

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 21, 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. R. 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 990 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.