to answer yes or no - not beat around ----

Chairman: Well, now just a moment. The people who present the material before this Authority have a right to qualify and explain the statements that they make and you nor I nor anyone else has a right to say they shall say this or they shall say that. We shall depend upon their best judgment and their training to say what they feel they can say.

Mr. Cashdollar: Well, Mr. Green, we asked them to find out the condition, what was causing our cattle, what was wrong with them. Mr. Fraser, and I have done everything and corresponded with the aluminum company, with the colleges, both Oregon State and Washington State College, then he writes us a letter, admits they have got fluorine on their teeth. Now he says he don't know. What kind of a guy is he? Does he know or don't he know, that is the question I ask you.

Chairman: Just a minute now. We are not going to let this hearing degenerate into matters of personality or accusation or anything of the sort. This board is interested in only one thing, ascertaining the facts that pertain to the matter before us which is fluorosis or fluorine poisoning on Sauvie Island. We are not going to get into any personal animosities or anything of the sort. All we want is factual data and we are not going to get off on a tangent of that sort.

Mr. Cashdollar: That is just what I asked you. That is just the word I asked him, isn't it? Whether there was any fluorine in my herd or not, and how did it get there.

Chairman: Just a moment, please. If you people wish to come forth with anyone who is technically qualified to interpret these findings and to disagree with Dr. Spencer, Dr. Compton, Dean Price, or anyone else, we have no quarrel at all. You can present any evidence you want but keep this on a technical, proper plane and let's not degenerate into personalities and accusations or positions. We are not here for that. We are here to determine the facts and that is all we want. You or anyone else direct your questions accordingly in line with that type of approach. We will be glad to hear from anyone in this audience.

Mr. Cashdollar: Well, I want to ask this question. Did he find anything of fluorosis or any -----

Chairman: I think he answered your question. He answered the question very completely, in my opinion.

Mr. Cashdollar: He answered it? What did he say? Yes or no.

Chairman: What about the board?

Mr. Dixon: It isn't the question of whether it is fluorine or not it is the matter of the degree of fluorine. I think he made that very clear. He indicated the degree was below the level found or detected in herds tested for fluorine poisoning.

Dr. Erickson: I believe he made it very clear.

Chairman: Anyone else on the board feel that he did not make it clear?

Mr. West: He made it clear.

Chairman: Mr. Wendel?

Mr. Wendel: He made it clear.

Chairman: It seems to be unanimous so far as the board is concerned. We feel that he made it very clear. I personally do, Mr. West does, Dr. Erickson, Mr. Wendel, Mr. Dixon. I don't think we need to pursue that matter any further.

Mr. Fraser: Mr. Green, I would like to ask one more question.

Mr. Chairman: Yes, Mr. Fraser.

Mr. Fraser: I submitted an analyses of a tooth. I didn't read it because I didn't want to take up your time. I submitted a tooth examination of our cattle too showing it in the teeth. I would like to make this statement. On our ranch there has never been any, he says it is foolish to say that you don't have fluorine in your feed. The only feed that has been fed on our ranch has been raised on our ranch. The only thing we have bought is pure salt, and the only fluorine that our cattle got has come through the air to the ranch.

Chairman: Does that require a statement?

Dean Price: Fluorine is in all feeds whether it is on his ranch or anywhere else, that's a technical point which has no bearing on the facts.

Dr. Spencer: I might say that most soil would run 100 to 300 parts. I am no soil expert and I don't pretend to be but-----

Chairman: Dr. Compton probably knows about that.

Dr. Compton: Fluorine content is in most soil. It will run from very low figures of 50 ppm to over 1000 ppm but no information that I know of where the soils in this area it will be in the neighborhood of 200 to 400 ppm.

Mr. Fraser: Mr. Chairman, I would like to ask Dr. Compton a little bit about it in normal areas, or even though the soil is testing 200 to 400 ppm it still doesn't go up into the grass.

Chairman: We will direct that question to Dr. Compton.

Dr. Compton: We have run control pastures so-called in the Willamette valley at several times, we have sampled the pastures in those areas and analyzed samples for fluorine. They will normally run less than 10 ppm. They vary during the season from very low amount sometimes to a little over 10 ppm but they normally will be less than 10 ppm. We do have a large number of samples like that, so we know that in areas where there is no major industrial operation that pasture grasses and such do contain a small amount of fluorine.

Chairman: The time is getting along. I wonder if this part of the meeting has been explored completely - perhaps we should hear from Alcoa representatives.

Mr. Biggs, Attorney for Alcoa. I thought, Mr. Chairman, that it might be helpful to the Commission and all of us here if some of these things were put in a chronological prospective at least. I would like to say first that the Fraser case was tried in 1950. It was the Findings of Fact which Mr. Fraser adverted were made at that time. Now the history of that briefly is this. Prior to 1949 the aluminum company did not have its corrective devices installed. The installation was completed December 1, 1949. The trial of the Fraser case started in June 1950. The Findings of Fact were entered December 1950. The judge who tried that case made his findings of fact as to some fluorosis in the Fraser herd for the period prior to December 1, 1949 and expressly found that the evidence which had been taken before him was not sufficient to justify a finding that there had been any contamination or injury from the aluminum plant after December 1, 1949. He recognized that the time between December 1, 1949 and a year later when he made his findings was perhaps too short a time for him to make a determination of whether, after the corrective

devices had been installed, there was continuing damage. For that reason he permitted the case to remain on file with permission to the Frasers at the end of two years or within two years to file a supplemental complaint if they felt there was continuing damage. Now let me say with respect to that case that fluorosis in animals was, particularly from aluminum plants, was a fairly new subject. The court before whom it was tried was an ordinary layman. The testimony taken before him was highly technical just as the statements here made this morning would indicate. Judge Levy was compelled to choose between the conflicting opinions of experts who were appearing as experts of a party and was much troubled by the fact that both sets of experts were, in fact, identified, with one party or the other and had been so identified with them, in investigating the case and preparing the testimony they were to give in the trial. Finally he did find in favor of the plaintiff for that period up to 1949, still somewhat disturbed about the technical nature of the testimony. After he had granted a two year breathing spell the aluminum company then recognizing his situation and that he did not have before him in the file of that case a body of completely independent expert testimony - felt that the real solution of the problem - not just the technical problems in litigation, but the real solution to the problem so far as the public in general was concerned - would be to have an authoritative determination made by people in whom the public would repose confidence, who would have no objective but to find and declare the truth whatever it might be so that there would be a body of expert opinions uninfluenced by association with any of the parties, competent to decide these technical questions and which could be accepted as an authoritative determination. Alcoa's efforts, therefore, following the trial in 1950, during the period of two years allowed by Judge Levy within which a determination could be made upon accumulated evidence in the meantime set about attempting to conceive and formulate that kind of a program. It was with the thought that the two state colleges, Oregon State College from Oregon and Washington State College from Washington, Washington being the place where the Alcoa plant is operated, would certainly be representative of every conceivable interest in the determination of that kind. They were scientifically trained, they had the farmers' interest at heart, they were

Interested also in seeing that industry was not unfairly treated and for that reason it was suggested to the colleges through Dean Price, and I think perhaps Washington State College jointly that if they cared to take up such a study on their own terms and under whatever controls to guarantee their impartiality and objectivity that they cared to lay down, Alcoa would consider financing such a project. Dean Price to whom that proposition was submitted agreed to investigate. It was in the investigation of the feasibility of doing that that he held the meeting on Sauvie Island to which all farmers were invited and before whom he outlined the proposal that was made by Alcoa and asked their reaction. The reaction at first, as Dean Price has reported, because of the opposition of two or three of the farmers, was bad. Subsequently, when Dean Price announced the abandonment of the project, a petition of the farmers themselves on Sauvie Island reactivated and they requested that the colleges do undertake such a program at Alcoa's expense. Dean Price insisted for the colleges to do so it would be on the basis of collaboration with all the farmers and with Alcoa, and that their work would be subject to the supervision from day to day and time to time of a committee of the farmers themselves and representatives from Alcoa. Periodically, the college representatives would meet with those committees to outline the nature of the work, the scope, they were undertaking, the techniques that were to be used and so on. That was actually done and the report at the end of their study was made and finally put before the body. Now I want to say this, Mr. Chairman. So far as I know the two people who have spoken, or three people, Mr. Reeder, Mr. Fraser and Mr. Baker, did not permit or invite the colleges to come on their place. Alcoa, of course, had nothing to do with what farms the colleges would undertake to study but we were informed that it was not acceptable by those farmers for the colleges to undertake to investigate their place. The colleges then, as we understand it, set up an investigation of the whole problem by selecting representative farms in various areas throughout the Island which would be not only representative but statistically important in ascertaining whether there was contamination throughout the Island. Now that work was carried on in that manner, was done by the colleges in that way and we have relied completely upon their objectivity and impartiality and scientific know-

how in making the determination. We have, of course, been faced during this interim period with the possibility that Mr. Fraser would file a supplemental complaint; that was filed yesterday, just has been put in court in which he now contends that the bad damage has been continued and necessarily issues that have been raised by his complaint will have to be tried out before Judge Levy in Tacoma. We have, during the interim period caused or been permitted to make two or three herd examinations; we have not had any analytical work done upon the pastures of the Fraser place. The reports of the veterinarians who examined his herd - that is the veterinarians that Alcoa retained to make examinations can be made available to the Commission if the Commission so desires. They show no lesions of teeth, urinalyses, that have been made are within normal limits. If the Commission cares for that information we will be glad to submit it. We have had no work done upon the Baker place at all so we would have no information to offer on that but we would have been very happy if Mr. Baker had permitted the colleges to make investigations on his place. I want to - an issue has been made as to what was done with respect to the examinations of the Fraser place. Dr. Compton and Dean Price have spoken about that; Mr. Thayer, the works manager of Alcoa at Vancouver, did write a letter to Mr. Fraser after the college program was under way requesting or inviting him to submit his place to the examination of the colleges so that it would be made a part of the program. That was a specific request and invitation and no response was ever made to that letter; so that the only thing that we have, as of this time on the Fraser place, are the reports of the veterinarians who made the clinical examinations of the herd and some urinalysis; as I say, I make that statement just to put these various events in perspective. I was very interested in Mr. Wendel's question because it certainly is obvious whenever a subject like this is discussed - how can we laymen where we're met with conflicting opinions of experts on technical subjects, make a determination. Of course a court has to do that, a body of public servants as you people are here are called upon to do that, we suggest to you what we think the solution of the problem is if it comes to a question of who can you believe, we at Alcoa sensed after the trial in the Fraser case, that the beliefs and the creditability of the experts who had nothing but strictly scientific objectives in view is more reliable than the

credibility of experts who had been retained by one party or another and who may therefore to that extent be presumed to be partisan. It was in recognition of that problem that we asked the colleges as representative of the public and the parties and as friends of the court to make the kind of determination that could not be impeached by charges of bad faith, corruption and dishonesty and bribery and all the other charges that have at times been hurled at Alcoa in the Fraser litigation. I don't think that I have anything more to offer, Mr. Chairman, I realize that this evidence is simply an explanation of Alcoa's position. We have been advised, of course, by our own experts that there is no fluorosis out there but we are not satisfied that would even be persuasive to the parties opposing us or to the public if it rested simply on our own experts' testimony. For that reason we submit our case on the basis of the colleges reports.

Mr. Chairman: Mr. Shayer, do you care to say something?

Dean Price: One part of your remark, Mr. Biggs, I ask your consideration and acceptance with what you intended to say. I gathered your exact words were that the farmer advisory committee and the committee from Alcoa sitting with the college as we did periodically supervised the research work. I think you said that but I don't think you meant that. I would object. They did not supervise the work. I would say that the farmer advisory committee and the Alcoa committee sat with the college technical staff and we mutually agreed on the scope and project, and the colleges were willing anytime for anybody to challenge any procedure we were following and we would justify our procedure or we would recant ourselves. But the colleges directed the research first last and all the time, and it is their report and no one else is responsible for it. We considered the farmer advisory committee very helpful in its over-all work, approach or anything else. I thought I would make that clear because I think when you read the transcript you will see-----

Mr. Biggs: I certainly will accept Dean Price's correction. And, as Dean Price said, if that is not the appropriate word and I used it, I would like to withdraw it.

Chairman: Anyone else from Alcoa or the industry who would like to be heard?

Mr. Biggs: I think not.

Chairman: Mr. Fraser, would you like to say anything?

Mr. Fraser: I would like to have Mr. Biggs withdraw a few more statements. One of them was that Judge Levy will hear our case again.

Mr. Biggs: Well, if I said that, I don't know why I said it. I didn't mean to say that as Judge Levy is now dead. He died within a year or two after the trial. We don't know what judge will hear it.

Mr. Fraser: The other one is that this case lasted ten weeks - before the man - he was not just a layman after ten weeks. But the other statement; he made out like we didn't have any unbiased people there. Well, Oregon State College was there at that trial too.

Chairman: What is the pleasure of the Board? Shall we have a motion?

MOTION RE: SAUVIE ISLAND COMPLAINT

It was MOVED by Mr. Wendel and seconded by Dr. Erickson and carried that the Board take the matter under advisement and announce its decision later.

Respectfully submitted,

CURTISS M. EVERTS, Jr., Secretary
Oregon State Air Pollution Authority

TWELFTH MEETING
OF THE
OREGON AIR POLLUTION AUTHORITY

November 10, 1954

The twelfth meeting of the Oregon State Air Pollution Authority was called to order by the Chairman at 2:00 P.M., Wednesday, November 10, 1954, in room 720, State Office Building, 1400 S. W. 5th Ave., Portland, Oregon. Those present were Carl E. Green, Chairman, Mr. R. P. Dixon, Vice Chairman, Harold F. Wendel, Merle S. West, Members and Curtiss M. Everts, Jr., Secretary, Charles D. Burt, Special Assistant Attorney General, R. E. Hatchard, Chief of the Air Pollution Control Section, State Board of Health, W. J. Whitsell, Associate Engineer, State Board of Health, Frank P. Terraglio and Eugene E. Lee, Chemists, State Board of Health.

MOTION RE: MINUTES OF PREVIOUS MEETING

The Secretary summarized the minutes of the July 14, 1954 meeting and the special meeting held on September 28, 1954. The Chairman declared that if there were no corrections or additions the minutes would stand approved as prepared by the Secretary.

SAUVIE ISLAND RE: FLUORIDE MATTER

The Chairman stated that the Secretary had sent a transcript of the special meeting held on September 28, 1954, to each member of the Authority and that Attorney Burt had provided legal comment on the information presented at the special meeting.

The Chairman then asked if the members were now ready to consider action on the matter of alleged fluoride damage to crops and livestock on Sauvie Island.

Mr. Wendel stated that if the Attorney had any additional information on this matter that he should be heard.

The Chairman asked Attorney Burt to advise the members of the Authority regarding the action to be taken.

Mr. Burt explained that the Authority should take action as to whether or not there is atmospheric fluoride pollution occurring on Sauvie Island.

The Chairman asked if the Authority was ready at this time to make such a definite finding from the presentation of the reports from Oregon State College and Washington State College and the statements and reports introduced at the special meeting of September 28th.

Mr. Burt stated that the Authority could determine whether it should find that there is pollution or find that there is not pollution or to continue the matter for further discussion. At this time, however, the Authority should accept or reject the findings contained in the combined colleges' report on fluorosis on Sauvie Island.

MOTION RE: SAUVIE ISLAND - REPORT ON FLUOROSIS - OREGON STATE COLLEGE, WASHINGTON STATE COLLEGE.

It was MOVED by Mr. Dixon and seconded by Mr. West and carried that the findings contained in the combined report of Oregon State and Washington State Colleges, "Summary Report of Fluorosis Investigations in the Sauvie Island Area in Oregon from December 1, 1951 to June 30, 1953" be accepted since there was not sufficient evidence presented at the special meeting to discredit the conclusions contained in the report.

Mr. Wendel stated that the Authority would investigate the matter in the future if evidence was presented to support a complaint that fluoride contamination was present.

OSWEGO RE: CEMENT DUST

The Chairman stated that at its last regular meeting the Authority requested the Oregon Portland Cement Company to submit a progress report on their studies and efforts to reduce cement dust emissions at their plant in Oswego and that in the meantime the Authority's staff had conducted additional studies in the Oswego vicinity. He then requested Mr. Hatchard to report on the results of this air sampling.

Mr. Hatchard reported that continuous air samples had been collected during the periods August 18, through the 27th, and October 18, through the 29th, from the roof of the Elementary School located at Church and State Streets in Oswego which is approximately 1500 feet S.W. of the cement plant. The purpose of this sampling was to compare the

particulate matter in the air moving from the cement plant with the particulate matter present when the air movement is from the other directions. Mr. Hatchard stated that the staff had prepared a report describing the equipment used and the sampling data for each run.

He advised that the results of the samples collected during the period August 18 to 27 showed that the concentration of particulates when the wind was within the 90° arc from the plant to the sampling station was 3.5 times the concentration found when the wind originated within the other 270° arc. He stated that during the period from October 18, to 29th, the concentration of particulate matter when the wind was within the 50° arc from the plant to the sampling station was 1.8 times the concentration found when the wind was within the other 310° arc. Mr. Hatchard explained that during the second sampling run that the laboratory reports showed that from 25 to 40% of the particulate matter present in the samples was composed of calcium oxide. Assuming that Portland cement in this area is composed of approximately 62% calcium oxide (lime), he concluded that from 40 to 65% of the particulate matter collected was cement dust.

Mr. Hatchard explained that six particle fallout stations had been maintained in Oswego and that these stations are located from 600 to 3,000 feet from the cement plant. The laboratory analyses of the fallout found shows a fallout proportional to the distance of the station from the cement plant. The calcium oxide found ranged from 25 to 50% of the total sample, while the calcium oxide content in fallout samples from areas where there is no lime process industry ranges from 2 to 7%. Mr. Hatchard stated that the studies by the Authority's staff support the following conclusions:

1. The dust concentration in the Oswego air is 2 to 3 times higher downwind from the cement plant compared with the dust concentration on the upwind side.

2. The total particle fallout from the six stations has been from 2 to 3 times heavier than would be expected in communities where no unusual source exists. The calcium oxide content of the samples shows that the major portion of the dust concentration originates from the operation of the Oswego Portland Cement Company's plant.

3. That the physical and chemical nature of the cement dust has caused severe corrosion conditions in Oswego in addition to the excessive cleaning required to remove the dust deposition.

Mr. Wendel asked Mr. Hatchard if he found the fallout less in wet weather than in dry.

Mr. Hatchard replied that this was true.

The Chairman asked if this data had been presented to the company?

Mr. Hatchard replied that it had not since the sampling had been completed only a few days ago and the report had just been assembled.

Mr. F.E. McCaslin, President, Oregon-Portland Cement Company stated that he would be pleased to have a copy of the staff's report.

The Chairman asked if a representative of the cement plant would report on their dust control activities since the last meeting.

Mr. Frederic Yerke, Attorney for Oregon-Portland Cement Company stated that since the July 14th meeting the installation of a new bag collector has been completed in the packing department. Mr. Yerke explained that the unit has a capacity of 12,500 cubic feet per minute and cost \$12,000. He stated that the other dust control equipment described at the last meeting has been operated without change. Following the July 14, meeting a representative of Koppers Company visited the plant during the latter part of August and a preliminary report was prepared, and that the company is still awaiting the revised report. He stated that a representative of the Buell Engineering Company, Inc., had also visited the plant and submitted a report regarding dust control improvements. The company now has reports from three dust control companies and this information has been turned over to the plant engineering department. Mr. Yerke explained that the reports are of a preliminary nature and do not show equipment locations but the company hopes that it will be possible to reach some conclusion from the data available within a short time.

The Chairman asked Mr. Yerke when the new bag collector started operating.

Mr. Yerke replied that it was during the month of October 1954.

The Chairman asked Mr. Hatchard if the samples collected during that period showed a reduction in the dust concentration found.

Mr. Hatchard replied that if the new bag collector was in operation during late October the dust concentrations found didn't show a reduction. However, the weather conditions influence the dust concentrations present and that a reduction may have occurred that is not shown in the results from a few samples.

The Chairman asked Mr. Hatchard if it was a fair statement that additional dust control improvements were necessary.

Mr. Hatchard replied that the studies by the Authority's staff certainly showed the need for further dust control.

Mr. Yerke reminded the Authority that the company had not reviewed this data and requested that a copy be sent to Mr. McCaslin. He asked if the cement plant was eliminated as a nuisance source would it be possible to say whether or not there would still be a nuisance condition present in Oswego.

Mr. Hatchard replied that there would be nuisance conditions in the north end of the business section caused by cinders and flyash deposition from two wood waste burners.

The Chairman asked if a representative of the City of Oswego was present and wished to be heard.

Mr. Crampton, City Attorney, City of Oswego, stated that the city believed that the Oregon-Portland Cement Company was proceeding satisfactorily with its program to reduce cement dust emissions and re-assured the Authority that the City Council has a continued interest in this matter as a complainant.

Mr. Fred Hallwyler, representing the Lake Corporation of Oswego advised the Authority that his observations showed that the heaviest fall of dust seemed to be in the early hours and that the dust deposition was a serious problem to the property owners, damaging shrubbery, settling on cars and clothing, etc. Mr. Hallwyler stated that the people in Oswego felt the plant was taking corrective measures but they would like to be assured

that the changes would meet requirements.

Mr. Leche said that the dust control system operates continuously during the 24 hour period and that usually the only observable discharge from the main stack was steam.

The Chairman explained to Mr. Hallwyler that the weather conditions such as wind, temperature and moisture of air influences the capacity of the air to disperse the dust and that in the early morning there frequently is little wind and the vertical mixing of the air is lacking due to a temperature inversion. The Chairman advised Mr. Hallwyler that under these conditions more dust would be deposited on property downwind from the plant and that the property owners would notice increased dust early in the morning although the plant dust control systems have been operating.

Mr. Hatchard stated that dust samples had been collected during the early morning hours and that the results indicated that the plant dust control system is operated at night in the same manner as during the day.

Mr. Hatchard informed the Authority that the staff had observed the dust discharge from the main stack during sampling activities and had noted that frequently the dust discharged is visible for several hundred feet downwind.

Mr. Hatchard pointed out that the steam would have disappeared within a relatively short distance and that the visible plume under these conditions was cement dust.

Mr. West asked if there was calcium oxide contained in cinders and flyash from wood waste combustion.

Mr. Hatchard explained that calcium oxide determinations had been made on fallout samples collected in areas where cinders and flyash are a problem and that the calcium oxide found was within the range of 2 to 7% compared with the 25 to 40% found in Oswego samples.

Mr. Wendel asked L. E. Crampton, City Attorney, to amplify his statement that the Oswego City Council believed that the Oregon Portland Cement Company is proceeding satisfactorily towards the reduction in cement dust discharged.

Mr. Crampton explained that the Council believes that the company is making progress and

further that the city has always had cooperation from the cement plant.

Mr. Wendel asked L. E. Crampton, City Attorney, to amplify his statement that the Oswego City Council believed that the Oregon-Portland Cement Company is proceeding satisfactorily towards the reduction in cement dust discharged.

Mr. Crampton explained that the Council believes that the company is making progress and further that the city has always had cooperation from the cement plant.

The Chairman asked if the staff had any recommendations regarding the Oswego matter.

Mr. Hatchard stated that there is definite need for additional cement dust control and that the plans and specifications for proposed dust control improvements should be submitted to the Authority for review before the changes or alterations are made in order that the comments or recommendations from the Authority would be known in advance of the actual installation.

Mr. Hatchard stated also that a report describing the dust discharged from the cement plant during representative periods of operation would be extremely helpful in connection with the evaluation of area sampling data.

The Chairman asked if the Oregon Portland Cement Company had been requested to provide such a report.

Mr. Hatchard replied that the request had recently been made.

Mr. McGaslin informed the Authority that arrangements are being made to provide this report.

The Chairman suggested that the Oregon-Portland Cement Company and the staff prepare a progress report for the next meeting.

Dorothy E. Bloomquist of 14217 S. E. Fair Oaks Lane, Portland 22, Oregon, was present and requested that a sample station be placed on the east side of the Willamette River in the vicinity of Oak Grove to determine the cement dust fallout since they have been noticing the cement dust deposition from the Oregon-Portland Cement plant and also cinders from sawmills located north of the cement plant. She stated a letter had been

written to the Authority in August regarding this request but the station had not been started yet.

Mr. Hatchard assured her this fallout station would be located in that district as soon as feasible.

NORTH BEND: CINDER AND FLYASH CONTROL

The Chairman requested Mr. Whitsell to give a report on the efforts of the various industries in North Bend to abate the flyash and cinder deposition.

Mr. Whitsell advised the Authority that Weyerhaeuser Lumber Company had completed the installation of cinder collectors on their two boilers during the week of September 13, 1954. He explained that the collectors were made by Western Precipitation Company and blowers were manufactured by the Buffalo Blower Company. He reported that the North Bend residents in the south Sherman Street vicinity are very pleased with the cinder and flyash reduction this far. He explained that the staff has not collected a series of fallout samples since the collectors started functioning so the quantitative reduction can not be reported yet. However, the samples will be collected within the next two weeks.

Mr. Whitsell explained that Menasha Plywood Corporation has no plans to install collectors since it was their understanding that the Weyerhaeuser plant was such a major contributor that when their collectors started operating the nuisance conditions would be greatly alleviated which would help the whole area. Mr. Whitsell reported that Menasha had recently begun the operation of a wood flour mill which would remove the sander dust from the boiler and that they, however, believed this would reduce cinder emissions considerably. Mr. Whitsell pointed out that the staff disagreed with Menasha regarding the reduction in cinder fall in the area north of Montana Avenue, caused by the installation of cinder collectors at Weyerhaeusers' mill since our study shows that the cinder fall in this area is from the Menasha plant. Mr. Whitsell also explained that the staff believes that the removal of sander dust from the boiler will reduce the fallout only about 5 to 10%. He reported that Menasha understood that a lumber mill in Tacoma, Washington had reduced a cinder complaint by modifying the boiler combustion conditions.

However, the staff learned from the air pollution control engineer in Tacoma that the complaint had been from excessive smoke and that cinders were not a problem.

Mr. Whitsett explained that Irwin-Lyons is contemplating changes in their overall operation which will have an appreciable effect on the cinders and flyash produced and that this change will be affected by spring 1955.

The Chairman explained to the Authority that the staff study showed that the excessive cinder and flyash fallout in North Bend originated from three industries and that two of the firms had either reduced their discharge or had plans to care for their problem.

However, the Menasha Plywood Corporation does not have adequate corrections underway.

The Chairman asked Mr. Hatchard when the next series of samples would be collected in North Bend that would show the effect of the Menasha wood flour by-product operation.

Mr. Hatchard replied that the samples would be collected within the next two weeks and that the analyses would be completed a week later.

The Chairman suggested that if the data which the staff secures shows no substantial fallout reduction then the Authority should advise the Menasha Plywood Corporation to proceed with appropriate plans to reduce the fallout.

Mr. West stated that the Authority should delay action until the fallout data is available that shows the results of their wood flour by-product installation.

The Chairman instructed the Secretary to advise the company that appropriate control measures must be taken if the fallout data shows that the excessive fallout is still occurring.

ASSOCIATED FOREST INDUSTRIES OF OREGON AIR POLLUTION COMMITTEE.

Mr. Charles M. Sanford, Assistant to Mr. Ogle, appeared before the Authority on behalf of Mr. Charles E. Ogle, Mgr. of Associated Forest Industries, who was unable to attend and stated that since the last Authority meeting their air pollution committee had met in Portland to discuss air pollution problems affecting the lumber industry. He explained that Mr. Hatchard attended this meeting and discussed with the committee the problems before the Oregon State Air Pollution Authority in respect to air pollution from sawmill

stacks and burners.

Mr. Sanford reported that after this meeting the Association sent out a questionnaire on all phases of air pollution from burners and stacks to 156 mill owners on October 29, 1954, and on November 9, had received a total of 22 reports. He explained that eighteen of the reporting members had waste wood burners and all had stacks while four of the reporting members had no burners which meant their waste material was absorbed in the sale of chips and bark, etc. Mr. Sanford advised that of the eighteen mills reporting seven had complaints of ash fallout and cinders and that it was interesting to note that two or three of the seven were both the complainant and the offender in that the fallout was discoloring and damaging the lumber in their own yards. Mr. Sanford emphasized that one owner had spent \$30,000 to correct this condition for his own benefit. He reported that the twenty-two plants who have reported so far all have chippers, and that these chips are either sold to processing companies or used in their boilers.

Mr. Sanford advised the Authority that the kraft plant to be located at Albany would use chips from lumber mills in the vicinity, however, the cost of transportation limits the distance that the wood chips can be hauled to the plant.

Mr. Sanford explained that Mr. Ogle had contacted six manufacturers of burner equipment regarding the elimination of smoke and fallout from waste burners and that the manufacturers are not in agreement regarding the improvements needed. He explained that Mr. Ogle was attending a meeting of the Forest Products Laboratory in Corvallis, Oregon, today and that he was investigating the possibility of a research project at the laboratory to determine improvements for waste burners.

The Chairman asked if the Forest Products Laboratory had mechanical engineers on their staff or could such services be obtained from the Oregon State College Department of Mechanical Engineering.

Mr. Sanford replied that he didn't know but that Mr. Ogle would secure that information. Mr. Sanford stated that the Association's Air Pollution Committee would be meeting in

December and that the Authority's staff would be invited to be present.

The Chairman thanked Mr. Sanford for a copy of the report and stated that the Authority hoped that the Association's committee would produce methods that will solve the smoke and fallout problems now present in many lumber mill areas.

PORTLAND RE: KENTON DISTRICT CINDERS AND FLYASH

The Chairman requested Mr. Whitsell to report on the Kenton District complaint investigation.

Mr. Whitsell reported that the staff began area investigations after the July 14th, meeting and had located fallout stations to determine the amount and character of the fallout in that area. He explained that the chief complaint concerns cinders and that the three alleged sources are the Portland Shingle Company, M and M Woodworking Company and Nicolai Manufacturing Company. Mr. Whitsell reported the three companies have been contacted and that the Nicolai Manufacturing Company recognized there was still some sander dust escaping from the tops of their cyclones, although the company has spent considerable money already in attempting to control the discharge. However, he explained that the company believed they were not responsible for the major part of the fallout existing in the Kenton district. Mr. Whitsell stated that the situation was similar at the M and M Woodworking Company and that the company indicated that they were willing to cooperate with the Authority but at the same time did not feel that they were discharging anything which could account for the complaints in the area.

Mr. Whitsell advised the Authority that he could not talk with the Manager of the Portland Shingle Company since he was in the east; however, he discussed the problem with the plant superintendent and learned that the company was aware of the problem with their waste burner and that the company had at an earlier date requested assistance from our staff.

MULTNOMAH COUNTY RE: BURNING REFUSE DUMPS.

Dr. D. B. Charlton, Charlton Laboratories, reported the burning of raw garbage at a refuse dump about 200 yards east of the Northwest Nut Grovers plant. He explained that

garbage of all types was being burned and great quantities of smoke is emitted from this operation. Dr. Charlton stated that he wished this matter could be investigated.

The Chairman asked Mr. Hatchard if the staff had complaints regarding this dump. Mr. Hatchard replied that he had talked with Dr. Charlton about a month ago regarding several dumps located north of Portland where refuse is burned and that a tour of the area had been made to determine if the previous refuse burning operation was going on. Mr. Hatchard explained that there was no burning at the former Seivert refuse dump. However, there were a number of other burning refuse dumps operating and that the Multnomah County Health Department has been maintaining routine inspections of all refuse burning dumps in the county. Mr. Hatchard reported that he had talked with Mr. Noel McKeehan, Sr. Sanitarian, Multnomah County Health Department who assured the Authority no garbage burning was being conducted and that the Authority had not received complaints from property owners in that vicinity.

Mr. James Nelson representing Northwest Nut Growers was present and stated that about two years ago his firm had made a fallout study and placed it on file with the Authority for their information. He explained since that time the situation has not improved and that the Northwest Nut Growers operate under a continual fallout of half burned cedar cinders and that this deposited material plugs the rain gutters and also sifts into the buildings. Mr. Nelson explained that he had talked with a sheet metal company and was told this problem could be overcome with proper collectors but nothing has been done as yet. He advised the Authority that many business concerns are suffering from this refuse dump located east of their plant but that it wasn't affecting their plant at this time. He stated it was hoped the Authority would effect some improvement in the condition now present in their area.

The Chairman asked if all this burning was located outside the city limits.

Mr. Hatchard replied that the refuse burning areas were north of Columbia Boulevard outside the city.

Mr. Dixon asked if complaints had been received by the Authority.

The Chairman explained that no specific complaints had been received regarding the refuse burning but the Authority had received a complaint signed by about 150 Kenton District residents.

The Chairman requested Dr. Charlton to submit his complaint in writing to the Authority for the record.

Mr. Wendel suggested that the staff investigate the burning refuse dumps and submit a report at the next meeting.

Mr. Hatchard stated that the Multnomah County Planning Commission and the Health Department would be interested in the matter and that the staff would contact these agencies. The Chairman stated that the Authority would expect a report from the staff at the next meeting.

PORTLAND RE: RICH MANUFACTURING COMPANY

The Secretary stated that a letter had been received from J. Gullickson, 725 N. Watts Street, Portland, Oregon, transmitting a complaint signed by 49 residents which alleged that the smoke and odor from the Rich Manufacturing Company was causing nuisance conditions.

The Chairman asked the Secretary if this was close to the Kenton District. The Secretary replied that the company was located on Columbia Blvd., near Albina Avenue which is east of Kenton district.

Mr. Dixon suggested that the Authority's staff follow this petition up and make a report on this as soon as possible.

The Chairman reminded the Authority that this complaint involves the question brought up sometime ago regarding what extent we could work within the city of Portland and that it was not our wish to complicate matters and confuse the relationship with the city.

The Secretary stated that the Authority has been referring complaints within Portland to the City officials unless the complaint claimed human health injury.

The Chairman asked if it would be proper to transmit this petition to the Mayor and City Council for their investigation of the matter with the understanding that the Authority

would assist if requested.

MOTION RE: RICH MANUFACTURING COMPANY

It was MOVED by Mr. Dixon and seconded by Mr. West and carried that this matter be referred to the Mayor and City Council of Portland with the offer of cooperation and assistance of the Air Pollution Authority.

PORTLAND RE: PABCO ROOFING COMPANY

The Secretary stated that a letter from E. A. Bird, Secretary, Metal Trades Council of Portland and Vicinity had been referred to the Authority on October 27, 1954 by the State Industrial Accident Commission and that a complaint petition enclosed with the letter alleged that the fumes and smoke from the Pabco Roofing Company, 6350 N.W. Front Avenue, were injurious to the health of the employees of the Penn Salt Company, 6400 N. W. Front. The Secretary advised that the complaint was signed by nine union officials and 150 union members.

Mr. Al Bird of Portland Metal Trades, 410 Labor Temple, appeared at the meeting and stated that employees at Pennsylvania Salt Manufacturing Company have become ill due to fumes from the Pabco Roofing Company operations and that it was difficult to keep employees on the job under these conditions. He stated the atmosphere becomes so heavy with these fumes that visibility was affected and an oily scum which seems to attack the paint gathers on the cars parked nearby. Mr. Bird emphasized that this condition is definitely a health hazard and for that reason was first referred to the State Industrial Accident Commission.

Mr. John T. Sharkey, employee of Pennsylvania Salt Company, stated that Pabco has a stack about three stories high and when the asphalt fumes are released during southerly winds these fumes seem to enter right into Penn Salt Plant's enclosed working rooms and that within 12 or 13 minutes working under those conditions employees develop headaches and nausea and at times in 30 to 45 minutes even chest pains occur. Mr. Sharkey stated that these fumes are more intensive at night than in the daytime and that on the swing shift some employees have become so ill it was almost impossible to stay on the job. He reported that the employees were very much concerned about this condition and that

their union is very interested in the health and welfare of its employees. He read an excerpt from an article entitled "Cancer at Work" by Dr. H. Abrams which pointed out that the asphalt fumes cause a higher incidence of lung cancer to workers exposed to such fumes.

Mr. Stores Waterman of Pennsylvania Salt stated that he thought Mr. Bird and Mr. Sharkey had expressed vividly employees' complaints and that his company had hoped that improvements would be^{made} so that official action would not be needed. Mr. Waterman advised that the oily fumes and dust in the air settles on the high voltage equipment in their plant and that causes a hazardous condition to their employees and property since explosions could occur. He explained that they tried to keep the high voltage installation clean but since their plant operates 24 hours a day continuously it is almost impossible.

Mr. Waterman also reported that an oily substance covered cars, buildings, shrubs and any materials which may be stored in the open.

Mr. Wendel asked if this complaint had been taken up with Pabco Company's head office in San Francisco.

Mr. Waterman replied they had taken this up through the Pabco Portland office.

Mr. Hatchard said that he believed the efforts of both management and the employees' union had caused Pabco to consider methods for the control of their fumes since Mr. D.C. Bird, Portland Pabco Manager had advised the Authority's staff on November 5, 1954, that their company had authorized the installation of fume control equipment.

Mr. Hatchard stated that the Pabco Company had a consultant, C. E. Lapple, Stanford Research Institute, study the problem and that his recommendations were being followed.

Mr. Hatchard reported that the Drew Engineering Company, 809 N. E. Lombard Street, Portland, Oregon, was designing the project and that the installation of the fume control on the first asphalt saturator tank would be completed within six to eight weeks.

MOTION RE: PABCO ROOFING COMPANY

It was MOVED by Mr. Wendel and seconded by Mr. Dixon and carried that the Authority's

staff investigate the conditions in cooperation with the City of Portland and if Pabco does not proceed with the fume control system to arrange for a special meeting of the Authority to consider the matter further.

The Chairman added that the Authority will expect a progress report at the next meeting and he requested the gentlemen who represented the employees of Penn Salt Company to keep the Authority advised on the situation in the interim.

ASPHALT PAVING PLANTS RE: STATUS OF DUST AND VAPOR CONTROL

The Chairman requested Mr. Hatchard to report on the efforts of the owners of the asphalt paving plants to reduce the dust and vapor discharges. Mr. Hatchard reported that the staff had investigated the discharges from eight paving plants during the summer and that in Eugene Mr. Byrnes, owner of the Byrnes Paving Plant, had installed a Madsen type water scrubber that had substantially reduced the dust and vapor discharges. He explained that District Engineer Merryman had collected filter samples before and after improvements were made; that although significant improvement had occurred it was not yet clear whether the nuisance conditions had ceased.

Mr. Hatchard explained that Mr. T. M. Wildish had advised the Authority that a water scrubber had been secured from the Madsen Company; however, the staff had not collected filter samples after the scrubber had been installed. Mr. Hatchard reported that one of the State Highway's portable paving plants had started operation approximately 1,000 feet east of the Byrnes Paving Plant; however it was observed that excessive discharges were occurring and District Engineer Merryman discussed the matter with the maintenance superintendent and the plant was moved to a more remote location.

Mr. Hatchard stated that complaints had been received regarding the operation of the Highway Commission's portable paving plants in east Tillamook and North Bend. He stated that the staff investigated the conditions and the paving plants were moved to more isolated regions where the dust and vapor discharges would cause no nuisance.

The Authority received complaints from the Forest Park Zoning Commission, Mr. Hatchard continued, which involved the discharges from the Babler and Roger Company's paving plant.

He explained that this particular paving plant had already been equipped with a Madsen type water scrubber; however, it appeared that an insufficient quantity of water was being provided to the scrubber. The plant ceased operating at this location before it was determined whether adequate improvements had been made.

Mr. Hatchard reported that the Parker Schram Paving Plant located at N. E. Cully and Columbia Boulevard had installed improvements to their dust control system; however, staff investigations after the improvements indicated that further corrections would be needed to eliminate nuisance conditions.

Mr. Hatchard advised the Authority that during the past two years the investigation of 14 paving plants had been made and he emphasized that the nuisance conditions caused by these plants could have been prevented if the owners had:

1. Provided control equipment before paving operations started or;
2. Had located these plants in areas far enough away from other land uses.

He advised the Authority that the staff had secured data regarding the general conditions under which nuisance conditions are created by paving plant operations. In order to prevent recurrence of such conditions in the future he suggested that this information be provided to the Associated General Contractors and to the Oregon Highway Commission.

Mr. Ray Beeler, representing the Associated General Contractors, advised the Authority that the various owners of the paving plants operating in the area had effected dust control improvements and he promised that his association would continue to work towards the prevention of future nuisance conditions. He pointed out that often it is not easy for the paving plant owner to satisfactorily control the plant discharges under a variety of field conditions. Mr. Beeler requested that his organization be advised of the meetings of the Authority in order that they might be represented.

The Chairman directed the Secretary to forward the information regarding the prevention of nuisance conditions from paving plants to the Associated General Contractors and the State Highway Commission.

HUNTINGTON RE: DUST DEPOSITION

The Secretary stated the Authority had received a complaint-letter signed by about 120 Huntington residents alleging that cement dust from the Oregon Portland Cement plant in Lims, Oregon, was being deposited on their properties and was causing nuisance conditions and that the complainants requested an investigation and correction of this condition.

The Chairman asked if the representatives of the Oregon Portland Cement Company wanted to make any statement.

Mr. Frederic Yerke stated that the Lime plant had been operating 31 years and at present has just the one kiln similar to the original kiln at the Oswego plant and he pointed out that the area in the Huntington vicinity is one characterized by extremely high natural lime deposits. Further, he informed the Authority that this is an extremely windy location and a constantly shifting dust condition which contributes much to air pollution alone. Mr. Yerke stated that the company seriously doubted if the Lime plant was contributing substantially to the dust deposition in the city of Huntington.

Mr. Wendel asked if this case could not be referred to the Authority's staff for investigation.

Mr. Hatchard explained that when the complaint was received we were not able to do much sampling due to heavy commitments at the time; however, District Engineer Patterson had made a preliminary survey of area conditions and had located a fallout station.

Mr. Hatchard stated that fallout information is being collected but the fallout results alone would not be conclusive since no separation can be made of lime from the plant or from natural sources. He explained that special type sampling procedures would be necessary and that it would be next spring before such a study could be started.

The Secretary was instructed to advise the people of Huntington that studies will be made when possible.

PORTLAND RE: CITY OF PORTLAND AIR POLLUTION COMMITTEE

The Chairman requested Mr. Hatchard to report activities of the City of Portland's Air

Pollution Committee.

Mr. Hatchard explained that Mr. Whitzell and he had met with the members of the City of Portland Committee in July to discuss the Authority's program and explain the results of air sampling and investigation in the Portland area. Mr. Hatchard stated that four members of the Committee had been appointed early in the summer and that at this time the committee was mostly engaged in educating the new members. He explained that the City Council had transferred the committee from Building Department to the City Health Department and that the Health Department was investigating air pollution complaints mostly to advise the committee regarding the type of problems existing in the city. Mr. Hatchard reported that the Authority has been reporting complaints received in Portland to the Health Department so the Portland Air Pollution Committee would be advised.

DATE OF NEXT MEETING

The Secretary was instructed to arrange a regular meeting date during the latter part of January 1955.

MEETING ADJOURNED

There being no further business, the meeting adjourned at 5:00 P.M.

Respectfully submitted,

CURTISS M. EVERTS, Jr., Secretary
Oregon State Air Pollution Authority

1955-1957
OREGON AIR POLLUTION
AUTHORITY MINUTES



State of Oregon
Department of
Environmental
Quality

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SPECIAL MEETING OF THE
OREGON AIR POLLUTION AUTHORITY

MARCH 2, 1955

A special meeting of the Oregon State Air Pollution Authority was called to order by the Chairman at 2:00 P.M. Wednesday, March 2, 1955, in Room 36, State Office Bldg., 1400 S.W. 5th Avenue, Portland, Oregon. Those present were Carl E. Green, Chairman, Dr. Harold M. Erickson, Merle S. West, Harold F. Wendel, Members, and Curtiss M. Everts, Jr., Secretary, R. E. Hatchard, Chief of the Air Pollution Control Section, State Board of Health, W. J. Whitsett, Associate Sanitary Engineer, State Board of Health, Frank P. Terraglio and Eugene E. Lee, Chemists, State Board of Health.

MOTION RE: MINUTES OF PREVIOUS MEETING

The Secretary summarized the minutes of the November 10, 1954 meeting. The Chairman declared that if there were no corrections or additions the minutes would stand approved as prepared by the Secretary.

ELECTION OF OFFICERS

The Chairman informed the members that the time had come again when officers must be elected.

It was MOVED by Mr. Wendel and seconded by Dr. Erickson and carried that Carl E. Green be elected Chairman of the Oregon State Air Pollution Authority for the year of 1955.

It was MOVED by Dr. Erickson and seconded by Mr. Wendel and carried that Mr. West be elected Vice-Chairman of the Authority for the year 1955.

REYNOLDS METALS COMPANY

George W. Mead, Attorney, Public Service Bldg., Portland, Oregon, representing Paul Martin, requested to be heard relative to complaints against the Reynolds Metals Company. He stated that the Martins are owners of a large cattle ranch of approximately 1500 acres located in Multnomah County immediately east of the Troutdale aluminum plant and that it was their purpose to register a formal complaint before the Authority with

respect to the operations of Reynolds Metals Company because of the trespass and nuisance which the Martins have endured uninterruptedly since the operation of the plant. Mr. Mead explained that the U. S. District Court in Oregon has on file all records available from the civil actions brought by the Martins and others who have been damaged. He also stated that the Martins were put out of business in 1946, had to remove the cattle from the property and had to move away from the property themselves because they were physically affected. Mr. Mead stated further that since 1951 the Martins have had a test herd of about 300 cattle on the property and that every six months or so they have had the cattle tested and all were found to be suffering from fluorosis. He reported that the condition still prevails and that this statement is supported by the record of Civil Suit No. 6151, U. S. District Court.

The Chairman read the policy of the Authority with respect to the procedure for handling complaints and advised Mr. Mead that the Authority would be glad to hear the factual data at a future meeting supporting the complaint.

Mr. Mead replied that he would arrange for the presentation; however, he explained that his appearance before the Authority today was only to get on record and to determine what the Authority will do about the situation.

Mr. Mead expressed his concern regarding the actions of the Joint Ways and Means Subcommittee over the 1955-57 biennial budget of the Authority and hoped that all funds requested had been approved. He stated that if the budget request had not been approved by the Sub-committee he would assist in any way possible as there is a great need for the Authority to investigate the fluoride situation in the Troutdale area. Mr. Mead reiterated again that he had not intended to present supporting information on this complaint at this time for it would take a weeks' time or more but that he wanted to be on record regarding the complaint.

The Chairman advised Mr. Mead that a written complaint would have to be submitted to the Authority if an investigation of the situation is to be made.

Mr. Mead replied that he could file a complaint with the Authority today if desired but that the fluoride problem is a nebulous thing and difficult to understand and that he was not sure what form of complaint should be prepared.

Mr. Mead explained that Judge James Alger Fee made findings of fact which brought out that the corrective measures instituted by Reynolds Metals Company were ineffective and that in this particular case the Martins and others were awarded damages. He further explained that the findings in the case in which Judge Fee presided showed enormous quantities of fluorine being emitted from the plant and that the findings from January through December 1947 were that 2800 pounds of fluoride per day were being released and that it increased to 3900 pounds in September 1950. Mr. Mead stated that the fluoride released was reduced because the Governor had instituted an agricultural and livestock study of fluoride damage in Troutdale and that a large sum of money was spent on the program. He reported that the fluoride emissions were reduced to around 1,000 to 1,100 pounds per day and it was last reported that 700 pounds of fluorine per day are emitted from the plant. He stated that Reynolds Metals Company may say it was evidence of good faith, that they now have the fluoride controlled and would get an expert to say no damage is being done.

Mr. Mead pointed out that prior to the time the controls were installed all evidence showed that the livestock had ingested large amounts of fluorine and that his point was that controls have helped and that now instead of fluoride discharges in the thousands of pounds per day, prior to the controls, it has been reduced to 700 pounds per day according to plant estimates. However, Mr. Mead continued, damage is still resulting and the test herd show signs of fluorosis and unmistakable evidence of considerable damage and that these statements are findings of fact based on months of testimony. Mr. Mead added that he thought the matter to be sufficiently serious at this time to justify a careful examination by the Air Pollution Authority since, as a public authority, the Authority may wish to be on record with respect to

these facts that show and determine that there is still toxic materials emitted from the plant which are trespassing and causing damage at this present time. Mr. Mead emphasized that this is a much more serious aspect than would normally be called a common nuisance and it surely is time that some public authority go into this matter and do a thorough investigation.

Chairman Green asked Mr. Hatchard if he would please review briefly the work that has been done to date in that area.

Mr. Hatchard reviewed briefly the air sampling activities in the Troutdale-Corbett area explaining that the Authority's staff had been conducting an area survey since July 1953, collecting air samples from seven stations. He stated that the location of these stations was selected to supplement the Oregon State College Agricultural Experiment Station data regarding fluoride concentrations found at test plots carried on from 1948 to 1954. He stated that the sampling data is published to July 1, 1954 in the Authority's First Biennial Report and that supplementary reports have been presented at previous meetings.

Mr. Hatchard pointed out that during the progress of the area survey the staff had consulted with F.E. Price, Dean, School of Agriculture, and Dr. O. C. Compton, Associate Horticulturist, Oregon State College, Agricultural Experiment Station, and Dr. M. B. McKay, resident in the Troutdale-Corbett vicinity. He explained that Oregon State College Agricultural Experiment Station reports showed a need for air sampling at test plot stations in the direction east - southeast of the plant and that our work has been done in that direction. Mr. Hatchard stated that these activities were a part of the area survey to determine present conditions and not based upon complaints since to date no written complaints have been received regarding fluoride damage to agriculture or livestock in the Troutdale-Corbett vicinity. He reported that no air sampling has been conducted since August 1954 due to the investigation on Sauvie Island and other commitments.

Mr. Mead again stated that they are not satisfied with the agriculture and livestock studies done by Dean Price's staff and that he believed there was no cooperation rendered in this situation. He stated that when the Martins entered into the case they appealed to Dean Price and the University of Oregon Medical School to do research work for them and offered to pay for it but they were unable to obtain cooperation. Mr. Mead implied that it finally was disclosed that they were doing research work for the aluminum companies.

He reported that the Martins then had to seek opinions of veterinarians and doctors in the east and had research work done outside of the State of Oregon and expressed the opinion that the Authority had an important duty to perform and should not rely on other data sources. Mr. Mead concluded that there is no secret about the fluoride situation, and it is common knowledge in Troutdale vicinity that Judge Fee found there is contamination discharged from the Reynolds Metals Company's plant.

Mr. Wendel asked Mr. Mead the basis of these conclusions.

Mr. Mead replied that it was based upon the admissions the company itself made regarding the fluoride quantity discharged, the opinion of expert veterinarians brought here from the east to testify in court and the opinion of pathologists that the cattle were damaged.

Mr. Wendel said he would like to explain that during the consideration of the Sauvie Island fluoride sampling the only matters brought before the Authority were hearsay and innuendo and that there was never any evidence of bias on the part of the Oregon State College or Washington State College.

Mr. West added that it is a serious charge to make that a college was biased and that it was his understanding that colleges, engaged in research projects are searching for the facts and that their conclusions would be based only upon the facts.

Mr. Mead retorted that he did not say "bias", and he repeated that they did not get

cooperation from the colleges.

Mr. West commented that if Mr. Mead did not use the word "bias" that he implied that meaning.

Chairman Green explained that recent agricultural and livestock research on Sauvie Island was supported by a grant from Alcoa and that the Authority arranged a special meeting to allow Mr. R. Fraser and others to present factual data to the Authority that would support their objections to the conclusions made in the colleges' report.

He stated that it has been difficult to establish the truth because the data presented at the special meeting, September 28, 1954, regarding Sauvie Island was all hearsay.

Mr. Mead emphasized that his statements regarding fluoride in Troutdale were not innuendo but facts supported by the courts. He stated, however, that Reynolds might believe that the Martin claim is unjust and did not want to cooperate but the damages are real, so real that they have destroyed the Martin property. Mr. Martin, he explained, recovered about \$47,000 damages plus \$900.00 court cost which just about paid for their experts.

Mr. Mead stated that numerous people had come to him with fluoride complaints in the Troutdale area and that he also had a number of smaller cases involving the Reynolds Metals Company that were settled out of court but the company did not admit liability in any of these cases.

Dr. Erickson asked if the findings of fact made by Judge J. A. Fee would be submitted to the Authority.

Mr. Mead replied that the transcript certainly was available together with depositions from many witnesses.

Dr. Erickson stated he understood Mr. Mead to say they were dealing with a toxic substance endangering the health of animals and humans.

Mr. Mead said that the case he referred to was a case involving only cattle but that there are three cases pending which involve human health damage and there is plenty of evidence and medical testimony from physicians to support the cases.

Dr. Erickson then asked if the case just referred to revealed no findings on human beings.

Mr. Mead replied that it did not.

Mr. Wendel advised Mr. Mead that if the complaint is submitted to the Authority in accordance with the procedure already explained that it will receive attention.

The Chairman explained that the Authority's investigation would necessarily be limited by budget and staff available.

Mr. West advised Mr. Mead that some of his assertions and charges were rather serious and should be proven.

Mr. Mead wanted to know if a letter from Mr. Martin stating he has been damaged or is being damaged now would be sufficient.

The Chairman advised Mr. Mead that was the correct procedure.

Mr. Mead said he would submit a formal letter bringing this situation to the attention of the Authority.

Mr. Fredric Yerke, Attorney, American Bank Bldg., Portland, Oregon representing Reynolds Metals asked to be heard stating this matter is one very vigorously disputed between the parties and their attorneys. He stated that Oregon State College was requested to do work on the Martin ranch and that Dr. Compton went on the ranch in 1951 and collected samples and the results were introduced at the trial but they were found to be lower in fluorine content than necessary to cause fluorine poisoning in cattle. Mr. Yerke stated that Oregon State College carried on extensive studies in the area but as far as he knew there was only one visit made to the Martin property. He stated further that insofar as the research work was concerned Reynolds Metals Company has never supported any research at either Oregon State or Washington State Colleges. He explained that at the time the plant was constructed in 1941 Mr. Martin was running a dairy ranch and continued to use the property for eight years and then he bought land one mile northwest of the plant, then purchased

another parcel of land known as Reed Island about 3 miles to the east of the plant. Mr. Yerke explained further that one year later Martin bought land east of the Sandy River, about 900 acres there, and in another year he bought land nearer to the plant, about one-half mile away from the plant. He stated that this presents a situation covering three and a half years wherein a man and his family had been buying property closer and closer to the plant. Mr. Yerke stated that the plant was constructed by Alcoa for the U.S. Defense Plant Corporation and operated the plant from 1941 to 1945 and the plant was closed down from 1945 to 1946 until September when Reynolds Metals Company leased the plant from the Government. He explained that after a fume control system was installed Reynolds started operating the plant and that the company's first contact with the Martins was in 1946 or 1947. He stated that some foliage sampling was done then but was discontinued in 1948 because of a dispute. Mr. Yerke advised the Authority that from that time on Reynolds have had claims presented by Martin and that first there was the law suit filed in August 1951 to cover the period from 1946 up to 1951. He stated that this case was tried by Judge Fee more than two years ago and that the decision rendered by Judge Fee was prior to August 1951 with the exception of one case and that Judge Fee refused to award damages after 1951 for reasons of his own. The main case Mr. Mead referred to, Mr. Yerke advised the Authority, is over two years ago and one case was over nine years ago. Therefore, he stated, this record is irrelevant to any situation that is occurring at this time and that Reynolds has competent medical testimony in every phase.

He pointed out that the amount of fluorine found by the Authority's staff one mile southeast of the plant was less than one part per billion whereas fluorine on top of the State Office Bldg., measured four parts per billion and that Reynolds have no doubt that no damage has been caused since August 1951 to the Martins. Mr. Yerke requested formally that if the Authority is going to consider the Troutdale fluoride matter that Dean Price, Dr. Compton and Dr. Remmert be requested to carry on the study of agriculture and livestock since these are well qualified men in their

respective fields and their results will be reliable. Mr. Yerke added that the Authority should also retain a veterinarian.

Mr. Yerke stated that for the months of June, July, August and September of 1954 the fluorine content of the pasture one mile east of the Sandy River averaged only 35 parts per million. Mr. Yerke requested that the Authority secure the services of experts, make investigations and run necessary tests and then study the scientific results.

The Chairman concluded this case by explaining the Authority had a long agenda to review and it would be advisable for the Board to set a date in the future for further hearing on this matter.

Mr. Wendel stated that he thought the Authority should have a written complaint on record to establish this case for a special hearing and that we will have legal counsel at such a time who will advise us on all phases. Mr. Wendel advised both attorneys that the Authority was desirous of learning the facts on both sides.

EUGENE: CITY AIR POLLUTION COMMITTEE ACTIVITIES

The Chairman requested a report on the activities of the Eugene Air Pollution Committee.

Mr. Hatchard stated that Mayor Johnson had appointed a nine man committee during December 1954, to study the cinder and flyash complaint in west Eugene and also consider the city wide situation. Mr. Hatchard explained that the Authority's staff has met with the committee several times and that a survey of lumber mills in west Eugene had been completed and a report prepared. He noted that the survey of the Eugene mills disclosed that 5 of the 10 mills contributing to the excessive cinder and flyash conditions had recently installed equipment that would reduce the quantity of wood waste burned. He also explained that the City of Eugene had requested the Air Pollution Authority to cooperatively plan for extension of air sampling to secure additional data.

NORTH BEND: CINDER AND FLYASH CONTROL RESULTS

The Chairman requested a progress report on the North Bend cinder problem.

Mr. Hatchard reviewed the area study by the staff and explained that the Weyerhaeuser mill had installed their cinder control system in September and since that time the fallout had reduced. He pointed out that the fallout varied between 1400 and 1700 tons per square mile per month during the winter months; however, during a comparable period after the control system was installed the fallout had reduced to 38 tons per square mile per month. He reported that the Irwin-Lyons mill is operating less frequently at this time which has helped to cut the emissions and that the Menasha Plywood Company had been delayed in starting their wood flour by-product plant. However, that next samples would show if the change has caused a reduction.

As a matter of interest Mr. Wendel asked if this work could have been accomplished without the air pollution law.

Mr. Hatchard replied that he doubted that it would have been since an extensive study was needed to show the sources.

OSWEGO: ARFA SAMPLING DATA, DESCRIBING CEMENT DUST DEPOSITION.

The Chairman requested a summary of the area survey in Oswego.

Mr. Whitsell explained that since the last Authority meeting the staff expanded the directional air sampling in the Oswego vicinity by setting up two new stations on the roof of the fire station and the Forrest Hills School. He stated that directional sampling at the Elementary School previously had shown that on an average of two to three times as much dust was present when the wind was from the cement plant to the station. He stated that subsequent sampling showed a repetition of the cement dust concentration at the Elementary School and Fire Station when the wind direction was from the plant to the station compared with the other directions. He explained that the previous sampling had shown the higher concentration was cement dust since the lime present accounted for 25 to 45% of the sample. He pointed out that the most

recent series showed that over 30% of the samples collected was lime and that the ordinary cement contained about 60% lime. It can be concluded that 53% of the particulate material was cement dust.

Mr. Whitsell explained that the purpose in establishing the sampling station at Forrest Hills School was to determine what level of dust and calcium oxide concentrations would be indicative of an area where nuisance conditions are not a problem to the residents. He reported that the average lime concentrations found at the Forrest Hills station on wind from the direction of the plant is 23 micrograms per cubic meter compared with 110 micrograms per cubic meter found at the Elementary School. He stated that the staff will be able to submit recommendations to the Oregon Portland Cement Company for additional dust control.

The Chairman invited representatives of the Oregon Portland Cement Company to report on their progress.

Mr. Yerke advised the Authority that they do not have their report ready since Mr. Leche is in the east and could not be present to give a report.

The Chairman stated the Authority realized there was no time to prepare a report since the meeting had been called on very short notice.

PORTLAND: ASPHALT ROOFING PLANT FUME DISCHARGE.

The Chairman requested a report regarding the status of fume problems from the Pabco plant discharge.

Mr. Terraglio summarized the Pabco Roofing Company complaint registered by the employees of Pennsylvania Salt Mfg. Company and stated that a survey was undertaken by the staff to determine levels of contaminants existing in the area. Mr. Terraglio explained that only the physical properties such as viscosity, softening point, weight, etc., were of importance to asphalt users and that the exact composition of asphalt was unknown. He reported that samples have been collected continuously at a station using a directional high volume sampling unit and other equipment to learn the levels

of particulate matter, sulfur dioxide and other contaminants present. He stated that the results have shown a high level of particulate material present and that sampling was continuing.

Mr. Hatchard explained that at the last meeting there was the health concern expressed by the Pennsylvania Salt employees; that Dr. Sullivan was advised of this complaint and he had requested the employees to submit detailed information describing their individual health effects to him.

Mr. Hatchard reported that there was considerable delay in preparing these statements but that Dr. Sullivan received 92 employee statements on February 19th. He explained that Dr. Sullivan was out of town and unable to attend the meeting.

The Chairman asked Mr. Hatchard if satisfactory progress was being made.

Mr. Hatchard stated he thought that Pabco is progressing with the installation of the three unit filter systems to collect the fumes and condensates from the saturators.

Mr. Stores Waterman of Pennsylvania Salt Mfg. Company advised the Authority that their cooperation was appreciated but that complaints were still being received from their employees that they are affected whenever the wind blows in the direction that brings Pabco fumes into the employees' work area. He stated this progress report gave hope that there would be elimination of condensed material and odor which has had a marked physiological effect on the employees. He also wished to be advised when the Authority would meet again.

Chairman Green assured him he would be notified.

PORTLAND; HYDROGEN SULFIDE ODOR PROBLEM IN SOUTHWEST AREA.

The Chairman requested a report on the hydrogen sulfide problem in southwest Portland.

Mr. Hatchard reported that this problem had appeared before but due to the intermittent nature of the emission it had proven very difficult to set up equipment to sample before the fumes dispersed. He stated that the city of Portland and the Authority

received many complaints and that by reviewing the previous field investigations the probable source was found to be a chemical plant located near the Willamette River at S.W. Carruthers Street. He explained that arrangements were made for the plant management to notify the staff when they expected to produce the lime - sulfur spray since the hydrogen sulfide is released intermittently then. The staff was at the plant site February 19th, and established three sampling stations; however, it proved to be a good day for the plant to operate since the discharges were being dispersed. He reported that on February 23rd and 24th, Chemist Lee collected hydrogen sulfide samples from the area and found concentrations from 0 to 8 parts per million.

Chairman Green pointed out to the members this was not only an odor problem but a toxicity problem as well and he asked if the hydrogen sulfide could be removed from the discharge before going into the atmosphere.

Mr. Hatchard replied that this could be done and that the company is now giving consideration to providing proper scrubbing equipment.

PORTLAND: KENTON DISTRICT SMOKE, FLYASH AND CINDER STUDY.

The Chairman requested a report on the smoke, flyash and cinder study in the Kenton District.

Mr. Whitsell reported on this complaint stating that the staff had made a survey of twenty-three industrial establishments and later decided only five had a reasonable chance to contribute to air pollution. Mr. Whitsell stated that the information secured from these five plants was as follows:

Portland Shingle Company

The plant was not in operation at the time of the visit but there was considerable evidence to show that they were contributing heavy discharges in the nature of cedar sawdust.

Nicolai Door

It was noted that some of their cyclones used for handling the sawdust from the saws

and other equipment was not collecting too well since much material escaped. The steam plant stack produced some smoke but it was not determined if it produced enough to be a problem.

M & M Plywood Company

One cyclone collector was discharging sawdust and not removing as much material as it should. The steam plant uses wood waste and does discharge excessive smoke but the cinder and flyash discharge is unknown.

Mayhew Company

No burning was being done at this plant and the cyclones were performing very well.

Montag Company

There are two possible sources of air pollution at this plant, the paint spray booth which they feel has already been corrected since cars can be parked now without suffering any damage and the foundry pouring which occurs for an hour once a day.

Mr. Whitsell stated he did not believe there was a complaint against this company, and that following the next sampling period the staff will have more general information on the fallout levels.

PORTLAND: DUST AND FUME DISCHARGE FROM FOUNDRY IN NORTH COLUMBIA BLVD., & ALBINA AVE.

The Chairman requested a report regarding the dust and fume discharge from the Rich Mfg. Company.

Mr. Hatchard reported that the complaint was referred to the Portland City Council and on December 24, the city requested the Authority's assistance and that a plant survey was made in cooperation with Mr. Brooks, of the Portland Health Bureau. He explained that Mr. Brooks and he had visited Rich Mfg. Company and had conferred with Mr. Fred Menzel, Assistant Plant Mgr. He stated that Mr. Brooks had contacted about fifteen complainants to determine if the complaint was mostly regarding dust, fumes or odor and it was learned that the complaint involved the plant's operation in general. He explained due to the prevailing wind at this time of the year and other commitments no sampling has been carried on in the complainants' area to date.

Mr. Fred Menzel, Rich Manufacturing Company appeared before the Authority and stated that his company did not know which discharges needed control. He stated they realize this is a problem "not of smog but a smoke and dust nuisance". He had contacted two firms for their recommendations as to what sort of equipment could be installed. He further said that they have received one quotation proposal for installing a scrubber type control unit on the cupola but that they had not received any replies from either of the companies as yet regarding the dipping operation which causes the creosote type odor.

PORTLAND: SUPERPHOSPHATE PLANT FLUORIDE DISCHARGE:

The Chairman requested a report of the studies of the superphosphate fluoride survey.

Mr. Terraglio explained that this was the first opportunity for the staff to make an area study before the plant started and that an automatic impinger has been located at a station at the former Oregon Shipyard grounds and on a Sauvie Island station located about $1\frac{1}{2}$ miles northwest of the superphosphate plant. He reported that the sampling is continuing.

Mr. Hatchard stated that Mr. Hughes of Hughes-Johnson Chemical Company had conferred with the staff to determine what would be his solution for the fluoride discharge problem and that the management realized the need for control, were working on the control system and that Mr. Hughes had agreed to notify the Authority when test operations occur so that air samples could be collected.

REQUESTS FROM CITY OF PORTLAND FOR JOINT INVESTIGATION OF NEW COMPLAINTS

The Secretary advised the Authority that three requests had been received for assistance in connection with investigation of atmospheric contamination originating in the City of Portland.

He explained that Mr. Grenfell, representative from Portland, requested the Authority to take some action regarding conditions arising from the roasting of coffee, and that the Authority had received a complaint from Dr. Dewey regarding soot, cinders and

flyash being emitted from Northwest Electric Plant and the Jones Lumber Company.

The Secretary stated the third situation involved excessive smoke discharge from the B.P. Johns Furniture Company and that joint field investigations would be made by the city and Authority representatives as soon as schedules will permit.

ASPHALT PAVING PLANT DUST AND FUME DISCHARGES

The Chairman asked if the Authority staff was working on this problem.

Mr. Hatchard informed him that a memorandum had been prepared on the prevention of dust and fume problems associated with the location of paving plants not equipped with adequate dust control and these recommendations had been sent to the Associated General Contractors and State Highway Commission.

He explained that the Authority had received a request from the State Highway Commission for information regarding control equipment for asphalt plants and that all available information had been provided.

ASSOCIATED FOREST INDUSTRIES AIR POLLUTION COMMITTEE

The Chairman stated that he had written to Mr. C. F. Ogle, Secretary-Manager, Associated Forest Industries of Oregon expressing his dissatisfaction in the lack of progress that their air pollution committee has made in working out a method to solve their industry problems. He further added that a reply from Mr. Ogle substantiated this conclusion. The Chairman explained that he did not believe that the Authority was getting the type of cooperation it should have from industry to find some answers for air pollution problems to accomplish something definite, and establish a working program with the Authority.

The members of the Authority agreed that the Authority should look for more assistance from the Associated Forest Industries of Oregon.

Dr. Erickson stated that it seemed to him that the Associated Forest Industries of Oregon was depending upon the individual mill owners to take action on specific problems instead of approaching it as a general industry problem.

Mr. Hatchard explained this to the Authority that the staff had frequent contact with lumber mill owners and since no representative of the Associated Forest Industries of Oregon committee was present he stated that the larger size mills make up the membership and that they use more of the wood waste than the smaller size mills. He explained that the Association believes that the cinder and flyash problems would be reduced by increased use of wood waste; however, they are considering a much longer time period than present complainants would wait for solution of specific problems.

Mr. Hatchard stated that the problems can be solved as there is sufficient basic data but there is a present need to apply the knowledge to the wigwam waste burner situation.

The Chairman stated that the time would be too far into the future, such as 10 to 20 years away before the woodwaste would be used and that the Authority should contact the officers of the committee to promote more activity by the lumber industry.

Mr. West stated that a cooperative effort was the logical procedure instead of each lumber mill owner having to develop individual solutions.

Dr. Erickson stated it appeared to him a matter of education and that it would be worthwhile to get together and discuss the problem and also get the Association's point of view.

MOTION RE: ASSOCIATED FOREST INDUSTRIES OF OREGON

It was MOVED by Dr. Erickson and seconded by Mr. West that the Secretary of the Authority contact Mr. Ogle and meet with the Board of Directors of the Association to arrange a meeting with the Association at the earliest possible date.

SWEET HOME

The Secretary informed the members that the Authority had received a complaint-petition signed by 65 residents in the Sweet Home vicinity regarding the discharge of cinders and flyash from the Santiam Lumber Company. The Authority has advised the complainants that studies were underway in that area. The Secretary explained that since these complainants resided outside of Sweet Home and the plant is partly inside

the city, a copy of the correspondence has been sent to the city. The Secretary stated that the complainants and the Santiam Lumber Company would be notified of the next regular meeting so they can arrange to be present.

Mr. Hatchard advised the Authority of the District Engineers' survey of the conditions and submitted pictures taken showing the cinder deposition on the complainants' property. He stated that it is clear that the installation of cinder controls are needed and that from the nature of the fallout it appeared that much of the deposition originated with the steam plant. He reported that a letter has been sent to the Santiam Lumber Company explaining the situation and a reply was received saying that it is their intention to take care of the matter and requested the Authority advise regarding cinder control equipment available commercially.

The Chairman asked if the staff had any recommendations to make at this time.

Mr. Hatchard stated that we would like to consider this problem at the next Authority meeting when the data from the fallout station will be available.

DATE OF NEXT MEETING

It was decided that the next meeting of the Authority would be at the call of the Chairman.

MEETING ADJOURNED

There being no further business, the meeting adjourned at 4:30 P.M.

Respectfully submitted,

CURTISS M. EVERTS, Jr., Secretary
Oregon State Air Pollution Authority

THIRTEENTH MEETING
OF THE
OREGON AIR POLLUTION AUTHORITY

June 23, 1955

The Thirteenth meeting of the Oregon State Air Pollution Authority was called to order by the Chairman at 1:30 P.M., Thursday, June 23, 1955, in Room 579, State Office Bldg., 1400 S.W. 5th Avenue, Portland, Oregon. Those present were Carl E. Green, Chairman, Merle S. West, Vice Chairman, Mr. R.P. Dixon, Dr. Harold M. Erickson, Harold F. Wendel, Members and Curtiss M. Everts, Jr., Secretary, Charles D. Burt, Legal Advisor, R. E. Hatchard, Chief of the Air Pollution Control Section, W. J. Whitwell, Associate Engineer, State Board of Health, Frank P. Terraglio and Eugene E. Lee, Chemists, State Board of Health.

MOTION RE: MINUTES OF PREVIOUS MEETING

The Secretary summarized the minutes of the special meeting of March 2, 1955. The Chairman declared that if there were no corrections or additions the minutes would stand approved as prepared by the Secretary.

TROUTDALE-CORBETT AREA

The Chairman requested the Secretary to read communications received regarding the fluoride problem.

The Secretary read a letter dated March 8, from Paul and Verla Martin in which a formal complaint was entered that the discharges from the Reynolds Metals Company were adversely affecting livestock on their ranch near Troutdale, Oregon.

The Secretary also read a letter dated March 29, from Attorney F.A. Yerke, Jr., representing Reynolds Metals Company which recommended that the Authority collect basic data regarding the fluoride conditions in the vicinity of the Martin ranch and that samples of vegetation be collected and submitted to Oregon State College for analytical purposes. Mr. Yerke's letter also recommended that experienced veterinarians make an immediate inspection of the cattle, collect urine samples from at least twenty head of cattle; that the Martins notify the Authority of any cattle deaths that occurred so that appropriate samples could be collected and analyzed

and that the Martins notify the Authority of any sales of animals that were contemplated so that the cattle could be examined and samples collected.

The Secretary also read a letter dated April 11, from Paul Martin requesting immediate action by the Authority on the complaint entered March 8, 1955 and enclosing a copy of the findings of fact, conclusions of law, and judgment rendered by Judge James Alger Fee of the U.S. District Court, in the case of Paul and Verla Martin versus Reynolds Metals Company.

The Chairman then requested a report from the staff regarding the area fluoride studies.

Mr. Whitsell stated that sampling for atmospheric fluorides in the vicinity of the Reynolds Metals Company Plant, Troutdale, Oregon, was resumed April 28, 1955 and that two automatic impingers have been operating day and night since that time except for the period from May 27, to June 6. He stated that an interim report had been prepared including results of the first 160 samples and that a copy of the report had been provided to each member of the Authority.

Mr. Whitsell explained that one automatic impinger was located at the Schutze residence which is 4,000 feet southeast of the aluminum plant and that the second automatic impinger had been operating at the Graham residence located 3,500 feet east southeast of the plant. He stated that both instruments used the standard Smith-Greenberg impingers and were operated at sampling rates between 0.9 and 1.1 cubic feet per minute and that each unit had automatic controls which operated the equipment on regularly repeating cycles.

Mr. Whitsell stated that the weather data included in the report was incomplete since the U.S. Weather Bureau Troutdale data was available only during the daylight hours from 0700 to 1500. He explained that where weather data is more complete in the report that these results are from the staff's own weather equipment which is also located at the Troutdale Airport.

Mr. Whitsell advised that on the last page of the interim report was a tabulation that showed that the fluoride concentrations present, when the wind was from the direction of the aluminum plant, was slightly higher compared with the winds from the opposite direction. He also pointed out that the average fluoride concentration of 1.3 ppb found at the Graham station is 60% higher than the average concentration for all Portland fluoride samples. He explained that the maximum concentration found at the Graham station was 4 parts per billion which is equal to the maximum concentration found in Portland in June 1954.

Mr. Whitsell pointed out that the meaning of these concentrations is still somewhat obscure since extensive research studies have not been carried on relating the effect upon livestock or agriculture in an area to the air fluoride concentration. However, he stated it is known that a few of the more sensitive varieties of the gladioli sustain some leaf damage when grown in an area where the fluoride concentration in the air is from one to two parts per billion.

Mr. Wendel asked if the fluoride air concentrations could be interpreted with regard to their effects on livestock and agriculture.

Mr. Whitsell replied that the exact meaning of the air concentrations was a little obscure; however, it was found that air concentrations coming from the direction of the plant were slightly higher than those when the wind is blowing in an opposite direction for the same station. He added that this is an indirect method and was not conclusive since research activities in other areas have not developed correlations between air concentrations and effects upon livestock or agriculture in the area.

The Chairman asked if there were any statements in the reports made by Oregon State College and Washington State College that would correlate the air concentrations with livestock and agricultural effects.

Mr. Whitsell replied that the colleges' reports did not include that information.

Mr. Wendel stated that he would like to see the Authority send the findings to Oregon State College and request interpretation with regards to livestock and agricultural damage in the vicinity.

Mr. Dixon asked if any studies had been done on livestock in the Troutdale area.

Mr. Whitsell stated that neither Oregon State nor the staff has done any work with regard to fluoride damage to the livestock; however, both the Reynolds Metals Company and plaintiffs in several civil suits had been carrying on independent studies.

Mr. Whitsell explained that the colleges' ability to interpret the air concentrations would depend upon whether they had collected foliage and other samples in the same area where the staff had collected air samples.

The Chairman emphasized that there is a need for correlation so the efforts being devoted to solving the problem will produce usable data. The Chairman asked if there were others present who wished to be heard.

George W. Mead, Attorney, Public Service Bldg., representing Paul Martin stated that he had previously filed a complaint against Reynolds Metals Company before the Authority at the March 2, 1955 meeting for his client, Paul Martin and that the findings of fact have been established by the U.S. District Court bringing out the fact that a serious problem is present. Mr. Mead also stated he and his client were present today to learn what has been done and that he believed a thorough investigation should be carried on.

Mr. Fredric Yerke, Attorney, representing Reynolds Metals Company stated they were not present with the intention of making any explanation at this time of the claims made by the Martins since these matters are being litigated in the Federal and Circuit Courts. Mr. Yerke explained that they have attempted for a period of some months to collect samples on the Martin property to secure data and that the Reynolds Metals Company now has a court order which will permit them to have a team of veterinarians examine the cattle and collect samples on the first Tuesday of each month. Mr. Yerke

assured the Authority that all of the information obtained could be made available to the Authority. He further stated that the Reynolds Metals Company believes their position is sound - that no damage is occurring now and none has appeared for several years.

The Chairman asked if Special Assistant Attorney General Burt had any comment regarding the action to be taken.

Attorney Burt advised the Authority that if the complainants against Reynolds Metals had any information that would shed light on this problem it should be presented but that in the meantime the Authority should make its own independent investigations.

Mr. Wm. M. Fraser, Rt. 1, Box 112, Portland, Oregon appeared before the Authority and stated he had moved about 700 head of cattle to Government Island on the Columbia River with the hope that less fluorine contamination was present in that locality than at Sauvie Island and that he would have a chance to raise livestock but now many of the cattle are dead. He stated that both Mr. Zeh and Mr. Yerke have seen the condition of his cattle and that they know the plant is emitting "poison". He added that there is no safe level for fluoride since it is a cumulative poison. He said it is impossible to breed cattle within the vicinity of an aluminum plant and that he has seen the Martin cattle and they are all lame and dying. He stated the Authority is just stalling along and that the only thing to do is for the Authority to close the Reynolds Metals Company plant.

Mr. Wendel asked how long Mr. Fraser had his cattle on Government Island.

Mr. Fraser replied that he moved the stock from Sauvie Island about two years ago.

Mr. Wendel wanted to know why Mr. Fraser moved his cattle to a place in between two aluminum plants.

Mr. Fraser stated that he thought there were no fluorine emissions there at the time but later found that there were. He said that he had no law suit against Reynolds but that between Reynolds Metals and Alcoa he had gone broke.

Mr. Wendel repeated that the Authority wants only factual evidence in writing and not hearsay.

He stated the Authority would have to have more expert assistance such as veterinarians, chemists, etc., so the Authority could develop its own data from which conclusions could be drawn.

Mr. Fraser concluded that he was just wasting his time coming before the Authority.

The Chairman advised Mr. Fraser that if he had a complaint or evidence regarding the fluoride problem that it should be presented to the Authority in writing.

Mr. Fraser asked if he did bring in evidence would the Authority close the Reynolds Metals Company plant.

Mr. Green explained that the Authority must have evidence from both sides and that the Authority could not arbitrarily close either Alcoa or Reynolds Metals but would have to follow legal procedures in both cases if such action were indicated.

MOTION RE: TROUTDALE-CORBETT AREA

It was MOVED by Mr. Wendel and seconded by Mr. Dixon and carried that any evidence which comes before the Air Pollution Authority must be submitted in writing and that the Authority proceed to supplement its staff with specialized technical assistance to obtain further information on the problem.

MOTION RE: TROUTDALE-CORBETT AREA

It was MOVED by Mr. West and seconded by Mr. Wendel and carried that the staff be instructed to proceed further with the investigation of fluoride emissions from Reynolds Metals Company.

OSWEGO: OREGON PORTLAND CEMENT COMPANY

The Chairman requested Mr. Hatchard to report on the status of the area study in Oswego. Mr. Hatchard stated that a summary report had been prepared by the staff including the results of all air sampling, field investigations and plant surveys completed during the past two years in Oswego. He explained that since this report

had previously been sent to the members of the Authority in advance of the meeting that at this time only the conclusions contained in the report would be restated:

* * * * *

1. The Oswego area is still being polluted excessively by emissions of cement dust from the Oregon Portland Cement Company's plant.
2. These emissions are causing economic losses and inconvenience to many Oswego residents and business establishments.
3. The cement company stack is releasing cement dust which accounts for the major part of the area problem.
4. It has been calculated from sampling results that these stack emissions must be reduced 80% to reduce nuisance conditions to tolerable levels.
5. There are stack-filtering equipment and engineering knowledge available which can reduce these emissions as described.

Mr. Hatchard advised the technical staff had met with the representatives of the Oregon Portland Cement Company to consider the area sampling data and he reported that the company provided the results of 70 stack emission measurements made during 1953 and 1954. He explained that consideration of the available data resulted in the recommendations contained in the Authority's letter of May 31, 1955 to Mr. D.H. Leche and that these recommendations are as follows:

1. That appropriate additional dust control equipment for the rotary kilns be installed.
2. That the dust control systems provided for the rotary kilns have the capacity to remove 99.5% of the dust discharged from the kilns.
3. That the plans and specifications for additional dust control equipment be submitted to the Authority for review before installation is made.
4. That a narrative description or a schematic plan of the proposed additional dust control systems be submitted to the Authority in advance of the next regular meeting which is tentatively scheduled for June 23, 1955.

The Secretary then read a letter dated June 17, 1955 which had been received from Oregon Portland Cement Company and to which there was attached a schematic plan of the proposed new facilities for the elimination of dust in accordance with the fourth recommendation set forth in the Authority's letter of May 31, 1955.

The Chairman advised Mr. McCaslin that the Authority appreciated the cooperation shown by Oregon Portland Cement Company and assured him that the technical staff would work with them on the problem.

Mr. Yerke informed the Authority that since the letter of June 17, 1955 was mailed Western Precipitation Corporation has been engaged to install the precipitator and that it would take approximately ten months to complete construction of the second precipitator and modification of the present precipitator.

Mr. Yerke stated that the project will cost about \$261,000 when completed.

Mr. Wendel asked if this control equipment would result in recovery of their product.

Mr. Yerke said they were sure it would.

Mr. McCaslin added that the value of the cement collected over the amount of cement collected with the present precipitator will be small compared with the cost of the installation.

Chairman Green instructed that the City of Oswego be advised of the progress.

PORTLAND: PARTICULATE MATTER FOUND AT FIVE PORTLAND STATIONS

The Chairman requested Mr. Hatchard to report on the area study of particulate matter present at five Portland sampling stations.

Mr. Hatchard explained that in September 1953, a national air sampling project was started under the sponsorship of the Public Health Service to obtain information showing the concentration of particulate matter present in U.S. urban communities and to develop sampling and analytical methods that will consistently describe the concentration and type of contaminants present.

Since September 1953 the staff has operated five area sampling stations using a high

volume sampler and an 8" X 10" glass fiber filter. He explained further that approximately 2,000 cubic meters of air are passed through the filter and that initially at least one sample was collected each week.

Mr. Hatchard pointed out that there are at present 90 sampling stations in 39 U.S. communities collecting samples under identical procedures and equipment and that in April 1955 Dr. Leslie Chambers, Director, Research, Taft Sanitary Engineering Center, had prepared a report summarizing the sample data secured. Mr. Hatchard stated that the staff had prepared a preliminary report summarizing the data secured at the Portland stations and that this report had been furnished to each member. He stated further that in Table I of the report is shown the maximum, average and minimum total particulate matter found at the sample stations on the State Office Building roof, the U.S. Forestry Service, Bldg., at N.W. Yeon near Nicolai Street and the Hill Military Academy near N.E. 92nd and Fremont. He explained that the average of all Portland samples collected was shown on Table III together with the comparison of the values found in six other cities having populations between one-half to two million.

Mr. Hatchard pointed out that the 143 micrograms per cubic meter average concentration present in Portland was exceeded only by Kansas City and Cincinnati. He stated further that Table III also shows what portion of the average particulate matter found was acetone soluble. He explained that this value is a measure of the amount of particulate matter present as hydrocarbons. He explained that this is a significant value since this material originates from general community activities. He reported that the 32.1 micrograms per cubic meter acetone soluble portion found at the Portland stations was the highest value found in comparable sized urban communities.

Mr. Hatchard stated that a continuous sampling period was carried on from October 27, to November 6, using five area sampling stations. The data secured from these stations is shown in Table V.

Mr. Hatchard indicated that the data thus far secured supports the following general comments.

1. The concentration of particulate matter found at the Portland stations is greater than the concentration present in San Francisco, Minneapolis, Houston and Atlanta and slightly less in Kansas City.
2. The Portland sampling stations showed the highest concentration of acetone soluble portion for cities from one-half million to two million population.
3. The exceptionally high Portland concentration of particulate matter found during the October and November sampling is similar to values found in Los Angeles during the same time of the year. This time period also coincides with the occurrence of frequent temperature inversions which limit the ability of the atmosphere to disperse the contaminants.
4. The lowest concentrations found during the continuous series of sampling occurred on Saturday and Sunday which may indicate the reduction caused by the normal weekend shut-down of industrial and commercial activities.

Chairman Green directed the staff to continue area studies in Portland.

Mr. Wendel suggested that the Authority send a letter to the City of Portland advising that the study of particulate matter shows that Portland has the highest value of acetone soluble of any cities of comparable size in the U.S. He suggested that in this letter we should ask what action the city is taking in the problem.

PORTLAND: KENTON DISTRICT: SMOKE FLYASH AND CINDER STUDY

Chairman Green requested Mr. Eugene Lee to make a report on the staff's investigation of the problem.

Mr. Lee reported that since the last meeting of the Authority two series of fallout samples have been collected from three stations in the area. The first series had been collected March 9, and the second on May 18. Mr. Lee advised that the laboratory results on these samples showed fallout values lower than the 25 tons per square mile per month rate that has previously been found to be the amount where nuisance conditions are created.

He explained that the low fallout results obtained thus far may be attributed to poor wind conditions for sampling.

The directional fallout unit located in the Kenton district has not produced samples that showed the source and therefore it is planned to move the instrument in the near future. Mr. Lee concluded that a study should be continued and the reports submitted at the next Authority meeting.

Chairman Green directed the staff to continue the investigation.

PORTLAND: PABCO ROOFING PLANT

Chairman Green requested that Dr. Ralph R. Sullivan, Director, Occupational Health Section, State Board of Health, to report on the investigation of health effects regarding the fumes from the Pabco Roofing Company.

Dr. Sullivan stated that in October 1954 Mr. Wm. Callahan, Chairman, State Industrial Accident Commission, advised him that the complaint had been received from the employees of the Pennsylvania Salt Company alleging health injury due to fumes from the nearby Pabco Roofing Company. Dr. Sullivan explained that the State Industrial Accident Commission referred the complaint petition to the State Board of Health for investigation. Dr. Sullivan reported that in response to the Authority's request for investigation of alleged health injury a visit was made to the Pennsylvania Salt Company in November 1954 to confer with the plant superintendent, supervisors and several employees known to have been affected by the fumes. Dr. Sullivan explained that from the result of these discussions it was decided that a health questionnaire would be circulated among the employees of the Pennsylvania Salt Company in order to obtain:

1. Names of all employees affected.
2. Symptoms and their frequency.
3. Medical consultation.
4. Name of the attending physician.

Dr. Sullivan stated that considerable time was required in securing the completed questionnaires and evaluating the results obtained. He stated further that the find-

ings based upon 92 returned employee questionnaires are as follows:

1. That the fumes objected to came from the neighboring Pabco plant.
2. That approximately 50% of the Pennsylvania Salt Company employees suffered ill affects according to their statements without any substantial difference shown regarding the location of their work area in the Pennsylvania Salt Plant.
3. That over 50% of the Pennsylvania Salt employees believe that the objectionable fumes were associated with the times when the wind direction was from the Pabco Plant to the Pennsylvania Salt Plant.
4. That the most frequent symptom was the inability to eat, nose and throat irritation, headaches, burning of the eyes, pain in the chest with breathing difficulty.
5. Five employees had seen personal physicians and in two of these cases indication of bronchial irritation and irritation of the nose and throat were noted by the physicians.

Dr. Sullivan summarized the results of his investigation as follows:

1. That the investigation dealt with the one part of the complaint alleging injury to health as a result of the fumes from the Pabco Plant and that over 50% of the Pennsylvania Salt employees reported symptoms such as nose and throat irritation, nausea, inability to eat, headaches, etc. Dr. Sullivan stated that limited medical evidence available indicated chronic irritation of the respiratory tract, chiefly of the nose and throat. However, the analyses of the employees' questionnaire suggested that most of the employees' symptoms were an annoyance or nuisance rather than a health hazard.
2. That previous studies of the Pennsylvania Salt Company including analyses of the air samples indicate that the symptoms or findings are not due to chlorine or other working atmospheric contaminants originating within the Pennsylvania Salt Plant.
3. That this investigation did not include the employees of Pabco or other plants in the vicinity which should be done if a study were to be set up to determine the long range effects on health such as cancer of the lung, skin, etc.

4. The second aspect of the complaint referring to asphalt causing cancer of the lung was not investigated at this time except to review the medical literature. Special research study would be necessary to identify chemically the presence of carcinogenic hydrocarbons and to establish a long range epidemiologic study of cancer of the lung in the exposed group.

The Chairman requested Mr. Frank Terraglio to report on the air sampling carried on by the staff since the last meeting.

Mr. Terraglio stated that a high volume air sampler with a pleated filter had been continuously run since the 2nd of March, using a wind direction switch for controlling the sampling and that it has taken usually several days to obtain a representative sample. He reported that fifteen samples were collected to show the discharges from the Pabco Roofing Plant from 10:00 AM to 6:00 PM. The total particulate matter found ranged from 228 to 3,885 micrograms per cubic meter with the average being 1,357.

Mr. Terraglio reported that five samples were collected during the period from 10:00 PM to 6:00 AM and the total particulate matter varied from 344 to 5,120 with an average of 1,364 micrograms per cubic meter. Mr. Terraglio compared these averages with the 176 micrograms per cubic meter found in samples collected at the station in the industrial area in Portland.

He also reported that on January 31, a special sample was collected using an 8" X 10" glass fiber filter and that this sample was submitted for analyses to the Taft Sanitary Engineering laboratory in Cincinnati. He stated that the total particulate matter found was 1,350 micrograms per cubic meter and that the organic particulate matter material composed 1,100 micrograms per cubic meter of the sample or 81% of the total.

Mr. Terraglio advised that the management of the Pabco Roofing Company had provided records of their plant operation units and that an attempt has been made to correlate plant operations with our sampling results. He stated that it has been extremely difficult to develop a relationship because of the extended sampling period. However, in one case on the 5th of February all operations at the Pabco Roofing Plant were shut

down and at that time one of the lowest results, 195 micrograms per cubic meter was obtained.

Mr. Terraglio stated that on March 18, the installation of the three saturator tank filter systems was completed and that since that time from 25 to 30 gallons of oil condensate has been collected per shift. He pointed out, however, that high particulate matter concentrations have been obtained since the installation of these filters. Mr. Terraglio concluded that the staff would like more information from the company regarding their emissions at the point of discharge during representative plant operations.

Mr. Walter Simon, Mgr. Pabco Roofing Company, Portland, stated that about the end of July they will have completed additional changes so that fumes from the asphalt plant will be eliminated. He further stated that before they proceeded with new installations they wished to know what sort of results will be obtained from corrections now underway.

Mr. Simon explained that his company spent about \$12,000 on the filters thus far and that they expected to spend another \$7,000 to \$8,000 for additional facilities. He reported that they intend to run tests on their discharges when this work is completed.

Mr. Wendel asked if any civil actions were pending.

Mr. Simon replied that there were none as a result of fumes; however, there was one situation two or three months ago when the plant discharged some oil into the air accidentally and the damage to cars was handled by their insurance company.

Mr. Wendel stated that he was pleased to learn that the company was making progress with the corrections.

Chairman Green stated that the staff should continue the investigation and submit a report at the next meeting.

PORTLAND: HYDROGEN SULFIDE IN S.W. PORTLAND

The Chairman requested a report from Mr. Hatchard regarding the staff's investigation of hydrogen sulfide in southwest Portland.

Mr. Hatchard stated that the staff had prepared a preliminary report summarizing their area investigations and sampling activities; that a copy of this report had previously

been sent to each Authority member. He also stated that the report has been sent to the management of the Miller Products Company and to Dr. T. L. Meador, City Health Officer. Mr. Hatchard stated the following recommendations were made in the report.

1. That the Miller Products Company advise the City Health Department or the Authority in advance when they are planning to produce lime sulfur spray.
2. That the company develop appropriate plans for controlling the discharge of hydrogen sulfide.
3. That plans and specifications for the control system be submitted to the Air Pollution Authority for review before any installation is made.

The Secretary stated that a letter dated June 22, 1955 had been received from F. E. Stewart, Assistant General Mgr., Miller Products Company, advising that a control installation would be in operation prior to their next processing period this fall and that experiments were being carried on by the Airkem Company to determine if the odor counteractant would remove the nuisance condition.

The Chairman asked Mr. Hatchard if the staff was receiving satisfactory cooperation from the company.

Mr. Hatchard replied that the management of the Miller Products Company had been very cooperative. However, no plans had been submitted by the company as yet describing the proposed control system. Mr. Hatchard stated that the staff would review the experimental work being carried on by the Airkem Company since the hydrogen sulfide discharges from the Miller Products Company were not associated only with an odor problem. He pointed out that hydrogen sulfide of relatively low concentrations is a toxic material.

PORTLAND: DUST AND FUMES DISCHARGED FROM RICH MFG. COMPANY

The Chairman requested the staff to report on the investigation of fumes from the Rich Mfg. Company plant.

Mr. Hatchard advised the Authority this matter had been previously referred to the City of Portland and that the Authority had received a request for assistance from the City. The staff has been continuing studies cooperatively with the City and

had made several plant visits. He stated that the study was delayed due to other commitments but in April sampling had been started at a station approximately 200 feet S.E. of the Rich Mfg. Company. Mr. Hatchard reported that the findings are very preliminary at this time but the samples collected showed excessive particulate matter present. Mr. Hatchard stated that the company management realized there is a problem that needs correction and that the company has been working for some time on plans for re-designing the pipe dipping process. He explained that the other major discharge originates from the cupola and that the company has a similar plant in Los Angeles County and therefore acquainted with the available methods for correcting the problem. He reported that the company has advised the Authority's staff that engineering work is going on at the present time to control the cupola discharge. Mr. Hatchard stated that the management is concerned regarding the degree of control needed to remove the nuisance conditions and that Mr. Fred Menzel, Assistant Plant Manager is now in the east and part of his tour will be to observe other similar operations and control systems. The company had requested the staff to obtain samples during the worst conditions so the data would be available for consideration with their plans for control.

Chairman Green directed the staff to continue the investigation.

PORTLAND: SMOKE AND CINDERS FROM M & M LUMBER COMPANY DOOR PLANT

The Chairman requested a staff report of the smoke and cinders from the M & M Lumber Company Door plant.

Mr. Hatchard stated that a petition signed by 4^R persons was received by the Portland Health Bureau regarding the smoke and cinder discharge from the M & M Door Company's plant at N.E. 25th and Multnomah and that the City had requested assistance from the Air Pollution Authority. He reported that a plant visit was made to the M & M Lumber Company with a representative from the City Health Bureau in May and that the problem was discussed with the management. The company was aware of the problem and is proceeding with investigations. Mr. Hatchard explained, and the Dohrer Company of Seattle has been retained by the company to study the steam plant emissions. He

He advised that the Dohrer Company was at the plant during the week of June 13th, and that a report is expected during the week of June 27th. He reported that the M & M Lumber Company management has advised the City that they will proceed as soon as recommendations are available to provide the control that is needed and that a progress report will be made at the next meeting. Mr. Hatchard stated that there has been an increase in cooperative work done in the Portland area with representatives of the City on complaint investigations and plant visits during recent months.

Chairman Green stated that the Authority should commend the Portland City Club's Air Pollution Study Committee for their thorough and well prepared report on the Portland air pollution conditions.

MULTNOMAH COUNTY: REFUSE DUMP -- S.E. 127th and Stark Streets

The Chairman requested a staff report on the refuse dump at S.E. 127th and Stark Streets.

Mr. Whitsell reported that the County Commissioners had received numerous complaints relative to conditions at this dump over a period of several years and recommendations had been made to correct the nuisance.

In September 1954 after receipt of a petition with 79 signatures Mr. Hatchard discussed the matter with the Multnomah County Health Department and offered assistance of our staff if necessary to investigate the air pollution problem of the complaint and that in February a member of the staff had visited the area and determined that at least 50 occupied residences are located so as to be adversely affected by operations of the dump.

Mr. Whitsell explained that after receipt of another petition naming the Air Pollution Authority as one of the petitioned agencies Mr. Hatchard attended the Board of County Commissioners' public hearing on May 10th, 1955 at which meeting the complainants stated that the dump caused fire and traffic safety hazards, mosquito and rat infestation and smoke, odor and flyash nuisances. Mr. Whitsell advised that the defendants presented a counter-petition signed by residents and customers who declared

that the dump was not a nuisance, that the dump was necessary to prevent uncontrolled dumping along the roadways, and that rats and mosquitoes were being controlled.

Mr. Whitsell stated that Chairman Gleeson advised that the Board would need reports from County and State Departments based upon their investigations before any decision could be made regarding the dump. He reported that on May 26, Mr. Hatchard and Mr. Porti, Sr. County Sanitarian, inspected the refuse dump and conferred with Mr. Talbot, one of the owners and that a tour of the surrounding residential areas revealed sharp odors and the likelihood of smoke and flyash nuisances with north and northwest winds and that on June 8, following a request for a report from the County Commissioners two fallout stations were established in the residential areas. He also reported that on June 20, a member of the staff again visited the dump and observed burning operations which were producing considerable smoke and flyash. Mr. Whitsell stated that the staff recommends that a study be continued and that a report be made to the Board of County Commissioners as requested.

Chairman Green stated that if there were no objections the work would be continued and a report made at a later date.

The Secretary read a letter dated June 15, to the Authority signed by Dr. Charleton regarding the continued operation of burning refuse dumps north of the Portland city limits and suggesting that these conditions be controlled.

The Chairman asked if there was a refuse burning conducted at the site of the former Seibert dump.

Mr. Hatchard replied that there was not but that there was refuse burning at several locations nearby and that the staff had received numerous telephone complaints but no formal complaints had been submitted. He explained that both the City and County have also received complaints regarding the smoke, odor and flyash for the refuse burning dumps in this vicinity.

Mr. Wendel added that burning is definitely going on as one can notice it when driving by.

Chairman Green wished to know if conditions are comparable to the Seivert dump that was closed down.

Mr. Hatchard replied that the situations are very similar.

EUGENE: STATUS OF THE AIR POLLUTION STUDY

The Chairman requested a staff report regarding the Eugene air pollution study.

Mr. Hatchard advised the Authority that the City of Eugene had organized a City Air Pollution Committee last year and that the staff had met with them on about four occasions, and that District Engineer Merryman has also worked with the committee. He explained that at present the committee is formulating their report for the consideration of the City Council and that Committee. Chairman Westling has reported that they intend to have the report before the Council in early July.

Mr. Hatchard reported that the staff has been working closely with the City of Eugene who has made available a part-time employee from the City Engineer's office so that air sampling could be expanded in the Eugene area. He stated that the five fallout stations had been increased to 17 and that observations of the characteristics of the 17 steam plants in Eugene have been made to accumulate basic data. He advised that at present the City of Eugene is taking more action toward developing a city ordinance than any other city in the state and that other cities have indicated interest. He pointed out that there is an obvious need to develop local ordinances for cities in Oregon.

SWEET HOME: SANTIAM LUMBER COMPANY

The Chairman requested a staff report on the investigation of the cinder and flyash discharged from the Santiam Lumber Company.

Mr. Hatchard recalled that at the last meeting of the Authority a complaint petition signed by 65 residents in the Sweet Home area was presented and that the complaint involved deposition of cinder and flyash from the Santiam Lumber Company. Mr. Hatchard reported District Engineer Merryman has been investigating this problem and has made visits to the plant and located fallout stations in the vicinity and that the Au-

thority had notified the company of the results of the sampling and survey of their plant. He stated that the company had been advised that their present discharges are in violation of state statutes and that the installation of cinder control equipment was recommended.

The Secretary read a letter from Mr. Walter Leisy, Mgr. Santiam Lumber Company dated June 21, 1955 that advised the Authority that the company is installing a log debarker which will be in operation September 1955 and will allow a utilization of a higher percentage of the plant wood waste and that the McManama Company, Seattle, Washington has been studying the steam plant and has proposed the installation of Western Precipitation Corporation's multiclones at a cost of \$50,000 and that the company wished to postpone purchase of the collectors until the log debarker is completed.

Mr. West stated that the company's plan for control was another example of cooperation from industry.

Mr. Wendel asked if any attempt had been made to determine the attitude of residents after being informed of the company's intentions.

The Secretary explained that we had just received the letter and that there had not been time to contact the residents.

Mr. Dixon suggested the staff take a further look at this installation after the barker is installed and then advise the complainants that something is being done about the cinder and flyash problem.

Chairman Green suggested sending a letter to the local newspaper so that the residents would be informed of the progress.

Mr. Leisy was in accord and said "The New Era" was the name of the Sweet Home paper. Mr. Leisy added that the Chamber of Commerce had considered the company's proposal and heartily endorsed the plan.

ASSOCIATED FOREST INDUSTRIES OF OREGON

Chairman Green asked if the Secretary had anything to report regarding activities of the Associated Forest Industries Air Pollution Committee.

The Secretary stated he discussed the matter with Messrs. Ogle and Sanford and at that time it was Mr. Ogle's suggestion that a meeting should be arranged with their Air Pollution Committee and preliminary arrangements have been set for such a meeting but without a definite date set. The meeting, he explained, would take place before the next Air Pollution Authority meeting and an attempt would be made then to outline a program.

Chairman Green urged to follow through since there is a need for increased efforts by the lumber industry to control air pollution from their operations.

NEW COMPLAINTS RECEIVED

EMPIRE

The Secretary read a letter to the Authority dated June 10, 1955 from R. L. Thomas, Attorney for the City of Empire, requesting the Authority to investigate and take action regarding the excessive cinder and flyash deposition in Empire.

Chairman Green asked if the Authority could set up sampling points and start collecting data.

Mr. Hatchard said the staff has had two fallout stations operating for 1½ years and that complaints from the residents or any requests from the city had not been received. The Authority had been awaiting receipt of official complaint before proceeding on control effects.

Mr. Dixon suggested the staff continue its work and turn information over to the City of Empire when sufficient data is accumulated.

COTTAGE GROVE

The Secretary read a letter dated April 26, 1955 from Joan H. Gallo, City Councilwoman, requesting an air pollution survey in the City of Cottage Grove.

The Chairman asked if the staff could make the requested survey.

Mr. Hatchard informed the Authority that he had requested District Engineer Merryman to make a preliminary survey in Cottage Grove to determine how much work was involved and that a progress report could be made at the next meeting.

SALEM: EMISSIONS FROM THE OREGON PULP AND PAPER COMPANY

The Secretary read a complaint-letter from a resident from the City of Salem regarding the fumes discharged from the Oregon Pulp and Paper Company plant. He reported that the Marion County Health Department had not received any formal complaints regarding the fumes and that the staff has had a sulfur dioxide recorder in Salem during April of 1954.

Mr. Wendel asked if any complaints had been received regarding smoke in the Salem vicinity.

Mr. Hatchard replied that no complaints had been received.

Mr. Dixon asked about the status of the City Council's action on air pollution in Salem.

Mr. Hatchard explained we have had no contact with the Council.

Chairman Green asked if the Authority were to rent the sulfur dioxide recorder would it have the manpower to operate it.

Mr. Hatchard replied that we did not without interrupting studies now underway. He added that the plant management is very concerned with the fumes and has cooperated with the staff on past studies.

Chairman Green asked if there were methods by which SO_2 could be eliminated from the atmosphere.

Mr. Hatchard stated that there were a variety of recovery processes available.

Chairman Green directed we advise the management of this complaint and that a problem exists and that we should also notify the city officials.

MULTNOMAH COUNTY: LIME DEPOSITION FROM PACIFIC CARBIDE AND ALLOY COMPANY

The Secretary read a letter dated April 26, 1955 from R.E. Labbee, Warehouse Mgr. of Western Auto Supply Company and signed by 62 other employees regarding the deposition of lime on their automobiles from the Pacific Carbide and Alloy Company located east of their building.

Mr. Hatchard stated a preliminary visit has been made to Pacific Carbide and Alloy Company and it was found the company management was aware that other persons are being

affected by the lime discharge.

The Secretary stated that receipt of the petition has been acknowledged and the company had been notified of the complaint.

Mr. Wendel stated the Authority should notify complainants that this problem is receiving our attention.

Chairman Green directed that the company be advised to investigate control methods.

MULTNOMAH COUNTY: LIME DEPOSITION FROM PACIFIC MINERAL AND SHELL COMPANY.

The Secretary read a letter dated April 11, 1955 from W. N. Sommer, Spe-de-Way Products Company regarding the deposition of lime dust discharged from the Pacific Mineral and Shell Company located east of their plant.

Chairman Green directed the staff to proceed with the investigation of the complaint.

PORTLAND: CITY HEALTH BUREAU REQUEST FOR JOINT INVESTIGATION OF CINDER AND FLYASH DEPOSITION IN THE VICINITY OF 6400 block N. Willamette Boulevard.

The Secretary read a letter dated June 22, 1955 from the Portland Health Bureau requesting assistance in evaluating the complaint.

Chairman Green wished to know if the Authority could provide the assistance to the City.

Mr. Hatchard stated that the staff had established a fallout station in the vicinity and that this is a cinder and flyash problem from a waste burner operated by McCormick Baxter Company.

Chairman Green suggested this sampling be continued and submit a report at a later meeting.

DATE OF NEXT MEETING

It was decided that the next meeting would be at the call of the Chairman.

MEETING ADJOURNED

There being no further business, the meeting adjourned at 4:10 P.M.

Respectfully submitted,

CURTISS M. EVERTS, Jr., Secretary
Oregon State Air Pollution Authority

K Green

FOURTEENTH MEETING
OF THE
OREGON AIR POLLUTION AUTHORITY

November 4, 1955

The fourteenth meeting of the Oregon State Air Pollution Authority was called to order by the Chairman at 2:00 P.M. Friday, November 4, 1955, in Room 36, State Office Building, 1400 S.W. 5th Avenue, Portland, Oregon. Those present were Carl E. Green, Chairman, Merle S. West, Vice Chairman, Mr. R. P. Dixon, Harold F. Wendel, Members and Dr. Gordon C. Edwards (representing Dr. Harold M. Erickson) and Curtiss M. Everts, Jr., Secretary, Charles D. Burt, Legal Advisor, R. E. Hatchard, Chief of the Air Pollution Control Section, W. J. Whitsell, Associate Engineer, State Board of Health, Frank P. Terraglio and Eugene E. Lee, Chemists, State Board of Health.

MOTION RE: MINUTES OF PREVIOUS MEETING

The Secretary summarized the minutes of the thirteenth meeting of June 23, 1955. The Chairman declared that if there were no corrections or additions the minutes would stand approved as prepared by the Secretary.

INTRODUCTION OF PUBLIC HEALTH SERVICE OFFICIALS

The Chairman requested the Secretary to introduce Public Health Service officials present at the meeting.

The Secretary introduced the following officials:

- A. C. Stern, Chief, Air Pollution Control Program, Taft Sanitary Engineering Center, Cincinnati, Ohio.
- Mr. F. E. DeMartini, Regional Engineer for PHS, San Francisco, California
- Dr. Wilfred D. David, U.S. Public Health Service, San Francisco, California.
- Herbert C. Clare, Basin Engineer, Public Health Service, Portland, Oregon
- Leonard H. Male, U.S. Public Health Service, San Francisco, California.

CURRENT AIR AND FOLIAGE SAMPLING IN COOPERATION WITH THE OREGON STATE COLLEGE AGRICULTURAL EXPERIMENT STATION AND OTHER STUDIES.

The Chairman requested Mr. Whitsell to report on the status of the air and foliage sampling project.

Mr. Whitsell stated that the Authority had requested that the staff make every effort

to work in cooperation with Oregon State College Agricultural Experiment Station to determine if a correlation could be developed between air and foliage concentrations by collecting concurrent air and foliage samples. He explained that first tests were necessary to determine whether or not there was any appreciable variation in foliage concentrations throughout the day. He reported that the first phase of the study was now completed and the data has shown no appreciable variation in fluoride concentrations of the pasture grass samples during the day caused by the affects of sun light or other biochemistry taking place in the plants.

Mr. Whitself further stated that the air sampling program is continuing in the same area and that after the first detailed sampling run Dr. O. C. Compton, Associate Horticulturist, Oregon State College Agricultural Experiment Station, had collected additional foliage samples at two week intervals and that Dr. Compton was obtaining another series of samples today. He pointed out that the pasture growing season would soon be over which would curtail the project somewhat, but the staff will continue the air sampling in the area as long as weather conditions will permit. He reported that the air sampling was resumed in early September and a continuous series of samples has been obtained and that a continuous record of wind speed and direction during the period was secured using the Authority's equipment located at the Troutdale airport. Mr. Whitself stated that the staff has not had the opportunity to complete the tabulation of the air fluoride concentrations with the weather data for later correlation with the foliage fluoride concentration being analyzed by Oregon State College Agricultural Experiment Station.

The Chairman explained that the Authority had been seeking additional assistance from other state and federal agencies for some time to extend the investigation of agriculture and livestock conditions in the areas near aluminum reduction plants. He stated that arrangements had been made by the State Board of Health to secure assignment of a veterinarian with the Public Health Service to develop a Public Health Veterinarian program in Oregon and provide assistance on air pollution investigations.

The Chairman stated that Dr. Monroe Holmes, Veterinarian with the Public Health Service, Epidemiology Section, Communicable Disease Center, has been working in Oregon since early October and requested Dr. Holmes to advise the Authority on his livestock investigations.

Dr. Holmes stated that an understanding has been arranged that he will work half time with both the State Board of Health, Epidemiology Section, and the Air Pollution Authority, and that his work on the investigation of livestock conditions in Troutdale and Sauvie Island had included study of the past reports and review of the literature available. He reported that Mr. Whitsell and he had contacted individuals at both locations who have had long experience with the fluoride problems but who were not involved in litigation. Dr. Holmes advised that he had not formulated any conclusions or specific suggestions for future work but that he had become familiar enough with the situation to realize that a complete investigation of the livestock aspects will be a long term undertaking.

Mr. Dixon asked Dr. Holmes how long he thought it would be before definite conclusions would be available regarding the livestock conditions.

Dr. Holmes stated it would be rather difficult to say at this time but it would be more like a year instead of a month or two. However, he added there are fewer numbers of livestock visibly affected now compared with the published data from previous livestock studies.

The Chairman asked if it would be reasonable for the Authority to anticipate definite answers regarding the livestock conditions at Troutdale and Sauvie Island within a two year period.

Dr. Holmes agreed that the two year period would be realistic.

FEASIBILITY OF AGRICULTURAL AND LIVESTOCK RESEARCH AND INVESTIGATIONS PROJECT UNDER PROVISIONS OF PUBLIC LAW 159

The Chairman requested A. C. Stern, Director, Public Health Service, Air Pollution Control Program to advise the Authority regarding the assistance available from

his agency to investigate the agriculture and livestock conditions in the areas near the aluminum reduction plants.

Mr. Stern explained that an agricultural and livestock research project with funds available under Public Law 159 is highly improbable during the current fiscal year since the April 1955 report of the Federal Ad Hoc Interdepartmental Committee on Community Air Pollution recognized that the Department of Agriculture has had the Authority to conduct such activities for several years. He stated that no funds are available under the reimbursable contract research arrangement because the Department of Agriculture advised that the budget included these activities. He stated that if the air pollution involves agriculture or livestock considered to be economic crops then it is a primary concern of the U.S. Department of Agriculture and not the Public Health Service. Mr. Stern explained that they were interested in plants as indicators as to where air pollution exists; however, the Public Health Service could cooperate in the environmental phases of the problem such as obtaining information regarding the extent of the pollution of the atmosphere or methods to control sources.

Mr. Wendel asked if the effects of air pollution on human health was the main basis for developing the Public Health Service program.

Mr. Stern replied that the provisions of Public Law 159 does not delineate the detailed elements of the air pollution program but the purpose as stated in the law is "to provide research and technical assistance relating to air pollution control in recognition of the dangers to public health and welfare injury to agricultural crops and livestock, damage to and deterioration of property and hazards to air and ground transportation."

The Chairman explained that the Oregon Air Pollution Control Statute includes air pollution effects on public health and welfare, agriculture and livestock and other economic losses and that a major concern of the Authority is to develop a program which includes all effects instead of only part of the problem.

Mr. Stern stated that he hoped the problem of providing Federal assistance on agriculture and livestock air pollution to supplement local and state resources could be worked out

during the next year. He stated that the present arrangement between the Department of Agriculture and Public Health Service is not satisfactory since several requests by Public Health Service to Agriculture that specific studies be made by Agriculture have not produced results. Mr. Stern pointed out that PL-159 has been in effect only a few months and it will take some time to develop satisfactory relationships with other Federal agencies that have been concerned with some aspects of the problem for several years.

The Secretary stated that during the exploratory discussions this morning it was mentioned that the Air Pollution Authority staff, in cooperation with the Oregon State College Agricultural Experiment Station, has been engaged in an exploratory project to determine if there is a relationship between atmospheric concentrations of fluorides and the resulting concentration of fluoride in foliage. The Secretary explained that neither the college nor the staff have the personnel or equipment to pursue this study to a successful or unsuccessful conclusion and this matter was discussed with Dean Price and it was suggested that a research project be developed between the two agencies to secure grant-in-aid under the provisions of Public Law 159. The Secretary pointed out that if a relationship between air fluoride concentration and the foliage concentration can be developed then it would be a step in the right direction and would produce data needed for consideration of a standard. The Secretary suggested that the Authority and Oregon State College Agricultural Experiment Station should explore the possibility of developing a more detailed program in the areas near the aluminum reduction mills. The Secretary stated that if it is the desire of the Authority that the staff proceed with studies with Public Health Service or the Department of Agriculture or any other agency responsible for carrying on work of this nature, then this activity should be authorized.

MOTION RE: AGRICULTURAL AND LIVESTOCK RESEARCH AND FIELD INVESTIGATION PROJECTS UNDER PROVISIONS OF PUBLIC LAW 159.

It was MOVED by Mr. Wendel and seconded by Mr. Dixon and carried that the Secretary be instructed to proceed with the investigation of research and field survey projects

In cooperation with Oregon State College, Washington State College, Public Health

Service, U.S. Department of Agriculture and other interested agencies.

MEETING WITH MUNICIPAL REPRESENTATIVES ON PROVISIONS OF PUBLIC LAW 159.

The Secretary reported that a discussion meeting was held on November 3, 1955 so that

some of the representatives of city governments in the state could meet with Mr. Stern

and discuss some of the implications of Public Law 159 on city control programs. The

Secretary stated that representatives from Portland, Eugene, Roseburg and The Dalles

attended and Mr. Stern described very ably what the law could and could not do.

The Secretary explained that the City of Eugene created an Anti-Air Pollution Com-

mittee which has been very active this year and during the discussions on November 3,

1955 the Eugene City Manager indicated that the City would like to develop some program

with industry to arrange for study of various methods for burning waste wood so that

improvements in the cinder and flyash conditions could be made.

The Secretary stated it was his opinion that the authority should stimulate the pro-

posed project in cooperation with Oregon State College Engineering Experiment Station.

the lumber industry and interested cities. He added that it might be possible that

if such a project could be developed that the Public Health Service could assign one

of their engineers to work in Oregon.

NOTION RE: ORGANIZATION OF RESEARCH PROJECT TO STUDY WASTE WOOD BURNING PROCEDURES.

It was moved by Mr. Dixon and seconded by Mr. West and carried that the Secretary be

instructed to proceed with the organization of a project to make an engineering study

of waste wood burning procedures in cooperation with Oregon State College Engineering

Experiment Station, lumber industry, interested cities, Public Health Service and

others.

AREA AND SOURCE DISCHARGE STANDARDS

The Chairman requested Mr. Hatchard to report on the need for area and source dis-

charge standards.

Mr. Hatchard reported that during the past three years the Authority's staff has been

conducting area atmosphere pollution surveys and field investigations of specific complaints throughout the state and that considerable data has been secured describing the air sanitation problems now affecting urban communities where air pollution nuisance conditions exist. Mr. Hatchard explained that the Authority's staff has used this data to develop field investigation standards to limit fallout of particulate matter within the various types of land use and the fallout rate for some specific air contaminants such as cement dust or lime and the density of smoke discharged from combustion processes. He stated that use of this data has stimulated control installations through cooperative efforts by industries and cities except for situations involving waste wood burners and some odor conditions.

Mr. Hatchard reported that during the past few months there has been increasing city activity in the development of municipal air pollution ordinances particularly at Eugene and Portland. He stated that at previous meetings of the Authority the staff has reported on activities with the City of Eugene's Anti-Air Pollution Committee and with the Portland Health Bureau. Mr. Hatchard pointed out that one of the major needs for the development of appropriate city ordinances is to assemble enough basic air pollution data so that the prohibitions established are closely related to the communities' desire to correct present problems and prevent new nuisance conditions.

He reported that air sanitation standards have also been requested by the Multnomah County and Lane County Planning and Zoning agencies in order that air conditions can be adequately incorporated into their rules and regulations. He recommended that the Authority's staff be instructed to prepare tentative standards for source discharges and the area effects resulting from air pollution based upon the Authority's accumulated data and experience and to submit the proposed standards for consideration at the next regular meeting of the Authority.

Mr. Hatchard advised that another major concern of the officials developing municipal ordinances is how the sources of air contaminants located outside of city boundaries

which are affecting areas within the city will be controlled. Mr. Hatchard explained that in January 1955 the Authority's staff prepared a report regarding municipal air pollution control in cooperation with the League of Oregon Cities and it was stated in this report that "it is anticipated that the Authority will institute air pollution control activities in the areas outside of city boundaries equivalent to those established by the city for application within the city". Mr. Hatchard stated that this report was submitted to the individual members of the Authority before distribution was made to city officials. However, no policy action had been taken at previous Authority meetings. He recommended that the Authority establish the official policy that it will administer the control of sources of air contamination in the urban fringe that affect areas within the city boundaries when the city has a municipal control program underway providing that the cities' control standards are equivalent to the standards adopted by the Authority.

Mr. Wendel asked if cities should adopt standards equal to those of the state.

Mr. Hatchard replied that the standards used by the city should be equal to the standards adopted by the Authority and that the actual control should be a cooperative effort with the city directly handling the sources within the city and the Authority supervising the control activities in the urban fringe.

The Secretary explained that on several occasions the question has arisen that before cities adopt standards locally the city officials want to be assured that the Authority will administer equivalent standards in an area outside the boundaries of their control. The Secretary stated if the Air Pollution Authority adopted such a policy it should be made certain that the standards adopted in the city would be equivalent to the standards adopted by the Air Pollution Authority.

Mr. Wendel stated that he thought that the cities should not adopt separate standards and that they should use the Air Pollution Authority standards.

The Chairman asked if the staff was ready to recommend for adoption a set of rules

and regulations.

Mr. Hatchard replied that sufficient data was available to prepare recommended standards for the control of smoke, particulate matter and a few specific substances such as cement dust.

The Chairman instructed the staff to prepare these standards and send them to each Authority member within the next thirty to forty-five days for review in advance of the next regular meeting.

LUMBER INDUSTRY, SMOKE, CINDER AND FLYASH DISCHARGE.

The Chairman requested Mr. Hatchard to report on the efforts of the lumber industry to solve industry air pollution problems.

Mr. Hatchard reported that smoke, cinder and flyash discharges from lumber and wood products plants continue to be the most numerous type of complaint received. He explained that the staff and the Authority's approach on the waste wood burner complaints has been to stimulate an air pollution committee appointed by the Associated Forest Industries of Oregon. Mr. Hatchard stated that in view of the delay in securing lumber industry activity towards a solution of the wood waste burner problem the staff recommended that the Authority cite individual mill managements who have not been able or willing to correct their waste burners and cinder/flyash problems.

The Chairman stated that the Authority has been working for nearly three years to get lumber industry action to solve the waste wood burner problems and in the last year or so have met with representatives of that group on several occasions. The Chairman said it was his belief that industry is not making any serious efforts to take care of the problems.

The Secretary suggested that the Air Pollution Authority invite the offenders to the next meeting and discuss the existing problems with them to stimulate corrections before actually citing the mills.

The Chairman asked if there were complaints regarding cinder and flyash discharges from steam generating plants where satisfactory progress is not being made.

Mr. Hatchard advised that no action has been taken by the Cape Arago Lumber Mill in Empire or the Coos Bay Lumber Company and that the cities of Empire and Eastside have requested the Authority to bring about corrections.

The Chairman suggested that the Authority cite in Cape Arago Lumber Company of Empire, Oregon, Coos Bay Lumber Company of Coos Bay, Oregon, to appear at the next meeting.

MOTION RE: LUMBER INDUSTRY, SMOKE, CINDER AND FLYASH DISCHARGE.

It was MOVED by Mr. Wendel and seconded by Mr. Dixon and carried that Cape Arago Lumber Company of Empire, Oregon, and Coos Bay Lumber Company of Coos Bay, Oregon, be cited to appear at the next Air Pollution Authority meeting.

STAFF PROGRESS REPORTS.

The Chairman requested brief reports from the staff regarding the progress or status of complaint investigations underway.

PORTLAND:

PABCO ROOFING PLANT

Mr. Terraclio explained that since the last meeting the asphalt blowing operation at the plant has been transferred to the Shell Oil Company located a few hundred feet west of the Pabco plant and that the Shell Oil Company had installed new equipment including a condensing and water scrubber system. He reported that filter samples have been collected at a station near the new Shell Oil Company's discharge point both before and after operations started. He explained that the results have been difficult to compare since the process has been operated intermittently. He reported that several plant visits have been made with a representative from the Portland Health Bureau and that some of the Pennsylvania Salt Company employees still believe that nuisance conditions are present. He stated that plans have been made to resume sampling at the Pennsylvania Salt Company station to show the degree of improvement compared with previous data.

PORTLAND:HYDROGEN SULFIDE IN S.W. PORTLAND

Mr. Hatchard reported that the Miller Products Company in S. W. Portland had been adding an odor counteractant material to their stack discharge when the lime-sulfur dormant spray was being produced; however, it was found that this method alone did not adequately handle the problem and they have ceased operations until a condensing and water scrubber unit can be installed.

PORTLAND:DUST & FUMES DISCHARGED BY RICH MANUFACTURING COMPANY

Mr. Hatchard reported that this matter had been referred to the Portland Health Bureau and the staff has continued the joint field investigations including collection of samples. He explained that Mr. Fred Menzel had advised that their company recognized that a problem exists and that they are planning dust control facilities on the foundry cupola and completely changing the pipe dipping process. Mr. Hatchard reported that the company was still in the plan preparation stage and it did not seem that corrections would be made before next summer. He suggested that the Portland Health Bureau and the Authority's staff should review the matter.

PORTLAND:KENTON DISTRICT CINDER AND FLYASH STUDY

Mr. Hatchard stated that the results obtained from fallout stations in the area show that a heavy deposition of cinders and flyash is not occurring. He explained that the Portland Shingle Company has been using their waste burner less than half time which probably accounts for the reduction.

MULTNOMAH COUNTY:LIME DEPOSITION FROM PACIFIC CARBIDE & ALLOY COMPANY

Mr. Whitsell reported that petition complaint signed by over sixty employees of the Western Auto Supply Company located nearby had been received in April 1955 and that after preliminary surveys the Authority advised the Pacific Carbide and Alloys Company that the discharges from their plant were causing nuisance conditions and that the installation of an appropriate control system was recommended. Mr. Whitsell reported that a sampling station was established in September using a directional switch and a high volume filter sampler and that the data obtained showed conclusively that

Pacific Carbide Plant was contaminating the area with carbon and lime. He stated that on October 11th, the Authority had sent a letter to Mr. Waters, General Manager, Pacific Carbide and Alloy Company, advising him of the results obtained recommending again that they proceed with the design and installation of the necessary control facilities and that the company advise the Air Pollution Authority by November 10, regarding the progress. Mr. Whitsell advised that representatives of the company had conferred with the staff and had indicated that they were actively investigating the problem to determine what could be done to reduce the dust emissions.

OSWEGO:OREGON PORTLAND CEMENT COMPANY

Mr. Terraglio reported that Mr. D. H. Leshe, Vice President, of Oregon Portland Cement Company had advised that construction for the new electrostatic collectors was proceeding according to schedule and that excavation was being completed and the steel erection for the installation will start about the 15th of December. Mr. Terraglio explained that after the two new precipitators are in operation the company will overhaul the existing unit so that the dust collection efficiency meets the requirements. The Chairman stated that he believed satisfactory progress was being made.

SWEET HOME:SANTIAM LUMBER COMPANY

Mr. Hatchard reported that the manager of the Santiam Lumber Company had advised the Authority at its last meeting that a log-debarker would be in operation by September 1955 and that less wood waste would go to the waste burner. Mr. Hatchard advised that District Engineer Merryman had recently visited the plant and had reported that the debarker was in operation and that 6.5 box cars of pulp chips are being sent to the Western Kraft Mill in Albany each day compared with 4.5 per day before the debarker unit was installed. Mr. Hatchard stated that the company has completed the foundation work for the installation of two cinder collection units and that the delivery of the equipment was expected early this month and that the units would be in operation January 1956. He stated that the cost for this work was approximately \$50,000.

COTTAGE GROVE:AIR POLLUTION SURVEY

Mr. Hatchard reported that District Engineer Merryman had made a preliminary survey of the sources in Cottage Grove to determine how many sampling stations will be needed but that the stations will not be started until other studies have been completed.

LANE COUNTY:McKENZIE RIVER ODOR

Mr. Hatchard Stated that the staff has made reports at previous meetings regarding the area control efforts by Weyerhaeuser Timber Company at their Springfield Kraft Mill. He explained that the management of Weyerhaeuser Timber Company has provided considerable research to develop odor control methods and that the equipment installed at their Springfield Kraft Mill had brought about substantial improvements.

Recently Mr. Hatchard reported a complaint was received from the Oregon Superintendent of State Parks regarding the odor nuisance conditions in the McKenzie River downstream from water waste discharge from the Weyerhaeuser Springfield plant. Mr. Hatchard stated that two groups of property owners on both sides of the McKenzie River were complaining to county officials and that this odor problem originated from the water waste discharged from the plant into the McKenzie River. He advised that arrangements had been made for Mr. Spies of the Sanitary Authority and a representative of the Air Pollution Authority to meet November 8, with the complainants concerned with the odor problem, and other aspects of the water waste problem.

DATE OF NEXT MEETING

It was decided that the next meeting would be about the middle of January to consider the recommended standards.

MEETING ADJOURNED

There being no further business, the meeting adjourned at 3:25 P.M.

Respectfully submitted,

CURTISS M. EVERTS, Jr., Secretary
Oregon State Air Pollution Authority

FIFTEENTH MEETING

OF THE

OREGON AIR POLLUTION AUTHORITY

February 9, 1956

The fifteenth meeting of the Oregon State Air Pollution Authority was called to order by the Chairman at 2:00 P.M. Thursday, February 9, 1956, in Room 36, State Office Building, 1400 S. W. 5th Ave., Portland, Oregon. Those present were Carl E. Green, Chairman, Merle S. West, Vice Chairman, Mr. R. P. Dixon,

Dr. Harold M. Erickson, Members and Curtiss M. Everts, Jr., Secretary, Charles D. Burt, Legal Advisor, R. E. Hatchard, Chief of the Air Pollution Control Section and W. J. Whitsell, Associate Engineer, State Board of Health.

MOTION RE: MINUTES OF PREVIOUS MEETING

The Secretary summarized the minutes of the fourteenth meeting of November 4, 1955. The Chairman declared that if there were no corrections or additions the minutes would stand approved as prepared by the Secretary.

ELECTION OF OFFICERS - 1956

The Chairman advised the members of the Authority that it was again time to elect officers for the calendar year of 1956.

It was MOVED by Mr. West and seconded by Mr. Dixon and carried that Carl E. Green be re-elected Chairman of the Oregon State Air Pollution Authority for the year of 1956.

It was MOVED by Dr. Erickson and seconded by Mr. Dixon and carried that Mr. West be re-elected Vice-Chairman of the Authority for the year 1956.

PROPOSED ADMINISTRATIVE RULES AND STANDARDS TO CONTROL AIR POLLUTION

The Chairman stated that the staff had prepared proposed Administrative and Control Regulations and suggested that the Administrative Regulations be considered first. He requested the Secretary to report on comment received regarding the regulations.

The Secretary reported that a letter had been received from W. W. Wyse, Attorney,

representing Alcoa suggesting that the regulations include a section outlining the procedure that the Authority would follow at future public hearings.

The Chairman invited C. D. Burt to comment on the suggestion.

Mr. Burt replied that it was his understanding that the preparation of public hearing procedures was being delayed until the Authority had more experience in holding public hearings.

The Chairman asked if there were representatives present that desired to make comments regarding the proposed regulations.

Mr. Fred N. Packwood, representing Columbia Empire Industries, stated that their organization had not had sufficient time to study the proposals and requested that this matter be deferred for at least a 60 day period until his organization could secure comments from their membership.

Mr. Charles Sanford of Associated Forest Industries of Oregon stated that his organization had mailed 200 copies of the proposals to its members but that so far only one telephone reply had been received. He requested a delay of at least 60 days in order to submit the comments of members of their association to the Authority.

Mr. Sanford further asked if a statement could be prepared which they could send to their members explaining the Ringelmann Chart. He stated that the technical terms were confusing to many persons and that the regulations could be clarified by using ounces and pounds.

Mr. Hatchard advised Mr. Sanford that the Ringelmann Smoke Chart, Information Circular #7719, published by the U.S. Bureau of Mines included the Ringelmann Smoke Chart and instructions for its use. He stated that the Authority had a few copies available and additional copies could be secured from the Publications Distribution Section, U.S. Bureau of Mines, 4800 Forbes St., Pittsburgh 13, Pa.

Mr. Robert R. McKean, Manager, Columbia Empire Industries, Inc., stated that his organization would also like 60 days or more to study the proposed regulations and hold two or three meetings with members to obtain their views. Mr. McKean asked if

he could have a sufficient supply of the proposals to send to their members. Mr. McKean also reported that his organization had been securing funds from their membership to retain Stanford Research Institute to make a study of air pollution in metropolitan Portland and that almost almost enough funds were available.

Mr. Charles K. Sterrett, Manager, Industries Department, Portland Chamber of Commerce, stated that as a member of the City of Portland Air Pollution that additional time was needed for the Portland City Attorney to study the proposed regulations. He stated that the Chamber of Commerce would also like enough time to study the regulations and formulate their comments and requested the staff to furnish more details regarding the background values included in the proposed regulations.

Mr. Hatchard explained that there is a rather wide range of concentrations of particulate matter originating from natural sources throughout the state and that initially regional type regulations were considered to allow for the differences. He stated that this approach became rather involved and would have created administrative and technical difficulties. Mr. Hatchard advised that use of a background value allows for the natural difference in the proposed regulations.

Mr. Dixon asked how the background figures compare with other states such as California or Washington.

Mr. Hatchard stated there were no detailed reports of background values for these states but that there was considerable background information available regarding Oregon's particle fallout. He reported that the background for western Oregon would vary from 2 to 10 tons per square mile per month depending upon the season of the year and location within the area. Mr. Hatchard pointed out that the background value would have to be obtained during a survey instead of referring to a previous result and that this measurement would be secured by locating a control station away from the community sources of air pollution.

The Chairman asked if there are other states accumulating this data.

Mr. Hatchard replied that there were not many states securing data but that many

cities had data available.

Mr. West wished to know if these methods and values were used throughout the country.

Mr. Hatchard replied that there is no standard method of securing fallout values but that efforts were being made by the Air Pollution Control Association to bring about standardization. He explained that the Authority's staff had followed in general the method published in laboratory procedures used by the Los Angeles Control District.

Mr. D. J. McNeil of Electric Steel Foundry Company asked if the staff had any data showing chemical analyses of the fallout materials.

Mr. Hatchard stated the staff had data regarding the physical nature of fallout material such as solubility, volatility or pH but that specific identification was limited to a few substances such as lime or sodium chloride.

Mr. R. E. Sinclair, Pacific Power and Light Company, referred to Section #6 of the Proposed Regulations and Standards and wished to know how 250 micrograms per cubic meter was arrived at. He further wished to know just how to evaluate these figures and whether this type of measurement was used in other areas.

Mr. Hatchard explained that the Authority's staff has collected several hundred air filter samples using a high volume sampler with an 8" X 10" glass fiber filter and that the procedures used were the same as those used in the Public Health Service national air sampling network. He replied that the value of 250 micrograms per cubic meter plus background for limiting the suspended particulate concentration was derived from experience in field investigations where nuisance conditions existed compared with the data obtained from sampling stations in the area.

Mr. Ray L. Beeler, Associate General Contractors, stated that there had not been enough time for his organization to study the proposals and secure comments from their membership. Mr. Beeler requested the Authority to allow another 60 days to submit comments.

Mr. Porter W. Yett, representing Associate General Contractors, asked if the staff had done any sampling on dust from paving plants to establish definitely the source

of the discharge and if any detailed investigation of road construction projects had been made in isolated areas.

Mr. Hatchard replied that the staff's investigation was usually limited to the adjacent area around an asphalt paving plant where residents or other property owners believed a nuisance condition existed and that the staff had not made any investigation of paving plants in isolated areas except where complaints were received regarding suspected injury to agriculture.

Mr. Yett stated further that his organization desired more time to study the proposed regulations and would like more information as to what procedure the staff intended to follow regarding the asphalt paving work on roads throughout the state in situations where water is not available.

The Chairman reviewed the previous complaints involving asphalt plants located in Portland, Gold Hill and in the Keizer area north of Salem and stated that the staff had studied the control of dust discharges and found there is equipment available for reducing the discharges from paving plants.

Mr. Hatchard added that the Authority had investigated dust discharges from about 16 paving plants and that corrections were made by the installation of appropriate equipment or by moving the plant to an isolated location and that lack of water supply to serve the control unit had not been a severe problem in a case brought to our attention.

Dr. Thomas Meador, Health Officer, City of Portland, said he believed that ^{there were} many pitfalls in the proposed regulations and that he desired more time to study the matter.

Mr. Fred M. Mensel, Rich Manufacturing Company of California, stated that he believed the standards the Authority proposed in regard to particulate matter were very good for larger companies that have large engineering staffs to interpret the findings but that he would like the standards to be expressed in common units so that the layman could understand them.

Mr. J. A. Kooper, Pacific Power and Light Company, also requested interpretation of micrograms per cubic meter units.

The Chairman explained that the standards could be expressed in several units of measure to clarify the proposals. The Chairman suggested that the members of the Authority dictate a memorandum to the staff transmitting their comments regarding the regulations. The Chairman announced that the Authority requested all organizations and individuals concerned with the proposed regulations to submit comments within the next sixty days so that the staff could prepare a revised draft at the next meeting tentatively scheduled for May.

EMPIRE: Cinder and Flyash deposition from Cape Arago Lumber Company

The Chairman requested Mr. W. J. Whitsell to report on the Empire cinder and flyash deposition problem.

Mr. Whitsell stated that the particle fallout study began in Empire in 1954 in response to reports that a problem existed in Empire. He reported that two fallout stations were used and that the data secured was sent by letter to the City of Empire on May 12, 1955. He explained that the stations were discontinued at that time since no written complaints or requests from the city had been received.

On June 10, 1955 Mr. Whitsell reported that a letter was received from R. L. Thomas, City Attorney, Empire, requesting that the Authority continue its study and take necessary action to correct the situation since the city officials had received complaints regarding cinder and flyash deposition particularly during the summer season.

Mr. Whitsell reported that on June 29, a representative of the Authority conferred with Mayor Kenneth Adams, Empire, and that a survey of the Cape Arago Lumber Company was also made.

Mr. Whitsell stated that Mr. Miller, Vice President, Cape Arago Lumber Company, requested a letter from the Authority describing conditions and making recommendations. He stated that on July 13, 1955 a letter was sent to Mr. D. Miller describing conditions and pointed out the results of the fallout stations showed 54 to 120 tons per square mile per month fallout was occurring and that nuisance conditions existed. He stated

that it was recommended by letter that the company take appropriate measures to reduce the cinder and flyash discharges; however, no reply was received from the company.

Mr. Whitwell reported further that on September 13, 1955 the City of Empire wrote the Authority again protesting the continuance of the cinder deposition problem and requested abatement. He explained that on October 24, and 27, 1955 one of the Authority's engineers tried without success to see Mr. Miller, Vice President, Cape Arago Lumber Company, to determine what progress the company had made based on the Authority's recommendations. Mr. Whitwell reported that on October 11, 1955 a letter was sent to Mr. Miller stating that since no reply had been received from their company that it was presumed no corrective steps had been taken and that the company was advised that they would be requested to attend an Authority meeting where the matter would be considered.

Mr. Whitwell reported that a representative of the Authority was in Empire on January 13, 1956 and was unable to obtain an appointment with Mr. Miller. However, in a telephone conversation Mr. Miller advised that it would be best to talk with their attorney, Mr. F. A. Torke, Jr.

Clifford N. Carlson, Jr., Attorney, Cape Arago Lumber Company, stated that the steam plant was shut down in December 1954; that the sawmill was now shut down; that the planing mill was being operated every other week and that the company had no present plan for re-opening. Mr. Carlson advised the Authority that this information had been given to the Authority's staff by telephone some time ago.

Mr. Hatchard stated that this information had been received and in addition it was understood that the Cape Arago Lumber Mill is considering a reorganization of the mill from lumber production to plywood manufacture. He pointed out that if the changes are made and the steam plant is to be used, the Authority needed information regarding the company's plans to install cinder collection systems.

Mr. Carlson reiterated that there are at present no plans for continuing or converting

the mill operation; however, if any plans should be made the Air Pollution Authority will be notified.

The Chairman asked Mr. Carlsen if he did not think the company should have replied to the Authority's letters and recommendations.

Mr. Carlsen replied that the company certainly should have kept the Authority advised.

The Chairman asked Mr. Whitsell if the excessive cinders in Empire originated from the steam plant.

Mr. Whitsell replied that in the opinion of the staff the steam plant in itself was a very large contributor to the situation.

Mr. Carlsen asked if the waste burner serving the sawmill had been a significant source of cinders.

Mr. Whitsell stated that part of the sawmill waste which is not handled in the power plant together with the planer shavings was conveyed to the burner. Mr. Whitsell further explained that on the present level of operation the cinder discharge conditions seemed fairly good at the mill; that the last time he was there the planing mill was operating about two days out of the week and for that reason the fallout was low. Mr. Whitsell stated that he had learned from some of the residents and from Mr. Miller, Vice President Gays Arago Lumber Mill; that the mill planned to go to a plywood operation.

The Chairman stated that the Authority expected a specific statement in writing from the company regarding their future plans and that the management should not ignore the Authority's correspondence but put in writing all of their plans as they are formulated. The Chairman further stated that if the Authority can not get cooperation from the management that management representatives must be present at the next meeting.

Mr. Carlsen stated that the company would send a letter to the Authority regarding their plans.

EASTSIDE: Regarding cinder and flyash deposition in Eastside.

The Chairman requested Mr. W. J. Whitsell to report on the Eastside cinder and flyash

deposition problem.

Mr. W. J. Whitsell reported that the first complaint regarding the Eastside cinder and flyash conditions was received May 27, 1953 from a private citizen and that on November 23, 1953 Mr. J. C. Merchant, Eastside City Recorder, requested the Authority to make an investigation; that on February 15, 1954 representatives of the Authority conferred with Mr. Merchant and Mayor Alto; that a preliminary survey was made and a fallout station established on the Elementary School, and that on July 16, 1954 a member of the Authority's staff conferred with Mr. Forrester, General Manager Coos Bay Lumber Company, regarding the excessive fallout found at the Eastside station. The Authority's representative recommended at that time that cinder control efforts be made and pointed out that it would include a combination of the operational control measures, the installation of cinder collection equipment or increased use of wood waste material to produce by-products.

Mr. Whitsell stated that on October 5, 1954 a letter was received from City Recorder Merchant advising that citizens of Eastside had petitioned the Council and requested abatement action. Mr. Whitsell reported that he had conferred with Mr. Forrester on June 30, 1955 and learned that the company hoped to defeat the problem by eliminating wood waste. He explained that on the same day the steam generating plant at Coos Bay Lumber Company was visited accompanied by Mr. S. G. Southwick, Chief Engineer.

Mr. Whitsell stated that on August 2, 1955 another letter was received from Mr. Merchant regarding the future action to be taken by the Authority to reduce the cinder and fly-ash problem. Mr. Whitsell stated that the Authority sent a letter to the City of Eastside dated August 5, transmitting the fallout results obtained from the sampling station for the period September 1954 to April 1955 which showed a fallout from 121 to 590 tons per square mile per month.

Mr. Whitsell advised the Authority that on September 1, 1955 a letter was sent to Mr. Forrester transmitting the complete particle fallout results and recommending that the company provide appropriate cinder collection equipment. He stated that this

letter also requested plans for such installation be submitted to the Authority's staff for review before any changes were made. Mr. Whitsell stated that no reply was received to this letter.

He explained that on October 27, 1955 a representative of the Authority again contacted Coos Bay Lumber Company and learned that no significant changes had been made and that on October 31, 1955 the Authority sent another letter to the Coos Bay Lumber Company advising the company that since no progress had been made toward the correction of cinder and flyash discharges that a representative of their company would be requested to attend an Authority meeting where the matter would be considered further.

Mr. Whitsell stated that on November 3, 1955 a letter was received from the Coos Bay Lumber Company stating that they have plans for utilizing more waste materials and that the company hoped the Authority would "bear with us for another few years". On November 16, 1955 Whitsell stated that the Authority sent a reply to Coos Bay Lumber Company again calling attention to the original findings that the steam plant is a major source of excessive cinder deposition in Eastside and that it was pointed out that knowledge, experience and equipment was available to effect a satisfactory control.

Mr. R. G. Southwick, representative of Coos Bay Lumber Company stated that his company is not convinced that these conditions were originating from their steam plant since there are several other mills who also could be contributing to the pollution problem. He also wished to know why Coos Bay Lumber Company was designated as the main contributor.

Mr. Whitsell replied that the staff had enough experience with air pollution problems in other areas to rule out plants over one quarter mile distance. Mr. Whitsell explained that it appeared that Coos Bay Lumber Company waste burner was not being heavily loaded at the time of his visit, and also the fact that the material carries as far away as it does seems to indicate that it is coming from a source at a higher elevation than the waste burner.

Mr. Southwick stated there have been no changes made in the smoke stack since 1928; that forced draft is not used and that the company must be convinced that this dis-

charge is coming from the steam plant. He explained that at present they are securing equipment to make a stack survey and that if they found it very bad and was causing a real nuisance that then the company wished to make corrections. He pointed out that the management contacted one company from Medford to make a study for them but it "didn't work out".

The Chairman advised Mr. Southwick that the Authority's staff believes their mill is the main source causing excessive fallout in Eastside.

Mr. Hatchard stated that the staff's measurements in Eastside are not as detailed as the studies made in North Bend, but that there is a characteristic wind pattern in the Coos Bay vicinity that also is applicable to the Eastside situation. Mr. Hatchard explained how prevailing winds effect fallout conditions and during the period of the lumber strike in 1954 the fallout was 19 tons per square mile per month when Coos Bay Lumber Company was shut down while the other mills were still operating. He advised the Authority that the fallout samples from the Eastside station ranged from 44 to 990 tons per square mile per month when Coos Bay Lumber Mill was operating from February 1954 to January 1956.

Mayor Louis Linder of Eastside, Oregon, submitted a petition signed by residents and explained that this was not solicited but was placed in a couple of grocery stores and the post office to obtain signatures. Mayor Linder described how the cinders became lodged under roof shingles and caused them to curl, how the cinder dust fills the roof valleys; that residents can't open windows at night because the cinders would pour in. He explained further that cinders enter buildings under doors, through windows and plug the roof drains. He stated that in the Eastside area there are two prevailing winds, north and south, up and down the bay.

The Mayor stated that it was necessary for him to clean his drywells which were packed solid with cinders. He also stated that homes have depreciated markedly in selling price due to the nuisance conditions. The Mayor briefly reviewed the success that Weyerhaeuser Timber Company attained in removing the fallout problem in North Bend

and how grateful the citizens are. Mayor Linder stated that he at one time was employed by the Coos Bay Lumber Company and that they had used forced air so that they could burn as much wood waste as possible which caused the steam plant to blow off excess steam.

Mr. Southwick told the Authority that their management does not have to force the boilers to get rid of the waste; that now they have a new hardboard plant, and are utilizing 300 tons of waste a day. Mr. Southwick agreed that there still may be an occasional steam blow off but he attributed it to the change in the steam load; that the planer shavings are now used by mixing with hog fuel and utilizing it as fuel in the boiler.

Mayor Linder stated that the management tore down the whole planing mill in 1937.

Mayor Linder stated that the cinder situation seemed worse since Coos Bay Lumber Company built the hardboard plant, as this fallout used to blow away but now it is finer and lighter and does not go as far.

Mr. Southwick said that none of the cinders go through the boiler at all because the fuel is not wasted.

The Chairman stated that the data collected by the staff indicates that there is a serious fallout problem in Eastside.

Mr. Dixon asked Mr. Southwick if the engineers of Coos Bay Lumber Company had made any attempt to work with the Authority and secure data regarding the stack discharge from the steam plant.

Mr. Southwick said their company is in an out of the way location but it certainly would be agreeable to the management to work with the Authority's staff and especially since they would have knowledge they could provide that would benefit the Coos Bay Lumber Company's engineers in making this study.

The Chairman asked Mr. Southwick if his company had any technically trained personnel.

Mr. Southwick stated the company did have technically trained personnel but not professional and mechanical engineers.

Mr. Dixon stated he was under the impression that the data the Authority sent to Coos Bay Lumber Company had been ignored and now they wish a few more years to make a study.

Mayor Linder stated that he was told by an individual in the area that Coos Bay Company had no intention of cooperating but that this was only hearsay.

Mr. Dixon asked Mr. Southwick if his staff could work with our personnel and run the necessary stack measurements.

Mr. Southwick replied that they certainly could, that he and the other engineers would undertake this study. Mr. Southwick stated that he was certain that Mr. Forrester would abide with the suggestion of working with the Authority's staff and that any practical solution would be acceptable.

The Chairman advised Mr. Southwick that this problem is his company's obligation and they must do something about abating it and not wait around for a few more years.

Mr. Southwick stated that in 1950 the company started operation of a pilot plant and since there was no water available they had to develop a dry process and that they are now using about 50% of the wood waste but the company wants to double the capacity and that a new building is available for another production line which would utilize all remaining wood waste.

Mayor Linder added that the company used to sell excess electric power but now that they have the hardboard plant they do not sell any and that sometimes the flames shoot into the air for about 100 feet when they shut down the boiler draft and smoke from the steam plant stack is coal black and can be seen for a mile or so.

Mr. West stated that it appears that the Coos Bay Lumber Company has not shown a spirit of cooperation and that he believed it was now time that there was some action taken on the matter.

Dr. Erickson suggested that the company send in progress reports of their activities.

The Chairman stated the Authority should request remedial measures to bring about

progress.

Mr. Whitsell stated that the staff has information available to help the Coos Bay Lumber Company in their remedial work and would be glad to assist them in any way possible.

Mr. Southwick appreciated this offer of help. Mr. Southwick stated that Mr. Forrester or Mr. Dashney should be at any meeting of the Authority and that it was unfortunate that another meeting prevented them from being present today. He stated that the company would work with the Authority.

Mr. Dixon suggested that the Authority write a letter to Coos Bay Lumber Company and offer willingness to cooperate with them and evaluate with them conditions which show their steam plant to be the main source of the Eastside problem.

MOTION RE: EASTSIDE Cinder and flyash deposition in Eastside.

It was MOVED by Mr. Dixon and seconded by Mr. West and carried that the Authority again bring to the attention of the Coos Bay Lumber Company the data which has been accumulated on cinder fallout in the city of Eastside, point out the lack of cooperation from the company to date, to offer the assistance of the staff in the interpretation of the data, to request the cooperation of the company in undertaking a study of their problem and to notify them that unless prompt action was taken the Authority will have no alternative but to institute proceedings to gain compliance with state statutes.

The Chairman directed the Secretary to prepare a letter advising the company again of the facts regarding the Eastside problem, point out that the company has not cooperated with the Authority and offer the assistance of a field engineer to evaluate the fall-out conditions and that cooperation of their company was again being requested. The Chairman asked members of the Authority if 30 days appeared a reasonable time in which to expect Coos Bay Lumber Company to begin their work.

Mr. Dixon stated that 30 days was sufficient.

The Secretary explained that 30 days may seem reasonable but he pointed out that the

time period depends on the company being able to employ a competent engineer to make the stack studies and he suggested the Authority set the 30 days as a beginning time and then adjust it accordingly if necessary.

The Authority agreed to this recommendation.

STATUS OF PROPOSED WOOD WASTE AND INCINERATION STUDY

The Chairman requested Mr. Hatchard to advise the Authority the status of the waste wood burner study.

Mr. Hatchard reported that on December 14, 1955 a meeting had been held at Oregon State College and that 15 representatives of lumber or wood products mills were present. He explained that the group supported the fact that there is a need for engineering study of waste wood burning practices; that the concensus of those present was that a planning committee be organized. Mr. Hatchard explained that representatives of the committee had been selected and included a representative from the West Coast Lumbermen's Association, The Oregon Coast Operators, Western Pine Association, Western Forest Industries Association and Oregon Forest Products Laboratory and that Professor M. Popovich, Assistant Dean of Engineering, Oregon State College, was acting as the chairman. He stated that a commitment had been secured from the Public Health Service, Taft Sanitary Engineering Center, to pay the salary of an engineer to work at the engineering experiment station in Corvallis. He stated that a committee meeting has been scheduled for the week of February 27; that plans would be made for securing equipment and funds to conduct the study.

The Chairman stated that the Authority was glad to learn of this progress.

STATUS OF PROPOSED STUDY TO CORRELATE FLUORIDE AIR CONCENTRATIONS WITH RESULTING FOLIAGE CONCENTRATIONS IN COOPERATION WITH OREGON STATE COLLEGE, AGRICULTURAL EXPERIMENT STATION.

The Chairman requested W. J. Whitsell to advise the Authority of the status of the proposed air and foliage concentration study in the Troutdale vicinity.

Mr. Whitsell reported that the field work was scheduled to begin during April at test plots in Troutdale west and east of the Reynolds Aluminum reduction plant and that

three automatic impingers were being built for the study. He explained that the project had been scheduled to begin on a smaller scale in April and would be expanded in June if research funds were secured by Oregon State College, Agriculture Experiment Station, from the Public Health Service.

INVESTIGATION OF LIVESTOCK - FLUORIDE CONDITIONS.

The Chairman requested Dr. Monroe Holmes, State Board of Health, Public Health Veterinarian, to report on his investigation of the livestock - fluoride situation.

Dr. Holmes stated that during December 1955 and January 1956 he had been obtaining background material regarding animal afflictions and development, pathology, etc., in the Troutdale area. He reported that he had contacted Drs. Seabert Carter, Thomas Carter and Dr. Brimble, practicing veterinarians in the area, and learned that none of them believed that the present afflictions or diseases that they found in herds near Reynolds plant are due to fluorides specifically. Dr. Holmes stated that there is some doubt regarding the cause of minor ailments such as hoof rot, diarrhea and general poor condition since the occurrence of these disorders has been more frequent than in the past.

Dr. Holmes stated that he had also contacted Mr. William Averill, Multnomah County Agricultural Extension Agent and with him interviewed William Tegart, Townsend, Schlenneger and Tebbart on the S. B. Hall farm and had endeavored to ascertain their past experience with livestock afflictions and deaths correlated to the present conditions in their animals. He advised that the data obtained from these interviews indicated that none of the people raising livestock in this area are presently afflicted with conditions which may be allied with fluorosis damage, but that two of the dairymen interviewed have firm convictions that there may be damages caused by fluoride from the Reynolds plant.

During the same period Dr. Holmes stated that he had also interviewed Mr. Herbert Howell, Farm Manager and Dairy Supervisor of the John Jacob Astor Experimental Station at Astoria, Oregon, who may be considered a nutritional specialist of animals and has

been with the lower Columbia River Valley for several years and is well acquainted with the feeding problems of livestock on the lower Columbia River. Dr. Holmes reported that Mr. Howell was of the firm conviction that some of the livestock people on Sauvie Island had suffered fluoride damage during the early operation of the Alcoa plant but that the continued complaints and problems within the animals are due to either poor farm management or lack of nutritional knowledge regarding the mineral and protein needs of them. Dr. Holmes advised that Mr. Howell's experiments have indicated animals of the Sauvie Island and lower Columbia River area are suffering largely from imbalance of trace minerals especially copper cobalt relation and possibly molybdenum and that liver biopsies on cows taken from the Fraser herd have shown only 10 to 11 parts per million by Wisconsin and Stanford Laboratories whereas the normal cow may be expected to have 150 to 300 parts per million of copper in the liver tissues. Dr. Holmes explained that present experiments on the experimental station herds have shown the copper deficient animals to have lesions and symptoms similar to those which are claimed to be damaged from fluorides but that he had not seen any of these animals personally but 35 mm color pictures showed such animals manifesting signs which were similar to those that several of the complaining dairymen have stated.

Dr. Holmes stated that there were two courses of action for utilization of livestock as sentinals or criterias of possible human health hazards from fluoride emissions by the Reynolds Metals Company, and that one would be to continue consistent physical observation and recording of all conditions, illnesses of each herd in this area.

Dr. Holmes explained that the disadvantage of this approach was that dairymen and livestock raisers lack cooperation particularly when such observations may not be of specific benefit to themselves and that physical observations are long and tedious having a tendency to lower milk production and cause minor damages to dairy animals and also that such observations required the unlimited use of the dairyman's manpower taking considerable time from his routine work.

Dr. Holmes stated that the advantage would be to obtain specific records of each animal over a current period where major changes and minor changes may be noted;

and that a period of 2 to 3 years would allow development of younger animals into adults providing growth stages which would accurately mirror any condition which may cause pathological or physiological changes. Dr. Holmes pointed out that the second approach would be to provide experimental and control herds within the afflicted area; however the disadvantage would be the initial cost of purchasing animals and providing pasture and housing and care for them. He explained that the advantage to this approach would be that the animals would be under specific observation and synergistic factors could be evaluated to a greater extent than in normal farm animals.

The Chairman stated this was a good report and the Authority was glad to receive it. He asked Dr. Holmes to keep the Authority informed of his subsequent work.

Mr. Clifford M. Carlsen, Jr., Attorney representing Reynolds Metals Company, asked Dr. Holmes if he intended to check urine samples and bone samples, etc.

Dr. Holmes replied that the bone conditions should be studied in a research program, but that this was all largely depending on the wishes of the Authority.

Dr. Erickson asked Dr. Holmes what would be the approximate cost of an experimental herd, how many animals it would involve and where would they be pastured.

Dr. Holmes stated he had not figured out the details but believed arrangements could be made with farmers so that a herd could be maintained at an economical level which would be self supporting; that the feed and animal care probably could be paid out of the sale of the animals or milk production.

Dr. Erickson then asked the Authority members if there was enough interest in the project to have Dr. Holmes explore it further.

The Chairman suggested it may be well to explore this phase of fluoride study from the standpoint that if there was need, efforts should be made to secure Public Health Service funds under the provisions of Public Law 159.

Dr. Erickson indicated that he was in agreement to this approach.

Dr. Holmes explained that at the November Authority meeting with Mr. A.C. Stern, Chief, Public Health Service Air Pollution Program, it was indicated that the relationship between Public Health Service and U. S. Department of Agriculture would have to be developed before such a proposal could be considered.

The Authority agreed that Dr. Erickson and Secretary Everts could submit this proposal to the Public Health Service if further study indicated that approach was desirable.

Dr. Erickson stated he would like a letter direct from the Authority describing what type of project should be explored, and whether Dr. Holmes should proceed with it.

Mr. Carlsen asked that in the event an experimental herd would be placed close to the plant would there be a control area away from the plant.

Dr. Holmes assured him that a control herd would also be maintained if such a study were undertaken.

SPRINGFIELD: Re: McKenzie River Odor Problem

The Chairman requested Mr. Hatchard to report on the progress of the odor problem originating from the discharge of the Weyerhaeuser Timber Company's pulp mill waste into the McKenzie River.

Mr. Hatchard reported that the staff had made surveys of the river problem and had met with representatives of Weyerhaeuser Timber Company and that the company had started research to determine the most practicable solution to the condition. He advised that the Sanitary Authority's staff and the Air Pollution Authority's staff had met with the company's Technical Director and learned that chlorination of about one million gallons of Bergstrom effluent with about 100 parts per million should remove the odors. He stated that the log pond would receive the chlorinated waste and that several hundred feet of pipe would be layed so that approximately 50 days detention before discharge would be available.

Mr. Hatchard pointed out that chlorination would start in May and that additional surveys would be made to determine the change in the river odor conditions.

The Chairman stated the Authority was glad to learn that progress had been made.

ALBANY; Re: Odor from Western Kraft Mill

The Chairman requested the Secretary to report on the complaints received regarding the odors from the Western Kraft Mill located north of Albany.

The Secretary stated that seven complaints had been received and that preliminary investigations had already started; and that as soon as staff time permits a more detailed report will be made.

Mr. Hatchard replied that representatives of the Authority had visited the plant on January 24, and learned that no specific odor control systems had been installed as a part of the plant construction. Mr. Hatchard stated that a dust control installation had been made as a part of the recovery furnace operation. However, this is not closely related to the odor conditions. Mr. Hatchard reported that District Engineer Merryman was contacting complainants to secure additional information and that odor surveys would be made when staff time permitted.

The Chairman instructed the staff to proceed with the necessary field surveys.

DATE OF NEXT MEETING

It was decided that the next meeting would be tentatively scheduled for May at the call of the Chairman.

MEETING ADJOURNED

There being no further business, the meeting adjourned at 4:20 P.M.

Respectfully submitted,

CURTISS M. EVERTS, Jr., Secretary
Oregon State Air Pollution Authority

SIXTEENTH MEETING

OF THE

OREGON AIR POLLUTION AUTHORITY

June 22, 1956

The sixteenth meeting of the Oregon State Air Pollution Authority was called to order by the Chairman at 1:30 P.M. Friday, June 22, 1956, in Room 36, State Office Building, 1400 S.W. 5th Ave., Portland, Oregon. Those present were Carl E. Green, Chairman, Marie S. West, Vice Chairman, Mr. R. P. Dixon, Dr. Harold M. Erickson, members and Curtiss M. Everts, Jr., Secretary, Charles D. Hurt, Legal Advisor, R. E. Hatchard, Chief of the Air Pollution Control Section, W. J. Whitsett, Associate Engineer, Mr. Frank P. Terraglio, Ronald D. Mance and J. R. Funst, Chemists, and H. W. Merryman, District Engineer, State Board of Health.

MOTION RE: MINUTES OF PREVIOUS MEETING

The Secretary summarized the minutes of the fifteenth meeting of February 9, 1956. The Chairman declared that if there were no corrections or additions the minutes would stand approved as prepared by the Secretary.

NORTH ALBANY: WESTERN KRAFT CORPORATION MILL

The Chairman requested the Secretary to report on the complaints received regarding odors discharged from the Western Kraft Corporation Mill north of Albany.

The Secretary read a letter dated April 10, 1956 from the City of Jefferson requesting the Authority to investigate the conditions and bring about abatement of the offensive odors, originating from Western Kraft Mill at Albany. The Secretary summarized a letter dated March 10, 1956 from A. L. Harding, City Recorder, Independence, which stated that a council meeting was held on 3-7-56 wherein it was agreed that an offensive odor being emitted from the paper mill at Albany was causing nuisance conditions at times in Independence and that the city council instructed the Recorder to seek assistance from the Air Pollution Authority to abate this nuisance.

The Secretary stated that since the Authority meeting on 2-9-56 a total of 15 other complaints had been received from residents near Albany.

The Chairman requested Mr. Hatchard to discuss the staff's investigation of the odor conditions.

Mr. Hatchard stated that the Western Kraft Corporation began operation of the 120 ton per day mill in September 1955 and that the production process included the following steps: (1) Cooking wood chips in a pressure cooker for 4 hours, (2) Washing and refining the pulp for use in the kraft paper machine, (3) Recovery of chemicals removed from the pulp and, (4) Makeup of chemicals for reuse in the process.

He stated that there are many points of atmospheric discharge from a plant of this size but the major emissions included the digester blow and relief gases, recovery furnace stack and the lime kiln. He explained that other plant discharges include the various condenser relief valves, pulp washer, paper drying, oil fired boilers. He stated that the existing plant control systems included a condenser to remove the condensible part of the digester blow and relief gases, a venturi scrubber to serve the recovery furnace together with centrifugal type collector and a water scrubber and vacuum filter connected to the lime kiln discharge. He explained other plant control arrangements included an operational balance of excess air through the recovery furnace to prevent the formation of odorous sulfide compounds.

Mr. Hatchard stated that the complaints received were based upon objectionable odors from the plant and that the main source of odor came from the non-condensable digester relief and blow gases and the black liquor recovery furnace discharges.

Mr. Hatchard reported that the staff had made five area odor surveys since March in the vicinity of the plant. He explained that no satisfactory field odor sampling equipment is available and that the surveys are made by observing the odor frequency and intensity at various distances from the plant. He explained that the odor intensity is recorded on a basis of 0 to 4 and that there was good agreement between

the independent determinations by two observers at the same sampling station.

Mr. Hatchard stated that the variable weather conditions in Albany complicated the study since fixed sampling stations could not be used. Mr. Hatchard reported that the surveys showed frequent odor intensities of number 1 and 2 and occasional observations of #3 and 4 intensity for short durations usually less than one minute.

Mr. Hatchard stated that the company was planning to use an odor masking additive and that arrangements would be made for the staff to conduct another survey at that time.

Mr. R. V. Hansberger, Executive Vice President, Western Kraft Corporation, stated that the management is fully aware of the problem in north Albany and that representatives of the Air Pollution Authority have conferred with him a number of times regarding the information from the surveys and studies. He explained that since the date of the Air Pollution Authority's last meeting Western Kraft had been shut down for a period of 30 hours in which time changes were made in the system. Mr. Hansberger said that he believed the mill is doing a good job removing the materials and odor although, he stated, they have found it extremely difficult to separate them entirely with water or liquid showers because all substances were not soluble.

One of the changes made during their shutdown, he explained, was to force more air in the recovery system burning process and to prevent the formation of odorous compounds. Mr. Hansberger said he felt it was quite successful although it had not entirely solved the problem. In addition to that in the period between June 2nd, and June 5th, they inaugurated experiments and tests using Alamask. It was pointed out that its function is to mask the odors. He stated that their observations indicated that Alamask was performing quite successfully in reducing the odor from the recovery system. He stated that another test was scheduled in July which would include use of Alamask in the pulp digester. He added that as far as the expansion program was concerned, the technical staff had been studying the problem continuously including the recovery system and that they had purchased a larger and

more powerful fan and separation system which will greatly assist the oxidation of the odorous materials before discharge.

Mr. Hansberger stated that the experiments are continuing and although the improvements will not be 100% effective he was certain they would be able to substantially reduce the odors from their kraft mill. Mr. Hansberger stated that he would like very much to have a representative of the Air Pollution Authority present at the next experiment using the odor masking agent.

Chairman Green asked Mr. Hansberger to advise the Air Pollution Authority when the next test run would be made and a representative would be present. The Chairman asked Mr. Hansberger if other kraft mills were using this odor control method.

Mr. Hansberger replied that every kraft mill has this type of odor problem and is concerned and working on improvements and that he and his staff are keeping in touch with developments in other mills. He added that Western Kraft system is somewhat novel but they thought it was better than some conventional systems of reducing odors. In general, he stated, that if there was a way of measuring relative odor compared with production he was sure that Western Kraft was doing as well as any kraft mill in the business.

Mr. Dixon suggested that Mr. Hatchard attend the next experiment and submit a report to the Air Pollution Authority.

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The Chairman asked Mr. Hatchard if he received plans for the control of odors to serve the expanded plant.

Mr. Hatchard stated that the staff had not made a specific request but that it was normal practice to receive plans before an installation is completed.

The Chairman requested Western Kraft Corporation to submit their plans describing the control systems for the expanded plant to the Authority for review.

Mr. Hansberger stated that it is their intention to make the plans available.

The Chairman requested a report from the staff at the next meeting.

EMPIRE: Official public hearing regarding embers and flyash discharges from the Cape Arago Lumber Mill.

The Chairman stated that the representatives of the Cape Arago Lumber Company were now present and that the Authority would proceed with the public hearing regarding the cinder and flyash deposition on property near the Cape Arago Lumber Mill in Empire.

The Chairman requested the Secretary to summarize the previous actions of the Authority regarding the matter.

The Secretary stated that at the last Authority meeting Mr. Clifford Carlson, Attorney representing Cape Arago Lumber Company, stated he would advise the Authority regarding the company's plans. The Secretary explained that since November 1955 the mill had been closed except for partial operation of the planer; that there had been some reports that the mill production may be completely reorganized. The Secretary pointed out that the Authority did not receive any communication from the Cape Arago Lumber Company although an additional request had been sent to the company requesting the information. He reported that the company had notified the Authority that the lumber mill had resumed operation on May 1st, and that it had also been decided at the last Authority meeting that the company would be cited in if appropriate arrangements were not made to control their cinder and flyash discharges.

During the hearing Mr. Whitcell reported that the Authority's studies began in March 1956 with the location of two fallout stations and that the Authority had notified the City of Empire regarding the fallout results obtained and announced that the station would be discontinued unless complaints were received. The City of Empire requested the Authority to continue the investigation and take necessary action to reduce the cinder and flyash deposition. Mr. Whitcell stated that the data obtained from the fallout station showed excessive deposition was occurring during various periods and that a maximum of 417 tons per square mile per month had been found. He stated that the Authority's recommendations had been submitted to the management of the Cape Arago Lumber Company regarding the installation of cinder control equipment to serve the steam generating plant but that no changes had been made. He also

stated that during his past two field trips to Empire he was unable to contact Mr. Miller to discuss the situation.

Mr. Hatchard stated that the Empire City Council had sent subsequent letters to the Authority again requesting abatement action.

Mr. Miller, Vice President, Cape Arago Lumber Company, stated that he had operated the company since May 1950; that he had received some complaints at the mill regarding cinder conditions. He explained that he had attempted to minimize the discharges from the waste wood burner. Mr. Miller stated that he regretted that his company appeared not to be concerned about the problem; that inadvertently letters from the Authority had not been properly answered. He stated that the company would investigate the matter of installing cinder collection equipment to serve the steam generating plant.

MOTION RE: EMPIRE CAPE ARAGO LUMBER COMPANY

It was MOVED by Mr. Dixon and seconded by Dr. Erickson and carried:

1. That the Authority continue the hearing.
2. That the management of Cape Arago Lumber Company obtain technical assistance to advise them regarding the correction of the excessive cinder and flyash discharges.
3. That they cooperate with the Air Pollution Authority staff.
4. That we receive statement of progress toward solution of the problem within 90 days.
5. That the staff advise the Authority of specific recommendations for further action or consideration in the matter.

The Chairman requested the company to submit a progress report within the next 90 days.

Dr. Erickson stated he would like a progress report submitted sooner than 90 days if possible.

MULTNOMAH COUNTY: BURNING REFUSE DUMPS NORTH OF PORTLAND

The Secretary stated that several complainants were present who wished to be heard regarding air pollution from the burning refuse dumps.

Mrs. Carlie Gilstrap, 405 N. Russett Street, stated that after the establishment of her residence a series of garbage dumps have been started in the area north of Columbia Boulevard and that now when these dumps operate over 100 trucks a day deliver wet garbage to the dumps. She reported that two of the dumps receive permits from the county to operate but that the County did not give them any permit to burn and that they are burning in violation of that permit. She stated that they are anxious to have this situation corrected as soon as possible and to have this Authority take necessary action that will bring about proper handling of garbage. Actually she stated they would like to get the dumps closed but if that can not be arranged it is their understanding that the Authority could make recommendations to reduce the air pollution. She advised that they realized that the County and City are both involved, the city in licensing the trucks and hauling the garbage out of the city and the county in general supervision of the dump operations. She stated that the city has provided an incinerator to properly burn garbage but that the dumps north of Columbia Boulevard are closer for these garbage trucks to unload.

Mrs. Gilstrap said she understood there was a requirement that the dumps should be covered with five feet of dirt which definitely is not being done. Mrs. Gilstrap presented a map showing locations of complainants' homes and the refuse dumps. She reported that one new dump had been established near north Vancouver and Columbia Boulevard which was very close to their homes and that they suffer all summer and fall when the prevailing winds carry smoke, flyash and odors from the dumps to their homes. She stated that they have flyash deposited on their homes and yards and that the smoke is so thick that automobiles have to use their lights during daylight hours. Mrs. Gilstrap stated that there is practically always a cloud of dense smoke in one direction or another and that it is hoped the Authority's staff will make a preliminary survey since all the residents consider this a serious

health hazard.

The Chairman asked the Secretary if written complaints had been received regarding these refuse dumps.

The Secretary replied that a complaint had been received May 18, 1956 regarding the dumps which contained the signatures of eight residents.

The Chairman stated that this matter should be investigated not only by our staff but in cooperation with the County and City officials.

Mr. Dixon stated that if these trucks were operated in violation of a county permit, it appears that conditions could be improved by the county enforcing its regulations.

Mrs. Gilstrap replied that the burning at the dumps is being done in violation of the permit.

Chairman Green asked Mrs. Gilstrap what agency issued the permit.

Mrs. Gilstrap replied that she understood it was the Board of County Commissioners.

Dr. Erickson stated that the matter should be investigated with the County and City agencies and that independent studies should be made if necessary to determine the nuisance conditions in the area.

Chairman Green directed the staff to investigate the matter when other commitments will allow and to confer with the city and county officials concerned.

EASTSIDE: CINDER AND FLYASH DEPOSITION FROM COOS BAY LUMBER COMPANY

The Chairman requested W. J. Whitsett to report on the cinder and flyash deposition in Eastside.

Mr. Whitsett stated that at the February 9, 1956 Air Pollution Authority meeting the Authority directed that the Eastside problem again be brought to the attention of the Coos Bay Lumber Company and that the data which had been accumulated by the staff showing the company to be the major source of cinders and flyash be interpreted to the company management, and that the lack of cooperation by the Coos Bay Lumber Company be pointed out; that the company's cooperation in undertaking a study of their problem be encouraged and that the company be notified that unless prompt action be taken the Authority will have no alternative other than to institute proceedings to

gain compliance with state statutes.

Mr. Whitsell advised that on March 20, a letter containing the above recommendations was sent to the Coos Bay Lumber Company and that in a letter of March 21, from the Coos Bay Lumber Company a meeting date with the Authority's staff was arranged.

Mr. Whitsell reported that on March 30, Mr. Hatchard met in Coos Bay with Mr. J.W. Forrester, President, Coos Bay Lumber Company, Mr. D. D. Dashney, Vice President, Coos Bay Lumber Company and Mr. R. G. Southwick, engineer, Coos Bay Lumber Company and that the fallout and area survey data was discussed. Mr. Whitsell stated that Mr. Forrester advised that an engineering and contracting firm in Medford had made measurements of the steam plant stack but the Coos Bay Lumber Company believed the information was inadequate. Mr. Whitsell stated that C.C. Moore Company had been contacted to make another study but the Moore Company had not yet started the work. He stated that arrangements were made to notify the Authority when the stack study would be made so that a staff member could be present. Mr. Whitsell reported that the company management declared they intend to proceed with necessary corrections. On June 13, Mr. Whitsell reported that he conferred with Mr. R. G. Southwick at Coos Bay and learned that the company had just received a proposal from the Preferred Equipment Engineers in Seattle to conduct stack tests but that the nature of their requirements would necessitate considerable work in the preparation of scaffolding and opening the re-enforced concrete stack and that a building project already underway was expected to occupy their personnel completely until the middle of July.

The Chairman requested the Secretary to read a letter dated June 20, signed by Mr. D. D. Dashney, Vice President, Coos Bay Lumber Company, regarding the company's efforts to investigate the cinder discharge from their plant.

The Chairman asked if the staff had any recommendations to make in this matter.

Mr. Hatchard stated that the staff was concerned regarding the length of time required before corrections are made. He explained that we do have fallout measurements from our Eastside stations and that the data shows a very high rate of

deposition. He stated that the city officials urged that the matter be corrected just as soon as possible since the residents were pressing for action. In view of our information and what the company has advised it would appear that the report at the next meeting would be the progress taken in the meantime but really what was needed was to reach the stage of determining what specific installations will be made to correct the steam plant discharge.

The Chairman asked if this problem was similar to those which have been encountered elsewhere and that there are solutions available.

Mr. Hatchard stated that the situation is similar but there has been some difficulty on the part of the staff to convince the management of Coos Bay Lumber Company that it is their plant discharge that was creating the problem since there are other plants in the vicinity. Mr. Hatchard stated that the staff is certain that the Coos Bay Lumber Company is the major contributor but that a measurement of the steam plant was needed to determine quantitatively the amount of cinders and flyash discharged.

The Chairman asked ever how long a period has the Coos Bay Lumber Company been advised to reduce the discharge.

Mr. Hatchard stated that the Authority's recommendations were made $1\frac{1}{2}$ years ago and that the actual corrections are not yet started.

Mr. Whitsell stated that there is another matter which the members of the Authority might consider since the ownership of the mill is to be changed and Mr. Southwick, Coos Bay Lumber Company Engineer, had stated that a new owner may have different plans as far as the steam power plant was concerned and that there was a possibility of dismantling it.

Mr. Green asked if there had been a change of ownership announced yet.

Mr. Whitsell said no but the general opinion was that Georgia-Pacific Corporation would purchase this firm.

Mr. Dixon suggested that a registered letter be sent notifying the company of its violation of the statute and then give them a reasonable time to figure out what

they wish to do about it and if it is their plan to dismantle the plant it should be so stated but in any event the new buyer should be aware of the situation.

MOTION RE: EASTSIDE: COOS BAY LUMBER COMPANY

It was MOVED by Dr. Erickson and seconded by Mr. West and carried that the Coos Bay Lumber Company be notified that they appear to be in violation of the Oregon laws pertaining to air pollution and that the Authority would expect from them a statement regarding their plans for compliance with the state statute and that they shall advise us of such action within a period of 90 days.

SWEET HOME: SANTIAM LUMBER COMPANY

The Chairman requested Mr. H. W. Merryman to give a resume of the progress being made at the Santiam Lumber Company in Sweet Home, Oregon.

Mr. Merryman stated that the staff first became aware of this situation in 1954 when residents complained of nuisance conditions adjacent to Santiam Lumber Company and that a staff member made an investigation on November 29, 1954 and found a considerable nuisance condition caused by cinder and flyash fallout. He reported that a sampling station was established in November 1954 and in January 1955 the Authority received a complaint-petition signed by 65 residents near the mill and that the staff had made a plant visit. He stated that the main sources of the cinder and flyash were the two hog fuel steam boilers and the waste wood burner and that recommendations were sent to the company that cinder collection equipment be installed.

Mr. Merryman stated that the Santiam Lumber Company then engaged engineering services and proceeded with a program to correct the problem which included the installation of a log barker, a cinder collection system for both boilers and an additional hog fuel chipping unit. He advised that the barker was installed in September 1955 and the collectors were finished in January 1956 and that now all of the wood waste from this plant is used for pulp mill chips or for hog fuel. He stated that the waste wood burner was dismantled in May 1956.

The Chairman asked if this solution had remedied the cinder and flyash conditions.

Mr. Merryman stated there has been considerable reduction of flyash as a result of

the cinder collection installation and other changes but subsequent fallout samples would show the reduction quantitatively.

Mr. Hatchard stated that the staff is extremely pleased with the progress and pointed out that the company made corrections beyond the scope of the Authority's original recommendations.

The Chairman suggested that the Secretary prepare a letter in behalf of the Authority expressing appreciation for the cooperation extended.

PROPOSED ENGINEERING STUDY OF WASTE WOOD BURNING - Charles N. Sanford, Associated Forest Industries of Oregon.

The Chairman called upon Mr. Sanford to give a report on the status of the plan to organize an engineering study of waste wood burning.

Mr. Sanford stated that with the cooperation of R. E. Hatchard, some members of the industry, Oregon State College Engineering Experiment Station and Public Health Service that at least there is a sound program proposed. He stated that the only remaining step was to get the lumber industry to pay its part of the cost. Mr. Sanford reported that the program and plans of the waste burner research included the following arrangements:

1. U. S. Public Health Service has agreed to pay the salary of the chief investigator who will probably be an Oregon State College faculty member working during the summer of 1957.
2. The Oregon Forest Products Laboratory will provide technical service.
3. Sawmill and plywood industries will pay the wages of an engineering aide, provide sampling equipment, pay necessary traveling expenses of the two persons conducting surveys and pay for publication of a report to be distributed widely throughout the industry. This cost is estimated to be about \$6,000.
4. The Oregon State College Engineering Experiment Station will coordinate the project and assume responsibility to see that the research is carried out in a diligent manner and publish a report.

Mr. Sanford stated that the remaining arrangement is to get industry together and collect the \$6,000.00 but that some of the mills belong to no industry association of any kind so the \$6,000 will be solicited from companies directly involved with burner cinder and flyash complaints.

The Secretary informed the members of the Authority that this program may have seemed to progress slowly at first but that we have received excellent cooperation from the staff of the Associated Forest Industries of Oregon and that they have made a considerable effort to get the program organized. The Secretary stated that it has been a real pleasure working with Associated Forest Industries of Oregon.

PORTLAND: Staff report regarding summary of air sampling data, 1952-56, City of Portland Air Pollution Committee activities and Stanford Research Institute Survey.

The Chairman suggested that the staff could send a written report to members of the Air Pollution Authority regarding Portland air pollution activities and make only a brief report at this meeting.

Mr. Hatchard advised that the Secretary and members of the staff had met with the members of the City of Portland Air Pollution Committee on four occasions since the last Authority meeting and it was believed that there has been renewed interest regarding Portland air pollution conditions during the past six months. He stated that an effort was being made to establish an air pollution program by the City of Portland which the staff and members of the Authority can advise and assist. Mr. Hatchard said that Dr. Meador has requested technical assistance from Public Health Service to provide technical assistance to the city under the provisions of Public Law 159. Arrangements have been completed for an engineer to meet with all groups concerned with Portland's air pollution conditions and that the overall survey would proceed along the following general plan:

1. Determine the nature and extent of air pollution surveys needed.
2. Determine staff and equipment requirements to make the study.
3. Determine source of personnel and funds needed to support survey.
4. Detailed project development.

Mr. Hatchard advised that the Public Health Service engineer would be in Portland during the week of July 9, 1956.

EUGENE: EUGENE AIR POLLUTION CONTROL ORDINANCE.

The Chairman stated that it was his understanding that the City Council of Eugene has passed an air pollution control ordinance.

Mr. Hatchard reported that the Eugene City Council had unanimously passed the air pollution ordinance on May 28th, and that the control provisions adopted had been based upon the report prepared by the Eugene Anti-Air Pollution Committee following over a years study.

He stated that the staff had actively participated in the study of Eugene air pollution and had submitted recommendations which were incorporated with the committee's report.

Mr. Hatchard stated that the air sampling and surveys in Eugene had been increased to obtain more data and that this work has been carried on in cooperation with the city.

He advised that the control provisions contained in the ordinance were equivalent to the Authority's proposed regulations and that the city council had allowed a time period until January 1, 1958 for conformance.

Mr. Dixon stated that he believed it was a very good ordinance and that the City would get good cooperation.

BEAVERTON: PACIFIC ADHESIVES COMPANY ODOR CONTROL.

The Chairman requested Mr. Terraglio to report on Pacific Adhesives progress towards an appropriate odor control system. Mr. Terraglio reported that additional equipment was on order and the complete installation is expected within six weeks at which time the staff will re-evaluate the odor conditions as they exist.

The Secretary stated that the staff received a letter of appreciation from Circuit Judge Charles Foster regarding the work accomplished.

ADMINISTRATIVE MATTERS:

The Chairman advised that any proposed legislation for consideration by the state legislature which will convene in January 1957 should be considered.

The Secretary stated that September 1, 1956 was the deadline for submitting the proposed legislation to the Legislative Council for review.

The Chairman asked the staff if there was a need for additional legislation it should sponsor or recommend for the adoption of the Legislature.

Mr. Hatchard stated that one point that comes up frequently is the question whether there is a need for enabling legislation to allow a county or group of counties to carry on a local air pollution program. He advised that cities with the local rule provisions have the power to set up their own program and the question has come up in the Eugene-Springfield vicinity whether or not a two city or part of a county operation would be the best approach for a local program.

The Chairman asked if this matter could not come through the League of Oregon Cities and Association of Oregon counties if so desired.

The Secretary replied that this approach could be followed and he explained that the Legislative Interim Committee on Local Government is now engaged in the study of state and county relationships and state and city relationships. He advised that if this Committee believes that such legislation is needed, it would be introduced.

The Chairman felt there was no particular need for the Authority to go into this matter at this time but instead the request for any such legislation should come from other agencies concerned. He stated that the Authority would consider any legislation that might be proposed and decide whether it should be supported.

Budget for 1957-59 Personnel, Equipment needs, Biennial report, 7-1-54 to 6-30-56.

The Chairman requested the Secretary to discuss the major changes in the proposed 1957-1959 budget.

proposed

The Secretary stated the/budget provides for one additional public health engineer II over our present operating personnel and an additional chemist in the second year and one third of the salary of a Public Health Veterinarian.

The Chairman said since this item requires considerable study and deliberation he suggested that the review and recommendation of the budget be assigned to a committee of 2 or 3 members of the Authority.

The Secretary stated that the biennial report and budget preparation period coincided and that time was needed to prepare both items for presentation.

Dr. Erickson stated that he believed the Authority will be needing more data than ever before to justify the budget items requested. He advised that the Governor had requested an intensive review before his recommendation to the Legislature would be prepared.

NEW COMPLAINTS: CORNELIUS RE: DUST FROM DUGDALE NUT PROCESSING COMPANY.

A complaint regarding dust from the Dugdale Nut Processing Company dated May 11, 1956 sent in by City Manager J. D. Harleman was read and was placed on the staff's work schedule for investigation.

MYRTLE CREEK: CINDER AND FLYASH FROM UMPQUA PLYWOOD CORPORATION

The Secretary stated several letters of complaint were received from residents in Myrtle Creek regarding cinder and flyash from the Umpqua Plywood Corporation and that the Authority has written to W. H. Gonyea, General Manager, Umpqua regarding this nuisance and that a reply had been received from Mr. Gonyea that the mill would be closed if the Authority insisted that changes be made.

The Chairman wished to know if there has been any investigations in Myrtle Creek.

Mr. Hatchard stated that T.M. Gercow has investigated complaints and that a fallout station was operating and that the fallout has been very high and that the major source was the Umpqua Plywood Corporation's steam generating plant.

Mr. Dixon stated that he knew Mr. Gonyea and that in the past the company has been involved in labor troubles and each time he is approached to change some practice he advises that he is closing operation for 30 to 60 days and he will follow through

if it is to his advantage.

Dr. Erickson stated that if there is violation of the law the Authority should proceed with necessary steps to bring about correction.

Chairman Green instructed the Secretary to prepare a reply to Mr. Gonyea and point out that the cinders can be controlled.

MARION COUNTY; ODOR FROM THE LABISH COLD STORAGE COMPANY

The Chairman requested the Secretary to report on the Labish Cold Storage Company's odor problem.

The Secretary stated the Authority had received complaints from School District No. 31 relative to odor conditions from a pile of decomposing onions at the Labish Cold Storage Company in Brooks, Oregon. He reported that a field investigation was made and a letter was sent the company recommending that action be taken to abate this nuisance and that this complaint would be presented at the June 22, 1956 Authority meeting. The Secretary stated that no action had been taken by the company.

Dr. Erickson stated that he believed the company should be cited to appear at a public hearing since the company is apparently unwilling to cooperate on the problem.

The Chairman asked Dr. Erickson if this matter could be handled by the Marion County Health Department using the local nuisance statutes normally enforced by their department.

Dr. Erickson replied that there was no specific statute that applied to this condition which could be used.

The Chairman asked Attorney Burt if there were other statutes regarding public nuisances which the Marion County District Attorney could act on.

Mr. Burt stated that he could not recall a state law covering this matter but that he would be glad to investigate the matter with the District Attorney.

MOTION RE:; MARION COUNTY, ODOR, LABISH COLD STORAGE COMPANY

It was MOVED by Mr. West and seconded by Dr. Erickson and carried that C. D. Burt discuss this complaint with the District Attorney of Marion County and that if a

satisfactory solution is not found that the Secretary or Chief of the Air Pollution Authority be authorized to hold a hearing on behalf of the Authority to resolve the matter.

MEDFORD: CINDER AND FLYASH DEPOSITION

The Chairman requested the Secretary to review the complaints regarding flyash from sawmills in the Medford area.

The Secretary read a letter-complaint from Mr. Wallace W. Watkins of Medford

alleging cinder and flyash fallout from three sawmills were causing public nuisances in the vicinity and reported that a reply had been sent to Mr. Watkins advising that T. M. Cerov, State Board of Health District Engineer, would investigate the three waste burners in his vicinity.

Mr. West asked if the city of Medford was preparing an air pollution ordinance.

Chairman Orsen replied that the city was not preparing an ordinance at this time but this complaint should be discussed with the City Manager of Medford.

PORTLAND: TRUMBULL ASPHALT ROOFING - FUMES AND OIL DEPOSITION.

The Chairman requested the Secretary to report on Trumbull Asphalt Roofing nuisance condition.

The Secretary read a letter from the Portland Health Bureau dated May 16, 1956 advising that a complaint had been filed by the employees of the Hazeltine Company regarding the deposition of oily substances on their automobiles in the vicinity and requesting the Authority to assist with air sampling to determine the source of discharge. The Secretary reported that the Authority had advised the Portland Health Bureau that a study would be made as soon as the work schedule would permit.

The Chairman directed the staff to start the study as soon as other commitments will allow.

CLACKAMAS COUNTY: FUMIGANT USED AT CARGILL GRAIN COMPANY

The Chairman asked the Secretary to report on the status of the Cargill Grain Company's dust nuisance conditions.

The Secretary read the complaint dated May 31, 1956 submitted by Attorney Harry A. Harris in behalf of Mr. and Mrs. C. Wicks alleging that the Wicks were exposed to a health hazard due to the grain company's operations which allowed the wind to carry fine dust from their operation to the Wicks' residence. The Secretary advised that representatives of the State Board of Health, Occupational Health Section and the Authority had immediately investigated the human health aspects and it was learned that the Cargill Company had completed operations and that the new company would completely change the grain handling methods.

The Secretary reported that the staff had advised Dr. H. Stolte, Clark County Health Officer, of the situation since the complaint had been referred from their department, and asked Dr. Stolte to request another investigation if the new company appears to be causing a dust problem.

WILLAMETTE CITY: CINDER AND FLYASH DEPOSITION.

The Secretary was instructed by the Chairman to review the complaints regarding cinder and flyash deposition in Willamette City.

The Secretary read a letter from Mr. Ned S. Warriner, Corps of Engineers, Oakridge, regarding the deposition of cinders and flyash originating from two waste wood burners which were causing nuisance conditions.

The staff had advised Mr. Warriner that H.W. Merryman, State Board of Health District Engineer, would investigate the conditions.

THE DALLES: CINDER AND FLYASH FROM THE DALLES LUMBER COMPANY

The Chairman requested the Secretary to report on the complaints regarding the deposition of cinder and flyash near The Dalles Lumber Company in The Dalles. The Secretary stated the Authority had received a petition signed by 37 residents located in the Riverview area alleging that smoke and unburned sawdust from the burner of The Dalles Lumber Company was contaminating the air and injuring health and soiling the personal property of the residents. He reported that the group had been advised by letter that the complaint would be referred to the Authority at its June 22nd, meeting.

The Chairman directed the staff to investigate this complaint as time permitted.

THE DALLES: DRIFT OF LEAD-ARSENATE FROM ORCHARD DUSTING.

The Chairman requested Mr. Hatchard to report on the investigation of a lead arsenate orchard dust drift into The Dalles.

Mr. Hatchard stated that on May 22, 1956 the State Board of Health had received a request for assistance from Dr. H. R. Davidson, Wasco-Sherman County Health Officer, to evaluate complaints regarding a health hazard caused by the lead arsenate dust. He reported that Dr. Sullivan and he had attended a public meeting in The Dalles on May 23, and arrangements were made for investigation of the matter.

Mr. Hatchard stated that Dr. Sullivan was caring for the human health aspects and the Authority's staff had arranged for air sampling. He explained that subsequent field visits indicated that some of the orchardists near The Dalles had changed from dusting operations to solution spraying which had thus far prevented another occurrence.

He stated that arrangements were made with the County Health Department to notify The Authority if the situation occurred again so that samples could be collected.

Dr. Erickson stated that the State Board of Health appreciated having the staff investigate the problem and as a result of the investigations the orchardists may apply the insecticides in such a manner that no problem is created.

The Chairman directed the staff to continue cooperative efforts to prevent the problem from occurring again.

ALBANY: CINDERS AND FLYASH FROM BORDEN MILK COMPANY

The Chairman requested the Secretary to report on the investigation of sawdust and flyash deposition near the Borden Milk Company in Albany.

The Secretary read a letter dated May 31, from City Manager J. J. Salovaara regarding the deposition of flyash resulting from the Borden Company's plant on nearby residential areas. He reported that a letter had been sent to Mr. Salovaara on June 5, advising that an investigation would be made.

LINN COUNTY: CINDERS, SAWDUST & FLYASH FROM LEE FRUITT'S FUEL COMPANY

The Secretary stated that the Authority received a petition signed by 17 residents

of Lebanon, Oregon, on June 22, complaining about cinders and flyash from a mill located along highway No. 20. Since the petition had arrived this morning the Authority's staff has had no opportunity to investigate the situation.

The Chairman directed the Secretary to investigate the matter when the staff schedule will allow.

DATE OF NEXT MEETING

It was decided that the next meeting would be held in September at the call of the Chairman.

MEETING ADJOURNED

There being no further business, the meeting adjourned at 5:25 P.M.

Respectfully submitted,

CUMMISS M. EVERTS, Jr., Secretary
Oregon State Air Pollution Authority

BEFORE THE
OREGON AIR POLLUTION AUTHORITY

In the Matter of a)

PUBLIC HEARING)

Regarding air pollution from the)
Cape Arago Lumber Company located)
in the City of Empire, Coos County,)
Oregon.)

1400 S. W. 5th Avenue
Portland, Oregon
Friday, June 22, 1956

Met, pursuant to notice, 2:00 o'clock P. M.

BEFORE:

CARL E. GREEN, Chairman
MERLE S. WEST, Vice Chairman
R. P. Dixon
Harold M. Erickson, M.D.
Harold F. Wendel

ALSO PRESENT:

Curtiss M. Everts, Jr., Secretary
Charles D. Burt, Special Asst. Attorney General
Richard E. Hatchard, Chief, Air Pollution Control
Wilbur J. Whitsell, Associate Sanitary Engineer
Frank Terraglio, Chemist
Ronald D. Nance, Chemist
James R. Faust, Chemist

PROCEEDINGS

CHAIRMAN GREEN: Will the Secretary summarize the previous actions of the Authority regarding the cinder and flyash deposition in Empire.

MR. EVERTS: The Chairman, Members of the Authority will recall that in the resume of the minutes of the last meeting that the Cape Arago Lumber Company was represented by Council; that the Authority heard a report on the staff experiences and studies in that area and following the staff report Mr. Clifford Carlsen, Attorney, representing Cape Arago Lumber Company, stated that the steam plant of that company had been shut down in November 1955; that the sawmill was now shut down; that the planing mill was being operated every other week; that the company had no present plans for re-opening. Following a discussion the Chairman indicated to Mr. Carlsen that the Authority expected a specific statement in writing from the company regarding their future plans; that the management should not ignore the Authority's correspondence but put in writing all of their plans as they are formulated. That if the Authority could not get cooperation from the management the management representative must be present at the next meeting. Since that time additional studies have been made in the area.

The Authority received a letter dated June 21, 1956 from the City of Empire signed by its Mayor, Mr. Kenneth E. Adams, which reads as follows. "The Council of the City of Empire wishes to submit the following report for your consideration. Since Cape Arago Lumber Company has resumed operation there has been no noticeable improvement of the fallout problem. Residents of this city have continued to protest the fallout conditions. Council members are of the opinion no marked alleviation of outfall present since resumption of full mill operation." In your files there is an engineering report on the staff's study as well as a Chronological report on investigations, correspondence and so forth. I believe Mr. Whitself is prepared to report further on this matter.

CHAIRMAN GREEN: Mr. Whitself will you report to the Authority, please?

MR. WHITSELL: I believe it was agreed that we should read the chronology, is that right?

MR. BURT: I believe it substantially should be in the record.

MR. WIENER: Mr. Chairman, what procedures will be followed during the hearing?

CHAIRMAN GREEN: Would you state your name, please?

MR. WIENER: My name is Norman J. Wiener, Attorney, and I represent the Cape Arago Lumber Company.

MR. WIENER: It is also my understanding that the hearing will be conducted in accordance with Chapter 449.735 Oregon Revised Statutes.

CHAIRMAN GREEN: Mr. Burt, will you advise the Authority.

MR. BURT: This hearing will be conducted pursuant to the provisions of Chapter 449.735 for the purpose of establishing facts relating to this situation.

MR. WIENER: Will the witnesses be placed under oath.

MR. BURT: I would suggest to the Authority that it would be the proper procedure.

CHAIRMAN GREEN: Mr. Burt will you swear in the witness, please?

MR. BURT: Yes. Will you raise your right hand? Do you solemnly swear that the testimony which you will give before this hearing be the truth, the whole truth and nothing but the truth, so help you God.

MR. WHITSELL: I do.

CHAIRMAN GREEN: You will repeat your name and your business connection, Mr. Whitsell.

MR. BURT: Mr. Chairman, if I might interrupt, it might be well for the representative of Cape Arago Lumber Company to sit at the table.

CHAIRMAN GREEN: Yes. Won't you come up Mr. Wiener and the gentleman with you.

CHAIRMAN GREEN: The testimony given is being recorded and will be available later to you and other concerned.

CHAIRMAN GREEN: Mr. Whitsell, first tell us your full name and your occupation.

MR. WHITSELL: My name is Wilbur J. Whitsell, I am an engineer with the Oregon State Air Pollution Authority. This material which I am about to read is

Exhibit A which is a Chronology of events leading to this hearing. It concerns the State Air Pollution Authority's negotiations with the Cape Arago Lumber Company.

EXHIBIT A

CHRONOLOGY

CAPE ARAGO LUMBER COMPANY

1. March 11, 1954: The measurement of the cinder and flyash fallout in Empire started with the location of area sampling stations approximately 1300 feet SSE and 1300 feet SSW from the Cape Arago Lumber Mill.
2. May 12, 1955: Letter sent to the City Council of Empire transmitting the results obtained from the fallout stations and explaining that the stations would be discontinued since no written complaints had been received.
3. June 10, 1955: Letter received from R. L. Thomas, City Attorney for Empire advising that the City Council had requested the Air Pollution Authority to continue study and take necessary action to correct the cinder deposition problem. Also stated the city had received many complaints during the summer months each year and had been unable to correct the problem.
4. June 23, 1955: At a regular Authority meeting the staff was instructed to continue the sampling activities.
5. June 29, 1955: Fallout stations were reactivated 1300 feet SSE and 600 feet SE of Cape Arago Lumber Mill.
6. June 29, 1955: A representative of the Authority's staff conferred with Kenneth Adams, Mayor, City of Empire, regarding activities. Also conferred with D. H. Miller, Vice President of Cape Arago Lumber Mill.

7. July 7, 1955: Copy of letter received from City Attorney R. L. Thomas to Cape Arago Lumber Company urging the company to cooperate with the Air Pollution Authority.
8. July 13, 1955: Letter to Cape Arago Lumber Company reporting that from 54 to 120 tons per square mile per month of fallout obtained from area stations and that public nuisance conditions exist. It was recommended that the company take appropriate measurements to reduce cinder and flyash discharges.
(No reply received to this letter)
9. Sept. 16, 1955: Letter received from City of Empire protesting continuance of air pollution and fallout from the Cape Arago Mill.
10. Sept. 26, 1955: Letter sent to City of Empire advising that the investigation was continuing and that the Cape Arago Lumber Company had been advised that corrections were needed.
11. Oct. 26, & 27, 1955: A member of the Authority's staff attempted without success to obtain an appointment with D. H. Miller, Vice President, Cape Arago Lumber Company during a routine field trip to Coos Bay.
12. Oct. 31, 1955: Letter sent to D. H. Miller stating that since the Authority had received neither plans nor a reply to the letter of July 13, 1955 it was assumed no important corrective steps had been taken. The company was advised that a public meeting would be held and a representative of their company would be invited to attend.
(No reply to this letter received)
13. Oct. 31, 1955: Letter sent to the Empire City Council advising that no progress had been made by the company towards the reduction of cinder and flyash deposition and that a public hearing would be scheduled at a future meeting of the Authority.

14. Nov. 14, 1955: F. A. Yerke, Jr., attorney representing the company, requested copies of the fallout data obtained from the Empire stations.
15. Dec. 5, 1955: Reply sent to Attorney F.A. Yerke transmitting the fallout data.
16. Jan. 9, 1956: Letter sent to D.H. Miller advising that a representative of the Authority would be in the area and would contact him for an appointment.
17. Jan. 10 & 11, 1956: A representative of the Authority was unable to arrange a meeting with Mr. Miller but did talk with him by phone and was advised to contact Mr. Yerke for information.
18. Jan. 10, 1956: Letter from Attorney Yerke advising that the mill had been closed and was not operating at the present time.
19. Jan. 16, 1956: Letter sent to Attorney Yerke requesting a copy of the stack test data describing the discharges from the Cape Arago steam plant.
(No reply received)
20. Jan. 31, 1956: Letter sent to D. H. Miller notifying them of the Authority meeting on February 9, and requesting a representative to be present.
21. Jan. 31, 1956: Letter sent to the City of Empire regarding the February 9, Authority meeting.
22. Feb. 6, 1956: Phone call received from Mr. Yerke regarding the February 9, Authority meeting. Advised that the members of the Air Pollution Authority desired to know what arrangements the company had made regarding the control of cinders when the plant resumed production.
23. Feb. 7, 1956: Letter received from King, Miller, Anderson, Nash & Yerke, attorneys, representing the company, requesting copies of the complaints received.

24. Feb. 7, 1956: Copies of complaints sent to C.M. Carlsen, Jr. Atty.
25. Feb. 9, 1956: C.M. Carlsen, Jr., Attorney representing the company, advised the members of the Authority at the February 9, 1956 meeting that the plant had been closed except for intermittent operation of the planing mill. The members of the Authority requested notification from the company regarding their future plans. Mr. Carlsen agreed to send this statement.
26. Mar. 19, 1956: Letter sent transmitting minutes of the February 9, 1956 meeting to C. N. Carlsen, Jr., Attorney, including a request for a statement regarding the company's plans for control of cinder and flyash.
27. Mar. 29, 1956: A representative of the Authority collected the samples from the Empire stations and noted that the sawmill was not in operation and that the planer mill was being used on an intermittent basis.
28. Apr. 24, 1956: Letter received from N. J. Wiener, Attorney with King, Miller, Anderson, Nash and Yerke advising that the company proposes to re-open its sawmill on or about May 1, 1956.
29. May 7, 1956: Letter sent to N. J. Wiener acknowledging letter of 4-24-56 and again requesting information regarding the company's plans to control cinder and flyash discharges from the steam plant. Reference was made to the Authority's original letter of July 13, 1955.
30. May 7, 1956: Letter sent to H.C. Eckley, acknowledging receipt of complaint.
31. May 9, 1956: Letter received from D. H. Miller advising the company is investigating their discharge of cinders and flyash from the steam plant.
32. June 2, 1956: Notification sent to the company regarding a public hearing to be held at the Authority meeting of June 22, 1956.

33. June 4, 1956: Letter sent to the City of Empire advising a public hearing has been scheduled for June 22, 1956.

34. June 13, 1956: A member of the Authority's staff conferred with D. H. Miller and was advised that the company believed that cinder and flyash conditions have improved since 30% of the electrical power is now being obtained from the Pacific Power and Light Company. Learned from personnel in the steam plant boiler room that the steam load was about the same.

The Authority's representative conferred with City of Empire Mayor Kenneth Adams regarding the June 22, 1956 meeting.

MR. WHITSELL: That completes the reading of Exhibit A. Now Mr. Burt is it appropriate that I read this next section.

MR. BURT: May I ask Mr. Whitsell a few questions?

CHAIRMAN GREEN: Yes, Mr. Burt, proceed.

MR. BURT: Mr. Whitsell, do you know what the measurements of the fallout of these stations is at the present time.

MR. WHITSELL: Just one minute, please, we will get some fallout data.

MR. WHITSELL: The most recent fallout results are not listed here. You are interested only in the most recent ones, is that right?

MR. BURT: The most recent ones which you have made.

MR. WHITSELL: I think that, Mr. Hatchard, we can read directly from here. There are some low results here which occurred at the time the plant was not in operation. These are in milligrams, are they not? Milligrams per month.

MR. HATCHARD: Yes.

MR. WHITSELL: 22 mg. per month indicated for both stations. The one at the theater- - - - and also the one at Milburn residence.

CHAIRMAN GREEN: Just a minute, Mr. Whitsell.

CHAIRMAN GREEN: Your data referred to in the exhibit was in tons per square mile per month, I believe.

MR. WHITSELL: Yes.

CHAIRMAN GREEN: Can we have it on the same basis so that they are comparable, please?

MR. WHITSELL: This would be about 7 tons per square mile per month, for both the stations.

CHAIRMAN GREEN: That is for which period?

MR. WHITSELL: January 11, 1956 to March 29, 1956 and during that period the plant was shut down.

MR. BURT: Do you have any measurements since the plant was re-opened?

MR. WHITSELL: That would be the last series. I just began calculating those this morning and calculations are not complete, but for one of the stations I recall, that is the No. 3 station located at P. D. Milburn residence that was 230 mg. or in tons that would be 69 tons per square mile per month. Now ordinarily we get higher results from the station at the theater and I recall that they were higher but I don't recall the exact figure.

MR. BURT: Can you tell me what the Authority considers maximum fallout per square mile per month.

MR. WHITSELL: It varies somewhat with the community but in general we feel that when fallout values become in excess of 20 to 25 tons per square mile per month a nuisance condition exists.

MR. BURT: Were your studies made before the plant closed and since the plant has re-opened. Are you able to say whether or not there was any specific change of fallout at the plant?

MR. WHITSELL: From the time it was closed as compared with what it is now.

MR. BURT: In other words is the fallout appreciably less from the plant now than it was when it was previously run.

MR. WHITSELL: There isn't enough data to base a conclusion on for that type at the present time because so many factors such as the weather and wind directions

affect the results. At least the last results indicated that a nuisance condition still exists.

MR. BURT: Do you know whether or not there has been any changes made at the plant regarding the control of this discharge?

MR. WHITSELL: I don't know.

CHAIRMAN GREEN: Mr. Wiener, would you like to question the witness? Would it be proper to first state your name and whom you represent please, for the record.

CHAIRMAN GREEN: I wonder if you had better come up close to the microphones, Mr. Wiener.

MR. WIENER: My name is Norman J. Wiener, I am attorney representing Cape Arago Lumber Company.

CHAIRMAN GREEN: Could he be sworn in, Mr. Counsel.

MR. BURT: No, he is cross examining the witness.

MR. WIENER: Mr. Whitcell, did you participate in the prior tests personally? In the test prior to the most recent.

MR. WHITSELL: Do you mean in the collection of the fallout samples?

MR. WIENER: Whatever data you have been talking about. Did you personally participate in it.

MR. WHITSELL: Yes, I did.

MR. WIENER: And did you participate in this last collection of data?

MR. WHITSELL: Yes, I did. I personally collected the last samples.

MR. WIENER: How long were you down there?

MR. WHITSELL: In the Bay Area?

MR. WIENER: Yes.

MR. WHITSELL: I was there for approximately a day and a half.

MR. WIENER: How long were you taking these samples, whatever you do?

MR. WHITSELL: The actual collection of the samples requires a very short time. Not over 10 minutes per sample.

MR. WIENER: My specific question is how much time do you spend collecting this.

MR. WHITSELL: Perhaps a total of 20 minutes just collecting.

MR. WIENER: What was the weather like during this 20 minutes.

MR. WHITSELL: Showery. Some showers and sunshine.

MR. WIENER: Wind blowing?

MR. WHITSELL: Yes, the wind was blowing a little bit, not much.

MR. WIENER: What direction, during those 20 minutes.

MR. WHITSELL: At that time, as I recall, the wind was blowing approximately west, northwest.

MR. WIENER: By that you mean it was blowing from the west-northwest to the east-southeast or was it blowing towards - - - which direction?

MR. WHITSELL: What the meteorologist referred to as west-northwest wind.

MR. WIENER: Unfortunately I am not a meteorologist. Does that mean that the wind was blowing from the ocean? Towards the shore?

MR. WHITSELL: That is correct, yes. Those are my observations.

MR. WIENER: Can you estimate the speed of the wind, during that 20 minute period?

MR. WHITSELL: Oh, it was on the order, I would guess, 5 to 10 perhaps 15 miles per hour.

MR. WIENER: This sampling that you do, what does that consist of.

MR. WHITSELL: That consists of the location of a wide mouthed jar, one gallon jar at an elevated sampling station and left in location with water so that the material which falls out of the air falls into the jar. At the end of a known period of time usually in this case about 2 months, we replace the jar with an empty one and the jar complete with sample and water is brought back for analyses in our laboratory.

MR. WIENER: Sorry, I didn't quite understand you. You mean that this jar has been sitting out there two months when you were down there the other day.

MR. WHITSELL: That is right.

MR. WIENER: And you just picked it up, is that right.

MR. WHITSELL: That is correct.

MR. WIENER: Oh, I see, so during this period of time -- when was that jar put there.

MR. WHITSELL: The most recent jars which were collected were placed on March 29.

MR. WIENER: I see. So then your observation here a few moments ago and questioned by Counsel was based upon a fallout over a period from March 29, to June 13. Would that be correct?

MR. WHITSELL: That is correct.

MR. WIENER: Do you know when Cape Arago Lumber Company started up?

MR. WHITSELL: I will refer to the records.

MR. WIENER: It was May 1st. Now do you have any idea as to how much of this you collected was prior to May 1st?

MR. WHITSELL: No, I don't.

MR. WIENER: So your data there is based upon a period which covered both Cape Arago's shutdown and its operation.

MR. WHITSELL: That is correct.

MR. WIENER: You have no way of telling here technically as an engineer what fell since Cape Arago has resumed operation.

MR. WHITSELL: No. The only presumption is that it would have to be higher.

MR. WIENER: Why do you indulge in that presumption?

MR. WHITSELL: Because we have abundant background data, that is data from stations on the coast in other areas where there has not been a cinder fallout problem or where in certain seasons winds have been such that the station did not receive this material and we find results on the order of those mentioned just now, around 5 to 10 tons per square mile per month, perhaps a little higher. Just the order of magnitude which we found during that sampling period mentioned

here when the plant was shut down. Now these results from this last one were on the order of ten times that for a period, a sampling period, during only part of which the plant was operating.

MR. WIENER: All right. Where is this jar kept?

MR. WHITSELL: Station No. 1 is on the roof of a building immediately adjacent to the theater on New Mark Avenue and Station No. 3, is on the roof of a small outer building at the Milburn residence on Broadway.

MR. WIENER: Either of those houses have chimneys?

MR. WHITSELL: Yes, they do.

MR. WIENER: Any other lumber mills in the area of Cape Arago Lumber Company? Any other mill working plants?

MR. WHITSELL: Not at Empire.

MR. WIENER: How far is Cape Arago Lumber Company from the station? Just roughly, half mile?

MR. WHITSELL: I stated the distance previously, it is in the record here already. The one station at the theater is approximately 1300 feet south-southeast and the other one approximately 600 feet southeast of the mill.

MR. WIENER: In your experience, Mr. Whitsell, is cinder and this flyash travel through the air sometime at some distance?

MR. WHITSELL: We know of no instances where measureable quantities of these cinders have traveled more than 1/2 mile.

MR. WIENER: How far is the Coos Bay Lumber plant from here? From the stations.

MR. WHITSELL: From the Empire station? Well, I don't know but it is in excess of three miles.

MR. WIENER: How about Weyerhaeuser Timber Company.

MR. WHITSELL: I will be conservative and say that it surely must be in excess of 2 miles.

MR. WIENER: Immediately to the north of Cape Arago Lumber Company's plant is what? Physically, what is to the north of the plant.

MR. WIENER: Water, isn't it?

MR. WHITSELL: I guess, I am not sure.

MR. WIENER: I will state my question a little differently. Cape Arago Lumber Company is on water is it not?

MR. WHITSELL: Yes.

MR. WIENER: And, the town of Empire is what direction from the mill?

MR. WHITSELL: The town of Empire generally is in a southeasterly direction.

MR. WIENER: What are the prevailing winds down in that country?

MR. WHITSELL: For what time of the year.

MR. WIENER: The general prevailing winds the year around. Aren't they blowing from the southwest to northeast. Isn't that true along both coasts, or do you know.

MR. WHITSELL: No, I don't believe that is true.

MR. WIENER: What would be true.

MR. WHITSELL: It would be more accurate, I believe, to say the prevailing winds during the summer season, for example from June to September vary little according to the year will be predominately from the northwest.

MR. WIENER: Northwest?

MR. WHITSELL: Yes.

MR. WHITSELL: Now during the winter months, the other half of the year, from September to March or a little later, the winds prevail more from the south-east than from any other direction. The winds from the southwest which receive so much attention are those which accompany strong storms and disturbances.

MR. WIENER: What direction do the winds have to be to carry cinders from Cape Arago on the town of Empire.

MR. WHITSELL: They would have to be --- well they could be anything from north-northeast through north through northwest to west.

MR. WIENER: Winds blowing directly from the west carry cinders on the town of Empire?

MR. WHITSELL: On one part, yes, on the northern fringes of the town.

MR. WIENER: It would. All right. The prevailing winds you speak of during the summer months were from the north. Those would carry would they not?

MR. WHITSELL: The northwest winds. Yes, they would. They would carry the material directly across the center of the City of Empire.

MR. WIENER: Did your study you made several years ago show any significant difference between the months as to fallout?

MR. WIENER: Let me refer to the fallout records.

MR. WIENER: As to the periods of the year. What part the winds have in this, if any.

MR. WHITSELL: We began in March 1954. Without naming dates exactly I will try to run through this.

MR. WIENER: Just generally give me your observations.

MR. WHITSELL: Well, March 1954 through June. We got five results. All through March 1954 until November 1954 at which point it seemed to taper off a little bit then and November 1954 to January 1955 it was down some, then in January through April 1955 it was up again and we obtained one of the very highest results in June to August 1955. That was at the theater building station and we received another very high result for August through October at that same station. The result at the other station, the Milburn residence, was also high but not as high as that of the others for the same period.

MR. WHITSELL: Then from October 1955 to January 1956 the results were down again well below those encountered during the summer months although both were still a little higher than what we would like to see. Then the last period reported here is for January of this year through March of this year, the shut down period of the plant when the results were low.

MR. WIENER: What were those results during the shut down period?

MR. WHITSELL: Approximately 7 tons per square mile per month at both stations.

MR. WIENER: Now as I understand it we have no way of ascertaining from your

records what the fallout was for the period March 29, to May 1st. Is that

correct?

MR. WHITSELL: As separated from the latter part of that sampling period?

No we do not, that is correct.

MR. WERNER: Do I also understand you correctly that today you don't have

the data available to present to this authority at this moment, as to your most

recent sampling.

MR. WHITSELL: Only those samples which I read cover or indicate one value,

I am not sure of the other, covering the entire last sampling.

CHAIRMAN GREEN: May I interject a question.

MR. WHITSELL: Yes.

CHAIRMAN GREEN: The results to which you refer in tons per square mile

per month including that entire period amounts to how much.

MR. WHITSELL: For the one station, that one is at the P.D. Milburn residence

I recall that it was 220 mg, or 66 tons per square mile per month.

CHAIRMAN GREEN: And the other was in the order of?

MR. WHITSELL: The other was on the order of in excess of 300 mg, which

would be in the excess of 90 tons per square mile per month.

CHAIRMAN GREEN: I think it is important to point out that in spite of the

shutdown period the total collected amount during that period is well in excess

of the accepted standards of tolerance.

MR. WERNER: I am sorry I did not quite understand.

CHAIRMAN GREEN: What I am trying to point out is even including the period

of shutdown that the laboratory findings for the entire period are still well

in excess to what they should be even in spite of the shutdown period. Proceed.

MR. WERNER: Mr. Whitsell, what or who determines the amount of the proper

fallout in the air?

MR. WHITSELL: The so-called limit, if you may use that term, is a limit

which seems to have been generally accepted in various parts of the U.S. as a

limit above which we begin to experience nuisance conditions. Now that limit varies a little according to the character of the material that falls out, obviously.

MR. WIENER: What do you mean by nuisance conditions? I don't understand that.

MR. WHITSELL: Well, I wonder if it would be proper for me to call upon our attorney - - -

MR. WIENER: I want facts, that's all I am asking for. Not legal opinions.

MR. WIENER: I'll ask you this. Do you know of anybody in Empire, Oregon or any place immediately adjacent to Cape Arago Lumber Co., whose health was affected by any fallout from this plant?

MR. WHITSELL: I know of none.

MR. WIENER: Do you know of any property that was damaged? Do you personally know of any property that was damaged by any fallout from Cape Arago?

MR. WHITSELL: I don't know that I would be qualified to judge whether property has been damaged.

MR. WIENER: Do you know or don't you?

MR. WHITSELL: I don't know specifically.

MR. WIENER: Mr. Whitsell, are you an engineer?

MR. WHITSELL: Yes.

MR. WIENER: Did you examine Cape Arago's plant here the last 2 weeks?

MR. WHITSELL: I visited the boiler room, walked through the plant.

MR. WIENER: Did you talk to Mr. D. H. Miller, Jr?

MR. WHITSELL: Yes, I did.

MR. WIENER: In your opinion, did they refuse to cooperate with you at that time?

MR. WHITSELL: No.

MR. WIENER: Did he permit you to inspect the plant?

MR. WHITSELL: Yes, he did.

MR. WIENER: And did you inspect the plant.

MR. WHITSELL: Yes, I visited the boiler room. I wouldn't call it an inspection. I am not really a qualified mechanical engineer.

MR. WIENER: I see. Are you qualified to express an opinion as to what is required to correct any fallout situation from a saw mill. Do you personally qualify?

MR. WHITSELL: Would you repeat that please?

MR. WIENER: Are your qualifications such that in your opinion you are qualified to express an opinion as to what a large sawmill of the Cape Arago Lumber Company type should do, to correct what you consider to be an improper fallout condition?

MR. BURT: I don't believe that is a proper question, Counsel. I think that he could definitely show what abatement was needed to correct this condition other than his own personal opinion. He wasn't the only person involved in making those recommendations.

CHAIRMAN GREEN: I further think that the statutes under which we operate do not require that our staff make specific and definite recommendations regarding the manner in which the plant shall be operated and how the unit shall be constructed to comply but rather we call attention to certain things that the management or the enterprise must find the answer for themselves.

MR. WIENER: So that the record will be clear, Mr. Green, ORS 449.735 provides "Whenever the Air Pollution Authority determines that a person has violated any of its orders or any of the provisions ORS 449.705 to 449.755 it shall give written notice to such persons specifying the causes of complaint." Now I have yet to find out if you have an opinion as to what the causes of complaint are in this case. If you don't have opinions it is perfectly all right to say you don't have them.

MR. WHITSELL: I think I must be honest in saying I do have an opinion as to what the causes of the complaint are. The people in the area, the ones who

have complained feel that the cinder fallout originating from Cape Arago Lumber Mill was excessive. They feel that it is causing them trouble, dirtiness, some have mentioned fire hazard. I don't know about that.

MR. WIENER: Has there been any fire that you know of that was caused by any fallout from the mill in that area?

MR. WHITSELL: It would only be hearsay, I can't - - - -

MR. WIENER: Well, you don't know then.

MR. WHITSELL: I don't know of any.

MR. WIENER: Did you talk to any of the people in the area?

MR. WHITSELL: Yes, I have.

MR. WIENER: Did you talk to the Mayor?

MR. WHITSELL: Yes.

MR. WIENER: Was it at your suggestion that he directed a letter to this Authority which arrived here today.

MR. WHITSELL: I suggested to the Mayor that if it were not possible for anyone to come to represent the City that then they should send a letter which could become a part of the record and which would express their current feelings on the situation.

MR. WIENER: Do you know how many complaints you have received from people in the Empire area? Numbers.

MR. WHITSELL: I would have to refer to the records for that, I don't know.

MR. WIENER: More than 100 or more than a dozen or more than five?

MR. WHITSELL: I don't recall first hand.

MR. BURT: I don't believe that would have any direct bearing on whether or not there is a nuisance condition existing in Empire due to Cape Arago Lumber Company.

MR. WHITSELL: I don't recall the numbers of complaints which have been directed to us. I think it probably would be more meaningful if that same

question were asked of the City as I understand they received the largest number of complaints and passed this information generally along to us.

MR. WIENER: Do you know if a representative of the city of Empire is here today?

MR. WHITSELL: I don't know whether one is here or not.

MR. WIENER: Now have you or do you know of any other member or representative of the State Air Pollution Authority who received any complaints which have to do with danger of life or injury to property? To your knowledge, that is all I am asking.

MR. WHITSELL: I don't know.

CHAIRMAN GREEN: May I interject a question. Mr. Counsel, could we have read that portion of the State Air Pollution Authority statute which has to do with this matter rather than limiting it to two specific things. Should we review what is covered by the statute?

MR. BURT: In what respect, Mr. Chairman, I - - - -

CHAIRMAN GREEN: I believe that the question of cross examination pertaining to injury to health and to property - - - it seems to me there are other aspects we are to consider.

MR. WIENER: Mr. Green and representatives of the Authority. I don't intend to be saying what the law is. All I am doing is cross examining about what I think it is. Certainly the Counsel of the Sanitary Authority can question him about anything he wants. All I'm doing is asking specific questions and whether I am right or wrong is immaterial.

MR. BURT: Mr. Chairman, you may be referring to section of the Acts concerning whatever conditions are such as to require immediate action to protect the public health or welfare. The Authority may take such action as it may deem advisable for immediate or for summary abatement of the - - - -

CHAIRMAN GREEN: Also had in mind the general policy of the state.

MR. WIENER: It is 449,710 (2).

MR. BURT: Do you have your copy that you might read it. Do you have the Act written up in Chapter and Section?

MR. WIENER: To the end that the least possible injury shall be done to human, plant and animal life and property. General legislation operated in uniformity throughout the state is necessary and ORS so and so and so and so shall be liberally construed for accomplishment of these purposes. That is the general policy, language of the statute.

MR. BURT: There is also, Mr. Chairman, Section 6 which we have here relating to the discharge directly of particulate material stating that discharge into the air of solids, liquids or gas so as to cause such injury to human, plant or animal life or to property as to constitute public nuisance is contrary to public policy of the state of Oregon which covers most of these proceedings.

CHAIRMAN GREEN: That's right.

MR. WIENER: I have no further questions.

MR. BURT: May I re-examine Mr. Whitsell.

CHAIRMAN GREEN: Yes, Mr. Burt, proceed.

MR. BURT: Mr. Whitsell, would you state the amounts in tons per square mile on the average that we were reporting in the Cape Arago stations you have had reference to prior to the time they closed their operation.

CHAIRMAN GREEN: Do you have any results already averaged?

MR. WHITSELL: I would have to go through and average these results.

MR. BURT: Well, can you give them per month, Mr. Whitsell, during the period prior to the closing.

MR. WHITSELL: I can read them in order as they are written here. Would that be helpful?

MR. BURT: Yes, that would be helpful.

MR. WHITSELL: For the station at the theater on New Mark Avenue they are as follows in tons per square mile per month. 64, 91, 23, 23, 78, 2,400 and 417.

MR. BURT: That was before the period preceeding the closure of Cape Arago.

MR. WHITSELL: That is right.

MR. BURT: Now do you have any figures on the fallout during the closure of Cape Arago in these same stations?

MR. WHITSELL: Yes, we have one sampling period result. That is from January 11, 1956 to March 29, 1956. The result for both stations was 7 tons per square mile per month.

MR. BURT: And then as I understood you that subsequently to the opening of the plant the same station was giving a reading of 66 tons approximately.

MR. WHITSELL: One of the stations, yes.

CHAIRMAN GREEN: Was it over 90?

MR. WHITSELL: In excess of 90. I don't recall the figure because I hadn't completed the calculations.

MR. BURT: Would it then be a fair statement that during the closure the fallout was approximately 7 and during the periods the plant was operating it was always in excess of 50 or generally in the excess of 50.

MR. WHITSELL: Generally, yes.

MR. BURT: With the exception of two months. I think it was mentioned 23 or 24.

MR. WHITSELL: That is correct.

CHAIRMAN GREEN: Is there an explanation for the two 23 values. Are these in a wind direction or other region?

MR. HATCHARD: Mr. Chairman, we don't have the exact information but I believe it falls within the period of a general shutdown of lumber industry due to labor conditions at least the summer periods are low but I don't think the plant was operating.

MR. WHITSELL: June of 1954 to November 1954 approximately.

MR. BURT: Are there any plants, lumber plants located in the prevailing wind stream between your collection station and Cape Arago Lumber Company.

MR. WHITSELL: There are no other lumber or sawmills between our stations and the Cape Arago Lumber Company.

MR. BURT: Are there any other substantial sources of flyash of this type?

MR. WHITSELL: Not in that area.

CHAIRMAN GREEN: Anything further, Mr. Wiener?

MR. WIENER: I have something further but not with him.

CHAIRMAN GREEN: Yes

CHAIRMAN GREEN: Mr. Secretary, Mr. Legal Counsel I should say, could we proceed next with a summary of this or should we ask for additional presentation of data or matter?

MR. BURT: You might check, Mr. Chairman, with Mr. Hatchard or Mr. Everts if there is any additional data on this subject.

CHAIRMAN GREEN: Mr. Hatchard, is there any other data which you could present?

MR. HATCHARD: Touching on what has been discussed here previously I think some questions were raised regarding what corrections might be expected to be provided at a similar mill and how actively the Cape Arago Lumber Company is concerned with the recommendations from the Authority. There have been many cinder collection systems serving a similar type mill and fallout measurements have shown the corrections brought about because of those installations.

CHAIRMAN GREEN: Wasn't it nearby at North Bend?

MR. HATCHARD: Yes sir.

MR. BURT: Do you know, Mr. Hatchard, any specific complaints causing damage?

MR. HATCHARD: Yes.

MR. BURT: Before you answer I am just asking you if you know of any. If you know of some we will swear you in as a witness.

CHAIRMAN GREEN: Come up, Mr. Hatchard, and be sworn in as a witness.

MR. BURT: Do you solemnly swear that the testimony which will be given before this hearing is the truth, the whole truth and nothing but the truth, so help you God.

MR. HATCHARD: I do.

MR. BURT: State your name and your position.

MR. HATCHARD: Richard E. Hatchard, Chief of the Air Pollution Control Section, Oregon Air Pollution Authority.

MR. BURT: Mr. Hatchard, relative to this damage reported by residents in the area of the Cape Arago Lumber Co., Empire, Oregon, do you know of any specific instances of damage in that area due to particulate, due to fallout of particulate matter.

MR. HATCHARD: One specific complaint - - - would it be better if I referred to the Authority files?

MR. BURT: Well, whether you read it or summarize it, it will be up to you if you know about it.

MR. HATCHARD: This is from H. C. Eckley, P.O. Box 760 North Bend, Oregon. Regarding the fallout from the Cape Arago Lumber Mill at Empire. He is objecting to the excessive fallout on his properties and the difficulty that he has had during the past 5 years in attempting to sell his property and urging that corrective action be taken.

MR. BURT: Has he cited specific instances of damage, the type of damage.

MR. HATCHARD: Only indirectly in saying "that I had several people interested in buying the place during a period of 5 years the story is always the same, too much sawdust from the mill. Something will have to be done about it and quick. My place is located at 442 Pennsylvania Ave., two blocks or more from the burner."

MR. HATCHARD: Mr. Burt, you recall in the Chronology that we operated those stations for practically a year. We supplied a report to the City of Empire expressing the Authority's intention of discontinuing. In response to that letter the City then requested that the Authority continue their study stating that the City Council of Empire wanted the Authority to take appropriate action to reduce the cinder fallout. It was followed again by a request from the City

Council of Empire in September of last year protesting the continuance of excessive fallouts citing again that it is a concern to their residents.

MR. BURT: Have you ever observed personally any of the manifestations of the fallout matter?

MR. HATCHARD: Yes, I have serviced the stations on two occasions and the observations would be that which one would make in servicing the station which is on the roof of the building, the collection of burned and unburned sawdust and flyash which comes from a lumber mill operation, both a steam plant or waste burner, clogging of roof drains and deposits on the properties around there which require repeated cleaning operations. It is really one of the excessive labor involved in cleaning buildings.

MR. WIENER: I will have to object to this type of testimony regarding the general effects of cinders and flyash instead of specific investigation in Empire.

MR. BURT: Have you seen any manifestations of damage, when I say that have you actually seen these clogged drains and gutters and roofs?

MR. HATCHARD: I apparently didn't make it clear. I was speaking of Empire, I was speaking of servicing stations in Empire and I was speaking of conditions as they exist in Empire at the stations we have operated since March of 1954.

MR. BURT: Have you seen these clogged drains yourself?

MR. HATCHARD: Yes, in cases when fallouts were as high during the periods that have been referred to earlier but not when the fallout was 22, definitely not.

MR. WIENER: Mr. Hatchard, what is the date of that letter from Mr. Eckley?

MR. HATCHARD: Date of the letter is April 19, 1956.

MR. WIENER: Does that refer to the fallout of sawdust?

MR. HATCHARD: Yes.

MR. WIENER: Do you know if Cape Arago Lumber Company was in operation in April 19, 1956.

MR. HATCHARD: Yes, there is no question that the mill was shut down until May 1st, except for the planer mill operation.

MR. WIENER: All right that answers the question.

MR. MILLER: Mr. Hatchard, when were you last there?

MR. HATCHARD: March 29th, I believe, and previous periods.

MR. MILLER: You haven't been there since the mill resumed operation?

MR. HATCHARD: NO sir.

CHAIRMAN GREEN: Counsel, is it proper to ask if anyone else wishes to be heard in this matter, now? This gentleman, are you Mr. Miller? Mr. Burt, would you place the witness under oath.

MR. BURT: Do you solemnly swear that the evidence that you will give before this hearing will be the whole truth and nothing but the truth. So help you God.

MR. MILLER: I do.

CHAIRMAN GREEN: Your name please.

MR. MILLER: David H. Miller. I am Vice President of Cape Arago Lumber Co.

MR. WIENER: How long have you, or your family or your business connections operated Cape Arago Lumber Company.

MR. MILLER: I started at Cape Arago Lumber Company on May 7, 1950.

MR. WIENER: How long is the mill which is now occupied by Cape Arago Lumber Company been at that particular site.

MR. MILLER: Over 70 years.

MR. WIENER: Is it a saw mill?

MR. MILLER: Yes sir.

MR. WIENER: Describe in general its location for the members of the board here who are not familiar where it is.

MR. MILLER: It is on the harbor of Coos Bay. Our plant is built on the water so that ships may dock. With reference to the city of Empire, we are possibly 3 blocks from the heart of town.

MR. WIENER: Are there other mills in the general area?

MR. MILLER: The only mill is below us, The Coos Bay Pulp Corporation.

MR. WIENER: How far is that from you? Air miles.

MR. MILLER: Possibly a mile and a half.

MR. WIENER: Within a radius of 5 to 10 miles are there a number of mills?

MR. MILLER: Yes.

MR. WIENER: Name some of them.

MR. MILLER: Weyerhaeuser Timber Company, Coos Bay Lumber, Evans Products,

Menasha Plywood Company, Irwin-Lyons.

MR. WIENER: Do those operate and burn fuel?

MR. MILLER: I believe they all burn sawdust.

MR. WIENER: How many people are employed by you?

MR. MILLER: About 150.

MR. WIENER: Do most of those people live in Empire?

MR. MILLER: Some live in Empire, some North Bend, some Charleston. Pretty well divided up.

MR. WIENER: Do you know some of your employees personally?

MR. MILLER: I believe I know them all personally.

MR. WIENER: Have any of these people made complaints to you about the flyash or cinder conditions?

MR. MILLER: I would say it would be pretty hard for an employee to complain. I don't think they would even if they felt like complaining. I want to be truthful.

MR. WIENER: Have you ever received any complaints?

MR. MILLER: I have in the past years, yes, I have had people call me up about the cinders in the summer months in June to September it is bad, in other words the wind takes it right over the town. In your other months you have your rain, your wind and takes it right off the bay.

MR. WIENER: During what dates was your mill shut down?

MR. MILLER: Except for the planer, the mill was shut down from November 7, 1955 to May 1st, 1956.

MR. WIENER: Have you made corrections to reduce the cinders discharged from the mill?

MR. MILLER: Yes we have installed new screens in the waste burner and repaired the conveyor and tried to improve the air inlet system. At the steam plant we have reduced the steam load to reduce the cinders. Also, we are studying the installation of a chipper to produce chips for sale to pulp plants.

(Recording machine failed at this point of the meeting)

During subsequent questioning Mr. Miller indicated that his company would make additional changes at the mill if it were reasonably certain that the cinder discharge would be reduced. He also stated that they would investigate the installations made at other similar steam plants.

CHAIRMAN GREEN: What is the desire of the Authority members after hearing this discussion?

MOTION: RE: EMPIRE CAPE ARAGO LUMBER COMPANY

It was MOVED by Mr. Dixon and seconded by Dr. Erickson and carried:

1. That the Authority continue the hearing.
2. That the management of Cape Arago Lumber Company obtain technical assistance to advise them regarding the correction of the excessive cinder and flyash discharge.
3. That they cooperate with the Air Pollution Authority's staff.
4. That we receive a statement of progress toward solution of the problem within 90 days.
5. That the staff advise the Authority of specific recommendations for further action or consideration in the matter.

The Chairman asked if the progress report could be put in the hands of the Authority members not later than 90 days from today, June 22, 1956.

Dr. Erickson stated he had hoped for a progress report sooner than that if possible.

SEVENTEENTH MEETING
OF THE
OREGON AIR POLLUTION AUTHORITY

October 25, 1956

The seventeenth meeting of the Oregon State Air Pollution Authority was called to order by the Chairman at 2:00 P.M. Thursday, October 25, 1956 in Room 36, State Office Building, 1400 S.W. 5th Avenue, Portland, Oregon. Those present were Carl E. Green, Chairman, Merle S. West, Vice Chairman, Mr. R. P. Dixon, Dr. Harold M. Erickson, Members and Kenneth H. Spies, Acting Secretary, Charles D. Burt, Legal Advisor, R.E. Hatchard, Chief of the Air Pollution Control Section and W. J. Whitsell, Associate Engineer, R. D. Nance and R. H. Percy, Chemists, State Board of Health.

MOTION RE: MINUTES OF PREVIOUS MEETING

The Acting Secretary summarized the minutes of the sixteenth meeting of June 22nd, 1956. The Chairman declared that if there were no corrections or additions the minutes would stand approved as prepared by the Secretary.

PROPOSED REGULATIONS AND STANDARDS TO CONTROL AIR POLLUTION

The Chairman requested Mr. R. E. Hatchard to explain changes made in the proposed regulations and standards since the last meeting.

Mr. Hatchard stated that the Authority had authorized the preparation of proposed rules and regulations to control air pollution at the December 1955 meeting primarily to assist municipal officials with organization of local programs. He explained that over 400 copies of the initial draft of the proposed regulations had been sent to interested industrial organizations, city officials, consulting engineers, planning and zoning commissions and others. Mr. Hatchard advised that the comments and recommendations received on the first draft had been used in modification and clarification of various sections included in the revised draft. He pointed out that the regulations were being formulated under the provisions of Section (5) 449.725 Oregon Revised Statutes and that the Authority's specific objectives were as follows:

1. To establish methods of measurement that will assist in the application of effective control wherever necessary.
2. To establish concentration ranges for air contaminants that have been measured intensively and which may be used in municipal air pollution programs.
3. To promote and stimulate the organization of complete community control efforts.
4. To clarify what is considered reasonable air pollution based upon data obtained from state-wide air sampling since 1952.
5. To prevent excessive expenditure for the installation of control measures which may provide a higher degree of correction than should be required based upon the local topography, meteorology and land use.
6. To prevent new air pollution problems being created by stimulating the installation of appropriate controls.

Mr. Hatchard explained that there are two basic approaches to establishing regulations for community control; one is to regulate the discharges at the source and the second is to base the regulations upon the effects created in downwind areas. He explained that the discharge limitation at the source had been used primarily in local smoke and dust control programs in other parts of the country mostly for emissions from combustion processes. He pointed out that there are several disadvantages to this approach when applied to general air pollution control since no allowance is made for the number of individual sources existing within a single pollution zone and that this approach gives no consideration to local differences in topography, meteorology or land use.

He stated that in the Authority's proposed regulations that only smoke control provisions were based upon discharge at the source and that this regulation is based upon the American Society of Mechanical Engineers recommendations. He stated that suggested limitations for other air contaminants have been developed from air sampling data obtained from both area surveys and the investigation of specific complaints throughout the state since 1952 and that these regulations were based upon the effects produced in the vicinity of the discharge source.

He explained that the Authority believed that this approach would overcome the long-term disadvantages of reliance upon source regulation alone. Mr. Hatchard emphasized that several of the comments received indicated a misunderstanding regarding the proposed use of normal background values as stated in Sections 2.2, 2.3, and 2.4. He pointed out that actually what is proposed will require recognition of the presence of air contaminants originating from natural sources which are present at relatively constant levels over a large area during a particular period. He explained that the determination of this value within a municipality would be made by operating an air sampling station removed from the metropolitan sources of air pollution concurrently with sampling units being operated at stations within the city. The background values found at the rural sampling station would then be subtracted from the total concentrations found at the city stations. He added that this field practice has been used for over two years and has worked effectively.

He emphasized that the proposed regulations were based upon data from over 2,000 fallout samples collected within the state, the analyses of several hundred filters obtained from municipal sampling stations and published reports of comparable studies made in other states.

The Chairman stated that the Authority would now like to hear statements from others concerned with the proposed regulations.

Mr. Robert E. McKean, Mgr. Columbia Empire Industries Association, Inc., said that his statements represented the collective thinking of the Air Pollution Committee of the Association and that the Association's policy regarding air pollution control, which was adopted four years ago, was to support reasonable efforts to control present situations and prevent future air pollution contamination and that their organization would not oppose the adoption of appropriate regulation. Mr. McKean stated that he had hoped that members of the Authority could have received copies of reports regarding air pollution which the Association is obtaining, prior to the meeting today. He further stated that for the purpose of this meeting he would present the following conclusions based upon available information concerning Portland:

1. That at the present time air pollution is not a serious city-wide problem in the Portland area.
2. That smoke, fallout and other contamination in large amounts is caused by activities of the general public.
3. That particle fallout is a nuisance but it is not a health hazard.

Mr. McKean assured that their Association will do the best they can to inform various industries to obtain their opinions. He stated that the committee has held many meetings and at this time their Association requests the Authority to delay action on the proposed regulations until the Stanford Research Institute's report on Portland air pollution and other reports are available for study. Mr. McKean had with him a report from his sub-committee composed of consulting engineers, a report from J. H. Miller and a report from the Association's Director of Safety Hygiene Committee. He stated that he would supply the Authority's staff with copies of all reports so they can be studied and that when the Stanford report is received he would send a copy to the Authority and to the City of Portland committee also. It was further stated that Columbia Empire Industries Association had already spent \$10,000 on the Stanford report and are considering a proposal from Stanford Research Institute involving about \$30,000 for a more intensive investigation of Portland conditions.

He reported that he had made a survey of expenditures made by Association members for air pollution control installations during 1954 and the amount was over \$800,000 which did not include the large installations made by Reynolds Metals at Troutdale or Oregon-Portland Cement Company plant in Oswego.

The Chairman stated that this matter was before the Authority in February 1956 and at that time the matter was delayed until June to allow time for review and suggestions by industry and interested parties and because of a request for additional time from Columbia Empire Industries Association consideration of the regulation was postponed to today's meeting.

The Chairman stated that it was the Authority's intent to give a reasonable length of time for all concerned to review standards and submit recommendations to the

Authority's staff. Many recommendations and suggestions, he said, have already been incorporated in the revised regulations.

Mr. F. A. Yerke, Attorney representing Oregon-Portland Cement Company stated that Mr. F. E. McCaslin, President, Oregon Portland Cement Company, was present, and that they joined with Columbia Empire Industries Association in requesting the Authority to consider delay of the adoption of the regulations until the Stanford study and other reports are available. He stated he believed this request was reasonable, since the fact that if the standards were not adopted today it would not impair any action by the Authority with respect to any type of air pollution problem.

Mr. Yerke stated further that in addition to supporting the remarks made by Mr. McKean he had comments regarding the lime dust Section 2.4 but he believed this could wait if the delay was granted until the staff has had an opportunity to read and digest the Stanford Report and other reports. He stated he would be glad to send his reports in writing at a later date.

The Chairman asked if the members wished to hear further comments or defer them.

Mr. Dixon stated that the Authority could defer hearing the comments on lime dust until later in the meeting.

Mr. Fred Menzel, representing Rich Manufacturing Company, advised the Authority that for quite some time he has been working with the City and the Authority's staff regarding the dust problem at Rich Manufacturing Company. He stated he concurred with Mr. McKean in that he too would like further time for study of the standards before adoption. Mr. Menzel gave a little of the background of his company and said he knew the Authority was aware of the complaints which have been made regarding dust and vapor. He added that he had been working with the City and State to determine what type of control equipment should be installed to satisfy the City and State requirements. He stated that he had presented one proposal to the City which was referred to the Authority's staff for review and that it was recommended that he install collection equipment that would operate at 92 to 95% efficiency. The most expensive equipment, he added, would cost about \$100,000 and

only an 85% efficiency guarantee could be secured. He stated that from this experience it appeared that the standards are not equitable to everyone and that he would like to go into the matter further to get a better understanding of the problem.

The Chairman asked Mr. Menzel if he preferred to discuss this further with a member of the Authority's staff.

Mr. Menzel replied that he would.

Chester Sterrett of the Portland Chamber of Commerce stated his organization had submitted data to Mr. R.E. Hatchard and wished to know if that data was circulated to the Board members.

Mr. Hatchard stated that it was used by the staff in preparation of the revised regulations; however, it was not transmitted to each member of the Authority.

Mr. Sterrett explained that industry was very willing to cooperate with the Authority's staff and there would not be anything lost in taking more time to work out the application of the regulations in more detail. He stated he had further objections to some sections in the standards but that he would submit them in writing.

Mr. Irvin Luiten, representing Weyerhaeuser Timber Company, stated he had a few comments to submit and his first comment pertained to sub-section 1.3 where the word "predominantly" causes some concern since there were many conflicting opinions.

Mr. Luiten explained that their Klamath Falls plant was located in a primarily rural area but there were a few residences in the area. He added that their legal department thought it was feasible to delete the phrase after the word "predominantly".

The second comment, Mr. Luiten stated, regarded Section 2.5 since it was their understanding that the interpretation of a public nuisance is one which is of substantial detriment to the public. It was Mr. Luiten's thought that the word "substantial" should be added, and should be added after the word "annoyance".

He stated that the Weyerhaeuser Timber Company would also like to delay for more study of the revised regulations. He expressed their company's appreciation to the Authority for the assistance and cooperation in solving air pollution problems.

Mr. Dixon said he understood Section 2.5 was a direct quotation from the statute.

Mr. Hatchard replied that it was not a direct quotation but the Authority did not intend to add any meaning other than what was in the statute.

Mr. Burt stated also that Section 2.5 was not a direct quotation but that he did not believe this particular statement was more stringent than the Air Pollution Control Statute.

Mr. Fred Packwood, Attorney, Columbia Empire Industries Association, made the statement that they had hoped the Stanford report would have arrived in time to allow study before this meeting since there is so much technical material to consider. He urged the Authority to allow additional time before acting on the proposed regulations.

Mr. McKean requested a meeting with the Authority's staff when all reports are available so that all the information could be considered and discussed.

The Chairman asked how long a delay the industry representatives were requesting - 30, 45 or 60 days.

Mr. McKean replied that 30 days would be sufficient for their group.

Mr. Yerke stated they could be ready also in 30 days, and that all they are waiting for is the receipt of the Stanford report.

Mr. Hatchard stated that there was really nothing new in the proposed regulations since the staff had been using the regulations as a basis for establishing whether a public nuisance was present and to formulate general recommendations for control during the past two years. He also pointed out that the regulations are needed by city officials for use in local programs and also for use in preventing excessive discharges from new sources.

The Chairman stated that regulations which the Authority adopts are subject to modifications in the future as more information becomes available. The Chairman asked the Authority members what action they wished to suggest.

Dr. Erickson asked how a 30 day delay would affect the staff's activities during the next 30 days.

Mr. Hatchard replied that it would not alter staff activities in any way but that we are concerned about the basic policy of the Authority to encourage the medium and larger Oregon cities to work with the staff to develop local programs. He explained that Eugene had adopted an ordinance in May 1956 and that in Portland there is increased activity through Dr. Meador's office toward expanding the present program. Mr. Hatchard pointed out that the cities would probably delay until the Authority adopted regulations and from this standpoint it would be unfortunate if delays occurred.

Mr. Dixon felt there was a definite need for some code which is fair to the state and he stated he would like to review the correlation of the figures contained in the Stanford report which would apply to Section 2 which is the only one that has figures in it and the reference to the Ringelmann chart, etc. He explained that he wanted to be certain that the Authority and the Stanford report agreed on the figures included in the regulations. For this reason, Mr. Dixon stated that he would like to wait for the Stanford Research Institute's report.

The Chairman asked for a motion to be made; that industry have reports and comments submitted within 30 days from today, and that by the middle of December the Authority have a meeting for further consideration and adoption. The Chairman asked Mr. Hatchard if 30 days would give the staff enough time for review.

Mr. Hatchard replied that 30 days would be satisfactory.

Mr. Dixon stated that it was his impression that the Stanford report would verify or disagree with the findings of the staff.

Mr. Hatchard stated that it was his understanding that the Stanford Research Institute's report on Portland consisted of a review of all available data from industrial groups, city, state and federal agencies including the U. S. Weather Bureau. However, he explained, that unless the project had been increased he did not believe that the Stanford Research Institute report included any review of the Authority's proposed rules and regulations. He stated that the staff had provided Dr. Wohler of Stanford Research Institute with a report dated July 26, 1956

summarizing all air sampling completed in Portland since 1952 but that Stanford Research Institute was not collecting and analysing air samples independently.

Mr. Menzel informed the members that the Stanford Research Institute's report is not in criticism or against the proposed standards in any way; that it is merely a survey of the City of Portland and surrounding territory and a comparison with the City of Los Angeles problem; that they took into consideration all of the discharge sources in the city and made an over-all report. Mr. Menzel added that he thought the proposed Authority standards are too rigid and that they could be changed to be more equitable to industry and to the public.

Mr. Dixon asked if Mr. Menzel read the finished report.

Mr. Menzel stated he had read a preliminary report.

Mr. Dixon pointed out that this is a state-wide proposal and that Multnomah County was one of thirty-six counties.

Mr. Dixon stated that standards should be adopted before the first of the year and that then there would be something to work from and that actually we are all trying to solve the problem cooperatively.

MOTION RE: PROPOSED REGULATIONS AND STANDARDS TO CONTROL AIR POLLUTION

It was MOVED by Mr. West and seconded by Mr. Dixon and carried that the final consideration of regulations and standards be deferred until the next regular meeting of the Authority and that 30 days from today be granted to interested parties to submit additional data to the Authority for consideration.

PORTLAND: STAFF REPORT REGARDING PROPOSED EXPANSION OF CITY AIR POLLUTION PROGRAM

The Chairman requested Mr. Hatchard to report on activities in the City of Portland.

Mr. Hatchard explained that since the June 22nd, Authority meeting there had been considerable activity toward the expansion of the existing city program. He explained that J. J. Schuneman, an engineer representing the Public Health Service, Community Air Pollution Program, had made an intensive survey of Portland air pollution conditions during the week of July 9, and that this survey had been requested originally by Dr. Meador and endorsed by Dr. Erickson as State Health Officer.

Mr. Hatchard reported that the staff had conferred at length with Mr. Schuneman and that all available sampling data had been provided to him. He advised that copies of the Public Health Service report were received in early October and that each member had previously been sent one. He reported that a member of the staff has attended three meetings with the Portland Air Pollution Committee since June which included consideration of Mr. Schuneman's verbal report and also detailed consideration of a cinder and flyash problem in north Portland. Mr. Hatchard reported that the staff had been working with Dr. Meador and his staff to formulate suggestions for the revision of existing city air pollution ordinances and with the organization of an expanded city program.

He pointed out that the joint investigation of specific complaints within the city has continued; however, the lack of staff in both agencies has caused delays in bringing about needed corrections. He advised that it was extremely unfortunate that the additional public health engineer position, requested by the Authority for the current biennium, had been deleted since this position was essential to provide adequate advice and technical assistance to city officials with the development of appropriate local programs.

Mr. Hatchard concluded in saying that Dr. Meador, Health Officer, City of Portland, was present and may also wish to comment upon recent activities.

Dr. Meador stated the information in the Public Health Service report is a result from sampling surveys and the difficulties in handling local problems. He reported that the Mayor had requested that he prepare an ordinance which would be workable and enforceable and also to recommend sufficient personnel to operate the program. He explained that he is now waiting for the Stanford report and action by the Authority on the proposed regulations.

EMPIRE: CINDER AND FLYASH CONTROL AT CAPE ARAGO LUMBER COMPANY

The Chairman requested W. J. Whitesell to present a report regarding the correction of the cinder and flyash deposition in Empire.

Mr. Whitesell stated that a public hearing had been held at the June 22nd, Authority meeting and that as a result of these discussions the Authority directed that the

Cape Arago Lumber Company proceed with plans to correct the cinder fallout conditions; that the company cooperate with the Authority staff and submit a report of activities to bring about appropriate control within the next 90 days and that the public hearing be continued.

He reported that one of the Authority's engineers had visited the Cape Arago Lumber Company on August 13, 1956 and was advised that their chief engineer, Mr. Blake, was in Eugene obtaining information on cinder collectors. He stated that a letter dated August 16, was received from the Cape Arago Lumber Company advising that work had started on the installation of a cinder collector similar to the unit used by a steam generating plant in Eugene. He reported that on September 12, 1956 schematic plans for the cinder collector together with a description of test runs on its efficiency was received.

He stated that on October 11, 1956 another field visit was made to the Cape Arago Lumber Company and it was learned that one cinder collector was operating and returning trapped cinders to the boiler for further combustion. He explained that the company plans to operate this unit for several weeks to note any need for improvements and then proceed with the construction of the second unit.

He reported that the Authority's representative had conferred with Mayor Adams in Empire and learned that the City is very pleased with the progress being made. He stated that the fallout stations in Empire would be continued as a check upon degree of improvement made by the installations.

The Chairman stated that this progress report would be accepted by the Authority.

EASTSIDE: CINDER AND FLYASH DEPOSITION

The Chairman requested Mr. Hatchard to report on the status of the cinder and flyash deposition problem in Eastside.

Mr. Hatchard stated that at the June Authority meeting the members directed that the Coos Bay Lumber Company be notified again that they appear to be in violation of the Oregon Air Pollution Statute and that the Authority expected a statement from the company regarding their plans for compliance within the next 90 days. He explained that on July 10, 1956 the Georgia-Pacific Corporation acquired ownership

of the Coos Bay Lumber plants; and that on August 14th, a staff member had conferred with D. D. Dashney, former vice president of Coos Bay Lumber Company and now with the Georgia-Pacific Corporation's Coos Bay Division. He stated that at that time Mr. Dashney had indicated that the steam plant cinder control program would continue since the new company was aware of the situation before the ownership changed.

Mr. Hatchard stated that a letter was received on August 27, 1956 from Mr. Dashney advising that the files of the Coos Bay Lumber Company regarding the cinder and flyash problem had been transmitted to Mr. R. E. Flowerree, Vice President of the Georgia-Pacific Corporation for his review and instructions.

Mr. Hatchard reported that on October 11, a staff member had conferred with representatives of the Georgia-Pacific Corporation in Coos Bay and learned that no progress had been made by the new company. He stated that the city officials were advised of the present status. Mr. Hatchard reported that a letter had been sent on October 19th, to Mr. R.E. Flowerree and that a request had been made for a report regarding their company's plans; that unfortunately Mr. Flowerree had another commitment and could not be present at this meeting, however, the Secretary had a letter from the company regarding the situation.

The Secretary read a letter dated October 22, 1956 from R.E. Flowerree, Vice-President, Georgia-Pacific Corporation.

"Gentlemen: With reference to your letter of October 19, 1956 regarding the excessive cinder and flyash discharge from the steam plant stack, I regret to say that because of prior commitments I will be unable to attend the meeting of the Air Pollution Authority on October 25. However, confirming the conversation of October 23, with Mr. Whitsett, we would like to know: (1) if the installation made at Cape Arago at the lumber company near Coos Bay will meet the requirements of the Authority; and (2) if you have any further information on effective devices for elimination of flyash."

"It is Georgia-Pacific Corporation's intention to cooperate fully with the Air Pollution Authority, and as soon as we have received the above requested information

from you we will take steps to eliminate the flyash from the steam plant stack."

Yours very truly,

GEORGIA-PACIFIC CORPORATION

/s/ R.E. Flowerree, Jr.

The Chairman asked if the staff had answered this communication.

Mr. Hatchard replied it would be answered as soon as the requested information could be prepared.

~~The Chairman asked Mr. Hatchard if satisfactory progress was not being made.~~

Mr. Hatchard stated Mr. Flowerree's letter indicated that appropriate controls would be forth coming.

The Chairman suggested the staff proceed in cooperation with the company and submit a progress report at the next Authority meeting.

NORTH ALBANY: REPORT REGARDING CONTROL OF ODORS AT WESTERN KRAFT CORPORATION'S
KRAFT MILL

The Chairman requested Mr. Hatchard to report on the status of the control of odors at the Western Kraft Corporation's plant in North Albany.

Mr. Hatchard stated that at the June 22nd, Authority meeting arrangements had been made for conducting area odor surveys at a time when the management of the Western Kraft Corporation was experimenting with the use of an odor masking agent. He explained that this work had been completed and that subsequent area odor surveys had also been made and that a report had been prepared as of July 25, 1956 summarizing the odor conditions based upon these surveys and that the report had been sent to the company. He explained that the recommendations included with this report were as follows:

1. That additional odor control facilities were needed at the plant to be in conformance with the Oregon Statutes.
2. Appropriate equipment should be provided to treat the digester blow and relief non-condensable gases before discharge into the atmosphere.
3. That the discharge from the lime kiln operation be changed to prevent the drift at ground level.

He advised the Authority that members of the staff had conferred with company representatives regarding these recommendations and that the company had advised that an engineer was preparing specific plans for an odor control system to be incorporated in the expansion program.

Mr. Hatchard stated that a representative of the company was present and had a report to present.

The Chairman invited Mr. R. O. Beatty, Ass't to the President, Western Kraft Corporation, to present a report regarding their activities since the last meeting.

Mr. Beatty stated that the company is acutely aware of the odor problem created by the kraft mill and is deeply interested in doing everything feasible to abate it and still stay in business. He pointed out that most people fail to recognize the very minute quantity of such odor causing substances as mercaptans which are sufficient to be detectable and that this condition complicates the solution of the problem. Mr. Beatty advised the Authority that in the original plant construction there were several air purifying devices which tend to reduce the atmospheric discharges in various steps of the process; and that within the past six months a considerably larger induced draft fan motor was installed on the recovery boiler which should help in the reduction of the odors from the recovery furnace by combustion or oxidation of odor causing materials.

He stated also that they are completely re-working the vent stack from the lime kiln which would be completed next March or April and that this improvement would reduce lime dust and drift at ground level. He explained that this change was made in response to the Authority's recommendations in their letter of September 6th.

Mr. Beatty explained that other improvements were now under study which included an odor control system similar to that used at a kraft mill in Port Alberni, B.C.

He pointed out that such a system would include a rather elaborate blow-steam condensation system to remove the odor causing condensibles from the digester relief and blow gases ahead of the oxidation towers. He said that the study of economic feasibility is now being made and that it was quite a costly installation for a mill of their size. He stated that W. O. Nisey, Engineering Vice President, was

studying the matter of oxidation towers and would, of course, keep the Authority informed regarding the progress.

He stated that the experiments made with the use of Alamask P-6D odor masking agent were quite inconclusive. He explained that such materials replaced one odor with another which was less objectionable to some people but perhaps equally objectionable to others. He stated that perfect masking of all of the kraft mill odor sources would be virtually impossible and it hardly seems as desirable as mechanical or chemical removal. He stated their company had not completely discontinued experiments with such materials and that they would keep the Authority advised on any further progress in this connection.

He concluded by saying that a review of their activities during the twelve months, since their operation began, would show intense interest in providing appropriate odor controls and that the company appreciated the friendly cooperation of the Authority. He stated that if the company finds that the objectionable odors from the mill can be substantially reduced at a cost which will still permit their operation to be competitive, he assured the Authority those changes would be made.

BEAVERTON: STAFF REPORT REGARDING TECHNICAL ASSISTANCE REQUESTED BY CIRCUIT JUDGE C. H. FOSTER

The Chairman requested Mr. Whitsell to give a report upon the investigations at the Pacific Adhesives Company in Beaverton.

Mr. Whitsell stated that the Authority members may recall that complaints had been made by residents of Beaverton regarding odors from the Pacific Adhesives Company's plant which finally led to court action in which the City of Beaverton requested an injunction against operation of the plant. He stated that as a result of this action Circuit Judge C. H. Foster decreed that the plant's operation constituted a public nuisance and requested the Air Pollution Authority to complete an intensive investigation and make recommendations for further control. He reported that the staff had spent considerable time and effort on this matter which included area odor surveys, conferences with company officials, plant surveys, stack tests and

experimental runs on pilot plants. He stated that the investigation extended over a period of approximately 3 months and that on June 12, a report was submitted to the company including recommendations for further odor control.

He stated that a plant visit was made on August 30, and it was found that the company has complied with all recommendations; that a report had been submitted to Judge Foster. He stated that since the improvements were complete several area odor surveys had been made and that it was evident that considerable odor reduction had been affected. He pointed out that Judge Foster's decree now allows the City of Beaverton to request the Court for further hearings during the next six months to determine whether the plant still constitutes a public nuisance.

He stated that the correction of odor problems consumes a great amount of time and effort since odors do not lend themselves readily to known methods of physical and chemical treatment. He also pointed out that odor problems within the state are increasing in number.

The Chairman stated it appeared that satisfactory progress had been made.

OSWEGO: INSTALLATION OF DUST CONTROLS

Mr. Hatchard stated there were representatives here from Oregon-Portland Cement but this item was not on the agenda. Mr. Hatchard stated he had the opportunity to make a visit to the plant recently and that the plant management had been routinely collecting stack sampling data. He reported that Mr. Leche, Vice President, had conducted him through the plant and they had conferred with the Oregon-Portland technical staff. He stated that all the major work was completed and a report had been received from Mr. Leche summarizing the additional installations made.

Mr. Hatchard advised that the remaining part of the work of the Authority's staff is to resume the dust sampling study in Oswego to establish the present conditions. He explained that an extended period of time would be needed to advise the City of Oswego of conditions during the various weather conditions.

The Chairman stated that this matter was proceeding satisfactorily.

Mr. Hatchard stated while there may be minor problems which the study would determine there had been a real improvement and that it was a pleasure to report on their progress.

Mr. F.A. Yerke, Attorney representing Oregon-Portland Cement Company stated all the information had been provided to the staff previously and he had no additional information to present.

The Chairman suggested that the Secretary send a letter of thanks to Oregon-Portland Cement Company for proceeding to correct this matter.

STAFF REPORT: REGARDING AREA SURVEY IN THE DALLES.

The Chairman requested Mr. R. Nance to report upon the area study in The Dalles.

Mr. Nance reported that the purpose of this sampling is to establish background values for air concentration of fluorides before the Harvey Aluminum Company begins operation next year. He explained that an automatic impinger operating on a six hour cycle was collecting four samples per day at a station located at a State Highway Department Bldg., in The Dalles. Mr. Nance stated that sampling began August 24, and to date 210 samples had been collected and 76 have been analyzed and reported. He advised that the median concentration of fluorides recorded so far is 1.3 parts per billion, a value which is considered to be low and normal for this type of community.

He stated that uninterrupted sampling will be continued to the extent that weather conditions will permit and he pointed out that without automatic equipment, developed as authorized by the Authority, this program would not be possible.

He reported that the Authority had written the Harvey Aluminum Company when the project was announced in 1953 and that in their reply the company had assured the Authority that "they definitely will avoid any air pollution in connection with their aluminum reduction plant." He explained that the staff will be contacting the company again to advise them of the background survey data and to discuss air pollution controls for the plant which is now under construction.

STAFF REPORT: REGARDING AREA SURVEY IN ALBANY

Mr. Hatchard stated that representatives of the Sanitary Authority and the Air Pollution Authority had made a survey of the U.S. Bureau of Mines Zirconium processing plant in Albany to become familiar with the process. For the past few months

the Wah Chang Corporation has been operating the plant and was now constructing a new plant east of Albany to process part of the ore. He reported that the company will be installing dust and fume control systems to prevent later problems in the area. He stated that the staff would follow the progress.

NEW COMPLAINTS RECEIVED

Mr. Dixon asked if the new complaints had been received in writing.

The Secretary stated that they had.

PORTLAND REGARDING DUST DEPOSITION NEAR SMITHWICK CONCRETE PRODUCTS COMPANY

Henry G. Keeney, 1757 N.E. Morgan Street wished to present his case regarding dust from Smithwick Concrete Plant and he was aware that the staff was working on this nuisance. Mr. Keeney stated he attended a public meeting that was held recently where about 200 affected residents considered the problem and that Dr. Meador and Mr. Hatchard had explained the City-State investigations. Mr. Keeney stated that the Smithwick Company has been taking some measures to eliminate part of their dust nuisance; but the conditions are still bad in the residential district south of the plant. He explained that the stack dust discharge is one problem alone but there is a large amount of dust from other sources emitted which settles on the house roofs, fills the eave troughs and it was not possible to paint houses in that vicinity when a north wind blows. He stated the dust filtered into the homes and there still was much to be done to control the dust. Mr. Keeney stated he had received very good cooperation from the Authority's staff.

Mr. Hatchard stated that sampling activities have been carried on since last May and that there is considerable data available. He explained that there were some recent changes made at the plant but at this time the staff was not prepared to say what degree of correction has been brought about. Mr. Hatchard stated there is an intermittent dust deposition problem present. He stated this complaint goes back to 1950 when the original problem was presented at a public hearing before the City Commissioners; that it has been a matter that has had concern from the management. Mr. Hatchard explained that it was unfortunate the staff was unable to

complete the preparation of a report for submission to Dr. Meador, City Health Officer.

The Chairman asked Mr. Hatchard if a report could be submitted to the City by November 1st.

Mr. Hatchard replied that it could.

The Chairman stated this would then be accepted as a progress report and that the staff would proceed to work on this matter with the City.

REGARDING CINDER AND FLYASH DEPOSITION

The Secretary read a letter from Harry Reese dated July 6, 1956 regarding deposition of cinders on his residence near Asbland.

The Chairman asked if field investigations had been made.

Mr. Hatchard stated that District Engineer T. M. Gerow had made investigations and his observations were that nuisance conditions were present from cinder and flyash deposition and that the management of the company had been advised and that they have responded as to what actions they will take.

The Chairman asked if the staff had advised the complainants of the status and progress.

Mr. Hatchard replied that it had been done.

Mr. Dixon noted there were five cases on cinder and flyash and suggested that the Secretary get in touch with the offending parties and notify them and follow through in each case.

Mr. Charles M. Sanford of Associated Forest Industries requested the names of the lumber mills involved be sent to their organization.

The Chairman stated that the information would be provided.

CLACKAMAS COUNTY: DUST AND VAPOR FROM PORTLAND SAND & GRAVEL COMPANY

Mr. Hatchard stated the Authority has received 4 or 5 letters from residents and most were referred from the Clackamas County Health Department for investigation.

It was pointed out that this is a condition which requires sampling and field surveys which have been delayed because of previous commitments.

DOUGLAS COUNTY; PORTABLE ASPHALT PAVING PLANT - CENTRAL HEATING COMPANY

Mr. Hatchard stated that five complaints were received regarding dust and vapor from the Central Heating Company located about six miles north of Myrtle Creek. Mr. Glenn Byrnes, owner, was advised by letter on October 18, of a field investigation made by District Engineer Gerow that the dust and vapor from the plant were in violation of the statute. Mr. Hatchard stated that a reply was requested by October 24th, so that the actions of the company would be known prior to this meeting. However, no reply has been received.

Mr. Ray L. Beeler, Associated General Contractors, stated that they knew about this complaint and that it has been in existence for some time now.

Mr. West asked if the State Highway Commission included in their contract the phrase that the air pollution law must be complied with.

Mr. Hatchard replied that there has been no recent contact with Mr. Williams, State Highway Engineer; that the Authority routinely sends a copy to the Highway Department of letters if it involves any activities of one of their departments; that contractors and the Highway Department have been very cooperative in encouraging a solution.

Mr. Dixon asked how long the Central Heating Company would be operating before the contract was completed.

Mr. Hatchard stated that Mr. Gerow advised that there was 5 to 6 miles of paving to be completed.

Mr. Dixon asked if the State Highway Department had been advised of the situation.

Mr. Hatchard stated only by copy of letter sent to Mr. Byrnes.

The Chairman suggested that it would be more satisfactory to write the Highway Department separately and request their assistance.

Mr. Hatchard said the staff would follow this suggestion.

ADMINISTRATIVE MATTERS; REGARDING DEMONSTRATION PROJECTS UNDER GRANT-IN-AID PROVISION OF PUBLIC LAW 159.

Mr. Hatchard explained that in each members' notebook there was an announcement of a new Public Health Service Grant-in-Aid program to encourage the organization

to 10th, in Cincinnati, Ohio.

representative of the technical staff be sent to this seminar to be held November 7th, It was moved by Dr. Erickson and seconded by Mr. Dixon and carried that a repre-

MOTION RE: OUT-OF-STATE TRAVEL TO ATTEND THREE DAY CONFERENCE

state from Public Health Service.

Dr. Erickson replied that these funds are general health funds provided to the

The Chairman asked if funds would come from the Air Pollution Authority's budget.

vided from staff training funds.

that this is a very important meeting and perhaps the travel expenses could be pro-

there is some difficulties having funds allotted at this time; however, he stated,

Dr. Erickson stated there was a limitation on the amount of out-of-state travel, and

of finance and administration regarding out-of-state travel.

The Chairman asked what was the policy of the Board of Health and the Department

to participate.

which will be discussed at the seminar and if the Authority approved that be planned

Mr. Hatchard stated that there was the program in each notebook showing the subjects

CONTROL PROGRAMS.

OUT-OF-STATE TRAVEL TO ATTEND A SEMINAR ON THE ADMINISTRATION OF AIR POLLUTION

burner engineering study were organized.

lication a grant should be made when appropriate projects such as the waste wood

The Chairman stated that if it were agreeable to the Authority to apply for ap-

obtained for short term technical assistance.

funds to assist City and State demonstration projects but that personnel might be

Mr. Hatchard stated that it was understood that Public Health Service would grant

not also be available.

The Chairman asked if Public Health Service would provide funds only or would person-

were not ready but could be expected soon.

for detailed instructions from Public Health Service but the forms and instructions

of local and state demonstration projects. Mr. Hatchard stated we had written

STATUS OF PROPOSED BUDGET FOR THE BIENNIAL PERIOD JULY 1, 1957 to JUNE 30, 1959.

Mr. Hatchard reported that the proposed budget would be reviewed by the Department of Finance at a meeting scheduled for October 26th, and that some additions had been made in the salaries item to conform with the new amounts.

Dr. Erickson added that the budget preparation had been complicated by the Civil Service Commission new salary schedule which increased the amounts and required revisions in the proposed budgets. He explained that the State Board of Health would have to show a great deal of justification for increases in the budgets. If this justification were shown to the Budget Director he in turn would recommend to the Governor that the increase be recommended to the Legislature.

The Chairman called the next Air Pollution Authority meeting for December 13, 1956.

The meeting was adjourned at 4:35 P.M.

Respectfully submitted,

K. H. Soles,
Acting Secretary

EIGHTEENTH MEETING
OF THE
OREGON AIR POLLUTION AUTHORITY

December 13, 1956

The eighteenth meeting of the Oregon State Air Pollution Authority was called to order by the Chairman at 2:00 P.M., Thursday, December 13, 1956 in Room 36, State Office Bldg., 1400 S.W. 5th Ave., Portland, Oregon. Those present were Carl E. Green, Chairman, Merle S. West, Vice Chairman, Mr. R. O. Dixon, members, Dr. Gordon C. Edwards representing Dr. Erikson, Kenneth H. Snies, Acting Secretary, Charles D. Burt, Legal Advisor, R. B. Hatchard, Chief of the Air Pollution Control Section and W. J. Whitwell, Associate Engineer, R. D. Nance and R. B. Percy, Chemists, State Board of Health.

MOTION RE: MINUTES OF PREVIOUS MEETING

The minutes of the seventeenth meeting held October 25, 1956 were summarized by the Acting Secretary. The Chairman declared that if there were no corrections or additions the minutes would stand approved as prepared by the Acting Secretary.

CHAPTER V "AIR POLLUTION CONTROL STANDARDS"

The Chairman stated that for the past year the Authority and its staff have been preparing regulations to prevent and control air pollution and that several drafts of the proposed regulations had been distributed for review and comment. He explained that the adoption of regulations had been delayed twice at the request of industrial organizations until the Stanford Research Institute Report and other information regarding air pollution was available for study. He stated that these reports have been released over a month ago and that the Authority wanted to give the proposed regulations final consideration today.

The Chairman asked Mr. Robert McKean, Manager, Columbia Empire Industries Inc., if their organization had statements to present regarding the regulations. Mr. McKean replied that eleven representatives desired to make reports. He said that several years ago when accusations were made regarding industrial sources,

their Association recognized that there was need for an unbiased report by a qualified organization regarding Portland air pollution.

He reported that on page 2 of the Stanford Research Institute report it was stated "that activities of the general public in the Portland area contribute approximately 75% of the compounds (hydrocarbons and oxides of nitrogen) which are thought to cause smog; manufacturing industry the remaining 25%". He stated that industry was glad to have this fact established and expected it would be important to the Authority since it was directly concerned with regulating the public sources also.

He stated that population and industrial growth was a factor to consider and quoted from page 12 of the report "on the basis of expected population and industrial growth, with no further control measures than exist at present, concentrations of smog-forming and other pollutants in the Portland atmosphere will probably increase by about 50% by 1965. Even this increase would not result in as high concentrations of smog-forming material as occur presently in Los Angeles". He concluded that other representatives had information to present at this time.

Herbert J. Weber, Director, Safety, Hygiene & Air Pollution Control Program, American Foundrymen's Society, Des Plaines, Illinois, stated he had studied the Stanford Research Institute's report and noted that atmospheric concentration of pollutants in Portland are only one-sixth of those in Los Angeles. He pointed out that inversions in Portland occur between one and seven o'clock in the morning when most industry is shut down; that allowing for growth the calculated emissions of SO_2 in 1965 would be 15% to 48% of the 1956 calculation for the Los Angeles area. He stated he was aware of the fact that this report was written especially for Portland but wanted to emphasize that the Portland area is the most heavily industrialized area in the state. He felt that the conclusion of the report would apply somewhat to other areas in the state but that there is no need to impose unnecessary restrictions. He pointed out that the foundry industry has always opposed state-wide codes because an emission limit adequate in one community may impose needless control in other communities. He felt it would be

improper to imply the Los Angeles code to perhaps Fresno where the conditions would not be the same.

He stated that the proposed regulations do not provide specific limitations for stack emissions. He asked how would one determine the normal background value when a specific city was already built up and when collection equipment is required what will be an acceptable collection efficiency. He pointed out that these factors are very important when one spends \$30,000 to \$125,000 for a piece of dust collection equipment, that an industry must have a guarantee from the supplier that it will satisfy the Authority. Mr. Weber stated that equipment manufacturers will not guarantee their equipment on the basis of these regulations since they can't guarantee a decrease in accordance with the area concentrations. Mr. Weber concluded that based on the Stanford Research Institute's report, the foundry industry submitted the following recommendations:

1. The Ringelmann Chart should not be used to evaluate emissions from foundries.
2. The amount of particulate fallout and the concentration of suspended particulate matter should be used only as a guide to determine the degree of control needed.
3. The cost for stack emission studies should be borne by the public.
4. The control of industrial sources where particle fallout or concentration of suspended material exceeds stated limits in no case should require a collection efficiency greater than 75% for any existing stack, and 85% for a new source.

Mr. Herbert Vonhof, M and M Woodworking Division, Simpson Logging Company, stated that he felt that the limitations on smoke density are unnecessarily severe as applied particularly to industries which are burning hog fuel. Mr. Vonhof stated he felt these standards to be severe for the following reasons:

1. According to the Stanford Report there is information which indicates there is no air pollution problem in this area at this time and therefore, there is ample time to prevent excess air pollution.

2. Unfortunately hog fuel often results in much more dense smoke discharge than in the regulations. The use of the hog fuel as a fuel is constantly being decreased with the event of natural gas and oil in this area and with the increased utilization of waste wood products, there is not so much burning of hog fuel. However, there are industries which are still dependent upon hog fuel in the boilers. He stated that changing to other types of fuel would impose a severe financial burden on industry.

3. Another important point is that hog fuel represents types of waste which can not be burned efficiently in power generating units and it would be very expensive to haul this material to a dump.

In conclusion Mr. Vonhof stated that he was fearful that under the proposed regulations corrective regulations may become repetitive. He explained that if there is 25% excessive fallout in an area from industry then each contributor would be asked to reduce the discharge and if the area is developing industrially it is logical to expect an increase in emissions which may again require further corrective action that could require the scrapping of the original equipment and obtain new equipment. Mr. Vonhof suggested that the regulations prescribe the stack allowances if and when corrective action is necessary so that an industry can take the action required and know it won't be called upon for further expenses until the industry can write off the original expenses.

Mr. E. G. Huffscht, representing Lumber Manufacturers Inc., stated that Mr. Gordon Wilkinson is unable to be present and had requested that the following statement be submitted.

"Our operation is a typical dutch-oven boiler operation, of the same type that is used by a great number of similar operations in this state.

A dutch oven is fed from the top by gravity feed, and is fired every one and one-half hours to four hours depending on the load on the boiler at the time. When fuel is being fed into the port from the top, a cross draft is created across

the top of the fire which results in dense black smoke. The duration of this smoke from the time the port is opened until all smoke dissipates is 12 to 15 minutes. During all other times of operation, there is no smoke as combustion is complete. Further, there is no indication of a fallout problem.

We feel that for this type of an operation, the proposed regulations should adopt provisions to these:

1. An allowance of 15 minutes in every $1\frac{1}{2}$ hours. This is because it takes about one minute to open the port and start the fuel into the dutch oven, and about 2 minutes for the smoke to dissipate after the port is closed - equaling the 3 minute allowance under the regulations. We need an additional 10 minutes to load the dutch oven.
2. An increase in the Ringelmann reading to cover our smoke during the furnace loading period.
3. The reason for our belief that we need a change in the proposed regulations is that the only estimate we have been able to get on the cost of smoke control equipment was prohibitive.
4. Installation of a gas or oil fired furnace would cost approximately \$6,000 but the cost of fuel and getting rid of the wood waste we are now consuming would cost approximately \$5,000 per month. For instance, the nearest place that we can dump the wood waste is the dump at St. Johns, a 14 mile haul.

If the regulations are passed and enforced as written, our firm will be put out of business. Further, in the 10 years that this plant has operated, there has been only one complaint lodged, and in that case, smoke from the plant was held down to the ground, but the condition did not last for longer than 3 or 4 hours.

Again we would stress that this operation of ours is a typical dutch oven operation which is used throughout the entire state, and our case is not an isolated one. This type of installation is utilized by all sizes of industry - small, medium

and large.

We would urge that your regulations consider this problem, and that some equitable answer is found to it before these regulations are enacted."

Mr. Harvey Pullin, B. P. John Furniture Company stated that his firm too operates a dutch type oven; that they feed wet fuel and dry fuel; that they add fuel to the boilers twice an hour and the smoke lasts 10 to 15 minutes at a time. He stated that the alternatives available to their operation are out of the question; that they would have to install separate heating units which would be prohibitive. He felt their only alternative was to move out of town; that they are now contemplating a plant either in Mississippi or Carolina; that this move would be considered for a subsidiary plant. He stated that his plant management is now in a frame of mind that if the severe regulations are adopted they will consider a permanent removal.

Mr. Chester Sterrett, Portland Chamber of Commerce, Portland Mayor's Air Pollution Committee, stated it was his wish to hold up the regulations for consideration until the next meeting of the Air Pollution Authority. He stated that it seemed academic to him if the regulations were adopted that each one of the cities would have to establish regulations along the lines of the Air Pollution Authority's standards. Mr. Sterrett stated that he talked to a number of industries in the east which he felt he would like to see come here but the competition for new industry is quite intense. Mr. Sterrett stated that after the last hearing he dictated a memo embracing some of his thoughts on the subject which might be considered in the proposed rules and regulations. Mr. Sterrett stated further that he feared if the regulations were put down in black and white that the good will of industry may be lost; that it was necessary to deal with specifics and there would be the risk of including recommendations to follow that would eventually cause industry to move from this area.

He pointed out that the Authority has fallout levels figured for heavy industrial

districts; that in the new county zoning law and new city zoning law that there are three types of industrial areas. He stated as he understood the regulations the 45 tons per square mile per month fallout would only apply to the heavy industry areas and that general and light industrial areas would come under the residential categories.

He further said that he was concerned about the way in which these background levels and fallout requirements were written into the regulations; that in the long run these may cause more trouble and misunderstanding than all of it is worth.

Mr. Porter Yett, Sr., Assoc. General Contractors stated that asphalt paving plants are used state-wide but fortunately they are able to move every 3 to 4 months. He added that in the concentrated area of Portland there are about 7 paving plants operating and there have been no complaints recently. Mr. Yett said it was his understanding that there has been only 3 or 4 asphalt paving companies that have had any serious nuisance reports in the past years. He stated that contractors owning these plants and doing construction work in grading operations have discussed the matter and have no yardstick to depend upon as the dust and soot varies from day to day and county to county in all of Oregon. He stated whatever might be adopted in Portland would not be of help in Bend or Klamath Falls or Roseburg. Therefore, he felt they would be in a predicament should there be any legislation adopted to set restrictions.

Mr. Yett suggested that any regulations which might be found necessary should also be approved by the Oregon State Highway Department.

Mr. Fred Menzel, Rich Manufacturing Company, stated that most of this information he presented today to the Board has been presented at previous meetings. He added that sometime ago his company was advised of a number of complaints south of the plant and that he had contacted several of the equipment companies requesting they submit prices for types of control equipment. He said that these companies refused to give any guarantees of dust control and the type of equipment the

companies recommend range in price from \$14,000 to \$75,000 F. O. B.

Mr. Manzel stated that the estimate cost for his firm would range as high as \$60,000 to install control equipment. He explained that in addition to this each company recommended that his company install burners in the upper stack of the cupola which has been at a cost of approximately \$10,000. He stated with this equipment the discharge still could not pass the Ringelmann Chart standards. He said their estimate of the cost of just stack measurements is about \$6,000 and that the most expensive piece of dust control equipment would remove only 85% at an actual cost of \$73,000. Therefore, Mr. Manzel said, it stands to reason all of the foundries could not stand such an expensive outlay and as a result would cause some small size foundries to close or move out of Oregon. He felt therefore, the standards should be revised.

James K. P. Miller, Morris P. Kirk and Son, Inc., stated that if regulations such as these were adopted alone it would have a tendency to emphasize industrial air pollution problems which is the same approach as was taken initially in Los Angeles. However, Mr. Miller stated, that the problem today is more acute in Los Angeles than when the air pollution district was started. He stated that the approach of looking to industry for the initial effort to control air pollution has given the public the impression that air pollution is an industrial problem. He pointed out that this makes it difficult later to get public support for correcting public sources such as incineration and vehicle discharges. Mr. Miller stated that he thought the Authority intended to develop controls for other segments of the population but he urged that the whole picture be presented to the public at one time and not piece by piece.

He stated that he concurred in Mr. Weber's statements regarding the standards since it would be extremely difficult to appraise the background in Portland and that studies throughout the country indicate this is a difficult problem. He indicated that in Los Angeles the problem is being intensely investigated; that

in the Stanford Research Institute's report the figures indicate that the real culprits are the hydrocarbon vapors and gases in the air coming principally from the public. Mr. Miller further stated that if an industrial emission is controlled there is still the contaminants from public sources to cope with.

Mr. Fred W. Packwood, Attorney, Columbia Empire Industries, Inc., stated that his group had adopted the policy from the beginning that they do not intend to impose any legal stumbling block or hardship; that it is appreciated that the law is enacted for a purpose and that the Air Pollution Authority is trying to enforce it. He further added that he firmly believed the proposed standards are premature, and that more study and research is needed. He stated that if the standards were not adopted at this time it would not prevent the Air Pollution Authority from going into the study of a specific source of pollution that was causing complaints. Mr. Packwood stated he did not see how the proposed standards can operate as they are and that every heating engineer and every manufacturer of control equipment says the regulations will not work satisfactorily.

Mr. Hatchard stated that the intent of the area fallout regulation was to determine first if there was a problem then bring about control for the individual sources of that problem and that the regulations would be effective using this approach.

Mr. Weber stated that it seemed to him that the salient points would be that he would like to see the Ringelmann Chart used only to measure combustion emissions from a stack. As it is now, he stated, it is used in measuring discharges from vehicles, foundries and others. He stated that the method can not be used for non-combustion sources.

The next point of importance, stated Mr. Weber, is that the particle fallout rate and suspended particulate matter are excellent as a guide only to indicate if a problem exists. He explained that if there was a problem then a stack analyses is needed to decide upon the control needed. Mr. Weber stated he appreciated that the Air Pollution Authority has a job, and industry has a problem and that it was his hope with true cooperation that the Authority will produce a program

that will be a model to others.

Mr. Wendel asked Mr. H. Pullin if he had any suggestions for acceptable standards.

Mr. Pullin stated he was not an expert on this matter but he felt there was a problem of putting specifically in the regulations an allowance for certain substances beyond the control of the people causing the nuisance. He stated he realized the Authority has a responsibility to the public. He further added that the amount of time allowed for smoke issuance and the Ringelmann Chart's evaluation should be reviewed. He felt convinced the Ringelmann Chart is open to serious questioning, and that the time element was too restrictive without regard to particular types of industries.

Mr. Dixon stated that he operates two dutch oven-type boilers and that excessive smoke had been eliminated by controlling the fuel addition rate. He stated that this procedure is not expensive and is very practical.

Mr. Pullin informed Mr. Dixon that this would help but was not a complete solution. He stated that his firm used both wet and dry fuel and that the smoke emitted often was in the early morning before they started feeding dry fuel.

Mr. Dixon stated that according to Mr. Yett no complaints have been received by the Authority regarding dust from highway work, etc., and that this was probably because the public is very patient and long suffering as long as they will be provided with modern highways.

Mr. Yett said that he hoped that some understanding could be agreed upon to regarding the application of the standards to highway construction dust problems.

Mr. Dixon stated that it was his impression that this code is a guide to control and not mandatory by itself and that it is necessary to establish initial regulations.

The Chairman asked Mr. Hatchard to comment on the regulations pertaining to smoke and dust and asked if methods were available to satisfactorily control these discharges.

Mr. Hatchard quoted Dean George Gleason, School of Engineering, Oregon State College, that any discharges from combustion process through a stack can be satisfactorily controlled with known techniques. Mr. Hatchard pointed out that the staff's experience in the investigation of complaints specific problems show that in general satisfactory control measures can be installed, to satisfy the regulations proposed today without severe economic burden to industrial concerns. He stated that there have been several references to dust problems associated with asphalt paving plants and that the Authority had investigated 22 complaints near these plants during the past four years. He explained that in each case the problem was solved either by moving the plant to a remote location or providing control equipment. He stated that the staff has had excellent cooperation from Associated General Contractors and State Highway Commission in bringing about solutions.

Mr. Hatchard reported that the staff had conferred with representatives of several industrial organizations since the October 25, 1956 Authority meeting to consider the proposed regulations. He stated that several changes were made in the regulations as a result of these discussions. He stated that most of the remaining opposition is involved with the administration instead of the wording of the regulations.

Mr. Hatchard stated that several references have been made to statements contained in the Stanford Research Institute's report on air pollution which may be misleading. He explained that the staff questioned the validity of comparing Portland to Los Angeles County where there has been ten years of intensive control effort. He stated that in Portland there have been no complaints regarding the presence of the type of smog that cause human eye and throat irritation. He emphasized that Portland does not have this condition at present and that actually these regulations are directed to more elementary forms of air pollution such as smoke and dust emissions. He referred to Figure 1, page 3 of the Stanford Research Institute's report which graphically showed that most of the particulate matter in the Portland atmosphere is discharged from industrial sources.

Mr. Hatchard stated that there had been several statements made objecting to the use of the Ringelmann Chart for certain discharges. He explained that the staff has used the Ringelmann Chart only for primary combustion sources and agree that it should not be used for measurement of foundry dust, vehicle exhaust and others.

The Chairman asked if Mr. Whitsell wished to make a report.

Mr. Whitsell stated that he felt Mr. Hatchard had covered the main points but that he would like to point out that most of the statements made by persons opposing the regulations have been considered by the staff before. However, Mr. Whitsell stated that concern regarding the staff's ability to establish background values had been expressed. He referred to the definition of background in the regulations and stated that over a period of years the staff has accumulated data from area studies and complaint investigations.

Mr. Sterrett asked Mr. Whitsell if we had a situation like that of the Tillamook burn a number of years ago emitting all the ash into the air, would a flyash like this be added to the normal background value or disregarded.

Mr. Whitsell said it would not be disregarded; that we would have to consider it with other factors; and that if it had appreciable effect on the normal background then it would alter the values. Mr. Whitsell stated that it would tend to raise the level of the background value for the particular period but it might not affect the long-term background.

Mr. Miller stated he felt that it is entirely possible that the Air Pollution Authority could get complaints in which the excess of the fallout was not 15 tons per square mile per month. Mr. Miller wished to know what the Authority could do in a case of this kind.

Mr. Whitsell stated the Authority could possibly be placed at a disadvantage but the values in the regulations are a result of the staff's experience with complaints.

Mr. Wendel wished to know if the staff has had conferences with industries.

Mr. Hatchard stated he and Mr. Whitsell have attended a number of meetings and

that the recommendations and suggestions were used to prepare the revised regulations. Mr. Hatchard briefly outlined the sections which were clarified or changed since the last meeting.

The Chairman asked Dr. Edwards if he had any comments to make.

Dr. Edwards stated he was at somewhat of a loss to comment at length since he was substituting for Dr. Erickson and had only a short time to read the Stanford Research Institute's report. Dr. Edwards stated that Mr. Vonhof had said earlier that no serious air pollution problem existed in Portland and that Mr. Menzel likewise made a similar statement to the effect that no major air pollution problem existed.

The Chairman asked Mr. Vonhof if he wished to clarify his remarks.

Mr. Vonhof replied that was his statement which was made on the basis of the Stanford Research Institute's report; but whether a serious problem exists is one of relativity. He stated that the group had been referring to the Los Angeles problem and set it up as a standard and therefore this was the basis for his statement.

Dr. Edwards quoted this section from page 13 of the Stanford Research Institute's report. "However, the fact that the air concentrations presently are 25% as high as those encountered in Los Angeles during periods of intensive smog is ample cause for concern. Projected 1965 air concentrations for Portland show that the values might be 40% as high as those during intense Los Angeles smog (1956)." Again attention should be given to controlling present and future emissions in the Portland area, and on page 16, "particulate matter sampling by the Oregon State Air Pollution Authority under sponsorship of the Public Health Service showed that measured concentrations approximated those from cities of comparable size where air pollution problems are recognized, e.g. Cincinnati, Kansas City, Houston and San Francisco."

The Chairman stated that generally the standard of comparison is something ideal or at least satisfactory for water supply or waste treatment studies and similar

studies but in the Stanford Research Institute's report the comparison of Portland with Los Angeles is comparing Portland to the worst air pollution in the country. He pointed out that this appears to be a negative approach and we must not lose sight of the fact the comparison standard used is far from the ideal. He stated that over the last several years the staff has accumulated much data which has been presented at past meetings and that now the staff has summarized this data into regulations which are real and factual. The Chairman pointed out that the staff has been using this data as a guide in field activities during the past years and that regulations which may be adopted by this Authority can be amended in the future when additional data is available or when problems arise.

The Chairman assured the groups present that the members and staff have given serious consideration to the regulations.

Mr. West said that as he read and studied the Stanford Research Institute's report it seemed the difference in the problem from that of Los Angeles is largely meteorological.

The Chairman again emphasized the report indicated that there is a problem.

Mr. West said that practically all of the complaints which the Authority has received have come from locations within cities and that he believed that it is the policy of the Authority to encourage cities to take care of their own problems and that these regulations should serve as a guide for the cities in setting up local air pollution control programs.

Mr. Dixon added his opinion that the Authority has been operating for four years and is charged with the responsibility for adopting appropriate rules and regulations and he believed that it is time the Authority established some guide posts to assist local efforts.

Mr. Wendel stated that he concurred with Mr. Dixon's thoughts in that we must establish regulations which would become standards when considering cases which will come before the Authority.

Mr. Vonhof wished to make himself clear that he and his group are concerned with the general problem of the industries; that the paragraph Dr. Edwards quoted indicated there is cause for concern and no industrial representative will deny it. He stated that they are mainly concerned with the degree of corrective action proposed at this time.

The Chairman asked if a motion would be in order now.

Mr. Wendel suggested that the Secretary read the duties of the Authority.

The Secretary read Section 449.755 of the Statute.

Mr. Packwood requested the Chairman have the Secretary read from Section 449.730, sub-section (1) as he felt that is the key section to the Authority's action.

The Chairman asked the members if they wished to consider the regulations for adoption.

Mr. Wendel asked if most of the differences now existing could be reconciled if more time were provided.

Mr. Hatchard replied that the staff is confident that this will eventually happen when the regulations have been in effect for a period of time. He stated that the staff is very cognizant of the fact that the Authority represents the communities of Oregon, the cities, industrial and commercial groups as well as the public and that in the long range interest of each group we recommend the adoption of the regulations. He explained that it is essential that the State agency provide all concerned with appropriate standards applicable to particular problems.

Mr. Hatchard stated that the staff was happy to report that in conferences with the city officials it was found they share the same viewpoint; and that these regulations would stimulate the formation of local programs. He also pointed out that the fundamental objectives of the state statute will not be realized unless there is full cooperation by all parts of the community.

Mr. Vonhof stated that the Columbia Empire Industries Association, technical sub-committee, had met several times with the staff to discuss the regulations and reach an agreement, that the most important part of these discussions has been over-looked for we have not been discussing the points in agreement.

Mr. Miller stated that one of the big problems is determining the allowable discharge from a stack which is not included in the regulations.

Mr. Hatchard explained how the area concentration levels are related to the control of individual sources and how agreement is worked out between the staff and the person responsible for an excessive discharge. He stated that this approach is preferable to an arbitrary limitation required by regulations.

Mr. Miller asked what was more arbitrary than the opinion of one of the men on the Air Pollution Authority's staff who decides how much industry has to collect.

Mr. Miller asked what efficiency was expected by the staff and when decided why couldn't this be written in the standards.

Mr. Hatchard replied that regulations specifying collection efficiency would apply state-wide and could result in requiring too much or too little control since there would be no consideration of important local factors such as the number of discharge sources in the problem area, prevailing wind, elevations or unique characteristics of a particular discharge.

Mr. Hatchard explained that this is not an unusual problem; that the staff has arrived at general recommendations to persons responsible for correcting a particular source and that the ranges of collection efficiency recommended usually fall within what is accepted as good engineering practice. It was admitted that the staff has found special problems and that solutions have been developed by giving special attention to the unusual situation. Mr. Hatchard stated that the only difficulty with this approach is the small staff available. He stated plans and specifications have been carefully checked when sent in but frequently the plans do not come by request, and that the plans are needed to be certain the control provided is satisfactory.

The Chairman asked if it were not true that in the past the staff has consulted and conferred with industries having a discharge problem.

Mr. Hatchard stated it certainly was.

Mr. D. J. McNeil of Electric Steel Foundry wished to read Section 2.1 "Smoke Discharge". He stated that as far as the foundry industry is concerned it was felt the use of the Ringelmann Chart will be used regarding emissions other than smoke.

Mr. McNeil said that the phrase, "smoke from fuel burning equipment" is one of the factors which bothers a good number of people. He stated that the Ringelmann Chart should only be used to measure smoke from fuel burning equipment. He wished to know if it were not within the power of the Authority to change the regulations from time to time as circumstances develop. He stated that Mr. Weber expressed the statement concerning the foundry industry that control of stack emissions could remove 75% of the discharge without undue economic hardship. He said that he hoped the Authority would not expect 90% collection efficiency at this time although he advised that in future years improvements in control equipment will be made so that higher efficiencies will be economically feasible. He stated he saw no reason why industry could not have some definite limits. He said he believed from all discussions and contact with the staff that the work is being done impersonally and entirely fair.

The Chairman asked if there was any question regarding the use of the Ringelmann Chart for only smoke from fuel burning sources.

Mr. Hatchard replied that there was none since the staff agreed with the limitation.

Mr. Burt added that he believed the provisions in Section 2.1 are more a question of engineering than anything else; that from a legal point of view these regulations do not set up standards that every industry must immediately comply with. The Authority should set up a general standard; that industries in the

area who have a problem should get together with the staff and correct their individual problems. Mr. Burt emphasized that a violation of these regulations, assuming they were adopted, would ^{not} immediately determine that an industry was in violation of the state law. Mr. Burt concurred with the Chairman by saying the standards are more for the convenience of Air Pollution Authority than for anyone else.

Mr. Miller asked the Chairman what is the legal power of the Authority.

The Chairman stated that after an order has been adopted by the Authority it is possible for any person or groups affected to appeal the order in the circuit court.

Mr. Burt read Section 449.705 of the statute for clarification and stated that the Circuit Court would thoroughly review any order that was appealed and that if the Circuit Court thought the Authority's order was unreasonable it would be overruled. If the order were not overruled and not complied with then there would be basis for the Authority to obtain an injunction.

Mr. Wendel stated he did not remember an instance where an order was adopted except where good faith has been lacking; that he recalled only few instances where orders were necessary.

The Chairman stated it was time to consider a motion regarding the standards.

Mr. Dixon wished to ask that under the definition of smoke in Section 4.3, would it apply to gases emitted from a foundry.

The Chairman read from Chapter 5, Section 1.8 to clarify this question.

Mr. Menzel said it was then his understanding that the Board would not consider the discharge from a cupola with the standards based on the Ringelmann Chart.

The Chairman stated Mr. Menzel understood this point correctly.

Mr. Wendel said the Authority must have some starting place and now would seem the proper time to adopt these regulations.

The Chairman read from page 22, "Lime Dust", the major heading Chemical Substance, 2.4 a, and stated that later other substances added in addition to lime.

MOTION RE: ADOPTION OF AIR POLLUTION CONTROL STANDARDS

It was MOVED by Mr. Wendel and seconded by Mr. Dixon and carried that the Authority adopt the Rules and Regulations Pertaining to Air Pollution Control Standards.

CHAPTER I - III ADMINISTRATIVE PROCEDURES

The Chairman asked if the members had any comments or corrections regarding Chapter I, Administrative Procedures.

Mr. Dixon asked if the procedures will meet all of the requirements in the statute.

Mr. Burt stated he believed the regulations met all requirements of the statute.

Mr. Dixon wished to know if Mr. Burt had any further additions or corrections.

Mr. Burt stated there was one in Chapter I, Section 1.5, the definition of The Act. Mr. Burt stated it would be appropriate to add the words "and amendments thereto", to include any subsequent changes by the Legislature.

Mr. Wendel asked about the enforcement provisions in this Act.

Mr. Burt explained that the enforcement provisions were included in the Statute and would apply after a Public Hearing was held.

MOTION RE: ADOPTION OF RULES AND REGULATIONS PERTAINING TO PRACTICE AND PROCEDURE

It was MOVED by Mr. Dixon and seconded by Mr. West and carried that Chapter I ^{III} of the Rules and Regulations Pertaining to Administrative Procedures be adopted by the Authority with the addition of the phrase, "and amendments thereto." in Section 1.5.

CHAPTER V PUBLIC HEARINGS

The Chairman requested Attorney Burt to discuss the Public Hearings regulations.

Mr. Burt stated that Chapter IV, Sections on Public Hearings, are basically a set of rules which cover the procedure to be followed during a hearing. He

explained that the rules are written so that any person who appears at a hearing will know what procedures will be used and that he will have an opportunity to prepare his presentation and bring legal counsel along. Mr. Burt explained that regulations are included which will produce a written record of the hearing which is essential for appeal or enforcement actions.

The Chairman stated that he had one suggestion regarding the definition of the examiner on Page 9 of Chapter IV. Mr. Green proposed the addition (Item 1.1 page 9) to read, "the term examiner shall designate the Chairman of the Air Pollution Authority or the Authority or the members of the Authority as designated by the Chairman".

MOTION RE: CHAPTER V PUBLIC HEARINGS

It was MOVED by Mr. West and seconded by Mr. Wendel and carried that the Authority adopt the Rules and Regulations Pertaining to Public Hearing Procedures including the change in the definition of the examiner to read, "the term examiner shall designate the Chairman of the Air Pollution Authority or the officer designated by the Air Pollution Authority to conduct hearings and to act as Hearings Officer pursuant to Section 449.735, Sub-section (4) O.R.S."

NEW COMPLAINTS

North Albany: Regarding odor from the Western Kraft Corporation's mill.

The Secretary read a letter from Mr. Dale L. Turnidge, dated November 19, 1956 regarding the continued presence of oppressive fumes from the Western Kraft Mill north of Albany. The Secretary stated that a reply was sent to Mr. Turnidge dated November 28, 1956 advising him of the status of the Authority's studies and recommendations to the Western Kraft Corporation.

The Chairman asked Mr. Hatchard if any further action had been taken on this complaint.

Mr. Hatchard replied that District Engineer Merryman had conferred with Mr. Turnidge to explain in more detail what odor control installations had been completed and what further corrections were being planned.

The Chairman directed the staff to continue the investigations and cooperative work with the Western Kraft Corporation to bring about reduction of the odors.

Oswego: Regarding cement dust deposition.

The Secretary read a letter dated September 29, 1956 from R. Bradley Jones regarding the continued presence of cement dust in the city of Oswego. The Secretary stated that Mr. Jones had been advised that the study would be resumed in Oswego when other investigations now under way are completed.

~~The Chairman asked if a date had been set for resuming the sampling.~~

Mr. Hatchard replied that the staff is planning to resume the study during January.

Portland: Regarding odors from the Chipman Chemical Co., 6200 NW St. Helens Road.

The Secretary read a letter dated November 28, 1956 from Mrs. Fred D. Glennon requesting an investigation of a strong odor near the Chipman Chemical Company. The Secretary advised since the source of the odor is within the city of Portland the complaint was transmitted to the Portland Health Bureau and Mrs. Glennon was notified that the city would make an investigation.

PUBLIC HEALTH SERVICE Demonstration Projects Program, Public Law-159

The Chairman requested Mr. Hatchard to discuss the new Public Health Service Demonstration Projects Program under provisions of Public Law-159.

Mr. Hatchard stated that recently Public Health Service had established a grant-in-aid program for demonstration projects related to air pollution and its control. He explained that these projects are for the purposes of evaluating or demonstrating the effectiveness of various methods of preventing or controlling air pollution problems, of assessing the type, extent and effects of air pollution and of planning, organizing and operate a program for the control of air pollution. He reported that an instruction manual had been sent to city officials and others who may be interested in the program. One application has been submitted to

the Authority from Oregon State College Engineering Experiment Station which concerned a grant request to support the waste wood burner research project.

Mr. Hatchard advised that the Authority had endorsed this application and urged the Public Health Service to make the grant of \$9,218. Mr. Hatchard reported that this grant request had reached Public Health Service in time to be considered with the first group of projects and it was hoped approval would be given in time so that the project could begin at Oregon State College in March 1957.

There are several potential projects in Oregon which could be organized and submitted to Public Health Service for approval. Mr. Hatchard reported that these projects should be planned on the basis of participation by the local, state and federal agencies. He pointed out that the new Harvey Aluminum Company's plant in The Dalles creates a need for additional area surveys. Another project could be an extension of air sampling and investigations in the city of Portland.

The Chairman suggested that the staff investigate the desirability of submitting applications for these projects and present a report at the next meeting.

The date for the next meeting was set at the call of the Chairman.

There being no further business the meeting adjourned at 5:00 P. M.

Respectfully submitted,

K. H. Spies,
Acting Secretary

TWENTIETH MEETING

OF THE

OREGON STATE AIR POLLUTION AUTHORITY

The twentieth meeting of the Oregon State Air Pollution Authority was called to order by the Chairman at 2:00 P.M. Monday, December 16, 1957 in Room 36, State Office Bldg., 1400 S.W. 5th Avenue Portland, Oregon. Those present were Carl E. Green, Chairman, Merle S. West, Vice Chairman, Mr. R. P. Dixon, Mr. Harold Wendel, Dr. Harold M. Erickson, members and Curtiss H. Everts, Jr., Secretary, Mrs. Catharine C. Bensch, Special Assistant Attorney General, R. E. Hatchard, Chief of the Air Pollution Control Section, W. J. Whitsett, Associate Engineer and R. B. Percy, Chemist, State Board of Health.

MOTION RE: MINUTES OF PREVIOUS MEETING

The minutes of the nineteenth meeting held June 27, 1957 were summarized by the Secretary. The Chairman declared that if there were no corrections the minutes would stand approved as prepared by the Secretary.

THE DALLIES Re: Harvey Aluminum Company, Aluminum Reduction Mill

The Chairman requested W. J. Whitsett to give a report on the staff activities concerning the Harvey Aluminum Company's plant now under construction at The Dalles.

Mr. Whitsett reported that at the last Authority meeting the Harvey Aluminum Company officials presented general performance specifications for the fluoride fume control installations to serve the aluminum reduction plant at The Dalles. He stated that after reviewing the specifications the Authority had advised the company that more specific information would be required to describe the selected control equipment as soon as the data is available.

He explained that on December 5, 1957 the company was advised that the Authority members would consider the matter of the Harvey Aluminum Company at The Dalles at their regular meeting scheduled December 16, 1957 and at the same time they were reminded that the additional information requested had not yet been received.

Mr. Whitsett reported that C. A. Roebon, Chief Chemist, Harvey Aluminum Company in a telephone conversation relative to the Authority's letter of December 5, 1957 had stated that he had just returned to the company's headquarters in Torrance, California

following two weeks of travel. He advised that the requested information was not available at the present time from the designers and manufacturers of the control equipment, however, the Harvey Aluminum Company expected to receive the information from the suppliers within the next month and that he would be able to attend the meeting approximately one month later.

Mr. Whitcell stated that a meeting was held October 1, 1957 with the state officials from Oregon and Washington at the request of Mr. Rochon for the purpose of determining what additional studies were needed in The Dalles area before the aluminum plant

started production. Mr. Whitcell reported that it is our understanding that plant pathologists and horticulturists from Oregon and Washington Agricultural Experiment Stations conduct a joint survey on both sides of the Columbia River as consultants to Harvey Aluminum Company. Mr. Whitcell reported that additional air sampling had been completed at The Dalles and the staff believes that the normal fluoride concentrations have been established at two representative stations in the vicinity. He stated that a total of 629 samples had been collected and analyzed which show the fluoride concentrations to be typically low for a community of this size and limited industrial development.

The Chairman requested Dr. Monroe Holmes, Public Health Veterinarian, to give a resume of his work in The Dalles concerning the livestock and dairy operations. Dr. Holmes stated his activities so far have been very limited; that he has only had the opportunity to survey the area near the Harvey Aluminum plant just recently and that he plans to check the condition of the animals in this area within the near future.

The Chairman suggested that the Harvey Aluminum Company follow the recommendations already provided; that the Secretary furnish any additional data to the company which may be available and notify the company again that additional information is needed as soon as possible; and that if it were agreeable with the members that he recommend the consideration of the company's control equipment be deferred until the next meeting.

The Chairman asked R. L. Stockman, Engineer in charge, State of Washington Air Sanitation program, if he would like to present any information.

Mr. Stockman stated that the Washington Agricultural Experiment Station had made limited surveys starting about 6 months ago and that they expect to make foliage examinations very soon. Also, he reported that the station had submitted an application to Public Health Service Community Air Pollution Program for a demonstration project grant to carry on fluoride studies in agricultural regions north of The Dalles.

Mr. Stockman advised that the proposal was being studied by a special committee and no decision had been made yet.

NORTH ALBANY Re: WESTERN KRAFT CORPORATION

The Chairman stated that the Authority had decided at the last meeting to hold a public hearing regarding the need for additional air pollution controls to serve the Western Kraft Corporation's mill north of Albany; however, the company had subsequently submitted plans for the installation of more facilities, had conferred with the staff and had started a stack measuring program. The Chairman requested Mr. Hatchard to summarize the staff activities.

Mr. Hatchard stated that since the Authority's report dated July 25, 1956 was prepared the Western Kraft Corporation has completed expansion of the mill production facilities from 100 tons to 200 tons of pulp per day and that several installations have been completed which effect the atmospheric discharges from the mill such as a second recovery boiler and venturi scrubber system and the installation of an additional lime dust control unit.

He reported that the staff had completed 4 area odor surveys during the period August to October 1957 in order to:

1. Determine the area odor conditions resulting from the mill expansion, installation of partial odor control systems and other operational changes.
2. Determine whether the addition of a masking agent effects the area odor conditions.

He stated that the procedure used in the surveys was similar to the 1956 field investigations where two observers individually recorded the odor intensity if an

odor was detected from a station downwind from the plant. He explained that the intensities noted were based on the following scale.

- 0 - no odor present
- 1 - threshold level of a kraft component
- 2 - definite odor of a kraft component
- 3 - strong odor of a kraft component
- 4 - over-powering odor of a kraft component.

Mr. Hatchard stated that the observations were made each minute at a station until two successive zero values were recorded and then the observations were interpreted until the odor appeared again or until the observers moved to another station.

He stated that a summary report had been prepared dated October 21, 1957 which included a comparison of the 1956 and 1957 area survey information. He explained that the data showed that higher odor intensities occurred during over-cast and rainy weather conditions and that the percentage of observations for the various odor intensities should not be interpreted as exposure time of the area to a specific odor intensity since the field method used limited the observations to stations and periods of time when the kraft odor was detected either continuously or intermittently.

He stated that the addition of a masking agent on October 15, 1957 did not substantially reduce the odor intensity, however; approximately 20% of the observations made on October 15, actually represented the odor of the masking agent rather than a kraft mill component. He reported that in the opinion of the observers the masking agent would be objectionable but that the use of the masking agent might be effective for short period use when it was desirable to substitute another odor for kraft type.

He reported that the comparison of the total observations made in 1957 with the data for 1956 indicated that the odor conditions have not changed significantly. He pointed out that from the comparison of the 1956 and 1957 data it might appear that the increased atmospheric discharge from the mill expansion was approximately balanced by the installation of control facilities or operational changes. He stated that this conclusion should not be made since the human nose is not a satisfactory quantitative measure of odors. He explained further that the average human olfactory sense is a very good qualitative measure of odor. He stated that the actual quality of odor compounds discharged from the kraft mill may have either increased or decreased as

a result of recent changes and would not be shown by these field surveys and for this reason, the Authority recommended the company undertake a stack sampling program to measure the quantity of odorous compounds emitted from the major mill discharge points.

Mr. Hatchard presented the following recommendations or observations for consideration.

1. Presence of odor in the area around the plant is at times creating public nuisance conditions.
2. The company should complete stack sampling procedures so that the discharge characteristics digester blow and relief gases may be compared before and after the blow heat recovery system is installed.
3. The Authority's staff should continue the area odor surveys after each change in the mill odor control facilities and preferably the surveys should be made concurrently with stack sampling operations.

Mr. R. O. Beatty of Western Kraft, stated he had a written report he would submit to the Secretary and reported that his company was installing the blow heat recovery system which will be completed in the next two weeks. Mr. Beatty pointed out that this unit would cost \$70,000 and that this is not the first odor control installation which has been undertaken. He stated that this project is one in the series of steps and that to date the company has spent about \$200,000 on equipment related to the reduction of odors in the plant. Mr. Beatty emphasized that these expenditures were difficult to make with the current market conditions for Kraft paper. Mr. Beatty stated that since there are so many variables affecting the area odor conditions such as wind, weather and temperature, mill discharges and others, that his company questions the area odor survey data as a basis for recommendations for control actions. However, he added, that it is the best system developed to date to measure the presence of area odor.

Mr. Beatty stated that Mr. Waldemar Seton, Chief Chemist, Western Kraft Corporation also had a report to present regarding the stack sampling program. Mr. Seton stated that there was no doubt that the gas chromatography method was the best for the stack measurement but this involved expensive laboratory equipment and precise methods which

are not available. He said Western Kraft has followed a method devised by Dr. McCarthy of the University of Washington and that the company has consulted with Dr. McCarthy. He added that the work to date done on kraft mill effluents shows there are four major odorous components, hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and dimethyl disulfide. He reported that Dr. McCarthy is also working on non-condensable gases given off by kraft mills and that they are trying to analyze the total component.

He stated that the stack samples showed that 0.42 lb. of hydrogen sulfide, 2.18 lb. of methyl mercaptan are present in the digester gases per ton of paper. He stated the other figure arrived at was a total titration figure for dimethyl sulfide which showed 4.1 lbs. bromine demand per ton of paper.

The Chairman stated the Authority would consider the progress reports and would expect further reports at subsequent meetings and that the Authority believes the Western Kraft Corporation is proceeding in good faith. He expressed to Mr. Beatty appreciation for the company's cooperation, promised that the staff will continue working with the company and requested the company to submit progress reports.

NORTH ALBANY Re: Wah Chang Corporation

The Chairman requested Mr. H.W. Merryman to report on activities concerning the complaints involving the Wah Chang Corporation's plant north of Albany. Mr. Merryman stated the company had started production during November 1956 and on July 30, 1957 the Authority received a petition-complaint signed by 20 nearby residents that considerable damage to trees and plants was occurring. On August 20, he reported that the staff made a preliminary field investigation and it was found that trees and vegetation were being affected.

On August 23, 1957 he stated the staff contacted James McClain, Director of Production, and advised him of the complaints and the field investigations and on August 30, 1957 a letter was sent to Wah Chang Corporation regarding complaints and field investigations and notification that the discharges from the plant were in violation of the Air Pollution Control statutes and recommended that the management install appropriate controls. Mr. Merryman stated that the sulfurium processing facilities were being expanded and it was requested that plans and specifications describing

the control systems be submitted to the Authority for review.

Mr. Merryman stated an automatic impinger was started at a sampling station near the plant on September 9, and on October 9, the fluoride and chlorine concentrations found were sent to the company. He explained that the data showed that excessive discharges of fluorides were being emitted from the plant.

Mr. Merryman reported that the staff conferred with Mr. Yih, General Manager of Wah-Chang on October 17, and learned that their intent to install and operate air pollution controls to be in conformance with the Air Pollution Control statute and that following the receipt of the company's plans for atmospheric controls a letter was sent the firm on December 6, 1956 regarding the review of the plans and specifications. He explained that in general the plans were found to be reasonably satisfactory and it was further recommended that the firm proceed to develop techniques and methods for stack sampling at the plant which had been previously recommended and also that continuous monitoring for hydrogen fluoride discharges be incorporated in the plant.

The Chairman asked if a representative of Wah Chang Corporation wished to present a report.

Mr. Ralph Nielson, Chemical Engineer, Wah Chang Corporation, stated he had nothing further to add except that the company had installed a scrubbing system and additional equipment has been ordered. He reported that they have contacted Dr. Donald F. Adams of Washington State College regarding advice on the installation of continuous monitoring equipment.

Mr. Hatchard stated that the plant is engaged in producing zirconium, tantalum-columbium for the Atomic Energy Commission, and that the staff believed the company has responded to recommendations quickly and the progress was reasonable at this stage.

The Chairman stated that the Authority accepted the progress reports and requested reports at the next meeting.

MULTNOMAH COUNTY Re: Pacific Carbide and Alloy Company

The Chairman requested W. J. Whitwell to present a report of staff activities concerning the investigation of dust discharged from the Pacific Carbide and Alloy Company's

plant at 9901 N. Hurst Avenue. Mr. Whitwell stated that in early 1956 the company had installed a stack water spray control system to remove particulate matter from the electric furnace discharges before release into the atmosphere. He reported that the Authority has continued to receive complaints regarding the deposition of dust on property near the plant and that the staff had investigated the complaints and completed the collection and analyses of air samples from stations in the vicinity. He explained that the particle fallout deposition rate was determined by analyzing samples collected periodically from polyethylene containers located on the roof of the Morrison Oil Company approximately 400 feet from the calcium carbide furnace stack. He stated that the small sized particles which remain suspended in the air were determined by high volume samplers using 8" X 10" glass fiber filters. He explained that the operation of the high volume samplers was limited to those periods when the wind direction was from the electric furnace stack to the sampling station within a 50° arc and a second high volume unit operated only when the wind was from the 50° arc in the opposite direction.

He stated that the particle fallout rates found during the sampling periods from August 1955 to August 1957 showed a median fallout rate of 97 tons per square mile per month and a maximum of 540. He pointed out that a fallout rate of over 55 tons per square mile per month in an industrial area in the Willamette Valley is in violation of the Authority's regulations, Chapter V section 2.2.

He reported that the suspended particulates collected on the high volume filter showed a median value for the northwest 50° arc of wind direction being 489 micrograms per cubic meter with a maximum of 787 and a minimum of 218. He explained that the Authority's regulations allow a concentration of 325 micrograms per cubic meter in a heavy industrial land use area of the Willamette Valley. Mr. Whitwell stated that the data supported the following conclusions.

1. The stack water spray control system is not removing enough particulate matter from the carbide furnace emissions.
2. The particulate matter discharged from the Pacific Carbide and Alloy Company is creating a public nuisance in the vicinity and is in violation of the Authority's

regulations, Chapter V Sect. 2.2, 2.3 and 2.4.

He presented the following recommendations for consideration.

1. That the Pacific Carbide and Alloy Company increase the particulate removal efficiency of the control systems as soon as practicable.
2. That the plans and specifications for the additional controls be submitted to the Authority for review before installation is started.

Mr. Clifton Glover, Assistant Manager, Pacific Carbide, explained that he represented the company since a serious transformer breakdown occurred that will stop production for about six weeks and Mr. T.J. Waters, Plant Manager, was working on this project.

He explained that about the first of August they shut off the water on the furnace stack scrubber because their operations were not satisfying the Morrison Oil Company who has been their main complainant. Also, Mr. Glover explained the company had removed 500 tons of sludge which was collected from the stack in the past 18 months of operation, which will provide another sludge pond to avoid stream pollution. The first part of last month Mr. Glover reported that the company had completed work relining the stack from the scrubber down; and enclosed the furnace to reduce the air flow coming from the furnace stack, in line with recommendations from Stanford Research Institute.

He explained the company has hired an additional chemist and that a large part of his duties will be to measure the stack effluent which will allow the company to obtain more efficiency from the scrubber. He added that they believed that the recommendation of the Authority's to improve the scrubber is the proper approach and their consultants will continue investigating methods of collection at the furnace.

He explained that the company is affiliated with Union Carbide Company and that it was their understanding that Electrometallurgical Company spent about \$300,000 for their system in Portland. Mr. Glover stated they have been in contact with the Louisville carbide plant control activity where several covered furnaces are operated that are about 4 times the size of the Pacific Carbide furnace unit. Mr. Glover stated his plant is working on this problem and hope to submit a good progress report at the next Authority meeting.

The Chairman stated that the emissions from this plant are in violation of the Authority regulations.

Mr. Dixon asked when the scrubber is started up again what does the company anticipate the amount of sludge would be.

Mr. Glover stated he hesitated to say because measurements had not been made after the improvements were completed.

The Chairman asked the staff for any additional recommendations.

W. J. Whitwell replied that the staff would like additional information regarding what improvements the company is planning.

The Chairman stated that the Pacific Carbide and Alloy Company must control the dust problem and that the staff is willing to cooperate in the activities.

Mr. Glover stated that the new chemist will be doing testing on the stack and will need considerable advice and help from the Authority.

The Chairman suggested to Mr. Glover that the plant's chemist get in touch with the Authority's staff and that the Authority be given a report within a month of the progress being made.

Mr. West stated that he believed this was a good procedure.

Mr. Hatchard stated that the staff was concerned with the adequacy of a water spray, since the random chance of collecting small size particulates was very limited.

Mr. Dixon stated that there are processes available which, if used, would solve the problem.

Mr. Wendel inquired whether the discharges were mostly CaO and asked how critical this discharge was since some contaminants were of a toxic nature and others were not.

Mr. Whitwell explained that the furnace discharge was mostly lime and carbon and the complaints were based upon deposition on vehicles, buildings and merchandise.

Mr. Hatchard explained that originally the petition came from the Western Auto Company employees located west of the carbide plant and that complaints have not been made after the stack controls were put in about 18 months ago. He stated the Morrison Oil Company was the main complainant at present.

Mr. Wendel further reiterated that the Authority should move with some speed to help rectify this situation.

Mr. Dixon suggested that Pacific Carbide and Alloy Company work with the staff and prepare a report for the next meeting; that he wished to see full cooperation between the staff and the company.

The Chairman concluded by promising that the staff is available to work with the company and that the Authority will expect a representative of the company present at the next meeting and in the interim have progress reports from the staff.

CITY OF EUGENE PROGRAM

The Chairman introduced Robert A. Finlayson, City Manager, City of Eugene and asked if he would like to advise the Authority on the activities of the city air pollution program.

Mr. Finlayson stated that Eugene started considering air pollution about 3 years ago through study by a special committee appointed by the Mayor that worked with the Authority's staff. He reported that in May 1956 the Eugene air pollution ordinance was passed and the enforcement provisions were dated January 1, 1958. Mr. Finlayson stated that on November 1, 1957 Mr. Verner Adkison was employed to head the air pollution program and was being trained in air pollution work. Mr. Finlayson added that although Mr. Adkison was new to air pollution he had considerable experience with lumber mills in Eugene through work with the Fire Marshal.

Mr. Verner Adkison, City of Eugene, presented a resume of his work with the City of Eugene since November and reported that a basic survey of the area was being made to be better informed of the problems; that public education activities were planned; that the air sample data activities were being reviewed with the Authority's staff. Mr. Adkison reported that he had attended the technical conference in San Francisco of the Air Pollution Control Association regarding problems relative to this air pollution work.

The Chairman thanked Messrs. Finlayson and Adkison for appearing at the meeting and stated the Authority appreciated the efforts of the City of Eugene on starting an active program and that the staff would certainly try to provide assistance as needed.

PROPOSED REGULATION OF OPEN-BURNING OF REFUSE

The Chairman requested the Secretary to review the need for regulations for open burning of refuse.

The Secretary read Chapt. 422 Oregon Laws 1957 which enables the Board of County Commissioners to adopt refuse disposal regulations and explained that the proposed Authority regulations could be applied to control open burning.

The Chairman said it would be proper for the Authority to consider the regulations and obtain any suggestions or comments from those affected by them and suggested that the Health Officers of the state and others submit suggestions after study.

Miss Charlie Gilstrap who represented a group of 170 home owners residing in the north section of Portland reviewed their problem regarding the open burning of refuse. She stated that it was unanimously believed that the county, and state are behind any movement which would bring about better sanitation conditions in that particular area. She stated all these residents have breathed and lived in this filth; from burning refuse and garbage; have tried to wash their homes; paint their houses but to no avail and that they considered it an extreme health hazard. She stated that on April 1956 this group petitioned the Air Pollution Authority to eliminate air pollution in this area discharged from the dumps. Miss Gilstrap stated that at the June 27, 1956 Authority meeting she reported that their group had unsuccessfully sought assistance from both the City and County; that some of the individuals have suffered from nasal congestion, throat irritations, etc., and had to seek medical advice.

Miss Gilstrap stated she had two pertinent requests to present and they are as follows:

1. "We want you to prohibit now the open burning of garbage in open dumps".
2. "To set a definite target date for conformance; we have waited far too long but you seem to provide our best assistance".

Mr. Hatchard stated that in accordance with instructions from the Authority the staff had made area surveys in the vicinity to determine the frequency of conditions in the area that would be public nuisance under the statute. He stated that at almost any time one can observe public nuisance at 8 or 9 open burning refuse disposal sites

near Portland city boundaries. In 1953 complaints had been filed regarding the Seivert dump and lacking any improvement the matter came before the Authority at a public hearing and an order was adopted which required that burning be stopped unless adequate equipment was installed to control the emissions, and that rather than comply with these instructions the owner ceased to operate. Mr. Hatchard stated that this produced no improvement in the area-wide problem since a new dump was started nearby. Mr. Hatchard stated that fortunately alternate methods of disposal are available that are practical and that are effective; that it was our understanding from refuse disposal specialists that sanitary landfill would be the answer.

Mr. Hatchard said that the staff recommended that regulations governing open burning dumps be considered and that General Sanitation Section, State Board of Health, have prepared recommended standards for operation of refuse disposal sites intended to supplement Chapt. 422, Oregon Laws 1957.

Mr. Wendel wished to know if these offenders had been warned previously.

Mr. Hatchard replied that all dump operators have not been notified.

Mr. Wendel continued that if the burning is in violation of existing statutes why was there a need to wait until additional laws or regulations are passed before acting now against the offenders.

Dr. Erickson stated the Authority acted once and wondered why this could not be done again.

Mrs. C.C. Barach, Special Assistant Attorney General, stated that the 1957 Legislature provided counties with specific control outside city limits so it might be that the county's responsibility to enforce the act. Mrs. Barach stated the Authority could contact the County District Attorney but the county commissioners have not yet made any rules governing open refuse burning.

Mr. Hatchard stated that the Multnomah County Board of County Commissioners had directed Dr. Sydney Hansen to prepare regulations for refuse and garbage disposal according to a news item dated December 5, 1957.

The Chairman asked Miss Gilstrap if their group had considered this problem with the Multnomah County Commissioners.

Miss Gilstrap stated that they have presented the petitions to the Multnomah County Commissioners and that she understood the rules were being prepared.

Mrs. Barsch called attention to the section in the act which says the County Commissioners may prescribe rules and that it was up to the County Commissioners to act.

Miss Gilstrap stated Chapt. 422, Oregon Laws 1957 would not take power from the Authority statute but instead would be supplementary.

The Chairman explained the act that became effective July 1, 1957 which involves the proper disposal of refuse and garbage and control of problems other than air pollution which concerns the Health Departments but not the Authority. The Chairman said the Authority still has the authority to control air pollution from refuse dumps and he asked Mrs. Barsch if it was proper for the Authority to proceed.

Mrs. Barsch stated the Authority would have difficulty if this procedure is followed before regulations are adopted; that then it could be said the offenders have no knowledge as to the required standards of garbage disposal and the action might end like that.

Mr. Wendel said it was his recollection that the Board had the authority from the statute and should now swear out a criminal complaint.

The Chairman said he recalled that at the last session of legislature a general bill was passed regarding procedures followed by state boards.

Mrs. Barsch replied that a statute was passed concerning the adoption of rules for public hearings.

Dr. Erickson asked if the problem here was one of general versus specific law. He stated we are empowered with a general state-wide law to control air pollution and now a specific law has to be enacted by legislature bearing on air pollution from refuse dumps. He asked if this may have taken away some of the Authority of the state agency.

The Chairman reiterated that we have a specific problem before us and to bring about a solution he suggested that the Authority should prepare specific regulations concerning open burning refuse dumps throughout the state and take action now.

Both Mr. Wendel and Dr. Erickson wondered why the Authority needed more regulations

if we acted 4 years ago on a similar type violation; what has changed in the meantime to require us to consider new rules and regulations.

Mrs. Barsch stated that this is not the procedure here, that it was city and county relationship.

Dr. Erickson stated that there is some question as to whether we have the right to adopt regulations as Chapt. 422 applies to counties and cities.

Mr. Wendel suggested the Authority start some proceedings and in the meantime assume it has full authority.

Mr. West suggested that the Attorney General's office consider the jurisdiction of the Air Pollution Control statute and Chapt. 422, Ore. Law 1957 and at the next meeting have a report presented.

Mr. Hatchard stated that the staff had considered control of air pollution from an open burning refuse dump and believed that the practice is wrong by any measure of good environmental sanitation; that the adequate disposal of refuse requires different methods and he explained that the staff efforts had been devoted to assisting county health departments in any matter involving air pollution.

Mrs. Barsch stated she believed that the refuse disposal operations are up to the local agencies, the city or the county.

Miss Gilstrap stated that their group has had this problem passed around from one agency to another; that the Authority studied it for a year and a half and now are asking the residents to live with this condition longer.

Mrs. Barsch read from Chapt. 422 Ore. Laws 1957 and stated this bill is not limited to air pollution.

The Chairman suggested that the Authority consider the following procedure.

1. As far as the adoption of more detailed regulations on this matter state-wide, initiate the proposed regulations for consideration at the next meeting.
2. For the particular situation in Multnomah County the Authority is of the opinion that some action should be taken and should we proceed by preparing a complaint or shall we cite the owners and operators to appear before the Authority at a public hearing.

MOTION RE: Open-Burning Refuse Dumps

It was MOVED by Mr. Wendel and seconded by Dr. Erickson and carried that the Authority instruct the staff to proceed immediately to inspect the various open burning refuse operations and if it is found they are in violation of the law that the Authority proceed with the filing of a criminal complaint.

Mr. Dixon asked if the Authority can do what the motion implies.

Mrs. Barach stated it could proceed but there was no guarantee matters would be settled.

Mr. West stated that he was not in favor of the motion but that the staff already has the Authority to proceed.

The Chairman said the motion was carried and so ordered; that it is now up to the staff to check with the Attorney General and Multnomah County District Attorney regarding such a procedure.

Mrs. Barach said that the Attorney General would confer to see whether the Air Pollution Authority would be a proper complainant or if this action should originate from a county authority.

Dr. Erickson stated that we have a state responsibility; that the county had failed to act and now it is the State's responsibility to do something.

The Chairman asked if the rules and regulations were adequate.

The Secretary replied that additional regulations are needed at this time to control air pollution from open burning dumps.

MOTION: Re: Proposed Regulation Of Open-Burning Refuse Dumps

It was MOVED by Mr. Dixon and seconded by Mr. West and carried that we proceed with the preparation of proposed regulations pertaining to open burning and refuse or similar material.

Dr. Erickson stated that he understood when the Authority voted on the motion we were only going to explore them and not adopt them.

The Chairman suggested copies be sent to the Authority members for study before the next meeting.

WASTE FUEL BURNER STUDY

Professor M. Popovich, Director, Oregon State College, Engineering Experiment Station,

has a demonstration grant from Public Health Service to study wood waste burners and that the approach to this problem included the following.

1. Testing of burners in lumber mills.
2. Collecting data on wood waste burners to include temperatures, gases, particulate loading, etc.
3. Studying the economic status of wood utilization.

Professor Popovich reported that the survey was completed and that his group had completed measurement of nine burners and that they are analyzing data obtained from the wigwam type burners and that the study seems to fall in a definite pattern. He said that they planned to start the economic survey in January and he thanked the Authority's staff for all the cooperation provided on this study; and that soon the conclusions based on the study would be formulated. He stated that the wigwam burner has a chance to function without excessive fallout and smoke; that some operational instructions are needed and that his group intends to include them in the report which will be published by July 1, 1958.

The Chairman introduced Robert L. Stockman, Engineer in Charge of Air Sanitation, Washington State Dept. of Health and Mr. V. Bacon, Executive Secretary, Northwest Pulp and Paper Association.

Mr. Stockman stated that their program is a new activity in Washington; that they appreciated working with the Air Pollution Authority staff and explained that at the state level they are responsible for providing technical assistance to local government. Mr. Stockman concluded by saying their activities are going to be much the same as that of the Air Pollution Authority and that he added appreciation for the work the Authority's staff did on the Seminar of last August which was very successful.

Mr. Bacon explained that their organization was called the Northwest Pulp and Paper Association which comprises 28 pulp and paper mills representing 16 companies in Oregon and Washington including Western Erefit Corporation. He explained that the purpose of the association is to support research on air and water discharge problems and to provide reports to the public.

Mr. A. Congleton, Mgr. of Columbia Empire Industries, Inc., announced the Seminar on Air Pollution to start at 10 A.M. January 22, 1958 in Portland. Mr. Congleton extended an invitation to all present at this meeting to attend and stated that he was sure this meeting was going to be very informative and especially wished the Air Pollution Authority staff to attend if possible.

ADMINISTRATIVE MATTERS Staff Training course, Taft Center, January 13 - 24.

The Secretary explained that a course was being offered by Public Health Service, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio, on "Analysis of Atmospheric Samples" on January 13-24, 1958; that it was requested that approval be given for R.B. Percy, Chemist, to attend and that application be made for State Board of Health training funds.

NOTICE Re: Staff Training Course, Taft Center

It was MOVED by Mr. West and seconded by Mr. Dixon and carried that Mr. Percy be authorized to attend this course at Taft Center in Cincinnati, Ohio.

NEW COMPLAINTS: Re: United Stud Planing Mill

The Secretary read a complaint from Mr. Wells, Heppner, Oregon, regarding smoke from the burning of wood waste at United Stud Planing Mill and reported that Mr. H.M. Patterson had investigated the complaint and submitted a report.

Re: Asphalt Paving Company

The Secretary read a petition from the Chelsea area, Klamath Falls, regarding the Asphalt Paving Company's dust and vapor discharges and reported that Mr. Gerow inspected the plant and the company was notified that the discharges were in violation of the statute.

Mr. Hatchard stated that the company had advised the Authority that a control system would be installed in accordance with previous recommendations.

The Chairman directed the staff to follow this case with reports from Mr. Gerow.

Re: Coquille Valley Lumber Company

The Secretary read a complaint from the City Manager of Milwaukie about smoke and odors from the plywood plant on E. 30th and Harrison Sts., Milwaukie.

Mr. Whitzell reported that the mill manager was contacted and on September 4, reported that work was completed which would correct the smoke and flyash conditions.

Re: Electro-Metallurgical Plant

The Secretary read a letter from the City Health Department relative to complaints received regarding depositions from the Metallurgical Company discharges.

Re: Monarch Shingle Company

The Secretary read two complaints regarding smoke, flyash and odor from the Monarch Shingle Company's refuse dump, 8414 N. Vancouver, Portland, and from the National Biscuit Company.

The Chairman requested that reports be prepared on these complaints.

STAFF VACANCIES AND FUTURE PROGRAM

The Secretary reported that the Authority staff was still one engineer short; that the Authority has been able to fill the chemist vacancy with a part-time laboratory technician. The Secretary announced that W. J. Whitzell will be resigning for a 2 year period on an International Cooperation Administration, Health Project in Costa Rica, and that one of the engineers on another program would transfer to the air pollution work.

MOTION NO: Election of Officers for 1958

It was MOVED by Mr. Wendel and seconded by Mr. Dixon and carried that Carl E. Green and Herle S. West be re-elected Chairman and Vice Chairman respectively for 1958.

DATE FOR THE NEXT MEETING

The date for the next meeting was set at the call of the Chairman.

There being no further business, the meeting was adjourned at 5:00 P.M.

Respectfully submitted,

CURTISS M. EVERTS, Jr., Secretary
Oregon State Air Pollution Authority

1957-1959
OREGON AIR POLLUTION
AUTHORITY MINUTES



State of Oregon
Department of
Environmental
Quality

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NINETEENTH MEETING
OF THE
OREGON STATE AIR POLLUTION AUTHORITY

June 27, 1957

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The nineteenth meeting of the Oregon State Air Pollution Authority was called to order by the Chairman at 2:00 P.M. Thursday, June 27, 1957 in Room 36, State Office Building, 1400 S.W. 5th Ave., Portland, Oregon. Those present were Carl E. Green, Chairman, Merle S. West, Vice Chairman, Mr. R. P. Dixon, Dr. Harold M. Erickson, members and Curtiss M. Everts, Jr., Secretary, R. E. Hatchard, Chief of the Air Pollution Control Section, W. J. Whitsell, Associate Engineer, R. B. Percy and J. R. Faust, Chemists, State Board of Health.

MOTION RE: MINUTES OF PREVIOUS MEETING

The Secretary summarized the minutes of the eighteenth meeting held December 13, 1956. The Chairman declared that if there were no corrections or additions the minutes would stand approved as prepared by the Secretary.

MOTION RE: ELECTION OF OFFICERS

The Chairman stated that it was necessary to elect officers for the year of 1957. It was MOVED by Mr. Dixon and seconded by Mr. West and carried that Carl E. Green be re-elected Chairman of the Oregon State Air Pollution Authority for 1957. It was MOVED by Mr. West and seconded by Dr. Erickson and carried that R. P. Dixon be elected Vice-Chairman of the Authority for the year 1957.

TOLEDO: GEORGIA-PACIFIC CORPORATION'S Kraft Mill

The Chairman requested Mr. Hatchard to summarize the staff activities regarding the control of air pollution from the Georgia-Pacific Corporation's kraft mill, now under construction in Toledo.

Mr. Hatchard stated that Georgia-Pacific Corporation started construction in the fall of 1956 of a 250 ton per day kraft mill located in the southern section of Toledo on the north bank of the Yaquina River. He explained that the design of the mill facilities allows for future expansion to 500 tons of pulp per day.

He stated that the pulp chips for the new kraft mill will be provided from the company's lumber mills in Toledo and Coos Bay and other mills in the vicinity. He reported that the staff was conducting area surveys in Toledo to establish the existing value of air pollutants such as particle fallout, suspended particulate matter, sulfur dioxide and odors. He stated that the staff had conferred with Georgia-Pacific Corporation's management and technical representatives regarding the control facilities and had reviewed the plans for the installation of facilities to control the major discharges from the mill as follows:

- a. Pulp digester blow and relief gases and vapors control include removal of condensable compounds followed by secondary treatment of non-condensibles in an oxidation tower before discharge into the atmosphere.
- b. The black-liquor recovery boiler flue gases will pass through two electrostatic precipitators in parallel which will remove 95% of the particulate matter before discharge. The boiler controls will include an automatic system to assure an excess of oxygen through the boiler to minimize the formation of sulfides.
- c. The lime kiln recovery unit will be equipped with a two stage dust control unit to prevent excessive discharge of lime.

Mr. Hatchard stated that the proposed control facilities should prevent the occurrence of public nuisance conditions in the future caused by the deposition of particulate matter but he pointed out there probably will be periods when objectionable odors are present. He explained that it is not possible to predict the frequency or intensity of excessive odors since there is little data available regarding the Toledo meteorological conditions and the affects of the local topography. He stated that the odor controls to be installed are equivalent to other recently constructed kraft mills and that the staff had no recommendations for additional odor control at this time.

He stated that there is a recognized need for continued research and development by the pulp industry to develop further control of kraft mill odors.

He recommended that the Authority grant tentative approval of the Georgia-Pacific Corporation's plans for controls with the understanding that additional odor control facilities will be provided if public nuisances are created and that the area studies be continued in cooperation with the city of Toledo.

MOTION RE: GEORGIA-PACIFIC CORPORATION'S Kraft Mill in Toledo

It was MOVED by Mr. Dixon and seconded by Mr. West and carried to grant tentative approval of the plans submitted by Georgia-Pacific with the qualification that additional facilities may be required if public nuisances are created and also to continue area surveys in cooperation with the city of Toledo.

THE DALLES: Harvey Machine Company's Aluminum Reduction Mill

The Chairman requested Mr. Whitsell to report on activities regarding the Harvey Machine Company's Aluminum reduction mill.

Mr. Whitsell reported that construction of the mill was begun last fall and Harvey Machine Company expects to begin production of aluminum early in 1958. He explained that the Soderberg process will be used and the method differs from the Reynolds Metals Company mill at Troutdale in several respects which appear important in air pollution control since the escape of gases is confined to a small area close to the anode, making collection much easier and more complete. He stated that this eliminates the need for handling and cleaning great volumes of air and there should be less dust, too, in the building area, since the manner of adding raw materials permits maintenance of negative pressure within the cell, thus drawing dusts into the collection system. He stated further that the Soderberg process lends itself better to air pollution control because in place of several pre-baked carbon electrodes, there is a single steel-encased electrode which contains unconsolidated carbon materials which bake into a hard material as the process continues and the electrode is consumed. He reported that the staff had collected more than 300 air samples in The Dalles area and that these results indicate a "background" fluoride level of approximately one part per billion which is typically low for small communities with little industrial development. He stated that sampling would be resumed and

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an additional station would be established at one of the stations where Oregon State College will be collecting foliage samples this summer and fall.

Mr. Whitsell reported that the company had been notified in April 1953 and that the Air Pollution Control statute provides for review of air pollution control plans and specifications but to date no plans nor specifications have been received by the Authority. He stated that the Harvey Machine Company has assured the Authority that the latest and most complete control facilities will be provided, but as yet no written description of these facilities has been received.

Mr. Whitsell presented the following staff recommendations for consideration:

1. That the company be directed to submit plans and specifications describing the air pollution control facilities.
2. That the plans for control be considered by the members of the Authority after review by the staff since no regulations have been adopted regarding fluoride concentration.
3. That a staff member be authorized to visit the nearest aluminum plant using the Soderberg process.

The Chairman asked if any representatives of the Harvey Machine Company would like to present information at this time.

Mr. Herbert Harvey, Vice-President appeared and stated that the process they are using is a modified Soderberg method and that their company would install the most efficient controls that could be obtained. He explained that the delay in submitting formal plans and specifications was caused because the company wished to take advantage of the most recent technical developments.

The Chairman suggested that plans be submitted to the staff for study as soon as possible.

Mr. Rene E. Legault, Chief Process Engineer, Harvey Aluminum Company, presented the plans and specifications describing the proposed control systems for The Dalles Aluminum Reduction Mill to the Authority.

Mr. Dixon asked Mr. Harvey where the nearest aluminum plant was located that was using the Soderberg method.

Mr. Harvey replied the Anaconda plant in Columbia Falls, Montana used the same modified process.

Mr. West asked if the Montana plant controls were operating effectively.

Mr. Harvey stated that the company reports a fluoride removal of 95% efficiency and that they have had no air pollution difficulty whatsoever.

Mr. Legault explained that there is a limit to the controls which Harvey Aluminum can provide since the equipment manufacturers will guarantee removal efficiencies to a set value but that the company anticipates removal of about 95% using the controls described in the plans and specifications.

The Chairman stated the Authority should accept the plans and specifications for review and that the Authority should decide whether or not to send a representative to visit a similar plant in Montana.

Mr. West stated that the determination of whether livestock or agriculture is being injured requires technical study and he questioned whether a one-two day visit by a staff member would be worthwhile.

Dr. Erickson stated that a staff member would not be sent unless the trip would produce worthwhile and informative data since it was very difficult to obtain state funds for out-of-state travel.

MOTION RE: The Dalles, Harvey Machine Company.

It was MOVED by Dr. Erickson and seconded by Mr. Dixon and carried that the plans and specifications submitted by the company be considered by the Authority after the staff had completed its review and that a staff member be authorized to visit the Anaconda mill in Montana only if necessary.

MULTNOMAH COUNTY: Pacific Carbide and Alloy Company.

The Chairman called on W. J. Whitsell to summarize the staff activities regarding the investigation of dust deposition near the Pacific Carbide and Alloy Company's plant. Mr. Whitsell stated that the staff began work in April 1955 after receiving a letter-petition from Western Auto Supply Company complaining of lime dust deposition on automobiles and merchandise. Several field investigations since that time have

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been conducted and the Pacific Carbide and Alloys Company had been advised of the results which showed that severe nuisance conditions existed and recommendations for control installations were made by the Authority in October 1955. In November 1955 the company presented plans for a control installation which was completed in February 1956. He reported that complaints were subsequently received from Morrison Oil Company that wet material was being deposited. He stated that on November 30, 1956 a letter was sent to Pacific Carbide and Alloy Company calling attention to progressive decline in collection efficiency as shown by fallout sampling results obtained from a nearby station.

Mr. Whitsell stated that maintenance problems with the control equipment have been persistent and fallout sampling results have continued to show values considerably above the maximum permissible amount for an industrial area. The substantial amount of lime present in the fallout makes it more objectionable.

It is recommended that the company be directed to proceed with additional controls which will result in a substantial reduction in emissions and that the Air Pollution Authority's staff be consulted in the development of these plans and that stack sampling studies be completed by the company.

Mr. T. J. Waters of Pacific Carbide stated that he believed the chronological history was very correct; that it is a difficult process making carbide let alone collecting the dust produced. He felt his company had made considerable progress in collecting the dust during the past few years. He stated that over two years ago they had complaints from Western Auto Supply Company but none have been received recently even though the control system is not performing as well as it should. He stated that the Morrison Oil Company was located just south of the carbide plant and he agreed that Mr. Morrison has a just complaint.

Mr. Waters stated they were over-whelmed by the dust in the furnace which has to be removed and that they do have water sprays installed in the stack which are very difficult to keep operating effectively. He explained that there seems to be no way to measure their performance but he estimated the deposition of dust is about 90% effective in their dust removal. Mr. Waters explained that it is

worse at times when the wind is blowing in the right direction and a mist is mixed with the lime. He believed that their problem now is to control the mist and the company did not know just how this would be accomplished, whether taller stacks would help, burning the sprays down or just what would rectify this baffling problem.

He stated that they had obtained advice from other carbide companies but for the type of furnace installed and the raw material available there is no known safe and sure method to collect the dust. He added that if there were available a dust collector which was safe and efficient the company would purchase it.

The Chairman asked whether or not an electrostatic precipitator would be of any use in this particular type of problem.

Mr. Hatchard stated that he was not acquainted with the use of an electrostatic precipitator on a carbide furnace discharge but the staff was familiar with the control of dust from the calcium carbide furnace at the Electrometallurgical plant.

He explained that several years ago there was a large area of north Portland experiencing heavy fallout but that this nuisance has been removed after installation of a covered furnace and centrifugal type water scrubber at Electrometallurgical plant.

Mr. Waters stated they know little about Electrometallurgical operations since no information is made public.

Mr. Hatchard stated that the staff was not familiar with other dust control installations at calcium carbide plants in other parts of the country, however, the staff was aware of considerable activity by industry associations in other fields.

Mr. Waters replied that there are only four carbide producers other than Union Carbide and Alloy and there is free exchange of information between the four but there is no formal industry association.

The Chairman inquired if there was any possibility of getting data through Public Health Service.

Mr. Hatchard stated that the Public Health Service, Community Air Pollution Program, does provide technical advice and assistance where problems are difficult and local

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resources are not adequate.

The Chairman asked Mr. Waters if he had contacted Public Health Service for information/^{on}this particular problem.

Mr. Waters stated he has been in contact with Public Health Service during the past years.

Mr. Hatchard added that there is increasing activity by many engineering and research groups; that there are several sources of Federal funds for engineering study and development. Mr. Hatchard stated that a considerable amount of time could be saved by utilizing engineering study methods rather than a trial and error process. He stated that almost any problem of particulate matter control can satisfactorily be solved by application of known engineering facts.

The Chairman stated that it was his opinion that this particular situation, in the past, had not been conforming to the state laws or regulations and that the problem is not solved and that a satisfactory solution is needed.

Dr. Erickson said it was his opinion that we needed to know what controls can be instituted and suggested that we explore with Public Health Service for additional controls and also that the industry do their part in making studies. Dr. Erickson suggested that Mr. Waters cooperate with the staff and obtain additional information then get together with the findings and work out an answer to the problem.

It was concluded by the Chairman that this problem be handled as suggested and the company and staff present progress reports at the next meeting.

MUNICIPAL AIR POLLUTION ACTIVITIES: Eugene, Portland and Klamath Falls.

The Chairman requested Mr. Hatchard to give a report on the progress towards the development of municipal control programs in Eugene, Portland and Klamath Falls.

Eugene Mr. Hatchard stated that the city of Eugene had adopted a municipal air pollution ordinance in May 1956 and that the control provisions in the ordinance were equivalent to those contained in the Authority's regulations. He explained that the effective date for the control regulations in Eugene was January 1, 1958 and that the city budget for fiscal year 1958 provided for the employment of an individual to work full time developing the city program beginning September 1, 1957.

He reported that area air sampling activities in Eugene have been continued in cooperation with the city and there was now available considerable data regarding particle fallout and the concentration of suspended particulate matter.

Portland Mr. Hatchard reported that a member of the Authority's staff had continued to meet with the City of Portland Air Pollution Committee to assist with the investigation of specific complaints, when requests are received from the Portland Health Bureau, and to participate in area air sampling activities. He explained that the major problem in expanding the municipal air pollution program has been the difficulty to obtain authorization for a minimum budget to employ a technical staff and to purchase air sampling and analytical equipment. He reported that the city of Portland's air pollution advisory committee had submitted urgent requests for budgetary approval and had appeared as a committee of the whole before Mayor Schunk and Commissioners Bean and Boody. Mr. Hatchard stated that the city officials had indicated that approval would be given just as soon as budgetary restrictions allowed and that the failure of the salaries measure on the November 1956 general election had created the need to reduce existing programs and to restrict new municipal activities.

Klamath Falls Mr. Hatchard stated that the city of Klamath Falls in preparing a revised air pollution control ordinance and that Mr. Mark Westling, Public Works Consultant, League of Oregon Cities, and a representative of the Authority's staff met with the City Council to discuss the proposed ordinance. He explained that several revisions were recommended and that at the present time the city attorney is incorporating these recommendations into the proposed ordinance. The Chairman requested that a letter from Dr. T. L. Meador, Health Officer, City of Portland, dated June 17, 1957 be read in which he requested assistance from the Air Pollution Authority.

The Chairman stated that the Authority had received similar requests in previous years and that it has been the policy of the Authority to cooperate and assist municipalities in developing local programs but not to assign any staff members to any particular city.

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MOTION RE: MUNICIPAL AIR POLLUTION ACTIVITIES:

It was MOVED by Mr. Dixon and seconded by Mr. West and carried that the Authority acknowledge receipt of the letter of June 17, from Dr. Meador and reply that the Air Pollution Authority would accomplish the following:

1. Continue and increase area sampling in Portland.
2. Secure additional information on the fallout values of particulate matter in Portland compared to rural areas and the metropolitan area, and assist with the evaluation of these values, but that no engineer could be assigned to the Portland Health Bureau.

GARBAGE AND REFUSE DISPOSAL

The Chairman requested the Secretary to review Senate Bill 424 relating to regulation of garbage and refuse dumps by County Health Departments. The Secretary stated the Authority had received a letter dated May 24, 1957 from Mr. J.R. Boydston, Multnomah County Sanitary Engineer, requesting the Air Pollution Authority to submit recommendations concerning the prevention and control of air pollution from refuse dumps.

The Chairman asked how soon the staff could start this study.

Mr. Hatchard replied that the Authority had begun collecting information from agencies and that there is a general effort going on to control burning refuse dumps. Mr. Hatchard indicated that within a month the staff could have a draft of the recommendations prepared.

The Chairman requested that these recommendations be mailed to the members of the Authority for study.

The Secretary replied that this would be done.

APPLICATION FOR PUBLIC HEALTH SERVICE DEMONSTRATION PROJECT GRANTS

The Secretary explained that an application for a demonstration project grant under the provisions of Public Law 159 was made by the Engineering Experiment Station, Oregon State College which provided for a waste wood burner study.

The Chairman requested Dean Popovich of Oregon State College, who is directing the project, to report on activities.

Dean M. Popovich stated that the three objectives outlined in the study were as follows:

1. Study several typical types of burners presently in use and determine rates of loading which would allow satisfactory operation with a minimum amount of fallout.
2. Complete surveys of incinerators to obtain data for re-design of burners if necessary.
3. Make an economic survey with the Oregon Product Laboratories to show the economics of wood waste utilization compared with costs of burning.

He stated that at the present time a 50 foot burner at the Swanson Lumber Mill in Springfield was being equipped to begin sampling measurements. He explained that this is the first of several burners which will be studied this summer; that two instructors from the college staff have been employed for this work and that Oregon Forest Products Laboratories and the Authority were providing cooperative assistance.

The Secretary thanked Dean Popovich for the excellent cooperation by the Engineering Experiment Station.

The Chairman requested the Secretary to report on the status of the suggested demonstration project for fluoride study by the Agricultural Experiment Station, Oregon State College.

The Secretary stated that the staff was authorized by the Air Pollution Authority at the last meeting to investigate the feasibility of increasing fluoride studies. He stated that F.E. Price, Director, Oregon State College Agricultural Experiment Station, had advised that the fluoride studies be continued at present levels and no expansion be made because of the limited area in Oregon where agricultural injury is caused by fluoride concentrations and because of the large number of variables involved.

The Secretary explained that the staff has been collecting data regarding the fluoride concentration in air near aluminum reduction plants and the Agricultural

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Experiment Station has obtained fluoride data from foliage samples from stations near aluminum plants. He pointed out that evaluation of this data may indicate some maximum and minimum relationships. The Authority members indicated that these studies should be continued at present levels.

STAFF REPORTS: EASTSIDE, EMPIRE, NORTH ALBANY

Eastside, Georgia-Pacific Corporation's Coos Bay Division

The Chairman requested Mr. Hatchard to report on the progress of the Georgia-Pacific Corporation on the installation of cinder control equipment to correct the excessive deposition in the City of Eastside.

Mr. Hatchard stated that at the last Authority meeting the Georgia-Pacific Corporation had announced plans for the installation of cinder control equipment in the hog fuel fired steam plant at their Coos Bay mill. He explained that the mill is located in the southeast part of Coos Bay and public nuisance conditions were being created in the city of Eastside which is located 1/4 mile north of the mill. He stated that the Georgia-Pacific Corporation had subsequently submitted plans advising that multiclone cinder control units would be installed in boilers numbers 5, 6, 7 and 8. He stated that the plan had been tentatively approved with the understanding that if the changes in the steam plant and the installation of collectors on the four boilers do not satisfactorily reduce the cinder and flyash deposition in Eastside that the company would then provide additional control for the remaining four boiler units.

He stated that the installation of the collectors was started during the week of June 17, and that there would be a delay in the project completion date since it had been necessary to change the size of the cinder fans. He explained that the delivery date of the fans is now August 1st, and it was expected that the project would be completed by the end of August.

Mr. Hatchard reported that pulp chipping equipment had been installed in the Coos Bay mill and that the company had started shipping chips to the kraft mill now under construction in Toledo. He stated that the company planned to install additional chipping capacity and that the chief engineer reported that by the end

of this year the mill wood waste burner would be needed for intermittent operation only.

Empire, Cape Arago Lumber Company

The Chairman directed Mr. Whitsell to summarize the activities related to the installation of cinder controls at the Cape Arago Lumber Company.

Mr. Whitsell stated that last year, it will be recalled, the Authority cited Mr. D. H. Miller to Cape Arago Lumber Company, Empire, to a public hearing regarding the correction of public nuisances in Empire caused by the deposition of an excessive quantity of cinders and flyash. Mr. Whitsell stated that the company decided to install controls and early this year the first of two units was completed on one of the two steam boilers. He reported that the second unit is scheduled to be installed during the seasonal shutdown after July 8th.

Mr. Whitsell stated that he had inspected the first installation and there was doubt that a considerable amount of cinders were being collected and returned to the boiler. However, he pointed out that a waste burner still operates near the steam plant which contributes considerable quantities of cinder and sawdust to the area.

He indicated that the cinder control installations will remove a greater part of cinders deposited in the downtown area.

North Albany, Western Kraft Corporation

The Chairman requested Mr. H. W. Merryman to report on the status of odor controls at Western Kraft Mill located north of Albany.

Mr. Merryman said he would report on the area odor surveys and observations and conferences with Western Kraft officials which were the outcome of the report made by the staff July 25, 1956. He stated the chief recommendations from the odor surveys and conferences with complainants was that additional odor control facilities be installed before the plant expansion was in production. Mr. Merryman stated that the company had completed the installation of several improvements towards the compliance with this recommendation. He explained that additional condensers and evaporators had been installed and that modifications were completed on the lime

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kiln recovery effluent which previously had resulted in reduced visibility on U.S. Highway 99 and was also the source of some odor. Mr. Merryman stated that the management is developing plans for additional control of digester blow and relief gases since further treatment of this discharge was necessary. He said that the Authority had not received additional complaints during the past several months, however, it should be understood that the previous complainants have been informed that the company and the Authority's staff are working towards the improvement of the odor conditions.

Mr. Merryman added that another control unit had been installed on the black liquor recovery boiler and that he had visited the plant last Saturday but it was difficult to establish whether significant odor reduction may have occurred.

He stated that the staff recommended that area odor surveys be continued to evaluate the odor conditions now that the increased plant production is under way and that the company be requested to submit plans and specifications describing the installation of additional odor control facilities and when the projects would be completed.

The Secretary read a letter dated July 20, from Western Kraft Corporation in which they acknowledged the Authority's invitation to attend today's meeting and advised that there was no additional information regarding their activities which had not already been submitted.

Dr. Erickson asked Mr. Hatchard if the staff comment - that the plans and specifications for odor control installations at the Toledo kraft mill being equivalent to other recently constructed mills - included the Western Kraft mill.

Mr. Hatchard replied no - the staff meant kraft mills in other states. He explained that the Toledo mill will be provided with pulp digester blow and relief gas controls for condensable and non-condensable components. He indicated that the Toledo kraft mill will begin production with the odor control facilities the staff expects will eventually be completed at Western Kraft.

Dr. Erickson asked if the Western Kraft Corporation had plans for odor control facilities in addition to what is now in use.

Mr. Hatchard replied that Mr. R. O. Beatty, Ass't. to the President, Western Kraft Corporation indicated that during the year of 1957 that the company had authorized installation of a unit to remove the condensable vapors which would be operating about December 1957 and that it was their plan to install a secondary odor control which would treat the digester blow and relief non-condensable discharges and completion was expected in 1958.

Dr. Erickson stated that he had received more complaints personally regarding the odors from Western Kraft mill than any other plant in the state of Oregon. He said that Western Kraft should install any equipment that is available at the earliest possible time to eliminate this severe pollution situation. He explained that tourists coming into Oregon certainly would get a poor impression of the state with this plant located adjacent to U.S. Highway 99.

Mr. Hatchard stated that in the staff's report dated July 25, 1956 the recommendation was made to the company that the odor control facilities be completed and installed in time to serve the expanded plant capacity. From the staff's meetings with the company and the technical staff it was understood that the delay in completing all of the controls was caused by economic factors. He said that so far as the complainants and City Councils are concerned that it would be helpful to have specific dates when the steps of odor control installations will be completed. He explained that the company had been very helpful in keeping the staff advised regarding the installations completed and their general plans for future controls. The Chairman wished to know if the plant was now operating at the greater capacity. Mr. Hatchard replied yes.

Mr. Dixon suggested that the Secretary write to Western Kraft and refer to the report of July 25, 1956 at which time it was recommended that they install controls before increasing the production; that we request specific dates when the additional controls would be completed and at the same time call to their attention the complaints and that the company should realize that the Authority requires a definite plan.

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The Chairman asked the members if they did not feel they should cite Western Kraft to appear before the Authority in a public hearing.

Dr. Erickson stated he believed that a hearing should be arranged to formulate an understanding as to when the additional controls will be installed.

Mr. Dixon asked if it would be proper to instruct Mr. Burt, Special Ass't Attorney General, to invite them to appear.

MOTION RE: Odor control at Western Kraft Mill, North Albany

It was MOVED by Dr. Erickson and seconded by Mr. Dixon and carried that the Authority take necessary steps to call a public hearing and have Western Kraft show cause why an order should not be issued to abate this type of air pollution in conformance with state statutes.

PLANNING AND ZONING AGENCIES REGULATIONS

Mr. W. L. Myllenbeck, Planning Consultant, Beaverton, Oregon stated that recently he has done industrial consulting and planning with the cities of Vancouver and Beaverton; and that Vancouver had been urged to write regulations on air pollution.

Mr. Myllenbeck stated that the zoning regulations which limit what type of industries could locate in certain parts of the city are out of date as many of the new industrial areas are attractive. Mr. Myllenbeck added that there should be a set of standards prepared which an individual industry must meet to be able to operate at a particular location.

Mr. Myllenbeck stated that representatives of planning and zoning agencies in metropolitan Portland have worked with Mr. Hatchard and others in different regulatory activities to get information on just how to approach the formulation of planning and zoning regulations, and the use of some types of controls. He explained that his group was concerned with the proper regulation of community growth to prevent air pollution problems. He stated that attempts to gather information throughout the country showed that it was difficult to obtain, but if appropriate regulations were available various cities and counties could adopt planning and zoning regulations beneficial to the State Air Pollution Authority. He also stated he had talked with various agencies hoping to use them as consulting

resources so that all facts may be submitted and a report would then be supplied from the consulting agencies to guide the planning commission. Mr. Myllenbeck concluded by saying that there is so very much research to be done on this subject and would greatly appreciate having the assistance and cooperation of the Air Pollution Authority.

Mr. Hatchard stated that there were several references in the statute to the prevention of air pollution; and that the staff was not satisfied that enough was being done towards the prevention of air pollution problems. He explained that a part of the prevention work could be handled through planning and zoning agencies, if additional regulations were available for planning groups. He said the staff was concerned over the length of time it would take to formulate the regulations since at present time the staff had been able to complete regulations only for smoke discharge, particulate matter and lime dust.

The Chairman stated that Mr. Myllenbeck would like to have additional air pollution regulations promptly and the staff has been working towards this objective but there was no immediate prospect of completing the project. He stated one of the major steps was adopting the initial standards in December 1956 since some of these regulations are performance standards. He stated the staff should proceed as rapidly as time would permit since this program is one of utmost importance.

Mr. Myllenbeck stated that there was the possibility of obtaining grants-in-aid under the provisions of Public Law 159 and such a project would be a benefit to all cities and counties in the state.

The Chairman suggested that the grant-in-air project be investigated further.

ADMINISTRATIVE MATTERS:

Budget 1957 - 59

The budget for fiscal year 1957-59 biennium was reviewed by the Secretary and the Secretary stated that because of a proposed revision in the compensation plan the salary figures would have to be revised.

Changes in Regulations

The Secretary reviewed several minor changes made in the regulations and stated

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the staff would like approval for those changes so the regulations can be filed with the Secretary of State.

MOTION RE: CHANGES IN THE REGULATIONS

It was MOVED by Mr. Dixon and seconded by Mr. West and carried to adopt the revisions as described by the Secretary.

Proposed field training course.

Mr. Hatchard reported that the Public Health Service, Robert A. Taft Sanitary Engineering Center, had been presenting courses on several phases of air pollution study, research, control and administration at their headquarters, Cincinnati, Ohio since 1955. He explained that the first field course on "Community Air Pollution" would be held in Tacoma, Washington under the local sponsorship of the Washington Department of Health and the Oregon Air Pollution Authority. He stated that the course instructors would be provided by the Taft Center.

He reported that invitations were being sent to industries, public health agencies, colleges and universities and control agencies. He stated that an enrollment of 75 was expected.

He requested approval of the Authority to send as many staff members, including district engineers, as the work schedule would allow.

The Chairman suggested and recommended that all the staff members who can be spared attend the field course in Tacoma, Washington August 22-24, 1957.

Other staff travel:

The Chairman requested comments by the members regarding staff travel to the aluminum mill in Columbia Falls, Montana and the kraft pulp mill in Missoula, Montana.

Mr. Dixon stated he did not see what would be gained since what the staff is seeking is performance and the company's information would have to be obtained.

Dr. Erickson added that perhaps it would be of value to visit the area, talk to the officials and residents in the area and listen to their complaints.

The Chairman stated that inasmuch as Harvey Aluminum operation is not scheduled to start until 1958 perhaps then it would be advisable to have a staff member make

a visit to another plant and that perhaps the two plants might be visited on one trip.

It was suggested by the Chairman that this matter be tabled and reconsidered at a later time this year.

Mr. Dixon stated this was agreeable.

NEW COMPLAINTS

Multnomah County Re: Smoke and flyash from burning vehicle bodies at Ben's Auto Wrecking Yard.

The Chairman stated that perhaps this complaint would be covered by SB-424.

The Secretary said the complaint had been acknowledged by letter and that an investigation was promised.

Multnomah County Re: Smoke and odor from burning refuse at Portland Meadows.

North Bend Re: Cinder and flyash deposition from Menasha Plywood Corporation.

Mr. Willard Friesen, owner, City Center Motel, letter concerning the deposition of cinders was read by the Secretary. Mr. Friesen was advised that the staff would make an investigation when a representative was in North Bend.

Multnomah County Re: Fumes from Silver Plating Company.


The Secretary read a letter from Mrs. Carmen Elfving regarding fumes from the Silver Plating Company and the Secretary stated that the complaint had been acknowledged and investigation will be made as soon as commitments will allow.

DATE FOR THE NEXT MEETING

The date for the next meeting was set at the call of the Chairman.

There being no further business, the meeting was adjourned at 4:15 P.M.

Respectfully submitted,


CURTISS M. EVERTS, Jr. Secretary
Oregon State Air Pollution Authority

TWENTIETH MEETING
OF THE
OREGON STATE AIR POLLUTION AUTHORITY

The twentieth meeting of the Oregon State Air Pollution Authority was called to order by the Chairman at 2:00 P.M. Monday, December 16, 1957 in Room 36, State Office Bldg., 1400 S.W. 5th Avenue Portland, Oregon. Those present were Carl E. Green, Chairman, Merle S. West, Vice Chairman, Mr. R. P. Dixon, Mr. Harold Wendel, Dr. Harold M. Erickson, members and Curtiss M. Everts, Jr., Secretary, Mrs. Catharine C. Barsch, Special Assistant Attorney General, R.E. Hatchard, Chief of the Air Pollution Control Section, W. J. Whitsell, Associate Engineer and R. B. Percy, Chemist, State Board of Health.

MOTION RE: MINUTES OF PREVIOUS MEETING

The minutes of the nineteenth meeting held June 27, 1957 were summarized by the Secretary. The Chairman declared that if there were no corrections the minutes would stand approved as prepared by the Secretary.

THE DALLES Re: Harvey Aluminum Company, Aluminum Reduction Mill

The Chairman requested W. J. Whitsell to give a report on the staff activities concerning the Harvey Aluminum Company's plant now under construction at The Dalles. Mr. Whitsell reported that at the last Authority meeting the Harvey Aluminum Company officials presented general performance specifications for the fluoride fume control installations to serve the aluminum reduction plant at The Dalles. He stated that after reviewing the specifications the Authority had advised the company that more specific information would be required to describe the selected control equipment as soon as the data is available.

He explained that on December 5, 1957 the company was advised that the Authority members would consider the matter of the Harvey Aluminum Company at The Dalles at their regular meeting scheduled December 16, 1957 and at the same time they were reminded that the additional information requested had not yet been received.

Mr. Whitsell reported that C.A. Rochon, Chief Chemist, Harvey Aluminum Company

in a telephone conversation relative to the Authority's letter of December 5, 1957 had stated that "he just returned to the company's headquarters in Torrence, California following two weeks of travel. He advised that the requested information was not available at the present time from the designers and manufacturers of the control equipment, however, the Harvey Aluminum Company expected to receive the information from the suppliers within the next month and that he would be able to attend the meeting approximately one month later".

Mr. Whitself stated that a meeting was held October 1, 1957 with the state officials from Oregon and Washington at the request of Mr. Rochon for the purpose of determining what additional studies were needed in The Dalles area before the aluminum plant started production. Mr. Whitself reported that it is our understanding that plant pathologists and horticulturists from Oregon and Washington Agricultural Experiment Stations conduct a joint survey on both sides of the Columbia River as consultants to Harvey Aluminum Company. Mr. Whitself reported that additional air sampling had been completed at The Dalles and the staff believes that the normal fluoride concentrations have been established at two representative stations in the vicinity. He stated that a total of 629 samples had been collected and analyzed which show the fluoride concentrations to be typically low for a community of this size and limited industrial development.

The Chairman requested Dr. Monroe Holmes, Public Health Veterinarian, to give a resume of his work in The Dalles concerning the livestock and dairy operations. Dr. Holmes stated his activities so far have been very limited; that he has only had the opportunity to survey the area near the Harvey Aluminum plant just recently and that he plans to check the condition of the animals in this area within the near future.

The Chairman suggested that the Harvey Aluminum Company follow the recommendations already provided; that the Secretary furnish any additional data to the company which may be available and notify the company again that additional information is needed as soon as possible; and that if it were agreeable with the members that he recommend the consideration of the company's control equipment be deferred until the next meeting.

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The Chairman asked R. L. Stockman, Engineer in charge, State of Washington Air Sanitation program, if he would like to present any information.

Mr. Stockman stated that the Washington Agricultural Experiment Station had made limited surveys starting about 6 months ago and that they expect to make foliage examinations very soon. Also, he reported that the station had submitted an application to Public Health Service Community Air Pollution Program for a demonstration project grant to carry on fluoride studies in agricultural regions north of The Dalles. Mr. Stockman advised that the proposal was being studied by a special committee and no decision had been made yet.

NORTH ALBANY RE: WESTERN KRAFT CORPORATION

The Chairman stated that the Authority had decided at the last meeting to hold a public hearing regarding the need for additional air pollution controls to serve the Western Kraft Corporation's mill north of Albany; however, the company had subsequently submitted plans for the installation of more facilities, had conferred with the staff and had started a stack measuring program. The Chairman requested Mr. Hatchard to summarize the staff activities.

Mr. Hatchard stated that since the Authority's report dated July 25, 1956 was prepared the Western Kraft Corporation had completed expansion of the mill production facilities from 100 tons to 200 tons of pulp per day and that several installations have been completed which effect the atmospheric discharges from the mill such as a second recovery boiler and venturi scrubber system and the installation of an additional lime dust control unit.

He reported that the staff had completed 4 area odor syrveys during the period August to October 1957 in order to:

1. Determine the area odor conditions resulting from the mill expansion, installation of partial odor control systems and other operational changes.
2. Determine whether the addition of a masking agent effects the area odor conditions.

He stated that the procedure used in the surveys was similar to the 1956 field investigations where two observers individually recorded the odor intensity if an

odor was detected from a station downwind from the plant. He explained that the intensities noted were based on the following scale.

- 0 - no odor present
- 1 - threshold level of a kraft component
- 2 - definite odor of a kraft component
- 3- strong odor of a kraft component
- 4 - over-powering odor of a kraft component.

Mr. Hatchard stated that the observations were made each minute at a station until two successive zero values were recorded and then the observations were interpreted until the odor appeared again or until the observers moved to another station. He stated that a summary report had been prepared dated October 21, 1957 which included a comparison of the 1956 and 1957 area survey information. He explained that the data showed that higher odor intensities occurred during over-cast and rainy weather conditions and that the percentage of observations for the various odor intensities should not be interpreted as exposure time of the area to a specific odor intensity since the field method used limited the observations to stations and periods of time when the kraft odor was detected either continuously or intermittently. He stated that the addition of a masking agent on October 15, 1957 did not substantially reduce the odor intensity, however; approximately 20% of the observations made on October 15, actually represented the odor of the masking agent rather than a kraft mill component. He reported that in the opinion of the observers the masking agent would be objectionable but that the use of the masking agent might be effective for short period use when it was desirable to substitute another odor for kraft type. He reported that the comparison of the total observations made in 1957 with the data for 1956 indicated that the odor conditions have not changed significantly. He pointed out that from the comparison of the 1956 and 1957 data it might appear that the increased atmospheric discharge from the mill expansion was approximately balanced by the installation of control facilities or operational changes. He stated that this conclusion should not be made since the human nose is not a satisfactory quantitative measure of odors. He explained further that the average human olfactory sense is a very good qualitative measure of odor. He stated that the actual quality of odor compounds discharged from the kraft mill may have either increased or decreased as

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a result of recent changes and would not be shown by these field surveys and for this reason the Authority recommended the company undertake a stack sampling program to measure the quantity of odorous compounds emitted from the major mill discharge points.

Mr. Hatchard presented the following recommendations or observations for consideration.

1. Presence of odor in the area around the plant is at times creating public nuisance conditions.
2. The company should complete stack sampling procedures so that the discharge characteristics digester blow and relief gases may be compared before and after the blow heat recovery system is installed.
3. The Authority's staff should continue the area odor surveys after each change in the mill odor control facilities and preferably the surveys should be made concurrently with stack sampling operations.

Mr. R. O. Beatty of Western Kraft, stated he had a written report he would submit to the Secretary and reported that his company was installing the blow heat recovery system which will be completed in the next two weeks. Mr. Beatty pointed out that this unit would cost \$70,000 and that this is not the first odor control installation which has been undertaken. He stated that this project is one in the series of steps and that to date the company has spent about \$200,000 on equipment related to the reduction of odors in the plant. Mr. Beatty emphasized that these expenditures were difficult to make with the current market conditions for Kraft paper. Mr. Beatty stated that since there are so many variables affecting the area odor conditions such as wind, weather and temperature, mill discharges and others, that his company questions the area odor survey data as a basis for recommendations for control actions. However, he added, that it is the best system developed to date to measure the presence of area odor.

Mr. Beatty stated that Mr. Waldemar Seton, Chief Chemist, Western Kraft Corporation also had a report to present regarding the stack sampling program.

Mr. Seton stated that there was no doubt that the gas chromatography method was the best for the stack measurement but this involved expensive laboratory equipment

and precise methods which are not available. He said Western Kraft has followed a method devised by Dr. McCarthy of the University of Washington and that the company has consulted with Dr. McCarthy. He added that the work to date done on kraft mill effluents shows there are four major odorous components, hydrogen sulfide, methyl mercaptan, dimethyl sulfide and dimethyl disulfide. He reported that Dr. McCarthy is also working on non-condensable gases given off by kraft mills and that they are trying to analyze the total component.

He stated that the stack samples showed that 0.42 lb. of hydrogen sulfide, 2.18 lb. of methyl mercaptan are present in the digester gases per ton of paper. He stated the other figure arrived at was a total titration figure for dimethyl sulfide which showed 4.1 lbs. bromine demand per ton of paper.

The Chairman stated the Authority would consider the progress reports and would expect further reports at subsequent meetings and that the Authority believes the Western Kraft Corporation is proceeding in good faith. He expressed to Mr. Beatty appreciation for the company's cooperation, promised that the staff will continue working with the company and requested the company to submit progress reports.

NORTH ALBANY Re: Wah Chang Corporation

The Chairman requested Mr. H.W. Merryman to report on activities concerning the complaints involving the Wah Chang Corporation's plant north of Albany. Mr. Merryman stated the company had started production during November 1956 and on July 30, 1957 the Authority received a petition-complaint signed by 20 nearby residents that considerable damage to trees and plants was occurring. On August 20, he reported that the staff made a preliminary field investigation and it was found that trees and vegetation were being affected.

On August 28, 1957 he stated the staff contacted James McClain, Director of Production and advised him of the complaints and the field investigations and on August 30, 1957 a letter was sent to Wah Chang Corporation regarding complaints and field investigations and notification that the discharges from the plant were in violation of the Air Pollution Control statutes and recommended that the management install appropriate controls. Mr. Merryman stated that the zirconium processing facilities were being expanded and it was requested that plans and specifications describing

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the control systems be submitted to the Authority for review.

Mr. Merryman stated an automatic impinger was started at a sampling station near the plant on September 9, and on October 9, the fluoride and chlorine concentrations found were sent to the company. He explained that the data showed that excessive discharges of fluorides were being emitted from the plant.

Mr. Merryman reported that the staff conferred with Mr. Yih, General Manager of Wah-Chang on October 17, and learned that their intent to install and operate air pollution controls to be in conformance with the Air Pollution Control statute and that following the receipt of the company's plans for atmospheric controls a letter was sent the firm on December 6, 1956 regarding the review of the plans and specifications. He explained that in general the plans were found to be reasonably satisfactory and it was further recommended that the firm proceed to develop techniques and methods for stack sampling at the plant which had been previously recommended and also that continuous monitoring for hydrogen fluoride discharges be incorporated in the plant.

The Chairman asked if a representative of Wah Chang Corporation wished to present a report.

Mr. Ralph Nielsen, Chemical Engineer, Wah Chang Corporation, stated he had nothing further to add except that the company had installed a scrubbing system and additional equipment has been ordered. He reported that they have contacted Dr. Donald F. Adams of Washington State College regarding advice on the installation of continuous monitoring equipment.

Mr. Hatchard stated that the plant is engaged in producing zirconium, tantalum-columbium for the Atomic Energy Commission, and that the staff believed the company has responded to recommendations quickly and the progress was reasonable at this stage.

The Chairman stated that the Authority accepted the progress reports and requested reports at the next meeting.

MULTNOMAH COUNTY Re: Pacific Carbide and Alloy Company

The Chairman requested W.J. Whitsell to present a report of staff activities concerning the investigation of dust discharged from the Pacific Carbide and Alloy Company's

plant at 9901 N. Hurst Avenue. Mr. Whitsell stated that in early 1956 the company had installed a stack water spray control system to remove particulate matter from the electric furnace discharges before release into the atmosphere. He reported that the Authority has continued to receive complaints regarding the deposition of dust on property near the plant and that the staff had investigated the complaints and completed the collection and analyses of air samples from stations in the vicinity. He explained that the particle fallout deposition rate was determined by analyzing samples collected periodically from polyethylene containers located on the roof of the Morrison Oil Company approximately 400 feet from the calcium carbide furnace stack. He stated that the small sized particles which remain suspended in the air were determined by high volume samplers using 8" X 10" glass fiber filters. He explained that the operation of the high volume samplers was limited to those periods when the wind direction was from the electric furnace stack to the sampling station within a 50° arc and a second high volume unit operated only when the wind was from the 50° arc in the opposite direction. He stated that the particle fallout rates found during the sampling periods from August 1955 to August 1957 showed a median fallout rate of 97 tons per square mile per month and a maximum of 540. He pointed out that a fallout rate of over 55 tons per square mile per month in an industrial area in the Willamette Valley is in violation of the Authority's regulations, Chapter V section 2.2. He reported that the suspended particulates collected on the high volume filter showed a median value for the northwest 50° arc of wind direction being 489 micrograms per cubic meter with a maximum of 787 and a minimum of 218. He explained that the Authority's regulations allow a concentration of 325 micrograms per cubic meter in a heavy industrial land use area of the Willamette Valley. Mr. Whitsell stated that the data supported the following conclusions.

1. The stack water spray control system is not removing enough particulate matter from the carbide furnace emissions.
2. The particulate matter discharged from the Pacific Carbide and Alloy Company is creating a public nuisance in the vicinity and is in violation of the Authority's

regulations, Chapter V Sect. 2.2, 2.3 and 2.4.

He presented the following recommendations for consideration.

1. That the Pacific Carbide and Alloy Company increase the particulate removal efficiency of the control systems as soon as practicable.
2. That the plans and specifications for the additional controls be submitted to the Authority for review before installation is started.

Mr. Clifton Glover, Ass't. Mgr., Pacific Carbide, explained that he represented the company since a serious transformer breakdown occurred that will stop production for about six weeks and Mr. T.J. Waters, Plant Mgr., was working on this project. He explained that about the first of August they shut off the water on the furnace stack scrubber because their operations were not satisfying the Morrison Oil Co., who has been their main complainant. Also, Mr. Glover explained the company had removed 500 tons of sludge which was collected from the stack in the past 18 months of operation, which will provide another sludge pond to avoid stream pollution. The first part of last month Mr. Glover reported that the company had completed work relining the stack from the scrubber down; and enclosed the furnace to reduce the air flow coming from the furnace stack, in line with recommendations from Stanford Research Institute.

He explained the company has hired an additional chemist and that a large part of his duties will be to measure the stack effluent which will allow the company to obtain more efficiency from the scrubber. He added that they believed that the recommendation of the Authority's to improve the scrubber is the proper approach and their consultants will continue investigating methods of collection at the furnace. He explained that the company is affiliated with Union Carbide Company and that it was their understanding that Electrometallurgical Company spent about \$300,000 for their system in Portland. Mr. Glover stated they have been in contact with the Louisville carbide plant control activity where several covered furnaces are operated that are about 4 times the size of the Pacific Carbide furnace unit. Mr. Glover stated his plant is working on this problem and hope to submit a good progress report at the next Authority meeting.

The Chairman stated that the emissions from this plant are in violation of the Authority regulations.

Mr. Dixon asked when the scrubber is started up again what does the company anticipate the amount of sludge would be.

Mr. Glover stated he hesitated to say because measurements had not been made after the improvements were completed.

The Chairman asked the staff for any additional recommendations.

W. J. Whitsell replied that the staff would like additional information regarding what improvements the company is planning.

The Chairman stated that the Pacific Carbide and Alloy Company must control the dust problem and that the staff is willing to cooperate in the activities.

Mr. Glover stated that the new chemist will be doing testing on the stack and will need considerable advice and help from the Authority.

The Chairman suggested to Mr. Glover that the plant's chemist get in touch with the Authority's staff and that the Authority be given a report within a month of the progress being made.

Mr. West stated that he believed this was a good procedure.

Mr. Hatchard stated that the staff was concerned with the adequacy of a water spray, since the random chance of collecting small size particulates was very limited.

Mr. Dixon stated that there are processes available which, if used, would solve the problem.

Mr. Wendel inquired whether the discharges were mostly CaO and asked how critical this discharge was since some contaminants were of a toxic nature and others were not.

Mr. Whitsell explained that the furnace discharge was mostly lime and carbon and the complaints were based upon deposition on vehicles, buildings and merchandise.

Mr. Hatchard explained that originally the petition came from the Western Auto Co., employees located west of the carbide plant and that complaints have not been made after the stack controls were put in about 18 months ago. He stated the Morrison Oil Company was the main complainant at present.

Mr. Wendel further reiterated that the Authority should move with some speed to help rectify this situation.

Mr. Dixon suggested that Pacific Carbide and Alloy Company work with the staff and prepare a report for the next meeting; that he wished to see full cooperation between the staff and the company.

The Chairman concluded by promising that the staff is available to work with the company and that the Authority will expect a representative of the company present at the next meeting and in the interim have progress reports from the staff.

CITY OF EUGENE PROGRAM

The Chairman introduced Robert A. Finlayson, City Manager, City of Eugene and asked if he would like to advise the Authority on the activities of the city air pollution program.

Mr. Finlayson stated that Eugene started considering air pollution about 3 years ago through study by a special committee appointed by the Mayor that worked with the Authority's staff. He reported that in May 1956 the Eugene air pollution ordinance was passed and the enforcement provisions were dated January 1, 1958.

Mr. Finlayson stated that on November 1, 1957 Mr. Verner Adkison was employed to head the air pollution program and was being trained in air pollution work. Mr. Finlayson added that although Mr. Adkison was new to air pollution he had considerable experience with lumber mills in Eugene through work with the Fire Marshal.

Mr. Verner Adkison, City of Eugene, presented a resume of his work with the city of Eugene since November and reported that a basic survey of the area was being made to be better informed of the problems; that public education activities were planned; that the air sample data activities were being reviewed with the Authority's staff. Mr. Adkison reported that he had attended the technical conference in San Francisco of the Air Pollution Control Association regarding problems relative to this air pollution work.

The Chairman thanked Messrs. Finlayson and Adkison for appearing at the meeting and stated the Authority appreciated the efforts of the City of Eugene on starting an active program and that the staff would certainly try to provide assistance as needed.

PROPOSED REGULATION OF OPEN-BURNING OF REFUSE

The Chairman requested the Secretary to review the need for regulations for open burning of refuse.

The Secretary read Chapt. 422 Oregon Laws 1957 which enables the Board of County Commissioners to adopt refuse disposal regulations and explained that the proposed Authority regulations could be applied to control open burning.

The Chairman said it would be proper for the Authority to consider the regulations and obtain any suggestions or comments from those affected by them and suggested that the Health Officers of the state and others submit suggestions after study.

Miss Carlie Gilstrap who represented a group of 170 home owners residing in the north section of Portland reviewed their problem regarding the open burning of refuse. She stated that it was unanimously believed that the county, and state are behind any movement which would bring about better sanitation conditions in that particular area. She stated all these residents have breathed and lived in this filth; from burning refuse and garbage; have tried to wash their homes; paint their houses but to no avail and that they considered it an extreme health hazard. She stated that on April 1956 this group petitioned the Air Pollution Authority to eliminate air pollution in this area discharged from the dumps. Miss Gillstrap stated that at the June 27, 1957 Authority meeting she reported that their group had unsuccessfully sought assistance from both the City and County; that some of the individuals have suffered from nasal congestion, throat irritations, etc., and had to seek medical advice. Miss Gilstrap stated she had two pertinent requests to present and they are as follows:

1. "We want you to prohibit now the open burning of garbage in open dumps."
2. "To set a definite target date for conformance; we have waited far too long but you seem to provide our best assistance".

Mr. Hatchard stated that in accordance with instructions from the Authority the staff had made area surveys in the vicinity to determine the frequency of conditions in the area that would be public nuisance under the statute. He stated that at almost any time one can observe public nuisance at 8 or 9 open burning refuse disposal sites.

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near Portland city boundaries. In 1953 complaints had been filed regarding the Seivert dump and lacking any improvement the matter came before the Authority at a public hearing and an order was adopted which required that burning be stopped unless adequate equipment was installed to control the emissions, and that rather than comply with these instructions the owner ceased to operate. Mr. Hatchard stated that this produced no improvement in the area-wide problem since a new dump was started nearby. Mr. Hatchard stated that fortunately alternate methods of disposal are available that are practical and that are effective; that it was our understanding from refuse disposal specialists that sanitary landfill would be the answer. Mr. Hatchard said that the staff recommended that regulations governing open burning dumps be considered and that General Sanitation Section, State Board of Health, have prepared recommended standards for operation of refuse disposal sites intended to supplement Chapt. 422, Oregon Laws 1957.

Mr. Wendel wished to know if these offenders had been warned previously.

Mr. Hatchard replied that all dump operators have not been notified.

Mr. Wendel continued that if the burning is in violation of existing statutes why was there a need to wait until additional laws or regulations are passed before acting now against the offenders.

Dr. Erickson stated the Authority acted once and wondered why this could not be done again.

Mrs. C.C. Barsch, Special Assistant Attorney General, stated that the 1957 Legislature provided counties with specific control outside city limits so it might be that the county's responsibility to enforce the act. Mrs. Barsch stated the Authority could contact the County District Attorney but the county commissioners have not yet made any rules governing open refuse burning.

Mr. Hatchard stated that the Multnomah County Board of County Commissioners had directed Dr. Sydney Hanzen to prepare regulations for refuse and garbage disposal according to a news item dated December 5, 1957.

The Chairman asked Miss Gilstrap if their group had considered this problem with the Multnomah County Commissioners.

Miss Gilstrap stated that they have presented the petitions to the Multnomah County Commissioners and that she understood the rules were being prepared.

Mrs. Barsch called attention to the section in the act which says the County Commissioners may prescribe rules and that it was up to the County Commissioners to act. Miss Gilstrap stated Chapt. 422, Oregon Laws 1957 would not take power from the Authority statute but instead would be supplementary.

The Chairman explained the act that became effective July 1, 1957 which involves the proper disposal of refuse and garbage and control of problems other than air pollution which concerns the Health Departments but not the Authority. The Chairman said the Authority still has the authority to control air pollution from refuse dumps and he asked Mrs. Barsch if it was proper for the Authority to proceed. Mrs. Barsch stated the Authority would have difficulty if this procedure is followed before regulations are adopted; that then it could be said the offenders have no knowledge as to the required standards of garbage disposal and the action might end like that.

Mr. Wendel said it was his recollection that the Board had the authority from the statute and should now swear out a criminal complaint.

The Chairman said he recalled that at the last session of legislature a general bill was passed regarding procedures followed by state boards.

Mrs. Barsch replied that a statute was passed concerning the adoption of rules for public hearings.

Dr. Erickson asked if the problem here was one of general versus specific law. He stated we are empowered with a general state-wide law to control air pollution and now a specific law has to be enacted by legislature bearing on air pollution from refuse dumps. He asked if this may have taken away some of the Authority of the state agency.

The Chairman reiterated that we have a specific problem before us and to bring about a solution he suggested that the Authority should prepare specific regulations concerning open burning refuse dumps throughout the state and take action now.

Both Mr. Wendel and Dr. Erickson wondered why the Authority needed more regulations

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if we acted 4 years ago on a similar type violation; what has changed in the meantime to require us to consider new rules and regulations.

Mrs. Barsch stated that this is not the procedure here, that it was city and county relationship.

Dr. Erickson stated that there is some question as to whether we have the right to adopt regulations as Chapt. 422 applies to counties and cities.

Mr. Wendel suggested the Authority start some proceedings and in the meantime assume it has full authority.

Mr. West suggested that the Attorney General's office consider the jurisdiction of the Air Pollution Control statute and Chapt. 422, Ore. Law 1957 and at the next meeting have a report presented.

Mr. Hatchard stated that the staff had considered control of air pollution from an open burning refuse dump and believed that the practice is wrong by any measure of good environmental sanitation; that the adequate disposal of refuse requires different methods and he explained that the staff efforts had been devoted to assisting county health departments in any matter involving air pollution.

Mrs. Barsch stated she believed that the refuse disposal operations are up to the local agencies, the city or the county.

Miss Gilstrap stated that their group has had this problem passed around from one agency to another; that the Authority studied it for a year and a half and now are asking the residents to live with this condition longer.

Mrs. Barsch read from Chapt. 422 Ore. Laws 1957 and stated this bill is not limited to air pollution.

The Chairman suggested that the Authority considered the following procedure.

1. As far as the adoption of more detailed regulations on this matter statewide, initiate the proposed regulations for consideration at the next meeting.
2. For the particular situation in Multnomah County the Authority is of the opinion that some action should be taken and should we proceed by preparing a complaint or shall we cite the owners and operators to appear before the Authority at a public hearing.

MOTION RE: Open-Burning Refuse Dumps

It was MOVED by Mr. Wendel and seconded by Dr. Erickson and carried that the Authority instruct the staff to proceed immediately to inspect the various open burning refuse operations and if it is found they are in violation of the law that the Authority proceed with the filing of a criminal complaint.

Mr. Dixon asked if the Authority can do what the motion implies.

Mrs. Barsch stated it could proceed but there was no guarantee matter would be settled.

Mr. West stated that he was not in favor of the motion but that the staff already has the authority to proceed.

The Chairman said the motion was carried and so ordered; that it is now up to the staff to check with the Attorney General and Multnomah County District Attorney regarding such a procedure.

Mrs. Barsch said that the Attorney General would confer to see whether the Air Pollution Authority would be a proper complainant or if this action should originate from a county authority.

Dr. Erickson stated that we have a state responsibility; that the county had failed to act and now it is the State's responsibility to do something.

The Chairman asked if the rules and regulations were adequate.

The Secretary replied that additional regulations are needed at this time to control air pollution from open burning dumps.

MOTION: Re: Proposed Regulation of Open-Burning Refuse Dumps

It was MOVED by Mr. Dixon and seconded by Mr. West and carried that we proceed with the preparation of proposed regulations pertaining to open burning and refuse or similar material.

Dr. Erickson stated that he understood when the Authority voted on the motion we were only going to explore them and not adopt them.

The Chairman suggested copies be sent to the Authority members for study before the next meeting.

WASTE WOOD BURNER STUDY

Professor M. Popovich, Director, Oregon State College, Engineering Experiment Station,

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has a demonstration grant from Public Health Service to study wood waste burners and that the approach to this problem included the following.

1. Testing of burners in lumber mills.
2. Collecting data on wood waste burners to include temperatures, gases, particulate loading, etc.
3. Studying the economic status of wood utilization.

Professor Popovich reported that the survey was completed and that his group had completed measurement of nine burners and that they are analyzing data obtained from the wigwam type burners and that the study seems to fall in a definite pattern. He said that they planned to start the economic survey in January and he thanked the Authority's staff for all the cooperation provided on this study; and that soon the conclusions based on the study would be formulated. He stated that the wigwam burner has a chance to function without excessive fallout and smoke; that some operational instructions are needed and that his group intends to include them in the report which will be published by July 1, 1958.

The Chairman introduced Robert L. Stockman, Engineer in Charge of Air Sanitation, Washington State Dept. of Health and Mr. V. Bacon, Executive Secretary, Northwest Pulp and Paper Association.

Mr. Stockman stated that their program is a new activity in Washington; that they appreciated working with the Air Pollution Authority staff and explained that at the state level they are responsible for providing technical assistance to local government. Mr. Stockman concluded by saying their activities are going to be much the same as that of the Air Pollution Authority and that he added appreciation for the work the Authority's staff did on the Seminar of last August which was very successful.

Mr. Bacon explained that their organization was called the Northwest Pulp and Paper Association which comprises 28 pulp and paper mills representing 16 companies in Oregon and Washington including Western Kraft Corporation. He explained that the purpose of the association is to support research on air and water discharge problems and to provide reports to the public.

Mr. A. Congleton, Mgr. of Columbia Empire Industries, Inc., announced the Seminar on Air Pollution to start at 10 A.M. January 22, 1958 in Portland. Mr. Congleton extended an invitation to all present at this meeting to attend and stated that he was sure this meeting was going to be very informative and especially wished the Air Pollution Authority staff to attend if possible.

ADMINISTRATIVE MATTERS Staff Training Course, Taft Center, January 13-24.

The Secretary explained that a course was being offered by Public Health Service Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio, on "Analyses of Atmospheric Samples" on January 13-24, 1958; that it was requested that approval be given for R.B.Percy, Chemist, to attend and that application be made for State Board of Health training funds.

MOTION Re: Staff Training Course, Taft Center

It was MOVED by Mr. West and seconded by Mr. Dixon and carried that Mr. Percy be authorized to attend this course at Taft Center in Cincinnati, Ohio.

NEW COMPLAINTS: Re: United Stud Planing Mill

The Secretary read a complaint from Mr. Wells, Heppner, Oregon, regarding smoke from the burning of wood waste at United Stud Planing Mill and reported that Mr. H.M. Patterson had investigated the complaint and submitted a report.

Re: Asphalt Paving Company

The Secretary read a petition from the Chelsea area, Klamath Falls, regarding the Asphalt Paving Company's dust and vapor discharges and reported that Mr. Gerow inspected the plant and the company was notified that the discharges were in violation of the statute.

Mr. Hatchard stated that the company had advised the Authority that a control system would be installed in accordance with previous recommendations.

The Chairman directed the staff to follow this case with reports from Mr. Gerow.

Re: Coquille Valley Lumber Company

The Secretary read a complaint from the City Manager of Milwaukie about smoke and odors from the plywood plant on E. 30th and Harrison Sts., Milwaukie.

Mr. Whitsell reported that the mill manager was contacted and on September 4, reported that work was completed which would correct the smoke and flyash conditions.

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Re: Electro-Metallurgical Plant

The Secretary read a letter from the City Health Department relative to complaints received regarding depositions from the Metallurgical Company discharges.

Re: Monarch Shingle Company

The Secretary read two complaints regarding smoke, flyash and odor from the Monarch Shingle Company's refuse dump, 8414 N. Vancouver, Portland, and from the National Biscuit Company.

The Chairman requested that reports be prepared on these complaints.

STAFF VACANCIES AND FUTURE PROGRAM

The Secretary reported that the Authority staff was still one engineer short; that the Authority has been able to fill the chemist vacancy with a part-time laboratory technician. The Secretary announced that W.J. Whitsell will be resigning for a 2 year period on an International Cooperation Administration, Health Project in Costa Rica, and that one of the engineers on another program would transfer to the air pollution work.

MOTION RE: Election of Officers for 1958

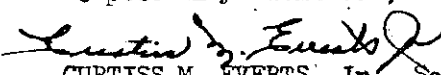
It was MOVED by Mr. Wendel and seconded by Mr. Dixon and carried that Carl E. Green and Merle S. West be re-elected Chairman and Vice Chairman respectively for 1958.

DATE FOR THE NEXT MEETING

The date for the next meeting was set at the call of the Chairman.

There being no further business, the meeting was adjourned at 5:00 P.M.

Respectfully submitted,


CURTISS M. EVERTS, Jr., Secretary
Oregon State Air Pollution Authority

TWENTY-FIRST MEETING

OF THE

OREGON STATE AIR POLLUTION AUTHORITY

The twenty-first meeting of the Oregon State Air Pollution Authority was called to order by the Chairman at 2:00 P.M. Thursday, April 10, 1958 in Room 36, State Office Bldg., 1400 S.W. 5th Avenue, Portland, Oregon. Those present were Carl E. Green, Chairman, Merle S. West, Vice Chairman, Mr. R. P. Dixon, Dr. Harold M. Erickson, members and Curtiss M. Everts, Jr., Secretary, Mrs. Catharine C. Barsch, Special Assistant Attorney General, R.E. Hatchard, Chief of the Air Pollution Control Section, J. L. Agee, Associate Sanitary Engineer, R. B. Percy and Edward Taylor, Chemists, State Board of Health.

MOTION RE: MINUTES OF PREVIOUS MEETING

The minutes of the twentieth meeting held December 16, 1957 were summarized by the Secretary. The Chairman declared that if there were no corrections the minutes would stand approved as prepared by the Secretary.

ADMINISTRATIVE RULES RE: Changes required by Chapter 717 Oregon Laws 1957

The Chairman stated that a year ago the Authority adopted administrative and technical rules and there was a need to consider revisions to the administrative rules under the provisions of Chapt. 717, Oregon Laws 1957. Mrs. Barsch reported that the Attorney General's office had prepared a model set of regulations which could be followed in the preparation of revisions of the Authority's existing regulations.

MOTION RE: Changes required by Chapt. 717 OL-1957

It was MOVED by Mr. West and seconded by Mr. Dixon and carried that the Authority hold a public hearing at its next regular meeting to consider the adoption of the revised administrative rules and regulations in accordance with the provisions of Chapt. 717 O.L. 1957 and that public announcement of such hearing be made.

THE DALLEES RE: Harvey Aluminum Company

The Chairman requested Mr. Agee to report on the status of the Harvey Aluminum Company's plans for installing control equipment in their aluminum reduction

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plant now under construction at The Dalles.

Mr. Agee reported that the final plans and specifications of the fume disposal system have been received and reviewed by the staff and that a conference was held with Dr. Rochon and Mr. Rene Legault concerning the operation of this equipment. Mr. Agee stated that procedure for testing and determining the fluoride removal efficiency of this equipment was outlined by the company representatives. He explained that background samples have been collected to determine natural fluoride levels in The Dalles area for the past three years. He recommended that conditional approval be granted for the control equipment providing the company will agree to:

1. Comply with the regulations of the Oregon State Air Pollution Authority.
2. Make periodic stack sampling and analyses to determine the fluoride discharge.
3. Submit periodic reports to the State Air Pollution Authority.

The Chairman asked Mr. Agee if background values had been determined.

Mr. Agee replied that over 600 samples had been collected and most of the background fluoride concentrations were within 0.1 to 1.0 part per billion.

The Chairman asked Dr. M. Holmes if he had a report to present at this time.

Dr. Holmes stated that he would delay his report until the next meeting.

The Chairman asked if a representative of Harvey Aluminum was present.

Mr. Legault, General Superintendent, Harvey Aluminum Company stated that his company has conducted simulated tests, that the analyses would be completed soon and that the data could be presented at the next meeting of the Authority. He explained that the simulated test run will approximate the working conditions and should give a clear picture of the fluoride removal efficiency. Mr. Legault concluded by saying that his company will cooperate with the Authority and would have the best control equipment available.

MOTION RE: The Dalles Harvey Aluminum Company

It was MOVED by Dr. Erickson and seconded by Mr. West and carried that plans and specifications for the air pollution control installation at Harvey Aluminum

Company be given conditional approval with the understanding that the company will comply with regulations, make periodic stack sampling tests and submit periodic reports to the Authority.

NORTH ALBANY RE: Western Kraft Corporation

The Chairman requested Mr. Merryman to report on the control of air pollution at the Western Kraft Corporation's mill.

Mr. Merryman stated that the company had completed installation of the blow heat recovery system in December and that the staff had completed some area surveys since that time. He explained that area odor survey data was needed to indicate what change had occurred in the odor conditions near the Western Kraft mill. He stated that the data obtained thus far is inconclusive since the weather conditions during the surveys had favored the dilution and dispersion of the mill effluents.

Mr. Merryman reported that the company had developed a stack sampling program to measure the concentration of several odorous compounds. He stated that some data was obtained before the blow heat recovery system was installed and after completion of the project. He stated that the information from the company's technical staff showed a reduction of 63% in the hydrogen sulfide concentration, 33% in methyl mercaptans and 68% in the organic solubles which would include the dimethylsulfide and dimethyl disulfide fractions. He stated that the staff recommended that the area odor surveys be continued; that the company continue the program of measuring the major mill effluents and that progress reports be submitted at the next meeting.

The Chairman asked Mr. Robert O. Beatty, Ass't to the President, Western Kraft if he wished to present a report.

Mr. Beatty replied that Mr. Merryman's report summarized the present status and that the company intended to continue the stack studies.

Mr. West stated that he passed the plant driving to Portland for this meeting and there was still quite an offensive odor in the air.

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Mr. Beatty replied that only one ppm would be just as offensive to the human nose as a great deal more. He further stated that this concentration could be reduced but that they would never reach the level of complete satisfaction for every human nose.

The Chairman stated that the Authority would accept these progress reports and that it appeared the company has been making progress.

MULTNOMAH COUNTY RE: Pacific Carbide and Alloy Company

The Chairman requested Mr. Percy to report on the Pacific Carbide Company's dust emission problem.

Mr. Percy stated that a plant survey was made in January when the calcium carbide electric furnace was shut down for maintenance. He reported that air samples were collected at a station on the roof of Morrison Oil Company from March 11-15, at a time when Pacific Carbide was also measuring their stack discharges.

Mr. Percy stated that the samples showed a suspended particulate concentration of 514 micrograms per cubic meter for the 50° arc of wind direction towards the plant and contained 34.2% lime (CaO). He explained that the filter from the high volume sampler which operated when the wind direction was away from the plant showed suspended particulates of 221 micrograms per cubic meter with 10.3% lime content. He stated that the results obtained when the wind was toward the plant are comparable to sampling results during August 1957. The suspended particulates for the opposite direction are higher than those obtained in August 1957 and this was probably caused by the changeable wind conditions in the area at this time of the year. He stated that the fallout samples collected during the March sampling period were comparable to those collected during the past and averaged 104 tons per square mile per month with an average calcium oxide of 23.5%. He pointed out that fallout samples collected during the plant shut down period showed a substantial decrease in weight and lime dust content. Mr. Percy stated that the staff recommended that a summary report be prepared including the company stack sampling data; that the company sample the discharge from other dust sources and that the company should continue development of additional

electric furnace dust control facilities.

The Chairman asked if a representative of the company was present.

Mr. Thomas J. Waters, Manager, Pacific Carbide, stated there was nothing further to report as Mr. Percy had covered it well. He added that their stack tests showed that they are able to reduce the electric furnace emissions by 83%; however, there will be more sampling and further testing. He stated that they will continue to make progress and will keep in close touch with the Authority.

The Chairman asked Mr. Hatchard if the staff had any additional comments.

Mr. Hatchard replied that the staff would like to work further with the company using the information obtained from area sampling. He stated that one problem was that Pacific Carbide's production now was less than the normal production periods.

The Chairman requested the company to continue working with the Authority's staff and that the Board would accept this as a progress report and would expect reports of further developments.

PUBLIC HEARING RE: Proposed Regulations for Open Burning Refuse Dumps

The Chairman stated that the public hearing would now be held to consider the proposed open burning refuse dump regulations; that the proponents and opponents would have an opportunity to present statements and give verbal testimony. He stated that the members of the Authority would not take final action today in view of a request from the League of Oregon Cities requesting more time to study the proposals.

The Secretary stated that copies of the proposed regulations had been sent to all parties who had indicated an interest at previous Authority meetings and to County Health Departments.

Mr. Joseph Hunt, Vector Control Specialist, Communicable Disease Center, US PHS, now assigned to the Umatilla County Demonstration Project, showed a series of colored slides which revealed typical open burning refuse disposal problems created in Oregon, Idaho and California. He explained the sanitary landfill dis-

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posal method outlining the various types of operations, equipment used and the lack of air pollution problems resulting from sanitary landfill. He answered questions regarding the cost comparison between sanitary landfill, complete incineration and open burning, disposal of lumber, brush and logs on sanitary landfill, methods of operation on low land, control of odors and the foundation conditions for building on former sanitary landfills.

Miss Carlie Gilstrap stated that the complainants in North Portland had been waiting for two years for appropriate action to control the smoke, odors and flyash from open burning refuse dumps. She indicated that some improvement had resulted from the Authority's action this spring but pointed out the problem was far from solved. She reported that her group has been in contact with the city and county officials but that little progress had been made as yet. She expressed her concern regarding the possible effect of excessive air pollution upon the increasing lung cancer and other human health aspects and requested the Authority members to take action to protect Oregon communities from the unnecessary air pollution from burning refuse dumps. She then narrated a series of colored slides which showed instances where refuse dumps north of Portland were burning during February to April 1958.

Mr. Walter A. Holt, representing the Oregon Centennial Commission, stated that there was a smoke problem in the area and that their organization hoped corrective action would be taken.

Clara Shaw, Rt. 2, Hillsboro, stated that the practice of open burning of refuse has to be changed and that satisfactory methods must be implemented that will protect our communities.

The Chairman stated that the Authority would now like to hear from those speaking against the proposed regulations.

Dean Bryson, Attorney, representing the Sanitary Truck Drivers Local No. 220, stated that the union was not opposed to a ban upon open burning but was concerned about the over-all problem. He stated that he believed something must be done

but questioned the provision in the proposed regulation that would allow the householder to burn refuse on their property. He suggested that the proposed regulations ought to consider segregating the types of refuse and also include consideration of the total cost to the community for changing from present disposal methods.

Mrs. Ezra Cook representing the City Sanitary Service, McMinnville, Oregon stated that about four years ago the McMinnville dump had been relocated to a site approximately seven miles west of the city and that their present operation consists of intermittent burning and covering. He pointed out that they have no problems since the nearest resident is about a mile away and he requested the Authority to give individual consideration to refuse dump operations which would be preferable to a blanket prohibition.

Mrs. George Heryford, Sanitarian, Lincoln County, stated that refuse disposal methods are necessarily individualized and that due to the rainfall and soil conditions on the coast the sanitary landfill procedure would not be practical.

E. N. McKinstry, City Engineer, North Bend, stated he agreed with the intent of the proposed regulations but if adopted would cause some difficult problems. He explained that the city of North Bend's refuse dump required burning because the strong prevailing trade winds would spread the refuse downwind.

Mr. Gordon Burt, City Engineer of Portland, submitted pictures of Portland's refuse disposal site and explained the operation of the city incinerator and modified landfill. He reported that since the Authority's action this spring the city has been reducing the amount of open burning through increased use of the incinerator. He pointed out that their problems involve the disposal of several thousand gallons of waste oil daily, large quantities of scrap lumber, tree stumps and also a lack of earth covering. He stated that the 1959 budget included a request for eight more employees and equipment purchases such as a chipper and cut-off saw and funds for purchasing excess earth fill. He explained that the Refuse Bureau could provide the type of refuse disposal that the citizens of

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Portland are willing to pay for.

Mr. Gene Fields, Sanitarian, Coos County, indicated that sanitary landfill methods would not be adaptable to many locations along the coast. He also questioned the provisions in Section 4.4 which gave the county health officer the responsibility for approving a variance in the open burning prohibition if it was in the public interest to protect undue hardship. He commented that any change in a city's disposal methods could be considered undue hardship and this section would be difficult for the health officer to administer. He suggested that other refuse disposal methods such as the Dano composting system may provide the answer.

The Chairman requested Mr. Hatchard to comment on questions raised during the discussion.

Mr. Hatchard stated that several references had been made to the California activities on refuse disposal to control air pollution. He reported that the first regulation of the San Francisco Bay Area Control District which includes six counties prohibited the open burning of all refuse, excepting for household rubbish, agricultural practices, and fireman training, and was adopted in October 1957.

He stated that the Los Angeles Control District began the control of refuse air pollution problems in 1948 when a regulation was adopted prohibiting open burning refuse dumps throughout the county and that other outdoor burning regulations had been adopted subsequently. He stated that the final step was taken in October 1957 when burning with the individual householder's single chamber incinerator was outlawed. The main point is to recognize that all air pollution control programs eventually must prohibit open burning. He pointed out that several references had been made during the discussion to the problem that may occur since the proposed regulations allow the householder to burn rubbish. He explained that rubbish does not include garbage or similar organic material.

The Secretary stated that the following letters had been received concerning the proposed regulations.

April 3, John C. Stoner, Sanitarian
 Lane County Health Dept.
 April 3, Lester M. Bennett, Sanitarian
 Yamhill County
 April 7, Mr. Ezra Cook
 McMinnville, Oregon
 April 7, A. W. Westfall, Sanitarian
 Tri-County Health Dept.
 April 4, Mr. Kenneth T. Adams
 Mayor of Empire
 April 7, I. Hartley,
 Mayor of North Bend
 April 8, Dean F. Bryson, Attorney
 April 8, Edward Brown, City Recorder
 Powers, Oregon
 April 9, Herman Kehrli, Executive Secretary
 League of Oregon Cities
 April 9, John H. Fasnacht, Mgr. of Utilities
 City of Bandon
 April 9, Ben E. Nicols, City Administrator
 City of Myrtle Point
 April 7, George J. Spady
 Coos Bay Sanitary Service
 April 10, Coos County Health Dept.

The Chairman stated that the comments, suggestions, recommendations would be reviewed and the matter would be considered at the next regular meeting of the Authority.

ADMINISTRATIVE MATTERS

The Chairman requested the Secretary to read the new complaints received.

The Secretary read a complaint against Hopkins Wrecking Yard submitted by Mrs. Yoes.

The Chairman asked if the staff could investigate the matter.

Mr. Hatchard replied that the staff should investigate this complaint along with several others involving the burning of wrecked automobile bodies.

The Chairman directed the staff to investigate the complaint and confer with all

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other parties concerned and report back to the Authority.

The Secretary read a complaint from the City of North Bend, signed by Mr. Herrington regarding open burning by Weyerhaeuser Timber Company.

The Chairman referred this to the staff for investigation when other activities permit.

The Secretary read a complaint dated 12-29-57 from Mrs. Emma Burk regarding emissions from the Chipman Chemical Company's plant in Guilds Lake, Portland.

The Chairman directed the staff to continue its work on this matter.

PLANNING & ZONING AGENCIES PERFORMANCE REGULATIONS

The Chairman requested Mr. Agee to report on the development of industrial park regulations to prevent air pollution.

Mr. Agee stated that the Air Pollution Authority has been requested by the Bureau of Municipal Research to recommend performance standards which may be applied to industrial park developments. The Bureau has indicated that a number of cities have requested such information to be used by their planning commissions. This approach to air pollution control is somewhat different than has been applied in Oregon to date. The Authority has approached air pollution control on an area air quality basis. Performance standards as such have not been employed to date. The staff has initiated a review of the literature and has tentatively developed performance standards as the Bureau requested. Mr. Agee stated that the staff expects to continue in this work to develop and test additional standards in the future.

The Chairman asked Mr. Agee how much more time was needed on this project.

Mr. Agee replied that this was an extensive study and would require a full scale investigation.

Mr. Hatchard stated that the time when the staff would have something definite would be determined on the success of getting an over-all research operation completed.

The Chairman instructed the staff to continue the work and to present the recommendations to the Authority for consideration.

BUDGET 1959-1961

The Secretary stated that the present staff consists of 4 engineers, 2 chemists and one stenographer; that the Authority is requesting one additional field representative be added to the budget for 1959-61. He stated this person would make initial field investigations that do not require engineering skill so the engineers can be used on more urgent work.

The Chairman asked if the budget had been submitted to the State Board of Health members.

The Secretary replied that it was still under discussion.

Dr. Erickson added that preliminary conferences had been held and the requests would be considered on May 8, 9, and 10th, by the members of the Board of Health and that he would support the request for the additional staff member.

Mr. Dixon stated he believed it right to have a field man do certain work if it would free the engineer for performing more technical duties.

The Chairman stated that those who attended the Authority meetings recognized that the Air Pollution Authority's staff has more than it can do; there are more requests for work and field trips than is possible for a staff of this present size; and that he thought it was appropriate to ask for the additional man to help on the field work.

MOTION RE: Budget 1959-1961

It was MOVED by Mr. Dixon and seconded by Mr. West and carried that a request be made for an additional field man for the Air Pollution Authority's 1959-1961 biennial budget.

There being no further business the meeting was adjourned at 4:50 P.M.

The next regular Air Pollution Authority meeting was set at the call of the Chairman.

Respectfully submitted,

Curtiss M. Everts, Jr.
CURTISS M. EVERTS, Jr. Secretary
Oregon State Air Pollution Authority

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TWENTY SECOND MEETING

OF THE

OREGON STATE AIR POLLUTION AUTHORITY

The twenty-second meeting of the Oregon State Air Pollution Authority was called to order by the Chairman at 2:00 P.M. Wednesday, August 27, 1958 in Room 732, State Office Bldg., 1400 S.W. 5th Ave., Portland, Oregon. Those present were Carl E. Green, Chairman, Merle S. West, Vice Chairman, Dr. Harold M. Erickson, Harold F. Wendel, members and Curtiss M. Everts, Secretary, Mrs. Catharine C. Barsch, Special Assistant Attorney General, R.E. Hatchard, Chief of the Air Pollution Control Section, J. L. Agee, Associate Sanitary Engineer, R. Ott, Chemical Engineer, R. B. Percy and Edward Taylor, Chemists, State Board of Health.

MOTION RE: MINUTES OF PREVIOUS MEETING

The minutes of the twenty-first meeting held April 10, 1958 were summarized by the Secretary. The Chairman declared that if there were no corrections the minutes would stand approved as prepared by the Secretary.

PUBLIC HEARING RE: Rules and Procedure in Hearings

The Chairman stated that in December 1956, the Authority had adopted administrative rules concerning public hearings and that the provisions of Chapter 717 OL-1957 required considerable revision of the existing regulations. The Chairman requested the Secretary to report on preparations that had been made for the hearing on proposed "Rules for Procedure in Hearings."

The Secretary stated that notice of the public hearing was published in the Daily Journal of Commerce on 8-7-58 and that the Authority has on file a certified copy of the publication and that the rules had been prepared and reviewed by Special Assistant Attorney General, Catharine Barsch.

Mr. West asked if these rules were patterned after the Board of Health's experience.

Mrs. Barsch stated that the proposed rules include the provisions of the existing procedures for the conduct of hearings and also conform with Chapt. 717, OL-1957.

Mrs. Barsch also stated that the model rules for hearings are subject to amendment by the Attorney General. She further stated that the proposed rules

include the original statutory hearing procedure and the existing administrative rules.

Mr. West asked if the proposed rules had been approved by the Attorney General's office.

Mrs. Barsch replied that the Authority's proposed Rules for Hearings almost exactly duplicated the Attorney General's model Rules for Hearings except that an emergency clause is included so that the rules will take effect immediately upon filing with the Secretary of State.

The Chairman asked if there were any additional questions regarding the proposed Rules for Procedure in Hearings.

Mr. West requested clarification of the statement, "Ultimate facts sufficient to show that the petitioner is entitled to the relief requested" in Chapt. IV, Rule 3A (3)(a).

Mrs. Barsch said that it required a statement of the facts in issue; that it was not expected or intended that a petition should state merely that someone caused the discharge of an air pollutant, but also that such discharge (or other condition created) constitutes a public nuisance. She said that the petition should contain a statement as to what conditions were created and that a public nuisance were created and that a public nuisance was thereby caused to exist.

The Chairman asked if this phraseology came from accepted legal procedures.

Mrs. Barsch replied that the phrase "ultimate fact" is a legal term and intended by the rule to be so understood.

MOTION RE: Rules for Procedure in Hearings

It was MOVED by Mr. Wendel and seconded by Mr. West and carried that the Authority finds that it is necessary that rules numbered 1 to 21 inclusive, Chapt. IV take effect immediately upon the filing thereof by the Secretary of State of the State of Oregon and that postponement would result in serious prejudice to the public interest and that the Air Pollution Authority orders therefore that these rules shall be effective immediately upon the filing thereof by the Secretary of State.

MOTION RE: The Adoption of Rules for Procedure in Hearings

It was MOVED by Mr. West and seconded by Mr. Wendel and carried that the Rules for

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Procedure in Hearings numbered 1 to 21 inclusive, Chapt. IV, be adopted and that the existing rules in Chapt. IV be rescinded.

NORTH ALBANY RE: Wah Chang Corporation

The Chairman requested that Mr. Hatchard report on the staff activities concerning investigations of air pollution near the Wah-Chang Corporation's processing plant located north of Albany.

Mr. Hatchard stated that the last report was presented to the Authority at its meeting on December 16, 1957 and that several mill surveys and air sampling operations had been completed since that time. He reported that the company had been notified by letter on April 22, 1958 that the fluoride concentrations found in impinger samples collected at the Johnson residence just south of the plant were excessive. He explained that a maximum of 20.2 parts per billion of fluoride was present compared with a normal fluoride value of 0.1 to 1 ppb in a rural area. He stated that in this letter the staff had recommended that the company institute a stack sampling program and arrange to install continuous monitoring equipment which would determine any unusual concentration of fluoride or chlorine being released. He stated that while the company had completed the installation of several additional controls in the zirconium reduction process, subsequent air sampling still showed the presence of excessive concentration of fluoride. In the most recent series of samples were collected on a two hour sampling interval between July 21 and August 1958. Laboratory analyses of these samples showed a minimum of 1.12 ppb and a maximum of 20.99 ppb. He reported that a staff member had completed an intensive plant survey on July 21, 1958 and found that the intermittent high fluoride concentrations appeared to result from the mal functioning of process units during production and that more operational control was needed. He stated that unfortunately the previously recommended stack monitoring equipment for fluoride and chlorine had not been installed. However, the company had made several manual stack sampling checks. Mr. Hatchard presented the following recommendations for consideration.

1. That recommendations be made again for the installation of stack monitoring equipment before fluoride and chlorine are released to the atmosphere.

2. That the management take action necessary to assure better operational control so that when a mal functioning occurs corrections are made immediately.
3. That the stack monitoring equipment be designed to actuate an alarm system or otherwise bring the high concentration to the attention of operating personnel.

Mr. Wendel asked if the fluoride was less than that found in air samples collected in the vicinity of aluminum reduction mills.

The Chairman stated that most of the fluoride concentrations found from samples collected on Sawie Island were within 1 to 2 ppb.

Mr. Hatchard said that occasionally there was a higher value found but none as high as the values found at the Johnson residence station near Wah-Chang.

The Chairman asked if there were methods which this concentration could be applied to reduce this concentration of fluoride.

Mr. Hatchard stated there were but that the specific applications of known techniques for controls had not been completely worked out yet; that there are unusual design problems and that he believed the Air Pollution Authority problems should have a high priority by the Wah-Chang management to bring about adequate control.

Mr. Hatchard concluded by stating he felt the need for stack monitoring equipment was very critical; that individual stack measurements involve difficult analyses and that the company should be aware of any excessive emission in order to make immediate operational changes to reduce the discharge.

The Chairman suggested that in addition to requesting monitoring of stacks the Authority should request that the company provide additional control facilities to remove the discharge.

Mr. Hatchard added that the stack discharges should be reduced to the level that would reduce the fluoride concentrations at sampling stations in the area to less than 1 ppb.

MOTION RE: North Albany - Wah Chang Corporation

It was MOVED by Mr. Wendel and seconded by Dr. Erickson and carried that:

1. That Wah Chang Corporation be instructed to install monitoring equipment on stacks where chemical reactive contaminants are being released which cause

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known injury.

2. That the corporation be instructed to proceed with plans for the installation of equipment or devices which would reduce the discharge to a maximum of 1 ppb fluorides in the vicinity of the plant.

NORTH ALBANY RE: Western Kraft Corporation

The Chairman requested that Mr. Agee report on staff activities concerning emissions from the Western Kraft Corporation mill north of Albany.

Mr. Agee stated that the staff had continued to investigate the operation of the Western Kraft Corporation through plant surveys and area odor investigations and that recent odor investigations have not shown definite nuisance conditions. He explained that with proper atmospheric conditions and wind direction public nuisance conditions were probably still occurring. He reported that the corporation has continued to make stack analyses at potential sources of pollution from the plant to determine the relative measurement of major sources of odor and that some of these analyses have been submitted to the Air Pollution Authority's staff. He stated that the following recommendations regarding the study and control of Western Kraft Corporation effluents were presented for consideration.:

1. The management of Western Kraft Corporation be requested to submit a written report outlining the sampling program that has been used in the past and future sampling which is contemplated, including the methods used, points of sampling, methods of analyses and the data that has been obtained to date.
2. The management institute routine representative sampling at these points concurrently.
 - a. Discharge of the recovery boiler venturi-scrubbers.
 - b. Stack discharge from the digester hot water accumulator.
 - c. The Corporation should submit a report of an analyses of the black liquor and flow rate to each venturi scrubber and blue prints of the venturi scrubbers as installed.

- 3. Submit future reports of all stack sampling measurements to the Authority when the results are obtained.
- 4. The Corporation should determine the rate of emission from the recovery furnaces and digesters to the atmosphere.
- 5. The Corporation should submit a summary of the area odor sampling program which Dr. Donald F. Adams of Washington State College is developing for the corporation.

The Chairman asked if a representative of the company was present.

Mr. E. J. Kirkpatrick, Project Chemist for Western Kraft stated that as far as analytical results were concerned he had talked to Authority Chemist Robert Percy regarding this; that his company will continue to run analyses but that all were not yet completed; that they have completed measurement of three sources out of 5 or 6 already. He added that he had no facts or figures to give today as he had been requested by Western Kraft to appear for Mr. Beatty who is out of town.

Mr. West wanted to know if the staff had suggested to the management it would like all the information which Mr. Agee had described.

Mr. Agee added that the staff has been receiving some data in more or less a piece-meal fashion.

The Chairman asked if Western Kraft had been requested to furnish this information.

Mr. Hatchard replied that the recommendations regarding stack sampling had been included in an interim staff report dated October 21, 1957 which had been sent to the management.

MOTION RE: North Albany Re: Western Kraft Corporation

It was MOVED by Dr. Erickson and seconded by Mr. Wendel and carried that the Authority request in writing from Western Kraft Corporation a complete report on stack sampling that has been carried on to date, a report on their plans for future sampling and controls and that the company be requested to submit blue prints of present pollution control equipment and any plans for additional equipment that may be available.

Mr. West asked Mr. Hatchard if the installations that Western Kraft have been using

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are of the type used by other Kraft mills.

Mr. Hatchard replied that Western Kraft's is not as complete as other recently constructed kraft mills and that there are some differences such as the use of a venturi scrubber on the recovery furnaces, etc.

Mr. West asked if other plants were using satisfactory methods.

Mr. Hatchard replied that there is only one other new kraft mill in Oregon and he explained that the staff believed that there was additional odor control facilities that are technically sound that should be installed at Western Kraft. Mr. Hatchard stated that the present control installations are not complete but the staff had not established that public nuisance is present after the last improvement was made.

THE DALLIES RE: Harvey Aluminum

The Chairman requested the Secretary to summarize the status of the Harvey Aluminum Company's plans for fume control facilities.

The Secretary reported that the Authority had granted conditional approval of the plans during the last meeting and that the company had requested an unqualified approval based only on the installation since the contract between the equipment supplier and the Harvey Aluminum Company requires full approval before payment is made.

The Chairman asked Dr. C. A. Rochon, Chief Chemist, Harvey Aluminum if he wanted to discuss the problem.

Dr. Rochon stated that his company was not in the same position as other aluminum producers as they are just starting their first aluminum plant but when Harvey decided to build the plant they were fully aware of the problems of fluorine emissions and that this phase had been studied extensively. He stated that in order to be assured that everything would be acceptable to the State they had incorporated a clause in the contract that the system should comply with all Oregon state regulations and that the officials had conferred with the Authority's technical staff and had submitted plans and specification describing the air pollution control facilities. He added that the staff had requested some minor modifications which were made. He explained that the company did not expect an unconditional

approval on the operation since no one really knows how it will work yet. He stated that installation of equipment is one thing and operation is another and that the company wants the installation approved separately. He stated his company had completed extensive stack tests and that samples were split with the Air Pollution Authority's staff. Dr. Rochon stated his company had submitted methods of analyses to the Authority, discussed stack sampling and they have done everything possible to exchange information and that everything is agreed upon except the approval of the installation.

The Chairman asked if it was Harvey Aluminum's desire that the Authority give an unconditional approval for the air pollution control equipment separate from operational performance.

Dr. Rochon replied that it was.

The Chairman stated that a contract was entered into by the Harvey Aluminum Company and an equipment supplier, and that the Authority as an outside party was referred to in the contract and that Harvey Aluminum was now asking the Authority to make a certain statement of approval so that the other parties may be satisfied and receive final payment for the work.

Mrs. Barsch stated that the statute does not require the Authority to give approval at any time.

Mr. Wendel stated to Dr. Rochon that he thought it would have been to their advantage to have determined in advance whether the plan approval arrangement written in their contract was feasible.

Dr. Rochon stated again that they had submitted all requested information regarding the fume controls but that they had never received an unconditional approval for the installation.

Mrs. Barsch said that it is possible that the staff could not tell whether the installation was correct until it has been operating.

The Chairman explained that for years the Sanitary Authority has given letters of approval for sewage treatment plants which are always qualified; that he had never

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received an unqualified approval. He pointed out that he did not think that a state authority could be in a position of entering into a contract with two other parties to say whether an installation is entirely satisfactory.

Dr. Rochon went on to state that the Authority administers a law which requires that before a plant can be started it must submit plans and obtain approval from the state and then after that there are quite a series of regulations.

The Secretary explained that it has been the policy of the Authority in the past to grant only conditional approval on installations and that conditional approval in effect was dependent upon the system operating in a satisfactory manner to prevent air pollution. He added that the Air Pollution Authority's law was different from that of the Sanitary Authority as it does not require the submission of plans as the Sanitary Authority act does; that the Air Pollution Authority's laws say the Authority may require the submission of plans, and that Harvey Aluminum was requested to supply plans for review and approval before the plant went into operation.

Mr. Wendel again stated that Harvey Aluminum has nothing to lose and everything to gain unless the staff became arbitrary.

Dr. Erickson explained to Dr. Rochon that the company would have to operate before the effectiveness of the equipment could be determined; that it was to their advantage to determine the equipment efficiency before making final payment to the installing company.

Mr. R.A. Pearce of Fluor Corporation, stated that his company also would like the Authority to state that the Harvey Aluminum plant control installations have been designed and installed with strict compliance to all laws.

Mr. Pearce informed the Authority that his company is trying to separate the design from operation.

Mrs. Barsch stated that the Authority can't give approval on design only since the Authority must know that the equipment has been properly installed and that can be determined through operation only.

Mr. Pearce did not agree with Mrs. Barsch and told the Authority this was entirely different; that a simulated test was run in May and they plan to continue testing. The Chairman added that if the Air Pollution Authority was expected to give this type of approval for all equipment throughout the state there would be no end of legal complications. He stated he would not clear such an approval and that the company should not expect it; and that the Authority has no obligation to do so. Dr. Rochon asked the Chairman if the Authority could reject plans.

The Chairman replied yes.

MOTION RE: The Dalles Harvey Aluminum

It was **MOVED** by Mr. Wendel and seconded by Dr. Erickson and carried that the Authority delay consideration of any final approval of the Harvey Aluminum Company's fume control systems until it was established that no public nuisance was being created.

MULTNOMAH COUNTY RE: Pacific Carbide and Alloy Company

The Chairman called on Mr. Clifton Glover, Asst. Mgr., Pacific Carbide and Alloy Company, to represent his company.

Mr. Glover stated that his company has submitted a stack sampling test today to the staff which had been conducted at the plant and that these tests showed an 83% removal. He stated their production was being reduced to 52% of capacity this month; however, the company will continue the stack sampling late in September to verify the 83% figure. He thanked the staff for locating another source of emission which had escaped the company. Mr. Glover added that the sources were more than they expected so are continuing testing in the immediate neighborhood. He added that these tests were from the lime kilns and that they are studying additional means and apparatus of controlling particulates from these kilns and hoped that within six months the problem will be solved. He added that when the plans are complete they will submit them to the staff for review.

Mr. Glover stated that during the hot, dry summer clouds of dust from trucks had fallen on their complaining neighbor's property. Mr. Glover stated they had ordered paving for the roads to handle this part of the problem. Mr. Glover stated

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they plan to cover their furnaces; that they have a new raw material contract and are working on everything to accomplish the best control.

The Chairman requested Mr. Hatchard to report on the staff activities concerning the Pacific Carbide and Alloy Company's dust emissions.

Mr. Hatchard reported that no air sampling had been carried on since March 1958 and that the data at that time supported the conclusions contained in the staff's report dated October 14, 1957. He explained that in this report it was found that the emissions from the company's calcium carbide production were in violation of Chapt. V, Sect. 2.2, 2.3 and 2.4 of the regulations. He stated that since that time the fallout station had been maintained and that complaints had continued from the Morrison Oil Company located just south of the Pacific Carbide and Alloy Company's plant.

Mr. Hatchard explained that the air sampling station on the Morrison Oil Company was in a heavy industrial land use area, but that just south of Columbia Blvd., which is the Portland municipal boundary an open land area exists which is now zoned for multiple family dwellings by the Portland Planning Commission and that this fact should be considered by the company when planning for additional dust control facilities.

Mr. T. Waters of Pacific Carbide wondered if the Authority was concerned regarding the University Homes property. He stated that there are many other kinds of operations like slaughter houses and rendering plants within a few hundred feet and wondered if this area should be used for residential use. He wished the staff to be aware of that aspect and added that when his company had an air pollution problem in the past before controls but they had very few complaints from that neighborhood since the wind was from other directions.

The Chairman wished to know if this aspect has been discussed with the Planning Commission.

Mr. Hatchard replied that it had not.

The Chairman stated that the location of the other plants nearby could be called to the attention of the City of Portland Planning Commission but added that the

staff could follow up this type of project. The Chairman asked if there were any comments or recommendations to make regarding this particular problem.

Mr. Hatchard stated that the staff would accept the invitation to confer with the company as the plans develop; and that he thought sampling should be delayed until the production of the plant was more normal.

Mr. West wished to know why production was now only 50% of normal.

Mr. Waters stated this was due to lack of business; that in time it was hoped the company would return to full production; that their rate of capacity expressed in electrical units is about 8000 kw. but would be about 4,000 kw next month.

Mr. West asked if the company doubled the present production would they have the same trouble as in the past.

Mr. Waters replied that they had the new controls.

The Chairman asked how many kw. they were operating on now.

Mr. Waters stated about 5000 kw.

The Chairman asked what was the maximum in the past year.

Mr. Waters stated about 6,000 kw, and added that the Morrison Oil Company was the only complainant.

Mr. Hatchard stated this was correct but lime concentrations, suspended particulates and fallout were a violation of the Authority's existing regulations.

The Chairman wished to know if satisfactory progress was being made to solve this problem.

Mr. Hatchard replied that the problem of whether reasonable control installations had been made or not would include economic aspects, land use and plans of the zoning commission for use of the land south of the plant and he indicated that more control be provided.

Mr. Waters stated in late September his company will be getting back to use of desirable raw materials and that the test results in September will be more comprehensive. MOTION RE: Pacific Carbide and Alloy Company

It was MOVED by Mr. Wendel and seconded by Dr. Erickson and carried that reasonable progress was being made; that the company was proceeding in good faith and desired

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to complete the controls and that the Authority postpone further consideration until a future meeting.

REVISION OF THE PROPOSED REGULATIONS FOR OPEN BURNING REFUSE DUMPS.

The Chairman asked if the proposed regulations for open burning refuse dumps were still being reviewed.

The Secretary explained that revisions were being made and that the reason the item appears on this agenda was that at the last meeting the Authority had directed that the comments be taken into consideration and that the matter be considered at the next meeting. He added that the staff was not ready to submit a revised draft for adoption; that further investigation was needed with municipal and county officials and others.

The Chairman stated that if this met with the approval of the Authority he would suggest the staff be directed to continue this study in conference with various parties and that the staff submit the proposed regulations for review before the next Authority meeting.

CONSIDERATION OF ODOR COMPLAINTS

The Chairman requested Mr. Hatchard to report on the odor complaint matter.

Mr. Hatchard stated that increasing numbers of complaints are being received regarding a variety of odor problems which originate from the discharges from such diverse activities as pea cannery operations, rendering plants, manure piles, glue factories and others. He stated that a large amount of staff time is required to establish whether public nuisance exists and whether it is within the jurisdiction of the air pollution control statute. He pointed out that many of these odor problems are of long standing, have involved local action and frequently could be handled by the local health department, district attorney or other local agencies by applying existing statutes regarding public nuisance. He stated that the staff investigation of some odor complaints created a problem since it caused delay in needed area atmospheric pollution surveys and our assistance to the planning and zoning agencies. He requested the Authority to instruct the staff as to a future procedure for handling these problems.

The Chairman asked if these could be classified as public nuisances and could the staff refer them to the health department.

Mr. Hatchard stated that many of the problems have been before various local agencies.

Mr. Wendel wished to know if some of these odor problems created a basis for civil action on the part of residents against the offender.

Mrs. Barsch stated they could as a private nuisance.

Mr. Wendel asked again if the Authority had instituted civil action against any offender.

Mr. Hatchard stated that the Authority had never done so.

Mrs. Barsch added that this may be the basis of a controversy; and the Authority should not appear to be instigating anything if it were a private nuisance and attempt to litigate responsibility.

Mr. Wendel said the Authority would not be proceeding properly if it was not advising the complainants what their rights were.

Mrs. Barsch said this could not be done because the staff would then be practicing law and that the staff should not instigate actions of this kind but perhaps the staff could advise local agencies what could be done to control the nuisance.

The Chairman stated that the problem was how to investigate pollution problems in the field that take so much time with an inadequate sized staff.

Mr. Hatchard stated that many situations were of long standing now; that the staff was working at it from a practical standpoint of trying to handle the increase.

Mr. Hatchard felt the answer was for more local action.

Dr. Erickson commented that there were various kinds of odors too and that some could be indicative of a contaminant which would have effects in addition to the odor.

Mr. Wendel stated that the Authority should encourage the staff to use its own judgment as to what sources of air pollution are the most serious and to treat those according to a priority of seriousness and that it is wrong to suggest to the staff they ignore any sources of air pollution.

The Chairman agreed with Mr. Wendel and added that wherever the staff knows that

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a particular problem might be handled by local health departments or the police department that this action be encouraged.

Mrs. Barsch stated that the handling of rendering plants and slaughter houses could be referred to the State Department of Agriculture and their attorney could bring action, and the responsibility would primarily be theirs since it was not air pollution alone.

The Chairman suggested that the staff could reduce some of this work by referring cases to other agencies wherever feasible.

City of Portland

The Chairman stated that the Authority has on occasions over many years discussed with representatives of the City of Portland the problems that pertain to air pollution within Portland and the city's lack of work in that connection. He stated he would like to receive a report from the staff at the next meeting summarizing the available data regarding existing conditions in the Portland area. He then suggested that at a subsequent meeting the Authority invite representatives of the city to meet and review the problem.

Mr. Hatchard asked if this would allow the staff to follow a priority on some of the complaint investigations.

The Chairman told Mr. Hatchard that if the staff could submit a report bringing the members up to date on the current work he believed then priorities could be worked out.

ADMINISTRATIVE: Cleaner Air Week

The Secretary then advised the members that National Cleaner Air Week has been set for October 19, through 25, and wished to obtain the members' guidance as to participation in any activities that the staff might wish to develop in Oregon both on a statewide basis and through some of the cities and other groups who would be interested in using the radio, television and other means of publication. The Secretary suggested that if the Authority indicated an interest in staff participation in Cleaner Air Week that sample proclamations would be prepared for the Governor's office and for the mayors of the cities to issue that week; and

would work with Health Education Section and prepare news releases calling attention to Cleaner Air Week.

The Chairman replied that he agreed with this approach.

National Conference on Air Pollution

The Secretary stated that a National Conference on Air Pollution was being called by the PHS Surgeon General during November 18, 19 and 20 and that the purpose of the meetings was to develop a 10 year plan of action and to outline steps necessary to achieve control objectives. The Secretary stated that the general public, specialists in all fields of air pollution, Federal, State, County and City Officials, Industries and other groups have been invited to participate in the conference which had been planned carefully by a committee appointed by the Surgeon General. The Secretary added he hoped the members would request the State Board of Health to authorize one of the staff members to attend; that he felt the information obtained would be worthwhile.

Mr. Wendel wished to know if the Air Pollution Authority's budget had sufficient funds.

The Secretary said it did.

Mr. Wendel stated he would recommend to the Board that an individual from the staff attend.

The Secretary added that if Dr. Erickson preferred another approach that he would withdraw the suggestion.

Dr. Erickson stated he thought that this is a very important meeting and Oregon should be represented.

MOTION RE: National Conference on Air Pollution

It was MOVED by Mr. Wendel and seconded by Mr. West and carried that the members request the State Board of Health for authority to send a representative to the National Conference on Air Pollution.

Planning and Zoning Agencies Performance Regulations

The Chairman requested Mr. Agee to report on Planning & Zoning Agencies Performance Regulations.

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Mr. Agee stated that at the request of the Bureau of Municipal Research the staff had prepared a set of air pollution standards which could be incorporated into performance standards for industrial park zoning and that the final copy of these standards were being reviewed for legal aspects. The staff had also been requested by a planning consultant employed by the cities of Forest Grove and Bend for assistance in preparing air pollution performance standards for zoning in these two cities. The staff will continue to work in the field of planning and zoning in an effort to prevent future air pollution problems.

Oregon State College Engineering Experiment Station's Wigwam Burner Study

The Chairman called on Mr. Hatchard to summarize the status of the college study of waste wood burners.

Mr. Hatchard reported that the findings from the first year of study were presented at a meeting of the lumber industry officials at Springfield on June 12, and approximately 40 representatives attended. He stated that the project engineers had prepared a summary report which showed that significant improvements in smoke, cinders and flyash emissions could be brought about by relatively simple operational controls.

He stated that the college had obtained a supplementary \$10,000 grant from the Public Health Service Community Air Pollution Demonstration Project and that the project would not attempt to define the design parameters which limits a waste burner operation. He stated that a pilot plant had been erected on the west side of Parker Stadium in Corvallis and that daily runs were being made with varying fuel compositions, air flow, temperature, etc.

The Chairman asked if the findings to date have been publicised and circularized to burner operators.

Mr. Hatchard stated that the college is going to publish the complete findings and they will be available in late September and that over 3000 copies would be distributed.

Area Atmospheric Sampling Surveys

The Chairman requested Mr. Percy to report on Area Atmospheric Sampling Surveys.

Mr. Percy stated that during June and July of 1958 intermittent high volume sampling for suspended particulate was conducted at three stations in the Portland area under different weather conditions. He stated that in August sampling at the three Portland sites was continued including sampling for oxidants, nitrogen dioxide and sulfur dioxide contaminants which are considered important in the formation of a Los Angeles type smog condition. He reported that sampling was also conducted in Pendleton during the latter part of August and first part of September utilizing two stations; one to establish normal background for suspended particulate and the other to measure suspended particulate in the city. He stated that additional suspended particulate sampling would be completed during September and October in Springfield, Eugene, Klamath Falls, Roseburg and Medford. During October plans have been made for a one week of intensive sampling in the Portland area in conjunction with representative of PHS to determine concentration of suspended particulate, fallout, nitrogen dioxide, sulfur dioxide, fluoride, total oxidants, smoke concentrations and visibility recordings. These area surveys will furnish information that will be correlated with sampling data collected at regular stations in these areas.

Status of Open Burning Refuse Dumps in Multnomah County

The Chairman invited Mr. Hatchard to summarize the status of the open burning refuse dumps in Multnomah County.

Mr. Hatchard stated that the staff had maintained its surveillance of the five Multnomah County refuse dumps where open burning caused complaints. He explained that intermittent burning is still occurring; however, two complaints have been filed with the Multnomah County District Attorney's office involving the dump at S.E. 126th and Stark and the Knapp Refuse Dump at 1233 N. Columbia Blvd. He stated that arrests had been made; bail posted and the defense attorney had filed demurrers and that at the present time the matter would be heard in the Multnomah County District Court on September 24, 1958. He stated that the staff was serving as a consultant to the Multnomah County District Attorney's office in obtaining air sampling data and field observations including photographs in accordance with previous Authority instructions.

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New Complaints

The Chairman wished to know if there were any written complaints to be considered.

The Secretary then summarized the following complaints.

1. R. Davis complaining of smoke from Electro Metallurgical plant in Multnomah County.
2. Complaint signed by Mgr. of N.W. Liquid Feed Company regarding Electro Metallurgical plant.
3. Complaint signed by a number of residents from Washington County regarding the Stanton Manufacturing Company.
4. Request from Clackamas County Health Dept. regarding odor nuisances in the vicinity of Oregon City.
5. Petition from 12 Washington County residents petitioning the Air Pollution Authority to abate a refuse and garbage dump at Laurel.
6. Complaint relative to fumes from a mill in the rear of property located on 6535 S.E. 62nd Ave., Portland.
7. Complaints from Gen. Vachon, Shady Cove, Oregon regarding cinder deposition.
8. Complaints from Beaverton, Oregon relating to disposal of sludge from the sewage treatment plant.
9. Petition relative to soot, etc., from Brown Paper & Pipe Company, Corvallis, Oregon.
10. Petition containing 21 signatures registering complaint of Kosher and Sons Fertilizer Plant, N.E. 44th and Holman, Multnomah, Oregon.

The Secretary added that the staff has made every effort to investigate as many complaints as possible but with the number of staff members we have and the other work to do we have not been able to take care of them all. He pointed out that this was an example of some investigations being made on the basis of priority regarding the seriousness of the problem.

Mr. Wendel wished to know if all of these complaints have been acknowledged.

The Secretary answered that they were.

The Chairman instructed the staff to complete investigations as possible and ask other agencies to help.

Clara H. Shaw of Laurel Community stated that there was a severe problem in Washington County regarding an open dump on an 80 acre hillside which was close to the highway and about 200 to 300 feet to the closest house. She stated that people are trying to raise families, enjoy the outdoors but none of this can be done on account of this dump and that air pollution has been a very big problem along with rodent infestation which has gotten so bad some residents have moved away. She stated her group has tried to obtain legal counsel on this problem and for the past week or so have been in Salem and that they are always referred back to the Air Pollution Authority. She stated Mr. Laverne S. Miller of State Board of Health, Vector Control Program, has tried to help and her group had the services of two attorneys who came out to the site one hot day this summer and they claimed the odor was so obnoxious that it alone was enough to convince an attorney to take the case. At this time, she stated, they are prepared to take legal action but thought they would try this petition for abatement first before going into a damage suit.

The Chairman asked Mrs. Shaw if this matter had been referred to Washington County. Mrs. Shaw stated that Mr. Sweet, Washington County Sanitarian, had given her a letter saying this nuisance should be abated and that L. Miller came out with Mr. Sweet to investigate but the Washington County Commissioners claim there was no garbage there so they requested abatement through the Air Pollution Authority. The Chairman asked her if there has been a written complaint made to the County Commissioner in Washington County.

Mrs. Shaw stated that there was a petition with 108 signatures which was filed in the Washington County records.

The Chairman asked if the 80 acres are owned by the county.

Mr. Hatchard stated that no staff member has made an investigation; that the complaint was filed July 23. He stated the Authority has acknowledged receipt of the complaint

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and investigation will be made when other commitments allow. He stated that court action is pending in the local circuit court and that if action in court involved the situation then the staff probably could not make the investigation. The Chairman asked if this was a problem of public health rather than air pollution.

Mr. Hatchard thought so and further believed there has not been burning at the dump for the past year.

Mrs. Barsch stated this is only a partial air pollution problem and this Authority can't call for abatement on rodent and fire hazard.

The Chairman explained to Mrs. Shaw that this agency can not dictate to anyone what to do; that it seems the problem presented is one that is a public nuisance and a public health problem and not basically an air pollution problem.

Mr. Wendel asked if it would be appropriate to ask Mr. Hatchard if the staff could give this case some priority and if found to any degree to be an air pollution problem he consult with the Chairman and take appropriate steps to alleviate this. If this is not then an air pollution problem and is a health problem then refer it to the proper agency.

The Chairman stated to Mrs. Shaw that the Authority will refer this case to the staff for investigation.

Mr. Wm. Templeman, 7302 N.E. 42nd St., stated a petition was sent to the Air Pollution Authority regarding a fertilizer dump near his home. He stated that Mr. Hatchard had checked it. He stated the day Mr. Hatchard called there and since that time the situation has not been as bad as previously when the situation was unbearable. He stated that this manure pile was started about a year ago and it now extends over 5 or 6 acres and that it was only 120 feet from his home. He stated he would like something done about this and wished to know the procedure which will be taken.

The Chairman invited the staff to comment.

Mr. Hatchard stated this problem is the type which would take a series of observations to evaluate and was an example of the staff problem. He informed

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the members that his staff was only able to make one field investigation thus far and had found the owner quite responsive and that some recommendations had been made.

Mrs. Barsch asked what the general land use was out there.

Mr. Hatchard stated it is mixed and felt it to be non-conforming land use but that he has not checked with Multnomah County Planning Commission.

Mrs. Barsch wanted to know if others have complained.

Mr. Hatchard said that several residents had signed the letter and that several telephone calls had been received when the odors were especially strong.

Mrs. Barsch wanted to know if there were chemicals to spray on the manure to neutralize the odors.

Mr. Hatchard stated that several companies have masking agents available.

Mrs. Barsch added that the owner of the dump must use every known facility to reduce the nuisance.

The Chairman stated that here again was a health problem that should be referred to the local Health Department.

Mr. Templeman stated they had Multnomah County Health Department make an investigation about two years ago.

Mr. Wendel stated he felt this case was severe enough and that the same direction to the staff could apply here as on the preceding case.

The Chairman directed the staff to try to give this complaint priority and that if it appears to belong in another category that the staff channel it to the appropriate agency.

The next regular Air Pollution Authority meeting was set at the call of the Chairman and the meeting was adjourned at 4:15 P.M.

Respectfully submitted,

Curtiss M. Everts
CURTISS M. EVERTS, Secretary
Oregon State Air Pollution Authority

TWENTY THIRD MEETING
OF THE
OREGON STATE AIR POLLUTION AUTHORITY

The twenty-third meeting of the Oregon State Air Pollution Authority was called to order by the Chairman at 2:00 PM Wednesday, March 4, 1959, in Room 36, State Office Bldg., 1400 S.W. 5th Avenue, Portland, Oregon. Those present were Carl E. Green, Chairman, Merle S. West, Vice Chairman, Dr. Harold M. Erickson, Harold F. Wendel, members and Curtiss M. Everts, Secretary, Mrs. Catharine C. Barsch, Special Assistant Attorney General, R. E. Hatchard, Chief of the Air Pollution Control Section, J. L. Agee, Associate Sanitary Engineer, R. Ott, Chemical Engineer, R. B. Percy, and Edward Taylor, Chemists, State Board of Health.

MOTION RE: MINUTES OF PREVIOUS MEETING

The minutes of the twenty-second meeting held August 27, 1958 were summarized by the Secretary. The Chairman declared if there were no corrections the minutes would stand approved as prepared by the Secretary.

MOTION RE: ELECTION OF OFFICERS

The Chairman announced that it was necessary to elect Authority officers for 1959. It was MOVED by Mr. West and seconded by Mr. Wendel and carried that Carl E. Green be re-elected Chairman of the Air Pollution Authority for 1959.

It was MOVED by Mr. Wendel and seconded by Dr. Erickson and carried that Mr. West be re-elected Vice-Chairman of the Authority for 1959.

PORTLAND RE: The Occurrence of Air Pollution in Portland and Vicinity

The Chairman requested Mr. Hatchard to report on the staff's preparation of "A Report on Air Pollution Conditions in the City of Portland" February 1959. Mr. Hatchard stated that during the last Authority meeting the staff was instructed to summarize all available information regarding air pollution conditions in Portland. He explained that the staff had been conducting area surveys since 1952 and that data from air sampling, such as particle fallout, covered a 6 year period. He pointed out that originally 27 stations were used in Portland and that after the first year the number was reduced to 4 representative stations. He reported that

over 50 particle fallout stations had operated at various times to study local air pollution problems. He identified the locations of the existing area sampling stations on a map of Portland which also included the collection of high volume filter samples to identify the suspended particulate concentrations. He displayed a filter sample collected from the State Office Bldg., station on March 4, at 10:40 AM and reported that the suspended particulate concentration was 386 micrograms per cubic meter.

He stated that the report also included data obtained in October 1958 during a one week period of intensive sampling for gaseous contaminants such as oxidant, sulfur dioxide, oxides of nitrogen and carbon monoxide. He reported that during this period the prevailing meteorological conditions allowed the collection of data that described air contaminant concentrations during temperature inversion periods.

He stated that the report had been delivered to the City of Portland on February 18, 1959, and that 10 copies were transmitted by letter to the Health Officer, Portland Bureau of Health, and five copies were sent to the Mayor and City Commissioners.

He reported that additional copies were sent to individuals and organizations that had previously requested the report. He stated that the summary included in the report showed that particle fallout values exceeded the Authority's regulations approximately 70% of the time at the downtown sampling stations. He stated that the concentration of suspended particulates found during temperature inversion conditions also showed concentrations in excess of the Authority's regulations and that this data was tabulated for the past six years of area-wide sampling.

He stated that since the report had been available for the past two weeks that there appeared no need to summarize each conclusion.

The Chairman asked Mayor Terry Schruck if he wished to present information on this subject.

Mayor Schruck stated that the City Engineer, Health Officer and various members of the Portland staff are vitally concerned with the Portland air pollution problem. However, he stated, that he and others took a dim view of the release of this report to the press and that he did not think it spoke well for good, sound relationship

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of the city and state governments. He stated that the city and state should work together with problems and that he believed the situation created by this report was ironic because the state was merely criticizing the city and was not acting in a constructive, helpful manner.

He stated that the City of Portland had improved programs in many departments and cited the milk, meat and slaughter house inspections as examples of the reduction or duplication of effort that had been brought about by cooperation of the city and State Department of Agriculture.

He stated that it would appear in this "attack" that has been made by the state that the state's philosophy was much different than the policies the city has been trying to pursue. He stated that air pollution problems stem from metropolitan sources and that all should work together on controls. He promised to keep ahead of the problem and take whatever corrective steps possible in the City of Portland with the available personnel. He stated that the state "in its attack had beat down the City of Portland", that the city wants to work with the state and not continually battle. He said the city was aware and recognized that air contamination occurs during certain periods but he thought certainly that the study covered a small period of time. Mayor Schrunk said he had included a request in the 1960 fiscal year budget for employing a staff and that the previous budget requests had not been approved. He stated again that they want to work with the state's assistance and not bickering between them. He added that apparently the state chose to make a big issue of this report in the press rather than discuss it with city representatives which builds barriers that are hard to break down.

Dr. Thomas L. Meador, Health Officer, Portland Health Bureau, stated that according to the Mayor's statement the state's actions had been one of coercion rather than one of assistance. Dr. Meador stated that it had been difficult to get any assistance from the Authority. He explained that the specific statement in the report regarding the relationship of the Authority to municipalities was not consistent with what has been occurring.

He stated that the report is an excellent summary of what is known and summarized it in one report but adds little new knowledge about Portland's air pollution conditions. He said there were no active, specific suggestions presented on how to meet the problems present in the City of Portland, and that is what is desperately needed. He stated, however, that he did not think the situation was as bad as the report presented it to be, but that the city wants assistance and that the city was entitled to it. He added that the state promised it would be provided, if possible, and that the state would take care of situations outside of the city. He stated that after all the City of Portland is inside the State of Oregon. He said that the state is assuming the attitude that it is glad to tax the city in any way possible but unwilling to give assistance. Dr. Meador said the city asked about a year ago for some type of good assistance to develop a realistic program in Portland. He stated even though it meant personnel and time that it should get started now and quit wrangling back and forth.

Mr. Sherman Washburn of 18222 S.E. River Road, Milwaukie, Oregon, stated he wished to speak as a resident of the metropolitan Portland area and that during the past two years he had been close to this civic problem. He stated that in studying the problem he found local government to be a hodgepodge of small administrations. He asked the state to take the leadership and set up the nucleus for metropolitan air pollution control. He stated that if left to communities to solve among themselves that the program would fail.

Mr. Carleton Whitehead, Secretary, Portland Air Pollution Advisory Committee, spoke also as an individual. He reiterated Mr. Washburn's words that the most important and encouraging thing was that all parties concerned want to work together on the Portland air pollution problem. Failure to cooperate, he said, would only lead to disaster for the community. He further stated that everyone should realize that the Advisory Committee to the City of Portland has for several years believed that money should be found for the creation of the initial staff for control of air pollution in the City of Portland. He said to make a start now and then work out the problems as the activity progressed. He added, that, speaking as a citizen and not for the

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city's Advisory Committee, that the City of Portland has a responsibility to help initiate, cooperate and provide the basic staff and train personnel which will make it possible to work with the state towards the development of a constructive program. He stated that air pollution definitely will increase if something is not done now.

The Chairman asked if others wished to be heard.

Mr. West asked Mayor Schrunk if he thought the situation was not as serious as stated in the report. He asked further if the city had any scientific basis for their conclusions.

Mayor Schrunk replied that the city did not and that he did not think the state did either. He stated that there was a problem but if the city always followed all theories then Portland could become a "ghost town" by arbitrary rules and regulations; that 1/2 million dollars has been spent on air pollution control in the city already and that he did not believe arbitrary "hounding of industry by scare headlines was any good" but that this activity should be approached on a good sound basis.

Mr. West informed the Mayor that the Portland report was made on the basic scientific findings.

Mayor Schrunk said that the city has not been able to get technical answers on the scientific basis that Mr. West was talking about.

Mr. West asked if there was any information the staff had that the city could not obtain.

The Chairman replied that the staff has provided all the information on hand to assist the city.

Mr. Hatchard stated that was correct; that the Authority's staff has tried to assist wherever it could and that the staff could not release data until the completed work was available. Mr. Hatchard stated that in following the Authority's policies of the past and present it was not the staff's responsibility to work out specific solutions; that the Authority has responded to requests throughout the state to assist, in any way possible; that the Authority has a reference file and information

for, that was provided. Regarding the question of technical facilities engineering-wise or the cost of materials, etc., the work that is going on now established that assistance is provided.

Dr. Meador stated there had been only about 25 trips by the Authority's staff to various industries; that one of the Authority's staff member had attended about twelve at the city's Air Pollution Committee meetings. He stated that in the past year the city did not ask for help because letters were received each time regarding the lack of personnel and more important pending matters. He informed the Authority that the city has taken care of 250 specific complaints without the help of the Air Pollution Authority since they couldn't get it. He further added that there is one operation in progress at the present time involving 125 complaints; and that it was very active and has to do with odor. He stated the city had asked for help on it; that 4 visits were made and one engineer stated that it was all right at that time but since then the problem goes on and the city has had no assistance at all. He added that he agreed that Portland should have some staff of its own but believed that the city was entitled to assistance from the state also.

Mr. Wendel said that he couldn't understand why this report was regarded as an "attack". He said certainly he could not construe it as an attack; that it was supposed to be a factual report which is intended as assistance to the City of Portland. He said that the manner in which it was made public was not meant to be in an unfriendly way. Mr. Wendel stated that this report was delivered to the city at least 12 hours in advance of release to the press. He stated that if we are agreed that a program must get underway for the control of air pollution in Portland before we have the horrible conditions that are present in other cities, and we have similar potential here, it was important to get started and forget the bickering over the report.

Dr. Erickson stated that he was concerned about the manner in which the city officials thought the release was made. He stated it was his understanding that the city had the report before it was released to the press; and that he felt the Authority and its staff were anxious to cooperate with Portland.

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The Chairman concluded that he thought he was speaking for all and stated that it was the intent of the Authority to cooperate with the city fully; that the Authority and the staff were ready to meet with the City of Portland and consider further the objectives to be accomplished in the control and prevention of air pollution.

PUBLIC HEARING RE: Proposed Regulations for Open-Burning Refuse Dumps

The Chairman requested Mr. Agee to report on the proposed regulations for open burning refuse dumps.

Mr. Agee stated that the first public hearing on the proposed regulations for open burning of refuse dumps was held April 1958 and that the present draft of the regulations was a revision based on comments presented. He stated that the proposed regulations prohibit open burning of refuse wherever nuisance conditions exist and specifically the proposed regulations would prohibit open burning in cities greater than 45,000 to a distance six miles beyond their city boundaries. He stated that the proposed regulations for cities between 10,000 and 45,000 population prohibit open burning of refuse and garbage to a distance beyond 3 miles from the city boundaries. He explained that exceptions to the proposed regulations were included which would allow open burning for weed abatement and pest control, controlled burning for fire prevention and open burning from two-family residences or less. He reported that the regulations provide for a city or a community, which have adopted rules or ordinances controlling the disposal of garbage and refuse, to permit variances to these regulations where no public nuisances are created.

The Chairman asked the Secretary to review the letters received regarding the proposed open burning regulations.

The Secretary reported that letters had been received from the following cities and individuals after review of the proposed open burning regulations:

1. State Department of Agriculture by Frank McKennon, 12-17-58.
2. City Manager of Eugene, 2-26-59.
3. Dr. H. T. Osterud, Director of Eugene-Lane County Health Dept. 2-20-59.
4. City of Klamath Falls by City Mgr. G.S. Vergeer. 2-24-59.
5. City of Bend, City Mgr. W. T. Thompson. 2-25-59.
6. Walter P. Browne, MD Health Officer, Umatilla County Health Dept. 2-27-59.
7. Mr. Adkison, Air Pollution Officer, City of Eugene on 3-2-59.

The Chairman asked if anyone was present who wished to be heard.

Mr. John H. Deines, Sanitary Truck Driver, Union 220, stated he would like to make a report on what happened in Portland since the last meeting of the Authority.

Mr. Deines stated that burning has been curtailed and that several dumps have been closed which created a hardship. He added that there was only one disposal site remaining near the City of Portland where it was legal to burn refuse. He stated his phone rings constantly from people asking where they may dispose of refuse. He pointed out that the outcome of this is that in various areas people are now burning trash and residue on their own property. He also reported that people are installing incinerators because the cost of hauling the refuse is too high. He asked if it was the policy of the Authority to force people to take these actions. He informed the Authority that Portland gets on an average of 500 to 600 truck loads of garbage a day and unless provisions are made for disposal, trouble will be encountered. He explained that it is too costly to haul refuse and garbage 25 to 30 miles for a round trip. He stated that there was need for a long-range study and that his union was now feeling the effects of the proposed rules and regulations; that the general public was not getting any service and all the Authority had accomplished by the regulations for open burning refuse dumps was to make many people irate. He felt he was at a loss to find a solution and no matter what was done there was the chance of arrest.

He stated that last summer his group had made an agreement with the County Court of Clackamas County but that was just a temporary arrangement. He said each individual has to do the best he can with his own project; but instead that he would prefer to be invited to the discussion when the Authority was ready to consider the whole refuse and garbage disposal problem. He indicated that from this hearing something definite should be decided upon rather than just criticism of the existing practices. He emphasized that all that was desired was something workable. He reported that Los Angeles County had done a lot of expensive work on this so why couldn't a similar project get started here. He concluded that he hoped something constructive would come from this meeting so that everybody wouldn't be mad at each other.

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Miss Carlie Gilstrap of 405 N. Russett St., stated she was on the receiving end of this problem and that she represented about 1100 people and was asking again that something be done. She stated that there was a provision that has been made by Multnomah County but that Mr. Deines forgot to mention that the county was establishing sanitary landfills. She said that the night before there was heavy smoke from refuse burning near her residence. Miss Gilstrap said everyone would welcome some kind of regulation that would once and for all take care of the refuse problem. She stated that there has been a long stalling process; that communications have been sent with no replies; that public hearings and discussions have been held and still nothing had really been accomplished. She stated that Multnomah County had provided about 3 months for dump operators to get plans ready but no plans were submitted to the county. She added that the Authority has been one agency that has given some of the best support for removing public nuisance from refuse burning and she commended the efforts of the Authority. Concluding, she stated, that she believed the proposed regulations reasonable and that they do not work a hardship but instead made allowances for exceptions and until something was done state-wide, this problem will go on and on. She requested that something concrete be decided upon right now at this meeting.

The Chairman called on Mr. Gordon L. Burt, City Engineer, Portland. Mr. Burt said he wished to know if the Section 4.4 f was intended to apply to the City of Portland at its remote refuse fill on N. Swift Blvd., and would allow continuation of the same type of operation that was currently underway which included controlled burning of tires at night and tramp lumber and dry refuse in a small burning dump. He told the Authority again that the bulk of the refuse generally goes on the sanitary fill and was compacted; that there is some open burning of casual loads that do not pack into the fill.

The Chairman requested Mr. Hatchard clarify whether the City of Portland refuse dump could continue present burning.

Mr. Hatchard stated that the Authority had received no direct complaints regarding the City of Portland's refuse disposal practices; that this location was

remote compared with other dumps. He stated that it was difficult to operate controlled burning since the weather conditions can change rapidly. He explained that the staff had not collected air samples downwind from the Portland refuse disposal site when burning operations were underway.

The Chairman asked if the city incinerator was available for use.

Mr. Burt replied that the incinerator was operating and that at the Authority's suggestion open refuse burning was being reduced. He informed the Authority that the city was including funds in the budget for a chipper to handle brush so it may be added to the fill rather than burned. He said the city had authorized a representative to travel to California to learn what was being done in this regard. He stated that his opinion was that the city had a refuse disposal program which was very economical. He reported that the burning of tires caused lots of black smoke and it was his hope that any smoke would be carried away from town; but if the tires are placed in a fill, air spaces are created and, when a loaded truck moves over the top, the tires move to the surface and that also would cause quite a problem.

Mr. Burt stated that the proposed regulations appear to give the Council the privilege of exempting the Portland refuse disposal site from the regulations.

The Chairman replied that the City Council may provide a variance with procedure if a public nuisance is not created by the burning refuse as defined by 449.730 ORS.

The Chairman asked Mr. Burt if the tramp lumber and tires could be burned in the present incinerator without it being chipped.

Mr. Burt replied it could not be done without a large hammermill that would cost the city about \$60,000. He explained that the existing incinerators are the old beehive type and can not be heavily charged.

Mr. Wendel asked Mr. Burt if the regulations were satisfactory to the City of Portland.

Mr. Burt said the regulations are satisfactory and wanted to confirm that the refuse disposal operation could continue the existing practices.

Mr. Wendel replied that as long as there are no complaints of nuisance the procedure was satisfactory. Mr. Wendel asked Mr. Hatchard if this was correct.

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Mr. Hatchard answered this was agreeable at the present time.

Mrs. Barsch asked if Mr. Burt was sure that there was no nuisance created beyond the city area.

Mr. Burt said he was not sure and that it would take a court of law to determine that.

Dr. Erickson asked if the city had received any complaints.

Mr. David B. Westby, Refuse Disposal Superintendent, Portland, replied that no complaint had been received.

Mr. Burt explained that several years ago heavy firing of the incinerator was done and if the incinerators are fired heavily, partially burned paper and flyash are discharged.

The Chairman asked the Authority if action should be taken today on the proposed regulations; that have been under consideration for about $1\frac{1}{2}$ years.

Mr. William Schlitt, Sanitary Service Company, Salem, Oregon, stated that he had a question about the application of the proposed regulations. He stated that he operated a city dump approximately $7\frac{1}{2}$ miles east of the Salem City Hall or five miles east of the city limits. He asked if the adoption of the regulations for a city of 40,000 population or more to be six miles from the city limits and then wouldn't the county court have something to say.

Mrs. Barsch said that the county court probably would be concerned for a new installation and could be interested in an existing dump if the county had adopted regulations for garbage and refuse disposal.

Mr. Schlitt explained that he has tried to stay within the existing regulations and that they only burn at night when the winds are away from the community.

Mrs. Barsch asked Mr. Schlitt if he was referring to a municipal dump.

Mr. Schlitt stated it is privately owned but used by the citizens of Salem also.

The Chairman explained that the Authority has reviewed and revised the proposed regulations many times and everyone concerned has had the opportunity to be heard; that the Authority will need now to determine an effective date for adoption.

Mr. West stated he thought the 3 mile limit in the proposed regulations arbitrary and could it be stated in some other manner depending perhaps upon the topography? The Chairman wanted to know if any specific distances should be included in the regulations.

Mr. Wendel said what if it is outside the six mile radius and still creates a nuisance.

Mr. Hatchard replied that recommendations would be made to the person responsible.

The Chairman asked the members if they thought about a year was enough time to provide before the regulations were enforced.

Dr. Erickson agreed and suggested January 1, 1960.

Mrs. Barsch asked the Chairman if he was considering building facilities and the extent of work involved with construction.

The Chairman explained that for open refuse burning no particular structures were required and that these regulations do not apply to incinerators.

MOTION RE: Proposed Regulations for Open-Burning Refuse Dumps

It was MOVED by Mr. Wendel and seconded by Dr. Erickson that the rules and regulations on open refuse burning be adopted and that the effective date for prohibition be January 1, 1960.

Mr. Wendel stated he understood that a copy of these regulations will be sent to all interested parties and publicised so that everyone will be informed.

MULTNOMAH RE: Pacific Carbide and Alloy Company

The Chairman asked Mr. Agee to report on progress at Pacific Carbide and Alloy Company.

Mr. Agee stated that at the last meeting of the Air Pollution Authority a representative from Pacific Carbide and Alloy Company submitted stack sampling data to the Authority. On the basis of this data, and area survey sampling results, violation of the Authority's regulations was shown. He reported that the company was requested to proceed with the design and installation of additional air pollution control facilities and that a plan for a stack scrubbing installation was submitted by the company which would remove particulate matter and lime dust from the lime kiln stacks.

He explained that the plan was reviewed and permission for the company to proceed

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with the installation was granted in a letter dated February 24, 1959. He stated that the company management was advised that the plant emissions must not cause nuisance as defined by the Authority regulations and that the company was requested to advise the Authority when the installation had been completed and when stack sampling information would be obtained.

NORTH ALBANY RE: Western Kraft Corporation.

The Chairman instructed R.R.Ott to report on activities concerning Western Kraft Corporation.

Mr. Ott stated that since the last Air Pollution Authority meeting the technical staff of the Authority had reviewed Western Kraft's Second Interim Report dated September 24, 1958 and on the basis of this report, it was believed that the sampling data could be used in the design of further control equipment for their recovery furnaces and digester gas emissions. He reported that stack sampling at other emission sources along with surveys were included in the future activities that Western Kraft Corporation agreed would be done. He reported that limited odor surveys in the area near Western Kraft have been made since the last Authority meeting and that when meteorological and weather effects are not favorable for the dispersion of odors, threshold and definite characteristic odors of the constituents were still present. He stated that Western Kraft, in a letter from Mr. Seton dated 12-8-58, had advised the Air Pollution Authority equipment had been installed to improve furnace combustion control and that the No. 2 recovery boiler stack would be extended. He stated that the staff will complete intensive odor surveys near Western Kraft Corporation and that this data along with other information will be presented at the next Air Pollution Authority meeting.

THE DALLES RE: Harvey Aluminum

The Chairman requested Mr. Percy to report on the Harvey Aluminum Company in The Dalles.

Mr. Percy stated that staff activities in The Dalles included atmospheric sampling for fluorides from stations at the City Hall and the State Highway Department Building. He said that continued plant and area surveys have been made and

Harvey Aluminum is conducting fallout sampling on a weekly basis, making occasional stack sampling tests and maintaining full operation of scrubbers and dust collectors on all pot lines. He stated that Oregon State College Agricultural Experiment Station was conducting fluoride tests on foliage and other plant life in the area collected from 19 stations in the vicinity of The Dalles. He stated that the information gained from this study will be correlated, at a later date, with atmospheric fluoride data collected by the Authority's staff. He stated one written complaint had been received by the Authority from a resident who operated a farm approximately 800 feet from the aluminum plant. He added that the complainant has been contacted and the effect on the complainant and his property was being investigated. Mr. Percy said the staff plans to continue monitoring the atmosphere in The Dalles to determine fluoride levels and to insure effective operations of scrubber and dust removal system at Harvey Aluminum Company. He recommended that Harvey Aluminum make stack sampling test runs at more frequent intervals in order to evaluate the over-all efficiency of the control system.

The Chairman indicated that the Secretary should send this recommendation to the management of Harvey Aluminum.

NORTH BEND RE: Menasha Plywood Corporation

The Chairman requested Mr. Hatchard to report on the North Bend complaint investigations.

Mr. Hatchard stated that the City of North Bend had received complaints from residents near the Menasha Plywood Corporation's mill regarding an excessive cinder and flyash deposition. The city had requested assistance in the investigation of the problem and that a survey and plant visit had been completed in February. He reported that the mill management was currently working on the control of the emissions from the waste wood burner; that a decision had been made to install a new burner that would be adequate in size for the quantity of wood waste. He stated that the new burner would include facilities for controlling the combustion conditions by temperature thermocouples and other devices. He stated that the plans and specifications for this work will be submitted to the Authority for review.

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NORTH BEND RE: Weyerhaeuser Timber Company

The Chairman requested Mr. Hatchard to report on the status of the investigation of the Weyerhaeuser Timber Company.

Mr. Hatchard stated that a comprehensive summary statement was prepared by Weyerhaeuser Timber Company explaining why a waste burner was now needed. He explained that in the middle of January 1959 the Pacific Power and Light Company's steam generating plant in North Bend was placed on a standby status which resulted in an excess of 300 to 400 units of hog fuel per day. The Weyerhaeuser Timber Company had studied alternate use of the wood residue but due to current economic conditions temporary use of waste burner appeared to be the only solution. He explained that the company had retained the services of Professor M. Popovich as a consultant in order to provide wood waste disposal facilities that would produce no flyash problem downwind from the burner. He stated that Professor Popovich is also Director of the Oregon State College Engineering Experiment Station and that the staff had reviewed the proposal with A. O. Karlen, Mgr. of the North Bend Weyerhaeuser mill and his staff. Mr. Hatchard pointed out that a thorough test of the burner unit, which was completed during the latter part of January had not been made since the mill has been shut down since January 22, due to a labor strike.

EASTSIDE: Georgia-Pacific, Coos Bay Lumber Division

The Chairman requested Mr. Hatchard to present a report on the status of the Eastside cinder and flyash deposition conditions.

Mr. Hatchard reported that a plant survey was made February 1959 and it was noted that the company had completed the installation of an additional new steam boiler which replaced two obsolete dutch oven units and that multiclone type cinder collecting facilities were installed on the new boiler which was operating on removal efficiency of 90-92%. He explained that the Georgia-Pacific Corporation's Coos Bay Lumber Division, included a green cut lumber mill, a wood fiber hardboard plant and a new plywood mill which started production early this year. The survey disclosed that an excessive deposition of unburned wood particles was evident in Eastside particularly during the past 2-3 weeks. He stated that the General Mgr.

Mr. Joseph Stronko, had assured that the company would complete changes in the disposal of wood fiber residue from the hardboard process and cinder dust from the plywood mill so that the material would be burned in the steam generating plant.

Mr. Hatchard explained that the current disposal was through the waste burner.

The Chairman decided to accept the progress reports and requested subsequent reports at the next meeting.

MUNICIPAL SURVEYS IN SALEM, Springfield, Roseburg, Medford and Pendleton.

The Chairman requested Mr. Agee to present a report on the status of Salem, Springfield, Roseburg, Medford and Pendleton area surveys.

Mr. Agee stated the staff has initiated air pollution surveys in Salem, Springfield, Roseburg, Medford and Pendleton and that the cities were invited to participate in a joint project to determine existing and potential sources of air pollution. He explained that a city representative will survey sources within the city limits and the Authority's staff will complete survey activities beyond the city limits. He indicated that approximately one day each week will be spent by each city worker for about six months. He stated that the joint report would include sampling information and field survey data with recommendations and would be submitted to each city Council at the end of the six month period. He advised that some specific complaint problems were included in the surveys.

The Chairman asked if anyone from the 5 cities came to be heard.

Three representatives of the Salem Chapter of the League of Women Voters, Mrs. M. Cleveland, President, Mrs. Churchill and Mrs. Howe, were present but they stated they did not come prepared to make any statements except they would like to be notified who is going to conduct the city survey in Salem.

Mr. Hatchard stated that the complaint in Salem related to the Oregon Pulp and Paper Company; that last week the staff had started a sampling program in Salem for sulfur dioxide and that traces of sulfur dioxide had been found. He advised the Authority that the staff was handling this problem in the same fashion as other investigations are handled and that the matter was discussed with City Manager Kent Mathewson and that assistance would be provided by the city-county health department.

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Dr. Erickson asked if there is to be one survey of the Oregon Pulp and Paper problem and another over-all survey.

Mr. Hatchard replied that the two surveys will be made concurrently.

ADMINISTRATIVE Budget 1959-1961

The Chairman called upon the Secretary to report on the status of the 1959-1961 biennial budget.

The Secretary stated that in the members' notebooks was included a tabulated summary of the budget and that the Authority had previously authorized the request for a sanitarian for the use in field investigations during the 1959-61 biennium. The Secretary stated that the total budget for 1959-1961 would be \$142,293; and that the budget was being considered by a Ways and Means Sub-Committee.

PROPOSED PROJECT WITH PHS TO DEVELOP PERFORMANCE STANDARDS.

The Chairman requested Mr. Agee to report on the proposed project with Public Health Service to develop additional performance standards.

Mr. Agee stated that an application has been submitted to US PHS for a technical assistance grant to develop performance standards for industrial park zones to prevent air pollution. He explained that the purpose of the study was to develop atmospheric discharge standards which can be applied to new industrial developments and that the standards would be used by local planning and zoning agencies. He reported that a conference was held with planning and zoning representatives from the City of Portland and the counties of Multnomah, Clackamas and Washington and each planning agency offered to assist in the proposed study. He stated that we have not received notification of the USPHS action on this project application.

NEW COMPLAINTS

The Chairman asked the Secretary to present the new complaints which have been sent to the Authority's attention.

The Secretary stated that a complaint was referred by member R.W. Perry which was signed by Mr. Henry Klindt, The Dalles, regarding emissions from Harvey Aluminum plant and that the situation was being investigated in connection with the other

field work. The Secretary reported that the following additional complaints were received:

- (a) From Dr. D. M. Hadjimarkos, Portland, regarding smoke and flyash emitted from a Safeway Store incinerator, S.W. Vermont St., and that the investigation had been made.
- (b) A petition was received from Caroline M. Bach, 2433 N.E. Clackamas St., containing 105 signatures from residents complaining of air pollution originating from the Simpson Logging Company's plant at 2506 NE Multnomah.
- (c) From Mr. Geo. Blome, R. 1, Box 445 A, Clackamas, relative to odors and smoke in the vicinity of Oregon City and that preliminary investigations had been made.
- (d) Complaint from Carl Klinkenbeard, Medford, Oregon, regarding cinder deposition in Central Point.
- (e) Petition including 832 signatures relative to strong disagreeable odors from pulp mill in Salem and that field investigations were underway. Mr. Hatchard reported that a part of this complaint was being followed up by Marion County Health Department and the State Board of Health; and that Dr. Edwards and Dr. Wilcox had a conference with Dr. Stone two months ago where it was decided that further investigation was required since the complaint included a health question. He stated that postcard follow up surveys had been sent to about 700 complainants and that a county-state investigation was underway.
- (f) A request from Mr. Angus Crawford, City Mgr. North Bend for assistance and field investigation of the Menasha Plywood Corporation's emissions.
- (g) A complaint from Mrs. S.R. Moe, North Bend relative to soot, deposition.
- (h) A petition signed by 184 Springfield residents relative to the deposition of soot, cinders and flyash on their properties. The Secretary stated that the petition was referred to the City Mgr. and a follow up study was underway.
- (i) Complaint from Mr. Corbett regarding the B.P. John Lumber Company, Macadam Avenue, Portland.
- (j) Letter from Mrs. Arnold Hertzell of Rainier regarding objectionable odors.
- (k) Complaint from Mr. Ray Montgomery of Coos Bay regarding Georgia-Pacific Company's lumber mill in Millington. The Secretary stated that this complaint has been referred to the District Engineer for investigation.
- (l) Letter from Mrs. Frank Murphy of Oakridge regarding particulate matter deposition. The Secretary reported that the investigation has been referred to the District Engineer in Eugene.

The Chairman directed the staff to investigate these complaints as other commitments allowed and that he would accept the progress reports and expect to receive additional reports at the next meeting.

Since there was no further business the meeting was adjourned at 4:10 PM; the next meeting to be at the call of the Chairman.

Lester M. Lewis

ABI228

December 11, 1958

Mayor and City Council
City Hall
Medford, Oregon

Gentlemen:

The staff of the Oregon State Air Pollution Authority has been collecting air samples from the city of Medford periodically since 1952. During the week of October 2, 1958 through October 8, 1958, two high volume air samplers were operated continuously to define the current conditions in the city.

The results of the sample data collected from the station on the City Hall roof, 5th and Central, showed that four of the 11 high volume filter samples collected for suspended particulate matter exceeded the allowable value as defined by the Air Pollution Authority Regulations (150 micrograms per cubic meter plus background). The highest value of suspended particulate matter was 262. Nuisance conditions begin to appear at about 200 micrograms per cubic meter for residential and commercial land use. All six fallout samples collected from the City Hall station exceeded the Air Pollution Authority regulations (15 tons per square mile per month plus 5 for background). The highest value was 39 tons per square mile per month.

Samples collected from 6 other sampling stations shows evidence of nuisance conditions periodically.

It cannot be concluded at this time that an area-wide air pollution problem exists in the city but the sample data indicates the presence of local nuisance conditions. Additional sampling and field surveys are required to further evaluate the area conditions.

It is recommended that a joint city-state sampling and field survey project be established to investigate conditions further. The participation of the city in a joint program would require the assignment of a man part time to service sampling stations and make field surveys. The Authority would provide sampling equipment, analyses of samples, and train the local man.

If the city is interested at this time in the development of a study program of this type please advise.

Very truly yours,

JA/mf
cc: T.M.Gerow
cc: Jackson County H.D.

/s/ R. E. Hatchard, Chief
Air Pollution Control