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 undertook

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 Sauvie Island 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:

LOCATION	FLUORIDE CONCENTRATION AIR
Roof of the U.S. Corps of Engineers Testing Laboratory 1/4 mile S.E. of the alumdnum 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 alumdnum 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 alumdnum 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.Strebin 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 southeast 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. Strebin 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. Strebin said he wished the Authority would get this transcript and study it.

The Chairman advised Mr. Strebin 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. Strebin 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-Lyons 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 Enright 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 apportion 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