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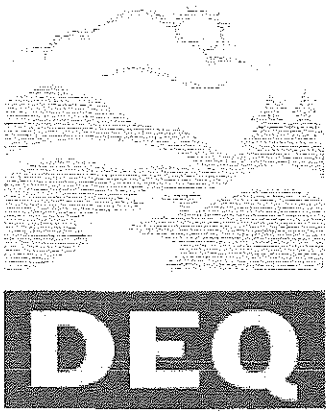
OREGON STATE SANITARY AUTHORITY MEETING MATERIALS



State of Oregon
Department of Environmental Quality

AGENDA

State Sanitary Authority

Joint Meeting with State Board of Health

10:00 a.m., May 6, 1965

Room 36, State Office Building, Portland

A. Introduction of Members

B. Review of 1965 Legislation

C. Budget for 1965-1967 Biennium

D. Minutes of February 18, 1965, meeting

E. Project plans for February, March and April

F. Willamette Basin Pollution Control Program

   1. Municipal sewage disposal

   2. Pulp and paper mills

G. Chatnicka Heights No. 2 Subdivision performance bonds

H. Portland refuse disposal petition (52 signatures)

I. Wigwam waste wood burner regulations

J. Rogue River pollution

K. Status reports

   1. Grand Ronde sewerage

   2. Mill City sewerage

   3. Arrow Meat Company waste disposal

   4. City of Portland sewage disposal

   5. Dunthorpe-Riverdale sewerage

OSBH-WPC
5/4/65-50

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Mr. Chris L. Wheeler
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Mr. B.A. McPhillips
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Mr. John P. Amacher
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Mr. Herman P. Meierjurgen
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Mr. Edward C. Harms, Jr.
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Mr. Kenneth H. Spies, Secretary
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MINUTES OF THE 105th MEETING

of the

Oregon State Sanitary Authority

May 6, 1965

The 105th meeting of the Oregon State Sanitary Authority was called to order by Harold F. Wendel, Chairman at 10:00 a.m., May 6, 1965, in Room 36, State Office Building, Portland, Oregon. The members and staff present were: Harold F. Wendel, Chairman; B.A. McPhillips, Chris Wheeler, Doctor Richard H. Wilcox, Herman P. Meierjurgen and John Amacher, Members; Kenneth H. Spies, Secretary; John Denman and Don Morrison, Legal Advisors; E.J. Weathersbee, Deputy State Sanitary Engineer; H.M. Patterson and H.E. Milliken, Assistant Chief Engineers; H.W. Merryman, Joseph A. Jensen, Fred Bolton and Leo Baton, District Sanitary Engineers; Bryan Johnson and Fred Katzel, Associate Sanitary Engineers; Howard G. Smith, Assistant Chief, Air Quality Control; Harold Sawyer, Patrick Curran and Ernie Schmidt, Assistant Sanitary Engineers; Ed Lynd, Water Pollution Control Technician; Glen Carter and Edison Quan, Aquatic Biologists.

Mr. Ed Harms, Member, was unable to attend because of a prior commitment.

Doctor Wilcox introduced the following members of the Board of Health who were also present: Herbert W. Goodman, D.D.S., President; Jack W. Grondahl, M.D., Vice President; Charles S. Campbell, M.D., John G.P. Cleland, M.D., Gerhard B. Haugen, M.D., A.V. Jackson, D.O., Mr. A.G. McLain and Forrest E. Rieke, M.D. The Secretary introduced the staff members to both boards.

MINUTES:

It was MOVED by Mr. Wheeler, seconded by Mr. Amacher, and carried that the minutes of the February 18, 1965, meeting be approved as prepared.

PROJECT PLANS

It was MOVED by Mr. McPhillips, seconded by Mr. Wheeler, and carried that the action taken on the following 53 project plans and engineering reports for water pollution control and 18 project plans for air quality control for the months of February, March and April, 1965, be approved:

Water Pollution Control

Date	Location	Project	Action
2-5-65	Manhattan S. D.	Sewerage system (revised)	Prov. app.
2-16-65	Oak Lodge S.D.	Lateral 2A-6-3-1	Prov. app.
2-16-65	West Slope S. D.	Lateral BO-5	Prov. app.
2-16-65	Eugene	Sewer extensions	Prov. app.
2-16-65	Eugene	Bethel Danebo Force Main	Prov. app.
3-1-65	Multnomah County	Jubitz Truck Station sewer	Prov. app.
3-9-65	Albany	Treatment Plant Addn.-Engineering Report	Approved
3-9-65	Corvallis	Treatment Plant Additions-Engineering Report	Approved
3-9-65	Cottage Grove	Treatment Plant Additions Engineering Report	Approved
3-9-65	Junction City	Treatment Plant Additions-Engineering Report	Approved
3-10-65	Banks	Treatment Plant Additions-Engineering Report	Approved
3-10-65	Albany	Cox Creek sewer lateral 3A	Prov. app.
3-10-65	Philomath	Sewerage Facilities-Engineering Report	Approved
3-10-65	Sweet Home	Revised plan for M. St. sewer	Prov. app.
3-10-65	West Slope S. D.	Main A and Lateral 1	Prov. app.
3-11-65	Eugene	Sewer extensions	Prov. app.

Date	Location	Project	Action
3-11-65	Gresham	Aspen Highlands Subd. sewer	Prov. app.
3-11-65	Milwaukie	Sewer extensions-Harvey St.	Prov. app.
3-17-65	Elgin	Sewerage system	Prov. app.
3-18-65	Jackson County	Fairway Estates San. Dist.	Prov. app.
3-18-65	Lake Oswego	Sewers LID #95	Prov. app.
3-18-65	Lincoln County	Sewage Treatment Plant Salishan	Prov. app.
3-19-65	Salem	Clark Creek sewers	Prov. app.
3-25-65	Multnomah County	Hayden Island Mobile Homes-Sewage treatment plant	Prov. app.
3-30-65	Salem	Sewer-Suburban East Salem-Engineering Report	Approved
3-31-65	Oak Lodge	Sewer Laterals B-7-2 & C-10-5-5	Prov. app.
3-31-65	Sunset Valley	Cornell Road sewers	Prov. app.
3-31-65	Wood Village	Arata Road sewer	Prov. app.
4-1-65	Jacksonville	Fifth and Lewis St. Sewer	Prov. app.
4-1-65	Gresham	N. W. 14th Place Sewer	Prov. app.
4-1-65	Woodburn	Senior Estates #5 Sewer	Prov. app.
4-2-65	McMinnville	Engineering Report	Approved
4-2-65	Eugene	Sewers BD 65-4-8-9-13	Prov. app.
4-6-65	Bullards Beach State Park	Sewers and Treatment	Prov. app.
4-6-65	Beaverton	Allen-Dale Subd. #2 Sewers	Prov. app.
4-7-65	Beaverton	Laterals A, B and C	Prov. app.
4-8-65	Dallas	San. Sewers-N. E. Dallas	Prov. app.
4-8-65	Tualatin	Romada Inn Sewage Treatment Plant	Prov. app.
4-8-65	Marion County	Wilark Park Sewer Laterals	Prov. app.

Date	Location	Project	Action
4-9-65	Chemawa	Aerated sewage lagoon	Prov. app.
4-9-65	Coos Bay	Englewood sewers	Prov. app.
4-12-65	Oak Lodge San. D.	Sewer lateral 2C-1-6	Prov. app.
4-12-65	Polk County	Chatnicka Hts. Lateral #2	Prov. app.
4-12-65	Canby	Sewer - S. E. Knott Street	Prov. app.
4-15-65	Medford	Fairway Estates Sewers	Prov. app.
4-19-65	Aloha San. Dist.	Laterals	Prov. app.
4-20-65	Silverton	Laterals - S. Water Street	Prov. app.
4-20-65	Medford	Sewer - McAndrews Road	Prov. app.
4-21-65	Columbia City	Report on Sewerage Facilities	Prov. app.
4-21-65	Salem	Sunnyridge Heights #5 Subd.	Prov. app.
4-23-65	St. Helens	Shell Chemical Co.	Prov. app.
4-26-65	Eugene	Engineering Report-Eugene Fruit Growers - Clarifier	Prov. app.
4-30-65	Interlachen S.D.	Engineering Report	Prov. app.

Air Quality Control

Date	Location	Project	Action
Feb. 3	Corvallis	O.S.U. Pathological Incinerator	Cond. app.
Feb. 4	La Grande	Boise-Cascade, Mt. Emily Div.- Flyash arrestors on boiler stacks	Cond. app.
Feb. 8	Salem	John F. Kennedy Elem. School Incinerator Matz APA 202	Cond. app.
Feb. 25	Lane County	Bailey Hill High School	Prel. review More info. requested
Feb. 25	Gold Beach	Gold Beach High School	Prel. review More info. requested
Feb. 23	Multnomah County	Heavy Equipment test site	App. w/comments

Date	Location	Project	Action
March 8	Multnomah County	Whitaker School Incinerator	Cond. app.
March 8	Portland	PL 88-206 Application 3-yr. grant for $186,977 federal funds	Comments submitted
March 16	Multnomah County	Pacific Mineral and Shell Corp. baghouse collector	Informal approval
March 22	Beaverton	Cedar Park Elem. School Incinerator	More info. requested
March 26	Troutdale	Upper Elementary School Incinerator	More information requested
March 26	Gresham	Powell Valley Elementary School Incinerator	More information requested
March 26	Washington Co.	James Templeton School Incinerator	More information requested
March 31	Tualatin	Durametal Mfg. Company Foundry controls	Cond. app.
April 2	Oakridge	Proposal for reduction of Air Pollution - Pope & Talbott	Comments submitted
April 14	N. Albany	Jr. High School Incinerator	More information requested
April 21	Eugene	Oregon Electric Service Incinerator	Cond. app.
April 28	La Grande	Boise-Cascade Corp. detailed control installation schedule	Approved

REVIEW OF 1965 LEGISLATION:

The Secretary reported that there were three bills introduced into the 1965 Legislature specifically at the request of the Sanitary Authority, that two of them, SB 90 and SB 185 had been passed but the third one, SB 87, was tabled, and that of the two that passed, SB 90 had been signed into law by the Governor and the other, SB 185, was awaiting the Governor's signature.

Doctor Campbell, member of the State Board of Health, reported that the State Board of Health has intense and strong interest in SB 185 as proposed by the Sanitary Authority.

It was MOVED by Doctor Campbell, seconded by Doctor Cleland, and carried that the joint meeting of the State Board of Health and State Sanitary Authority strongly favors the enactment of SB 185 into law.

The Secretary explained that the purpose of SB 185 is to prohibit after September 1, 1967, the discharge into any public waters of the state of Oregon any sewage or refuse from any moorage, marina, floating structure or any other structure unless such wastes are treated in a manner approved by the State Board of Health and State Sanitary Authority. There was considerable opposition to the bill, particularly by the time it reached the House. One hearing was attended by members of the Sanitary Authority staff at which there were approximately 200 people present, most of them owners of houseboats throughout the State, who claimed they were in full agreement with the state's program for abatement and control of water pollution, but voiced their opposition to the bill because they were afraid that it was impractical or impossible for them to comply with its requirements. It was pointed out that great pressure was being brought upon the Governor by certain interests to veto it.

Doctor Goodman, President of the State Board of Health, stated that the members of his Board were in full agreement with Doctor Campbell's motion, but wondered if it would be better if these joint boards prepared a statement that might have a little more factual information, other than the fact that these two boards are on record as favoring the bill, that could be released to the press, the Governor and anybody else interested.

Doctor Wilcox stated that it was his opinion that the statement which had been read into the Legislative Committee's hearings is a matter of public record now. He said that statement could be redeveloped to support the motion if the members so wished. Doctor Wilcox went on to say that it was his opinion that it is very unfortunate this bill had taken the name of the houseboat marina

bill because it is far broader than that. If the law is enforced it will eventually prevent human excreta that is carried into any plumbing fixtures from going into any public body of water in the state of Oregon. This applies to land, estuaries, rivers, etc. throughout the State.

The Secretary said that the other two pieces of legislation pertained to air pollution control.

Senate Bill 87, if it had been approved, would have removed from the present statutes the section which exempts from state control land clearing and land grading operations. At the present time neither the State Sanitary Authority nor any local air pollution control agency has any jurisdiction over land clearing or land grading operations. Since 1961 when the air pollution control law was amended, the clearing of land for the construction of highways and development of urban renewal projects has added materially to air pollution due to the fact that the contractors burn the buildings and other debris right on site.

Senate Bill 90 pertains to the metropolitan approach to air pollution control. It was pointed out that every home owner who has space heating and every automobile driver contributes to air pollution in his community, and that due to the multiplicity of these sources it is felt that it is almost impossible to effectively control air pollution entirely from the state level. It was proposed in SB 90 that the Metropolitan Study Commission, which was created by the 1963 Legislative Assembly, be expanded to include a study of air pollution, and to propose a statute which would allow establishment of regional control programs. Senate Bill 90 has been passed by the Legislature and signed by the Governor.

The Secretary also reported that at the request of the city of Portland, SB 242 had been introduced which if passed would have made it possible to establish regional air pollution control programs. In other words, two or more

cities, or two or more counties, or cities and counties by agreement could establish one regional air pollution control district. After several attempts to amend this bill, it was tabled.

House Bill 1272 would have provided for the state control of exhaust from automobiles and would have required the Sanitary Authority to establish standards for emissions and to certify devices which could be used on automobiles to control pollution from the crankcase, the exhaust and any other part of the vehicle. This bill was tabled. It was thought at the time of the hearing that Congress might enact some standards for control of automobile exhaust emissions on a national level, but at the present time this does not look too favorable.

Senate Bill 194 would establish a Columbia River Compact and contains a provision to give the Compact Commission authority to enforce requirements for the control and abatement of interstate pollution. It does not appear likely that this bill will pass this session.

Senate Bill 212 would provide for the certification of all sewage works operators by the State Board of Health. No action has been taken after two committee hearings.

House Bill 1312 pertains to abolition of the Rogue River Coordination Board. There were two amendments proposed. It has gone back to committee, and does not look like any action will be taken.

Several bills pertaining to financing of sewerage facilities in Oregon have been introduced in this 1965 session. One bill would require the State Highway Department to pay the cost of relocation of sewers and water mains and other utilities when it is necessary to relocate them due to highway construction. This bill was passed by both Houses, vetoed by the Governor and is now being reconsidered.

There are two bills pertaining to the Bancroft Act which are designed to improve the financing of sewers and other utilities.

Senate Bill 403, which has been passed, authorizes cities and other public bodies such as sanitary districts to issue bonds for 40 years instead of 30 years. The purpose is to reduce the annual carrying charges for some of the smaller communities that have extreme difficulty in raising sufficient funds to undertake construction of both sewer systems and sewage treatment works.

House Joint Resolution 31 pertains to air pollution control and instructs the Sanitary Authority to give full consideration to a report which was prepared by Oregon State University pertaining to the wigwam burner problem in Southern Oregon. It states that "the Sanitary Authority shall cooperate with industry to the end that the recommendations contained in this report will be fully considered and implemented." It would require further that the Sanitary Authority report back to the next session of the Legislature informing that assembly of the extent of the implementation of such recommendations, and authorizes the Authority to make any recommendations that it sees fit for new legislation to assist in solving this particular air pollution problem. This bill has not passed either House.

House Joint Resolution 11 would create an interim committee to study the functions of the State Board of Health in relation to counties and other activities in general public health throughout the State. It has passed the House. $30,000 would be appropriated to finance the study during the next biennium.

BUDGET FOR 1965-67 BIENNIUM:

The Secretary reported on the budget approved by the Legislature for the Division of Sanitation and Engineering for the 1965-67 biennium. He presented a comparison between the actual expenditures for the '61-'63 biennium, the

estimated expenditures for the present biennium, the amount requested for these various programs for the next biennium, the amount recommended by the Governor and the amount that was actually approved by the Legislature. The amount approved was about $150,000 less than the amount that had been requested two years ago for the present biennium.

A chart was presented showing the reductions that were made by the Legislature in the budget as recommended by the Governor's office. Two positions were eliminated, one from the Air Quality Control program and one from the Environmental Sanitation program. The Secretary reported that the Ways and Means Committee had made blanket cuts of $15,000 in the in-state travel and $7,500 in the capital outlay budgets.

Another chart was presented which showed a detailed breakdown for the various programs of the Division of Sanitation and Engineering divided between salaries, services and supplies, and capital outlay.

Information was included concerning the staffing situation of the Division of Sanitation and Engineering as it existed in the past and how it will be for the next two years. In 1961 the Division had an average staff of 57½ positions, 1963 - 63¼ positions, 1964 and 1965 due to cutback in budget the number of positions was below the 1961 operations. The Secretary stated that under the budget which was approved for the next two years, the Division should have a staff of slightly more than 66 positions. However, due to the manner in which the budgets are made, if a full staff is maintained, it will be necessary to go to the Emergency Board for additional money to finance the salaries and wages.

Most of the increase for the next biennium is in the Air Quality Control program. The Legislature and the Governor's office went along with the request

for additional people in air pollution control due to the fact that there is a good possibility for Federal financial assistance through the Federal Clean Air Act which was passed by Congress in December 1963.

WILLAMETTE BASIN POLLUTION CONTROL PROGRAM:

The Secretary of the Sanitary Authority stated that about one year ago the members of the Sanitary Authority reviewed and approved a detailed report which had been prepared by the staff pertaining to the problem of water pollution control in the Willamette basin.

In the late 1930's and early 1940's the policy was established requiring primary treatment for all municipal projects on the main stem of the Willamette and secondary treatment on the smaller tributaries. By 1957 when the last city on the main stem of the Willamette had complied with that policy, it was found that due to the tremendous increase in population and industry that had taken place in the meantime, primary treatment was not adequate to restore and maintain an acceptable degree of purity in the main Willamette.

In 1950 the Authority held a public hearing in the matter of waste disposal by the pulp and paper industry due to the fact that that industry constituted the largest single source of oxygen demand. As a result of that hearing held in 1950, it was determined that each of the five sulphite pulp mills would have to devise facilities to keep out of the stream during the summer and fall months all of the concentrated wastes from the production of sulphite pulp. The deadline was 1952. In compliance with that order these mills did provide facilities for that purpose. By providing these facilities these mills were able to reduce their BOD loads about 65% on an average.

In 1957 it was found that primary treatment for city wastes was not enough and likewise this degree of treatment by the pulp mills was not adequate to

maintain an acceptable dissolved oxygen concentration in the lower Willamette. Consequently, the Authority went on record last year as changing its policy to require a minimum of secondary treatment for all cities equal to 85% BOD removal, plus chlorination, and the same degree of reduction for the pulp mills during the period of critical stream flow, plus year round removal of settleable solids. In the original order in 1950 no mention was made of the seattleable solids contained in the waste from the paper making operations. Only the concentrated wastes from the pulp mills were mentioned, and since then it has been found that the settleable solids in the waste cause extensive sludge deposits in certain sections of the river. The Secretary went on to state that if the sludge deposits can be eliminated, a significant source of oxygen demand on the rivers will be removed.

(1) Municipal Sewage Disposal -

Mr. Weathersbee gave a report on the status of sewage treatment works - planning and construction - in the Willamette basin for communities having less than secondary treatment. This report, dated May 1965, has been made a part of the permanent files.

Mr. Weathersbee stated that all communities on the Willamette River basin will not have full secondary treatment facilities by the December 1966 deadline which was adopted as policy by the Sanitary Authority at its March 1964, meeting. However, each community has an active program under way and it is believed that reasonable progress is being made by all at this time.

(2) Pulp and Paper Mills -

Mr. Weathersbee presented a summary of the pulp and paper mill waste disposal for the Willamette River basin. This report, dated May 1, 1965, has been made a part of the permanent files.

The four sulphite mills located at Salem, Newberg, Oregon City, and West Linn on the main stem of the Willamette River had been requested to submit proposals for effecting reductions in their waste discharges which would meet the treatment requirements outlined in the Sanitary Authority's Willamette River Report of May 1964, which the Authority adopted as policy at its meeting in Eugene on June 18, 1964. Mr. Weathersbee summarized these proposals which have been made a part of the permanent files as follows:

(a) Boise-Cascade - Salem. This mill is already exceeding the Sanitary Authority's requirements for reduction in BOD. In addition, it proposes to provide in-plant changes and facilities that will materially reduce waste flows and solids losses, to construct a system for collecting and consolidating all of the waste sources throughout the mill, and to construct and place in operation primary sedimentation facilities by the end of 1968.

(b) Publishers' - Newberg. This mill has recently been purchased by the Publishers' Paper Company, and administrative control by that company was assumed April 1, 1965. Publishers' Paper Company has stated that it proposes to proceed with the former owner's plan of expanding the present lagoon capacity by 50% prior to this summer's low flow period. Publishers' Paper Company has not had time to develop a comprehensive program for waste reduction at this mill. They have stated that a study will be begun immediately and a definite proposal will be forthcoming in the near future.

(c) Publishers' Paper - Oregon City. This company proposes to continue barging a portion of its strong cooking liquors to the Columbia River as a means of effecting reductions in its BOD discharge during critical low

flow periods. By this means an average of 68% reduction in BOD was maintained during the critical flow period July through October of last year. In addition the company has tentatively proposed to install a gravity system for collecting all of its waste streams within the mill. They have projected costs for construction of primary sedimentation facilities and are investigating the proposal of long range recovery of cooking chemicals but have not committed themselves to carrying through any of these projects by any specific time.

(d) Crown-Zellerbach - West Linn. This mill proposes to add 30 MG capacity to its existing 70 MG waste sulfite liquor lagoon. This will permit an effective reduction in total mill BOD loads of 77% for a 140-day period. It is estimated that they will obtain an additional 5% reduction in BOD through removal of settleable solids. This will bring them close to the requested 85% reduction in BOD. In addition they propose to make extensive in-plant changes which will further reduce waste flows and solids losses, and to engineer, construct and place in operation primary sedimentation facilities by the end of 1967.

Following discussions of these proposals the Sanitary Authority took the following actions:

(a) Boise-Cascade - Salem. The Boise-Cascade proposal was accepted unanimously with the provision that all phases of the program, including the facilities for removing and disposing of settleable solids be completed and placed in operation by June 1, 1968.

(b) Publishers' - Newberg. It was MOVED by Mr. McPhillips, seconded by Mr. Wheeler and carried that the Sanitary Authority request Publishers' Paper Mill at Newberg to construct, in addition to its proposed 50% increase in capacity of the existing lagoon by this summer, additional lagoon capacity,

something on the order of 100 million gallons, and have it completed and in operation by June 1, 1966, and to have their solids problem solved by June 1, 1967.

(c) Publishers' - Oregon City. It was MOVED by Mr. McPhillips, seconded by Mr. Amacher and carried that we again communicate with this pulp mill by letter asking them to be specific in what they intend to do in regard to dates and plans, and failing to receive a satisfactory reply to our letter within a reasonable time, that they be asked to appear at the next Sanitary Authority meeting and explain why they are unable to do so.

(d) Crown-Zellerbach - West Linn. It was MOVED by Mr. McPhillips, seconded by Mr. Meierjurgen and carried that the proposal submitted by this pulp mill be accepted but point out that they are somewhat below the required 85% BOD reduction and request them to carry on a program for further BOD reduction.

CHATNICKA HEIGHTS NO. 2 SUBDIVISION PERFORMANCE BONDS:

Mr. Milliken reported that Chatnicka Heights is a small subdivision in Polk County just outside of West Salem. The developer had requested a variance in the performance bond requirements for this project. The original Chatnicka Heights subdivision included 26 lots. The developer now wants to include 10 more lots. The present bond covers the 26 lots but only three houses have actually been occupied and 10 either built or under construction. In order to sell the houses the owner has to have a few more lots available for buyers. The subdivision is served by a sewage treatment plant with a capacity large enough to take care of 100 houses. The owner has volunteered to increase the bond when there are more than 26 houses built. Mr. Milliken recommended that the Sanitary Authority grant the request for leaving the bond as it is.

It was MOVED by Mr. Wheeler, seconded by Mr. McPhillips and carried that the Sanitary Authority allow this variance with the condition that if and when sewer service reaches 20 dwellings, the bond at that time will immediately be increased.

ROGUE RIVER:

Mr. McPhillips stated that he is concerned over conditions in the Rogue River. The Rogue River Coordination Board is charged with seeing that the Rogue River and its tributaries shall be maintained such that fishing conditions in Curry County are comparable to fishing conditions in Josephine County and to provide a medium through which placer mining interests and fishing interests on the river and its tributaries may cooperate for the mutual benefit of both. This part of the law has been disregarded by the Rogue River Coordination Board who has tried to solve this problem by making an agreement with the miners whereby they could operate five days a week, leaving the river, supposedly, two days a week for the rest of the people to use.

Mr. McPhillips said that there are really two sources of pollution in the Rogue River - one of them is mining and the other is sand and gravel operations. At present there are no laws regulating placer mining and not too many regulating the other activities. Now is the time to start an active campaign on the Rogue River because there are no mines operating and will not be operating until next winter. Mr. McPhillips asked that the Sanitary Authority move in and get these gravel operations cleaned up, that a stand be taken on it, and that the offenders be notified that the Authority intends to stop them from muddying up the river.

It was MOVED by Mr. McPhillips, seconded by Mr. Amacher and carried that the staff be instructed to notify the gravel operators on the Rogue River and its tributaries that they will have to conform to the laws regarding pollution control, and that the staff be further instructed that if there is any pollution, to proceed against the operators.

PORTLAND REFUSE DISPOSAL:

Howard Smith reported that a letter from Mr. Niedermeyer, attorney for Mr. Elmer Hawk, and a copy of a petition with 52 signatures had been received in regard to the open burning of refuse at the city of Portland public dump located off North Swift Boulevard near St. Johns. The petitioners demanded that the laws of the state of Oregon be enforced in accordance with Chapter 426, Oregon Laws 1961, in regard to the abatement of air pollution in the city of Portland, and specifically at the city's refuse disposal dump located along North Swift Boulevard. The Secretary pointed out that this same petition was sent to the Honorable Tom Lawson McCall, Secretary of State, and to Ray Smith, Auditor of the city of Portland.

Mr. Howard Smith reported that a staff member had inspected the operation at the city dump on April 15, 1965, and had noted that open burning of combustible material, such as tree trimmings, cardboard, cellulose and lumber, was being carried on at the time. Also a two-section lagoon of oil waste was observed to be partly filled. Past practice by the city has been to open burn this oil at weekly intervals, usually at night. An average of 40-50 cubic yards per day of this rubbish material is open burned; however, some days much larger amounts of scrap lumber are brought in for disposal. Approximately 579,000 gallons per year of waste oil containing 20-30% water and sludge are disposed of at this site by open burning. Mr. Smith further stated that the city fire marshal requires a permit be issued for

this open burning and tries to limit the time of burning to periods of favorable atmospheric dispersion and that there have been numerous conferences with officials of the city of Portland urging a study to find a way of eliminating this source of air pollution. One private civil suit has been heard on this matter in Circuit Court of Multnomah County, Oregon Re: Elmer Hawk vs. Terry D. Schrunk, et al No. 294-940. The requested temporary injunction against the city was denied by the court because the conditions complained of had existed for some time, and the Sanitary Authority was negotiating with the city to correct the conditions described.

Mr. McPhillips asked how these oil wastes would be disposed of other than by open burning, to which Mr. Smith replied that at the present time negotiations are going on between the city, Port of Portland, and Bureau of Docks for collection of these oil wastes to be barged for reclaiming. Time Oil Company is interested in this and there is hope that this problem can be resolved. Mr. Smith stated that there are alternate ways of disposing of these oil wastes. One is a designed incinerator that will take even a higher percentage of water sludge and still burn it without creating any air pollution. Mr. Wendel mentioned that one way would be to take it six miles from the city and burn it, and another would be sanitary landfills. He also asked what was being done about burning tires and Mr. Smith said this practice had been discontinued, also the burning of asphalt roofing, but that a number of tires are being taken by contractors for auxiliary fuel for land clearing.

Mr. R.E. Hatchard, Director, Portland Air Quality Control, reported that a new city engineer has been employed and will be in Portland July 1. He has been authorized in this interval before he comes to Portland to visit successful incinerators and accumulate basic information. He is in Ohio now.

Detroit has made a dramatic solution to their refuse problem with a special incinerator; Atlanta, Georgia has another. Mr. Hatchard stated that this new city engineer would have responsibility for all city engineering work.

It was MOVED by Mr. McPhillips, seconded by Mr. Meierjurgen and carried that the city of Portland submit to the Authority by July 1, 1965, a workable plan for conversion from the open burning of all refuse and oil waste at this site to an approved method of disposal, that the plan include a time schedule for conversion of each class of refuse now being open burned, and that in view of the long standing nature of this problem and continued receipt of petitions and complaints in this matter, the open burning of solid and liquid waste cease at this site by September 1, 1965.

WIGWAM WASTE WOOD BURNER REGULATIONS:

Mr. H.M. Patterson read the proposed regulations drafted under the date of May 4, 1965, and by means of a sketch gave an explanation of the operation of a wigwam waste wood burner. He then recommended that the proposed regulations be adopted in accordance with administrative procedures.

Mr. S.B. McQueen, Chairman of the Forest Products Air Quality Committee of Associated Oregon Industries pointed out that the regulations which Mr. Patterson had submitted had been developed after a considerable amount of time, money, effort, experimentation on the part of numerous individual groups; namely, the State Air Quality Control staff, Oregon State University Engineering Department and the Forest Products Industry which sponsored this comprehensive report and study. Mr. McQueen stated that he had one slight disagreement with the regulations and this was in regard to exit gas temperatures. He felt that there was not a great deal of background information on this as yet. He mentioned that part of the regulation requires that each

burner have a thermocouple and a pyrometer installed and that each burner will have a log kept daily of its operation which includes the exit gas temperature reading. He felt and said he was supported in this regard by Dr. Boubel of Oregon State University, who is the man who directed the study, that they would not be in a position to say whether the requirements for exit gas temperatures should be 900, 200, 500 or what have you until they have had an opportunity to see this from a practical long-range standpoint. He suggested that at the outset no temperature be specified, but that within the first year re-examination of the information contained in the background log data as provided by daily reports and the use of thermocouples and pyrometers on burners be used to give a good basic idea of what the temperature should be. Because of atmospheric conditions, altitude, prevailing winds, type of fuel, etc., in one particular airshed, 500 degrees might be impossible to attain and on the other hand, it may be that a smokeless burner could operate at temperatures below 400 degrees, possibly even 250 degrees. He said the Industry's Air Quality Committee recommends that the specific temperature be deleted at this time and in its place there be substituted words to the effect that the highest possible operating temperature be maintained. This could be reviewed at a later time when there is more basic information available from which to draw.

Mr. Meierjurgen said he believed there should be more study on it, and that in setting a definite temperature we might be trapping ourselves. He also mentioned various species of wood to be burned and that some species required a higher temperature than others.

Mr. McQueen stated that the original study of Oregon State University was on Douglas Fir.

Mr. Wendel asked if it would suffice to say under Article (4) "burner exit temperatures will be maintained high enough to prevent the emission of objectionable smoke and particulate matter." He felt that different burners would differ, depending upon location and other factors.

Mr. Patterson stated that the regulations as drawn recognize the fact that there will be some emissions even if these regulations are complied with. These regulations have been drafted on the idea that this is a step in the direction to reduce air pollution but would not necessarily solve the problem. He said that we are reaching for a criteria that would give us some indication of the efficiency of combustion and we chose the degrees of exit gas temperature for that purpose. The regulation is actually drafted around the exit gas temperature requirement.

There was much discussion as to what the exit gas temperature should be to produce acceptable results.

It was MOVED by Mr. McPhillips, seconded by Mr. Amacher and carried that the item "the burner exit temperature shall be maintained above 500 degrees Fahrenheit" be deleted and that instead it be agreed that the burner shall be operated at the highest possible temperature that can be maintained without damage to the burner.

It was MOVED by Mr. Meierjurgen, seconded by Mr. McPhillips and carried that the amended draft be presented at a hearing for final adoption by the Sanitary Authority.

STATUS REPORTS:

(1) Grand Ronde sewerage. A hearing has been authorized by the Authority and is scheduled for June 9, 1965, in Grand Ronde.

(2) Mill City sewerage. Satisfactory progress is being made for the present. A hearing has been authorized in the event satisfactory progress is not maintained.

(3) Arrow Meat Company waste disposal. Mr. Weathersbee stated that members of the staff had participated in the two-day trial March 2 and 3, 1965, and are now awaiting the court's decision.

(4) City of Portland sewage disposal. Since the last Authority meeting the city of Portland has authorized its consulting engineers to proceed with the preparation of final plans for the construction of interceptors and trunk sewers so that they can make application for a Federal grant from the next fiscal year's allotment. They have also assigned members of their engineering staff to make the necessary study of the east side interceptor so that a plan can be worked out whereby they can make the changes necessary to prevent the overflow or by-passing of raw sewage into the Willamette River. They hope to have the whole project done in 6 years and the sewers for the Linnton and Guilds Lake areas completed in 3 years.

Mr. Wendel and Mr. McPhillips both expressed their disappointment over the fact that it had taken the city of Portland so long to resume planning for completion of its project. Mr. Wendel expressed the opinion that the city should be required to submit a bond issue to the voters in order to speed up the financing so that it could be completed in less than 6 years.

(5) Dunthorpe-Riverdale sewerage. The Secretary stated that the contract had been awarded for the engineering, but the engineers have not actually been authorized to start preparation of plans due to the fact that the county intends to finance the engineering by an advance planning loan from HHFA. The county does not want to risk using its money because if a bond issue should fail to be passed by the voters, the money would have been spent without opportunity for recovery within a reasonable time. An application for a planning advance was filed many months ago but HHFA refused to act on it

until the city and county had entered into a contract for the treatment of the sewage at the city's sewage treatment plant.

Commissioner Gleason has said that they are working as fast and as diligently as they can, that they are meeting with the Advisory Committee for the county sewer district, and will be setting a date shortly for a bond election.

The next meeting date was set for June 24 in Portland with an executive meeting in the morning and regular meeting in the afternoon.

There being no further business, the meeting adjourned at 5:00 p.m.

Respectfully submitted,

Kenneth H. Spies

Kenneth H. Spies
Secretary

DIVISION OF SANITATION AND ENGINEERING

Consolidated Summary of Expenditures by Programs

Program	'61-'63 Actual Expenditures	'63-'65 Estimated Expenditures	'65-'67 Requested by Agency	'65-'67 Recommended by Governor	'65-'67 Approved by Legislature
Office of Director	38,670	76,204	111,517	76,859	76,759
Air Quality Control	168,260	99,911	297,308	261,400	236,937
Environmental San.	378,807	297,121	382,574	327,125	308,857
Laboratories	-0-	111,520	217,323	179,657	178,397
Water Quality Control	436,462	208,819	262,016	222,464	217,964
District Offices	-0-	279,118	320,435	310,320	305,320
Total	1,022,199	1,072,693	1,591,173	1,377,825	1,324,234

5/5/65

DIVISION OF SANITATION AND ENGINEERING

Summary of budget cuts made by 1965 Legislature

Salaries		
Sanitarian 2 (AQC)	$12,972	
Sanitarian 4 (ES)	12,380	
Sub-total		$25,352
Services and Supplies		
In-state travel (blanket cut)	$15,000	
San. 2 travel (AQC)	1,475	
San. 4 travel (ES)	1,800	
	$18,275	
San. 2 other (AQC)	432	
San. 4 other (ES)	1,694	
	2,126	
Sub-total		$20,401
Capital Outlay		
Blanket cut	$ 7,500	
San. 2 (AQC)	144	
San. 4 (ES)	194	
Sub-total		$ 7,838
Total Reduction		$53,591

5/5/65

DIVISION OF SANITATION AND ENGINEERING

1965 - 1967 Budget Summary

Description	Requested by Agency	Recommended by Governor	Approved by Legislature
Office of director			
Salaries	101,538	67,168	67,168
Services & Supplies	9,591	9,591	9,591
Capital Outlay	388	100	-0-
Sub-totals	111,517	76,859	76,759
Air Quality Control			
Salaries	181,284	150,876	137,904
Services & Supplies	56,862	51,362	46,355
Capital Outlay	59,162	59,162	52,678
Sub-totals	297,308	261,400	236,937
Environmental Sanitation			
Salaries	291,827	249,693	237,313
Services & Supplies	83,696	71,732	66,038
Capital Outlay	7,051	5,700	5,506
Sub-totals	382,574	327,125	308,857
Laboratories			
Salaries	154,813	124,376	124,376
Services & Supplies	49,084	41,946	41,746
Capital Outlay	13,426	13,335	12,275
Sub-totals	217,323	179,657	178,397
Water Quality Control			
Salaries	191,531	171,679	171,679
Services & Supplies	68,382	49,990	45,490
Capital Outlay	2,103	795	795
Sub-totals	262,016	222,464	217,964
District Offices			
Salaries	252,320	248,074	248,074
Services & Supplies	67,805	62,205	57,205
Capital Outlay	310	41	41
Sub-totals	320,435	310,320	305,320
Totals			
Salaries	1,173,313	1,011,866	986,514
Services & Supplies	335,420	286,826	266,425
Capital Outlay	82,440	79,133	71,295
Grand Total	1,591,173	1,377,825	1,324,234

5/5/65

Division of Sanitation and Engineering Staff

	Positions Filled During Fiscal Year '61	'63	'64	'65	Positions Authorized for '66-'67
Office of Director					
Secretaries	1	1	1	1	1
Engineers	1	1	2	2	2
Sub-totals	2	2	3	3	3
Air Quality Control					
Secretaries	1	1	1	1*	2
Engineers	4	4	3*	3**	5
Sanitarians	1	1	1	1	1
Chemists	2	3	3	3*	4
Meteorologists	0	0	0	0	0.5
Inst. Tech.	0	0	0	0*	1
Student Tr.	0	0.5	0.75	0.75	0.75
Sub-totals	8	9.5	8.75	8.75	14.25

* One additional position was authorized but had to be left vacant to help balance the budget
** One additional position was budgeted but vacant

Water Pollution Control					
Secretaries	3	3	3	3	3
Engineers	9	9	5*	5*	7
Chemists	2	2	1**	1**	1
Biologists	1	2	3	3	3
Student Tr.	0.25	0.25	0.5	0.5	0.5
Sub-totals	15.25	16.25	12.5	12.5	14.5

* One position transferred to office of director. One position sacrificed to help balance the budget. One other position budgeted but vacant. One changed to biologist.
** One additional position sacrificed to help balance budget.

Water Supply Sanitation					
Secretaries	1	2	2	2	2
Engineers	6	6	5*	5*	6***
Chemists	1	1	0**	0**	1
Student Tr.	0	0.25	0.25	0.25	0.25
Sub-totals	8	9.25	7.25	7.25	9.25

* One additional position budgeted but vacant
** One position sacrificed to help balance budget.
*** This position to be reclassified as laboratory director (PHE 4)

	Positions Filled During Fiscal Year				Positions Authorized
	'61	'63	'64	'65	'66-'67
Environmental Rad. Surv.					
Chemists	0	1	1	1	1
Sub-totals	0	1	1	1	1
Environmental Sanitation					
Secretaries	6	7	6	6	6
Sanitarians	13	13	13*	13*	14
Plbg. Insp.	4	4	4	4	4
Biologists	1	1	0	0	0
Student Tr.	0.25	0.25	0.25	0.25	0.25
Sub-totals	24.25	25.25	23.25	23.25	24.25

* One additional position left vacant to help balance budget.

Total Positions

Authorized	--	--	62.75	65.75	66.25
Filled	57.50	63.25	55.75	55.75	--
Sacrificed	--	--	5	7 (5)*	--
Vacant	--	--	2	3 (5)*	--

* Last 6 months of fiscal year. Applicants have accepted offers for 4 of the vacant positions

Summary of Positions Filled

Secretaries	12	14	13	13	14
Engineers	20	20	15	15	20
Sanitarians	14	14	14	14	15
Chemists	5	7	5	5	7
Biologists	2	3	3	3	3
Plbg Insp.	4	4	4	4	4
Inst. Tech	0	0	0	0	1
Meteorologists	0	0	0	0	0.5
Student Tr.	0.5	1.25	1.75	1.75	1.75
Totals	57.5	63.25	55.75	55.75	66.25

PROJECT PLANS

The following plans or reports were received and processed by the Air Quality Control staff during February 1965.

Date	Location	Project	Action
Feb. 3	Corvallis	O.S.U. Pathological Incinerator	Cond. approval
Feb. 4	La Grande	Boise Cascade, Mt. Emily Division-Flyash arrestors on boiler stacks	Cond. approval
Feb. 8	Salem	John F. Kennedy Elementary School Incinerator Meets APA 202	Cond. approval
Feb. 25	Lane County	Bailey Hill High School	Preliminary review more information requested
Feb. 25	Gold Beach	Gold Beach High School	Preliminary review more information requested

PROJECT PLANS

The following plans or reports were received and processed by the Air Quality Control staff during March 1965:

Date	Location	Project	Action
Feb. 23	Multnomah County	Heavy Equipment test site	Approved with comments
March 8	Multnomah County	Whitaker School Incinerator	Cond. approval
March 8	Portland Bureau of Health	P.L. 88-206 Application 3-yr Grant for $186,977 of Federal Funds	Comments submitted
March 16	Multnomah County	Pacific Mineral & Shell Corp. baghouse collector	Informal approval
March 22	Beaverton	Cedar Park Elementary School Incinerator	More information requested
March 26	Troutdale	Upper Elementary School Incinerator	More information requested
March 26	Gresham	Powell Valley Elementary School Incinerator	More information requested
March 26	Washington Co.	James Templeton School Incinerator	More information requested
March 31	Tualatin	Duremetal Mfg. Company Foundry controls	Cond. approval

Project Plans

The following plans or reports were received and processed by the Air Quality Control staff during April, 1965.

Date	Location	Project	Action
April 2	Oakridge	Proposal for reduction of Air pollution - Pope & Talbott	Comments Submitted
April 14	N. Albany Jr. Hi.	Incinerator	Requested additional information
April 21	Eugene	Incinerator for Oregon Electric Service	Conditional Approval (Recommended to Lane County)
April 28	LaGrande	Boise Cascade Corp. detailed control installation schedule	Approved

Project Plans

During the month of February, 1965, the following 5 sets of project plans and engineering reports were reviewed and the action taken as indicated:

Date	Location	Project	Action
2-5-65	Manhattan S. D.	Sewerage system (revised)	Prov. approval
2-16-65	Oak Lodge S. D.	Lateral 2A-6-3-1	Prov. approval
2-16-65	West Slope S. D.	Lateral B0-5	Prov. approval
2-16-65	Eugene	Sewer Extensions	Prov. approval
2-16-65	Eugene	Bethel Danebo Force Main	Prov. approval

Project Plans

During the month of March, 1965, the following 23 sets of project plans and engineering reports were reviewed and the action taken as indicated.

Date	Location	Project	Action
3-1-65	Multnomah Co.	Jubitz Truck Station sewer	Prov. app.
3-9-65	Albany	Treatment Plant Addn.-Engineering Report	Approved
3-9-65	Corvallis	Treatment Plant Additions-Engineering Report	Approved
3-9-65	Cottage Grove	Treatment Plant Additions-Engineering Report	Approved
3-9-65	Junction City	Treatment Plant Additions-Engineering Report	Approved
3-10-65	Banks	Treatment Plant Additions-Engineering Report	Approved
3-10-65	Albany	Cox Creek sewer lateral 3A	Prov. App.
3-10-65	Philomath	Sewerage Facilities-Engineering Report	Approved
3-10-65	Sweet Home	Revised plan for M St. sewer	Prov. app.
3-10-65	West Slope	Main A and Lateral 1	Prov. app.
3-11-65	Eugene	Sewer extensions	Prov. app.
3-11-65	Gresham	Aspen Highlands Subd. sewer	Prov. app.
3-11-65	Milwaukie	Sewer extensions - Harvey St.	Prov. app.
3-17-65	Elgin	Sewerage system	Prov. app.
3-18-65	Jackson Co.	Fairway Estates San. Dist.	Prov. app.
3-18-65	Lake Oswego	Sewers LID #95	Prov. app.
3-18-65	Lincoln Co.	Sewage Treatment Plant-Salishan	Prov. app.

Date	Location	Project	Action
3-19-65	Salem	Clark Creek sewers	Prov. app.
3-25-65	Multnomah Co.	Hayden Island Mobile Homes-Sewage treatment plant	Prov. app.
3-30-65	Salem	Sewer-Suburban East Salem-Engineering Report	Approved
3-31-65	Oak Lodge	Sewer Laterals B-7-2 & C-10-5-5	Prov. app.
3-31-65	Sunset Valley	Cornell Road sewers	Prov. app.
3-31-65	Wood Village	Arata Road sewer	Prov. app.

Project Plans

During the month of April, 1965, the following 25 sets of project plans and engineering reports were reviewed and the action taken as indicated by the Water Pollution Control Section.

Date	Location	Project	Action
4-1-65	Jacksonville	Fifth and Lewis St. Sewer	Prov. app.
4-1-65	Gresham	N.W. 14th Place Sewer	Prov. app.
4-1-65	Woodburn	Senior Estates #5 Sewer	Prov. app.
4-2-65	McMinnville	Engineering Report	Approved
4-2-65	Eugene	Sewers BD 65-4-8-9-13	Prov. app.
4-6-65	Bullards Beach State Park	Sewers and Treatment	Prov. app.
4-6-65	Beaverton	Allen-Dale Subd. #2 Sewers	Prov. app.
4-7-65	Beaverton	Laterals A, B and C	Prov. app.
4-8-65	Dallas	San. Sewers - N. E. Dallas	Prov. app.
4-8-65	Tualatin	Romada Inn Sewage Treatment Plant	Prov. app.
4-8-65	Marion County	Wilark Park Sewer Laterals	Prov. app.
4-9-65	Chemawa	Aerated sewage lagoon	Prov. app.
4-9-65	Coos Bay	Englewood sewers	Prov. app.
4-12-65	Oak Lodge San. D.	Sewer lateral 2C-1-6	Prov. app.
4-12-65	Polk County	Chatnicka Hts. Lateral #2	Prov. app.
4-12-65	Canby	Sewer - S. E. Knott Street	Prov. app.
4-15-65	Medford	Fairway Estates Sewers	Prov. app.
4-19-65	Aloha San. Dist.	Laterals	Prov. app.
4-20-65	Silverton	Laterals - S. Water Street	Prov. app.
4-20-65	Medford	Sewer - McAndrews Road	Prov. app.

Project Plans (Continued)

Date	Location	Project	Action
4-21-65	Columbia City	Report on Sewerage Facilities	Prov. app.
4-21-65	Salem	Sunnyridge Heights #5 Subd.	Prov. app.
4-23-65	St. Helens	Shell Chemical Co.	Prov. app.
4-26-65	Eugene	Engineering Report-Eugene Fruit Growers - Clarifier	Prov. app
4-30-65	Interlachen S.D.	Engineering Report	Prov. app.

SUMMARY OF PULP AND PAPER MILL WASTE DISPOSAL

Willamette River Basin

May 1, 1965

Name of Mill	Year Built	Process	Effluent Discharge July-Oct. 1964	Place of Discharge	Avg. BOD Produced Jul.-Oct. 1964	Avg. BOD to River Jul-Oct. 1964	Avg.% BOD Reduction July-Oct. 1964	Avg.Susp. Solids to River Jul-Oct. 1964	Present Waste Treatment	Proposed Waste Treatment	Proposed Completion date
Weyerhaeuser (Springfield)	1949	415 tons/day Unbleached Kraft Pulp and Paper	7.30 MGD	McKenzie River (W-172-14.5)		4,522 lbs/day		3,035 lbs/day	BOD Good in-plant control. Evaporation and burning of cooking liquor; summer irrigation of evaporator condensates. Equalizing pond for strong wastes. Susp. Solids In-plant screens, centra-cleaners and save-alls for usable recovery.	Propose expansion to 1150 T/day. BOD Plan to maintain present waste flows and BOD discharges to river by installing continuous digester, improved recovery furnace and increased irrigation. Susp. Solids No plans for out-plant solids settling facilities.	1965 1965
Western Kraft (Albany)	1955	420 tons/day Unbleached Kraft Pulp and Paper	5.83 MGD	Willamette River (W-117)		10,532 lbs/day		4,418 lbs/day	BOD Good in-plant control. Evaporation and burning of cooking liquor. Susp. Solids In-plant screens, centra-cleaners and savealls for usable fibre recovery. 6 MG earthen settling basin for settleable solids reduction.	BOD and Susp. Solids No improvements requested or proposed.	

Crown-Zellerbach (Lebanon)	1890	100 tons/day Unbleached Sulfite Pulp and Paper	7.90 MGD	South Santiam River (W-109-11-16)		9,400 lbs/day	75-80%	6,430 lbs/day	BOD Evaporation and burning of waste sulfite cooking liquor or spray drying and by-product recovery. Susp. Solids In-plant screens, centra-cleaners and savealls for usable fibre recovery.	BOD Additional BOD reduction requested by letter, April 29, 1965. Susp. Solids Improved in-plant control and recovery facilities being installed. 1965 Install primary settling facilities. 1966
Boise-Cascade (Salem)	1923	150 tons/day Bleached Sulfite Pulp and Paper	7.39 MGD	Willamette River (W-85)	101,855 lbs/day	5,005 lbs/day	95% (95.3% Aug.)	6,294 lbs/day	BOD All waste cooking liquors stored in lagoons during low-flow season. 150 MG lagoon capacity. Susp. Solids In-plant screens, centra-cleaners and savealls for some useful fibre recovery.	BOD BOD reduction requirements are presently being exceeded. Susp. Solids Improved in-plant control and solids recovery facilities. 1965-1966 Install waste collection and consolidation system. 1967 Construct primary settling facilities. 1968
Publisher's (Newberg) formerly Spaulding	1926	150 tons/day Unbleached Sulfite Pulp and Paper	3.67 MGD	Willamette River (W-49.5)	108,240 lbs/day	62,173 lbs/day	42.6% (56.4% Aug.)	4,463 lbs/day	BOD Partial storage of waste cooking liquors during low-flow period. 44 MG lagoon capacity.	BOD Some in-plant improvements made. 1964-'65 Publisher's took over mill April, 1965, and proposes to increase lagoon capacity this summer. 1965

50 s/day fite 80 s/day ard- d p and er	1.72 MGD	Willamette River (W-26.5)	88,918 lbs/day	28,784 lbs/day	68% (74.8% Aug)	20,922 lbs/day	BOD Barge strongest waste cooking liquors to Columbia River during critical low-flow period.	BOD Continue barging as at present. Converting digesters for magnesium base operation. Possible recovery of cooking chemicals.	 1966 Indefinite
							Susp. Solids In-plant recovery of useful fibre.	Susp. Solids In-plant improvements to reduce/and increase recovery of solids. Construct gravity system to collect and consolidate waste streams. Pumping stations, pressure piping, clarifier and sludge dewatering facilities.	losses 1960-'65 1966 Indefinite
							Sanitary Waste Some connected to Oregon City sewer system. Some discharged to river.	Sanitary Waste Connect all sanitary wastes to Oregon City system.	1965
00 s/day ite 00 s/day nd- l s and er	25.86 MGD	Willamette (W-26.5)	179,085 lbs/day	57,102 lbs/day	68% (76.6% Aug.)	31,476 lbs/day	BOD Strong waste liquors stored in lagoons during low-flow period. 70 MG lagoon capacity.	BOD Add 30 MG additional lagoon capacity.	1966
							Susp. Solids In-plant recovery of useful fibre.	Susp. Solids Improved in-plant controls. Install flotation-type save-all on No. 9 newsprint machine. Install primary settling facilities.	1965 1966 1967

STATUS OF SEWAGE TREATMENT WORKS
Planning & Construction
Willamette Basin Communities
(having less than full Secondary Treatment)
May 1965

River Mile	Location	Present Treatment	Planning, Fiscal and Construction Program for Secondary Treatment						
			Engineer	Preliminary Study	Bond Election	Final Plans	Bids Opened	Completion Date	Estimated Cost
187-41.5	Oakridge	Primary(1952)	CH2M	Rec'd 4/3/63					$ 89,200(1)
187-37.5-2	West Fir (Hemlock)	Septic Tank(1952)	Hines Lbr.Co.	Let.Rpt. 2/26/65				12/66	
187-21	Cottage Grove	Primary(1953)	CH2M	Approved 3/9/65					162,600
178	Eugene	Intermediate(1961)	CH2M	Rec'd 6/3/64	5/15/64			1966	1,600,000
176-10.8	Weyerhaeuser Mill	Primary(1949)	Weyerhaeuser	Letter 2/17/65 (2)				7/65 (2)	
164	Junction City	Primary(1949)	CH2M	Approved 3/9/65					246,940
161	Harrisburg	Primary(1957)	CH2M	HHFA Adv. 4/27/65					48,400
149-6	Monroe	None	CH2M	HHFA Adv. 4/27/65	8/65	10/65	5/66	11/66	140,500
131	Corvallis	Primary(1949)	CH2M	Approved 3/9/65	5/6/65	5/65	9/65	7/66	1,060,000
119	Albany	Intermediate(1954)	CH2M	Approved 3/9/65					1,600,000
109-11-35	Mill City	None	Worthington	Rec'd 2/17/64				(3)	181,000
96	Independence	Primary(1951)	C&G	Complt'd 4/29/65	(4)				103,000
82	Manbrin Gardens	Primary(1947) now part Kaiser	C&G	Rec'd 11/23/62 (5)					
79.6	Chemawa	Inadequate Lagoon(1955)	USBIA	Conf. 9/16/64		4/9/65		7/65	
55-11-47-1	Grand Ronde	Septic Tank(1922)						(6)	
36-1-5-5	Hubbard	Septic Tank(1917)	R.E.Meyer	Complt'd 5/4/65	5/18/65				372,000(7)
29-46-17	Banks	Primary(1936)	R.E.Meyer	Approved 3/10/65	3/16/65				77,000
29-58	Forest Grove	Primary(1925) (8)	CH2M	Approved 8/26/63	2/6/64	7/28/64	7/28/64		652,000
21	Lake Oswego	Primary(1955) (9)	CH2M			9/25/64	3/10/65	7/65	52,831(10)
20.8	Tryon Creek(Port.)	New	Cunningham			10/1/63	12/9/63	7/65	2,546,000(11)
12.6	Dunthorpe-Riverdale	None	HR&S	Rec'd 1/29/64		(12)			880,000
17.9	Lewis & Clark Col.	Primary(1952) (12)							
14 to 4	Portland	(13)	S&T	Approved 2/18/65 (14)				1971	14,000,000

(1) Estimate cost $171,410 including Willamette City.
(2) Negotiating for connection to city of Springfield sewer system.
(3) Hearing authorized by SA if satisfactory progress not maintained.
(4) On 4/29/65 Council voted to submit $75,000 bond issue to voters.
(5) Now part of Kaizer County Service District voted 4/29/65.
(6) Hearing authorized by SA; scheduled for 6/9/65.
(7) Including new collection system and treatment plant.
(8) Started using land disposal in summer and fall months (1952).
(9) Will be served by Tryon Creek plant (1965).
(10) Pump station and connecting line to Tryon Creek Plant.
(11) Includes Tryon Creek STP and interceptors and Willamette interceptors and pump stations.
(12) Will be served by Tryon Crk. plant via Willamette interceptor(1966).
(13) Primary sewage treatment plant with discharge to Columbia River.(1951)
(14) Northwest Portland interceptors; pump station; new tunnel and outfall to primary plant on Columbia River (1968); improve interception of Willamette River outfalls; expansion of treatment plant; finance from revenues.

Summary of

WASTE DISPOSAL PROGRAM

Submitted March 24, 1965

Boise Cascade - Salem

			Approximate Cost
1959	50 MG	Waste sulfite liquor lagoon and auxiliary facilities	$ 95,000
1963	100 MG	Waste sulfite liquor lagoon	120,000
1964-65		Repair flood damage to lagoons	37,000
Thru 1966		Expenditures authorized for in-plant changes and facilities that will materially reduce waste flows and solids losses.	275,000
Thru 1967		Proposed construction of system for collection and consolidation of 144 waste sources throughout mill.	150,000
Thru 1968		Proposed construction of primary sedimentation facilities	
		Estimated cost of sedimentation facilities	350,000
		Estimated cost sludge disposal facilities	100,000 - 130,000
		Total estimated cost	$1,127,000 - $1,157,000

BOISE CASCADE FINE PAPER DIVISION · P. O. BOX 2089 · SALEM · OREGON 97301 · TELEPHONE (503) 362-2421

March 24, 1965

Mr. Jack Weathersbee
Oregon State Sanitary Authority
State Office Building
1400 S. W. 5th Avenue
Portland, Oregon 97201

Dear Mr. Weathersbee:

The attached report serves to review and outline our approach to developing facilities that will satisfy the conditions of water quality as outlined in your report of May, 1964.

This report will also serve to review those steps already taken to achieve this same end.

Very truly yours,

Richard Maley

R. Maley
Resident Manager

RWM cw
Encs.

Boise Cascade Corporation
Fine Paper Division
Salem, Oregon

This report is submitted as a result of the request by the OSSA that a study and plans be developed to meet the water quality standards as stipulated in their report of May, 1964, these water qualities being, namely:

A. The BOD of mill effluent to be reduced by 85% during the months of June through October, and/or those months of low river flowage.

B. All wastes to be given primary sedimentation, or equivalent, for the removal of settleable solids.

The capital expenditures and plans outlined in this report for the achievement of these water quality standards are, in essence, an acceleration of the stream improvement program started at this plant several years ago. To date this program has resulted in expenditures of approximately $546,000, of which an estimated $364,000 can be assigned directly to stream improvement measures, the major portion of the stream improvement expenditures being the construction of spent liquor lagoons and their required auxiliary installations, which has amounted to approximately $215,000.

For purposes of clarification, and to better review the status and plans of the two major headings of desired water quality standards, these items will be discussed separately.

A. The 85% reduction of BOD on mill effluent during the months of low river flowage has been steadily improved and fully complied with since the Sum-

A. (Continued)

mer of 1964. The development of this program started to take its present form in 1959 with the installation of a 50-million gallon waste liquor lagoon--at a cost of $75,000. The auxiliaries necessary to put this lagoon into operation cost an additional $20,000.

Recognizing the ever-increasing needs for control of river BOD loads, in 1963 we engaged CH_2M to study and develop plans for an additional 100-million gallon lagoon. The construction of this lagoon with its auxiliaries and pumping facilities was completed and went into operation prior to the low water period the Summer of 1964. This project in its entirety represented an expenditure of approximately $120,000.

As a result of these combined expenditures, through the Summer and Fall of 1964 we consistently realized a BOD reduction of 92% to 93% in mill effluent being delivered to the river.

During the December flood, 1964, the retaining walls and dikes on our lagoons suffered heavy damage. To facilitate the repairs necessary to bring these lagoons back into good physical condition, and, therefore, maintain the high level of BOD reduction, we have authorized an additional expenditure of $37,000. This work is currently in progress and will be completed well in advance of the period of low river flowage.

B. The second item of water quality needs dealt with in the OSSA report concerns the primary treatment of mill wastes for the removal of settleable solids. In recognition of this point we launched a comprehensive in-plant study and program in November of 1964. This program resulted in a marked acceleration of our moves already then in progress to reduce water usage, fiber loss, and filler loss. At the present time this is by far the most beneficial area for reducing mill solids losses.

As a result of this study we developed a capital expenditure program which has been approved for expenditures through the Fall of 1966 that will result in a marked reduction in mill solids losses as well as knowledge to develop further primary treatment facilities as required.

The reduction of total mill outfall, as well as the solids content of these outfalls, was a major factor of consideration in the allocation of these funds, both from a standpoint of dollars allocated and the timing of these expenditures.

See Attached Listing.

The following items represent those expenditures authorized through the Fall of 1966 that will have a marked effect on the reduction of mill solids losses and will materially alter our evaluation and selection of further primary treatment facilities:

1. The installation of new Saveall facilities on No. 2 Paper Machine.

2. The re-designing and rebuilding of pulp mill stock chests.

3. The installation of a mechanical filter to handle blowpit drainer bottom liquid.

4. The installation of additional cleaners on the pulp mill tail screen.

5. The installation of three-stage cleaners on No. 1 Paper Machine.

6. The installation of three-stage cleaners on No. 3 Paper Machine.

7. The installation of an additional stage of cleaners on No. 4 Paper Machine.

8. The installation of a mechanical side-hill type Saveall on No. 1 Machine.

9. The replacement of two older designed stock chests on No. 3 Machine.

10. The installation of white water purge-type showers on all Saveall and decker equipment.

11. The conversion to a 100% purchased chip usage. This would in turn virtually discontinue the use of the wood room and result with its being placed on a stand-by basis, thus bringing about elimination of wood room solids being discharged to the river.

The total of these capital expenditures is estimated at $279,000.

We anticipate the resulting effect to produce a marked reduction in mill solids losses. This would then give us a proper evaluation of flow values by the in-plant elimination of the amount of solids that would then not have to be further treated. Through this evaluation we would be in a position to then proceed with the approach and necessary decisions to render additional primary treatment, and make the proper selection of the necessary site and physical sedimentation facilities.

Concurrent with the formalization of in-plant studies and programs started in November of 1964 relative to the OSSA requests, we have developed a report and flow sheet information outlining the various collection points throughout the plant that would have to be picked up and consolidated into two large holding areas prior to their transfer to primary treatment facilities. In the development of this study and the subsequent analysis of these various collection points we have determined that our current mill losses are not totally realized by our present sampling and reporting procedures, and that in-plant consolidation of some points must be made for improvements in the areas of sampling and reporting.

This initial study has indicated to us that we would be picking up and consolidating 144 collection points throughout the plant. The required piping, valving, instrumentation, pumps, and holding vessels would require an expendi-

ture of an estimated $150,000.

Through initial estimates from suppliers, the treatment facilities themselves would result in an expenditure of an additional $350,000. Depending upon the outcome of trials and pilot plant installations now being studied by the paper industry for the various means of sludge disposal, an additional $100,000 - $130,000 would be required for final disposition of the treated solids.

Pursuant to the results obtained by the in-plant program and expenditures that have been authorized to be carried out through the Fall of 1966, we feel that the consolidation of the various mill collection points, with its necessary piping and surge tank systems, could progress through 1967, followed by the construction of the primary treatment facilities themselves in 1968.

Initial studies indicate that the acreage involved for these facilities and ultimate disposal of resulting sludge would have to be developed on our Minto Island property, with considerable thought and expenditure devoted to the distance involved from the actual mill site and ample provisions made for high water protection.

March 16, 1965

Summary of

WASTE DISPOSAL PROGRAM

Submitted April 13 and April 21, 1965

Publishers' Paper Co. - Oregon City

1947-1959 Publishers' spent approximately $1,300,000 to improve water quality. Further expenditures tending to effect reductions in waste discharges since 1959.

	For SSL disposal	Total
1960	$ 92,000	$ 157,000
1961	89,000	109,000
1962	113,000	1,032,500
1963	125,000	616,000
1964	128,000	721,000
1965	128,000	1,651,000
	$ 675,000	$ 4,686,500
1966	128,000 (assumed)	438,000 (tentative)

Aug. 1964 Retained CH2M to make preliminary engineering study relative to achieving 85% BOD reduction and settleable solids removal.

During 1965 Propose to connect remaining un-connected sanitary facilities to Oregon City sewer system. $ 20,000

1965-1966 Propose to continue barging SSL to Columbia River as in past for BOD reduction during low Willamette River flows and concentrate on the solids problem as follows:

Late 1966	(tentatively) install gravity waste collection system	257,920
Indefinite	Construct pumping station, pressure system and clarifier	405,860
"	Install solids dewatering and incineration equipment	227,500
	Sub-total for solids removal	$891,280
	Sub-total for sanitary sewage disposal	20,000
	Total	$911,280

PUBLISHERS' PAPER CO.
POST OFFICE BOX 551 · · · · OREGON CITY, OREGON

April 30, 1965

Mr. Kenneth H. Spies
Chief Engineer
Oregon State Sanitary Authority
1400 S. W. Fifth Avenue
Portland, Oregon 97201

Dear Mr. Spies:

At the request of Mr. Weathersbee I have been able to get the following information regarding the enlargement of a lagoon at Spaulding Division, Newberg, Oregon. My understanding is that plans have been made to increase the capacity of the lagoon by 50% and the work can proceed as soon as our Board of Directors have given approval and that will be asked for at the meeting on June 8, 1965.

I was told by the contractor that they can proceed with the enlarging of the lagoon at the same time the lagoon is being used, starting July 1, and the only problem that they may find is that some work on the county road must be done and they do not yet have the approval of the county to do this work, but they do not believe there will be any problem.

Yours very truly,

PUBLISHERS' PAPER CO.

James A. Wilson
Vice President and
Mill Manager

JAW:be

To: EJW

PUBLISHERS' PAPER CO.

POST OFFICE BOX 551 · · · · OREGON CITY, OREGON

April 21, 1965

Mr. Kenneth H. Spies
Chief Engineer
Oregon State Sanitary Authority
1400 S. W. Fifth Avenue
Portland, Oregon 97201

Dear Mr. Spies:

When you visited us Monday, April 19, 1965, I promised I would supplement my letter of April 13 with more detail regarding work Publishers' have done which directly and indirectly affect the quality of water in the Willamette River.

Several years ago we prepared a report showing that Publishers' from 1947 through 1959 had spent approximately $1,300,000 to improve water quality.

Below are listed some of the projects, and the cost, beginning with 1960 which the company has completed.

Year	Type Installation	Approximate Cost	Objective and/or Effect
1960	Replace No. 2 Blowpit	$ 50,000	Reduce fibre loss
	Installed pressure screen No. 2 paper machine	15,000	Reduce fibre loss
	Operation and maintenance of spent sulphite liquor disposal system	92,000	For SSL disposal
1961	White water system machine No. 1	20,000	Reduce effluent
	Operation and maintenance of spent sulphite liquor disposal system	89,000	For SSL disposal
1962	Groundwood refiner system	412,000	Reduce waste from wood mill
	Steel barge	84,000	Increase SSL to Columbia
	Sulphite screenings refiner	40,000	Reduce effluent

Year	Type Installation	Approximate Cost	Objective and/or Effect
1962	Tailing screen No. 3 paper machine	$16,000	Reduce effluent
	New saveall No. 1 paper machine	61,500	Reduce effluent
	Magnefite (M.G.O.) acid pilot plant	186,000	Reduce future SSL discharge
	Convert No. 3 digester for M.G.O. operation	120,000	Reduce future SSL discharge
	Operation and maintenance of spent sulphite liquor disposal system	113,000	For SSL disposal
1963	Installed improved pulp screens	60,000	Reduce effluent
	Improved sulphite reject system	5,000	Reduce effluent
	Purchased wood barges	19,000	SSL to Columbia
	Groundwood refiners additions	289,000	Reduce waste from wood mill
	Convert No. 1 digester for M.G.O. operation	108,000	Reduce future SSL discharge
	Acid heater No. 3 digester	10,000	Reduce future SSL discharge
	Operation and maintenance of spent sulphite liquor disposal system	125,000	For SSL disposal
1964	New improved cleaning and screening system No. 4 paper machine	108,000	Reduce effluent
	New barge dock	10,000	SSL disposal
	Acid heater No. 1 digester	10,000	Reduce future SSL discharge
	M.G.O. acid plant improvements	10,000	Reduce future SSL discharge
	Groundwood refiner addition	455,000	Reduce waste from wood mill
	Operation and maintenance of spent sulphite liquor disposal system	128,000	For SSL disposal
1965	Planned or in Progress:		
	Sanitary sewage collection system	20,000	Eliminate raw sewage to river
	Convert No. 2 digester to M.G.O.	120,000	Reduce future SSL discharge

Year	Type of Installation	Approximate Cost	Objective and/or Effect
1965	Replace No. 3 Blowpit	$ 88,000	Reduce fibre loss
	Groundwood refiner addition	1,151,000	Reduce waste from wood mill
	Signed royalty agreement for M.G.O. system	180,000	Future recovery system
	Estimated operation and maintenance of spent sulphite liquor disposal system	128,000	For SSL disposal
1966	Tentatively Planned:		
	Gravity collection system for mill wastes	258,000	Future elimination of waste to river
	New improved saveall No. 3 paper machine	85,000	Reduce effluent
	Convert No. 6 digester to M.G.O.	95,000	Reduce future SSL discharge

It is estimated that it will cost approximately $900,000 to collect and dispose of the solid wastes from the mill. The above $258,000 is the first step in this program.

AQC

The reference to the groundwood refiner system, which uses chips and sawdust produced from sawmill waste, as eliminating waste effluent from our own wood mill is that because of this method of making groundwood the wood mill is now operating eight hours per day, five days per week, when formerly it operated twenty-four hours per day, seven days per week. The coarse waste, bark, sawdust, etc. has always been burned but the effluent from the hydraulic barkers after going over a screen has been discharged into the river.

Regular inspections of saveall and cleaner operations are now made which result in reduction of effluent to the river.

Inasmuch as we get close to 85% BOD reduction in SSL with barging, it seems that with completion of the solids recovery program that the provision of 85% reduction in BOD requirement might be met.

AQC

The completion of the conversion to the M.G.O. system will make a great improvement in air quality and at that time an economic study can be made to determine the action to be taken regarding the installation of a recovery system for the burning of the waste from the sulphite mill.

Hoping this gives you the further information you desired.

Sincerely,

PUBLISHERS' PAPER CO.

James A. Wilson

JAW:be

James A. Wilson
Vice President and
Mill Manager

KHS

To: EJ

PUBLISHERS' PAPER CO.

POST OFFICE BOX 551 · · · · OREGON CITY, OREGON

April 13, 1965

Mr. Kenneth H. Spies
Chief Engineer
Oregon State Sanitary Authority
1400 S. W. Fifth Avenue
Portland, Oregon 97201

Dear Mr. Spies:

We submit the following concerning action taken, and to be taken, by Publishers' Paper Co. at its Oregon City plant regarding compliance with the standards of water quality prescribed by the Sanitary Authority in its May, 1964 report.

We employed Messrs. Cornell, Howland, Hayes & Merryfield (CH_2M) in August, 1964 to make the necessary preliminary engineering study. This has been done.

As to sanitary sewage facilities, CH_2M concur in our decision to redesign our facilities so as to connect those points not now connected with the Oregon City municipal sewer system at an estimated cost of $20,000. This part of the program will be scheduled for commencement and probable completion during 1965.

The solids aspect of the problem seems comparatively more acute at Oregon City than the BOD, and in the interest of presenting a practical and economically feasible program to our Directors, we have determined to continue the barging of spent liquor for the time being and to try to concentrate in 1965 and '66 at least on the solids problem.

As to solids disposal, CH_2M recommend a three stage program as follows:

Gravity collection system	$257,920
Pumping stations, pressure system and clarifier	405,860
Solids dewatering and incineration equipment	227,500
Total	$891,280

The report expressly confirms our own conclusions that there is great advantage in staging this construction program and that construction of the gravity collection system as a first step is desirable so that the amount and quality of flow which would be treated and pumped can be more accurately determined prior to final decision of the remainder of the system. This would enable the most economical and reliable design of the required facilities to be made. Flow measurements and a sampling program can be initiated immediately following the completion of the gravity system, and with the information thus gathered the pumping stations and the clarifier, as above stated, can be designed with greater assurance of its efficiency. It is even possible that such experience might indicate a wholly different scheme as desirable for the later stages.

We are, therefore, recommending to our Directors that $257,920 be tentatively appropriated in 1965 for the gravity collection system. We are proceeding with detailed engineering information on this part of the project. If the detailed figures are within reasonable range of the preliminary estimate mentioned above, we will than ask for authority to schedule the gravity collection system for construction with a target date for completion in late 1966. Even though our Directors authorize the construction of the first stage, such action must not be construed as a commitment to complete the other stages. Decisions and commitments in that respect must await the results achieved by the gravity collection system and financial and other considerations existing at the time.

We are looking forward to discussing this program with you on the 19th.

Respectfully submitted,

PUBLISHERS' PAPER CO.

Vice President and Mill Manager

Summary of

WASTE DISPOSAL PROGRAM

Submitted April 5, 1965

Crown-Zellerbach - West Linn

1964-65 In-plant stock recovery program has already reduced fibre losses by 1000#/day, and anticipated further savings of at least 2000#/day within next 6 to 8 months.

1965-66 Propose to add 30 MG capacity to existing 70 MG waste sulfite liquor lagoon. (This will permit avg. reduction of total mill BOD by 77% for 140 day period, or up to 85% reduction for shorter periods.) Plan also to continue use of spray evaporation system, which has shown from 0 to 40% evap. results depending upon weather conditions.

late 1966 Propose installation of flotation-type save-all (equivalent to primary sedimentation) on No. 9 newsprint machine, shown by testing program to be one of major contributors of settleable solids to river.

thru 1966 Conduct engineering and development of clarifying equipment to treat an estimated 13 MGD containing 20,000# of settleable solids.

1967 Place clarification equipment in operation to remove settleable solids and achieve an estimated additional 5% overall BOD reduction. No detailed cost breakdown given. Total cost of new work estimated to exceed $1,000,000.

Crown Zellerbach Corporation MANUFACTURERS OF PULP AND PAPER

WEST LINN, OREGON 97068

April 5, 1965

Mr. Kenneth H. Spies
Secretary and Chief Engineer
Oregon State Sanitary Authority
State Office Building
1400 S. W. 5th Avenue
Portland, Oregon

Dear Mr. Spies:

References: Your Willamette River Report May, 1964
Your letter dated August 11, 1964
Our letter dated August 31, 1964

Subject: West Linn Stream Improvement Plan

The following is submitted in response to your request of July 17, 1964 for a comprehensive study of stream conditions at the West Linn Division of Crown Zellerbach Corporation designed to culminate in a report outlining our procedures for compliance with the goals established in your Willamette River Report of May, 1964.

You will recall that we submitted in our letter of August 11, 1964, a seven-point outline of the specific areas which we had selected for evaluation in planning our stream improvement program. We wish to report that we have completed the proposed study work as outlined, along with an intensive in-plant stock recovery study program. (Attached) As a result of our studies and findings, we are hereby submitting a four-step program for stream improvement.

First, we are proceeding with soil exploration and testing leading to the alteration of our south spent sulfite liquor storage lagoon which will provide an enlargement of a maximum of 30 million gallons in the capacity of these facilities. This work is being performed by Cornell, Howland, Hayes and Merryfield and the construction will be supervised by their representatives. We anticipate that with good weather conditions for construction these facilities may be in operation during the 1965 season and in any case not later than the beginning of the 1966 low water period. This improvement will allow us to attain an average reduction of 77% of total mill B.O.D. for 140 days during the low water period, with the option of removing 85% of total mill B.O.D. during the most critical intervals by shortening the total lagooning period in proportion to the increased pumping rate. We believe that

we have demonstrated flexibility in adjusting ponding rates to river conditions by close coordination with your staff in the past and that this will be continued in the future to insure optimum river conditions.

Second, our in-plant stock recovery program is being directed toward the correction of outfall conditions confirmed by Item 1 of our proposed study, the Two Weeks Program of Daily B.O.D. and Settleable Solids Testing. The in-plant stock recovery group has initiated either work or plans to minimize these conditions. Projects completed to date have resulted in fiber savings amounting to approximately 1,000 lbs./day. Projects approved for expenditure and completion indicate that an additional 2,000 lbs./day will be recovered within the next six to eight months. This work was delayed by two floods which did extensive damage to our outfall sampling system, but we anticipate, based on results attained to date, that savings in settleable solids beyond the amounts now predicted will be realized.

The Two Weeks Program of Daily B.O.D. and Settleable Solids Testing verified that one of the major contributors of settleable solids to the river was our No. 9 newsprint machine. As a third step in our program, we intend to correct this condition by the installation of a flotation type saveall which will provide the equivalent of primary sedimentation to the effluent from this paper machine. Preliminary engineering and estimates for this project have been completed and startup is planned for late 1966. This equipment will be similar in design to the savealls which were previously installed on our No. 1, 2, 3, 5 and 6 paper machines.

We have found that some of the proposals for study and evaluation by the West Linn Study Group are not economically feasible, or that no imminent solution is indicated following the six-months period of intensive study. Although several alternatives for treatment of individual outfalls were evaluated, these proposals did not provide for proper long range solution of the problems. Consequently, we are making engineering studies leading to the installation of an effluent clarifier for primary treatment of our major outfalls as the fourth step in our program to comply with the goals you have established. We are aware that clarifying equipment, currently handling effluents containing a combination of groundwood fines, coating fillers, and sulfite furnish, is somewhat experimental. However, we are preparing to take the necessary steps to develop the performance of the proposed clarifier. Preliminary calculations indicate that this unit will be designed for a through-put capacity of approximately 13,000,000 gallons of effluent per day, containing approximately 20,000 lbs. of settleable solids. B.O.D. reduction is expected to be approximately 25%, which is in addition to that realized from the in-plant program and the impounding of sulfite spent liquor.

We anticipate that final engineering on this project can be completed during 1966, and that construction will follow. After a period of time for startup and evaluation of this unit, it will be placed in service some time in 1967.

Yours very truly,

CROWN ZELLERBACH CORPORATION

C. E. Englund
Assistant Resident Manager

CEE/lw

Attach -

cc: F.O.Boylon/SFO
C.R.Dahl/SFO
H.R.Amberg/CRD
R.A.Dupuis
G.D.King
T.C.Smyth

March 24, 1965
File: 815
WL WDR: 55-48

Reduction of BOD and Settleable Solids Load to River - - Study Results

Mr. C. E. Englund:

References: 1. Letter - K. H. Spies to C. E. Englund - August 11, 1964
2. Meeting - August 17, 1964
3. West Linn WDR 74-65 - July 30, 1964
4. West Linn WDR 84-39 - August 31, 1964

This report will summarize the results obtained through the efforts of two mill study groups over the past year at the West Linn Mill toward reduction of settleable solids and BOD load to the river. Those involved in this study included personnel from the Chemical and Biological Research, Central Research Division, Camas; Central Engineering Office, Seattle; West Linn Management; General Service Group, Technical Department, West Linn; General Engineering Group, West Linn; West Linn Mill operating personnel, and the Engineering firm of Cornell, Howland, Hayes and Merryfield.

A. Fiber Study Group

Six months ago a stock recovery group composed of nine supervisors and engineers was formed to improve the fiber recovery at the West Linn Mill. Losses have been reduced approximately 1,000 pound/day through this group effort. Improvements have resulted from investigation and correction of miscellaneous stock system leaks, chest level controls, grade change methods, reuse of fiber bearing water, and general plant housekeeping and training of machine crews. An additional savings of 2,000 pounds/day is planned during the next six months through such projects as the replacement of filtered water with white water on the screenings decker, additional uses for surplus white water from No. 6 paper machine, improved methods of handling chest run-outs on grade changes. The study group members and department supervisors are exploring additional methods of recovering fiber, which will be used in planning an overall two-year fiber recovery program.

B. B.O.D. Seven-Point Study Plan

1. B.O.D. and Settleable Solids Study of the Thirteen Principle Outfalls of the West Linn Mill

Status: Complete. Results confirmed previous data and pinpoint problem areas.

2. Lagoon Enlargement

Status: The project for lagoon enlargement is under way. Soil analysis is being done and enlargement should be complete this season assuming weather conditions to be favorable for drying. This enlargement could result in an additional 30 million gallons of storage capacity to our existing 70 million gallons.

3. Spent Sulfite Liquor Spray Evaporation System

Status: The spray evaporation system serves as a supplement to our lagoon system. Over the past seasons we have experienced evaporation results from 0 - 40% (increase of solids content) depending on weather conditions. During an extreme dry season we would expect this system to add to our lagooning capacity. We are planning to use this installation throughout the summer.

B. B.O.D. Seven-Point Study Plan (Concluded)

4. Lime Treatment of Weak Spent Sulfite Liquor

Status: Pilot Plant operation did not confirm laboratory trials. No further evaluation is planned.

5. Pilot Plant Digester Evaluation (Soluble Base)

Status: The pilot plant work on this project has been completed. This proposal does not appear practical.

6. Chemical Treatment to Reduce Outfall B.O.D.

Status: West Linn laboratory and Central Research Division trial results in this area were disappointing. Some small reduction of B.O.D. was obtained in these trials, but the feasibility of such a treatment on mill scale appears negative. No further trials are anticipated at this time.

7. Variations in Blow Pit Drainage and Washing Cycle

Status: This study is continuing. Laboratory trials are under way to evaluate various procedures in washing. The work has not progressed sufficiently as yet to permit a decision on this project.

J. E. Merrill
R. L. Geiser
J. McCourt

JEM/RLG/JMcC:mf

Water Systems
Structures

Airports
Surburban Developments

Sewage Works
Streets

BOATWRIGHT ENGINEERING
G.R. Boatwright - M.G. Boatwright
Civil Engineers
2613 12th St. S.E.
Phone 363-9503

April 2, 1965

Oregon State Board of Health
P. O. Box 231
Portland 7, Oregon

Att: Mr. Kenneth Spies
Re: Sewage Operational Bond
for Chatnicka Heights near Wood Village

Dear Mr. Spies:

This letter is to request a variance in the requirement for increasing the Operational Bond for a privately owned Sewage System as the lots are improved.

The existing bond covers the original 26 lots developed in 1964, to date 10 lots have been sold or have houses built or under construction. Only three (3) houses are actually occupied at this time. The existing market indicates the number of lots sold and built upon will be 14± in the next year, however a variety of lots has to be available for the buyer so 14 additional lots are being developed at this time.

It is felt that the existing bond will more than adequately cover the number of houses actually served with sewers for the next year, based on the present rate of development. Therefore deferment of increasing the operational bond is requested until the rate of service approaches the bond. When the number of actual active sewer services reaches 20 the bond will be increased by the Owner to meet with your approval.

Your approval of the Plans and operational bond is needed to record the plat.

Yours truly,

M. G. Boatwright

MGB/rb
c.c. Mr. Larry Epping

Present Bond $7,500.00
Need $10,000.00

TO : Members of the State Sanitary Authority

FROM : H.M. Patterson

DATE : May 6, 1965

SUBJECT: Staff report to the members of the Sanitary Authority relating to the open burning of refuse at the City of Portland public dump located off North Swift Blvd. near St. Johns

The Secretary of the Authority received a letter and copy of a petition from Mr. James C. Niedermeyer, attorney, on March 17, 1965. His client, Mr. Elmer Hawk had requested the assistance of political subdivisions of the State of Oregon to abate the continuing pollution of air in the City of Portland and specifically the abatement of air pollution at the City of Portland refuse disposal area.

The petition contained fifty-two signatures of persons with addresses in the area of North Smith, North Pier Park, North Bristol, North St. Johns, North James and North Hudson Streets which lie west and south of the dump site.

In essence the petitioners respectfully demanded that the laws of the State of Oregon be enforced in accordance with Chapter 426, Oregon Laws 1961, in regard to the abatement of air pollution at the City of Portland refuse disposal area located along North Swift Boulevard, Multnomah County, Oregon.

On April 15, 1965, a member of the staff inspected the operation at the city dump. Open burning of combustible material such as tree trimmings, cardboard, cellulose and lumber was being carried on at the time of inspection. A two-section lagoon of oil waste was observed to be partly filled. Past practice by the city has been to open burn this oil at weekly intervals, usually at night.

An average of 40-50 cubic yards per day of this rubbish material is open burned; however, some days much larger amounts of scrap lumber are brought in for disposal. Approximately 579,000 gallons per year of waste oil containing 20-30% water and sludge are disposed of at this site by open burning.

The city fire marshal requires a permit be issued for this open burning and tries to limit the time of burning to periods of favorable atmospheric dispersion.

This is a long standing problem that the staff has worked on since March of 1960. There have been numerous conferences with officials of the City of Portland, urging a study to find ways of eliminating this source of air pollution. One private civil suit has been heard on this matter in Circuit Court of Oregon Re: Elmer Hawk vs. Terry D. Schrunk, et al No 294-940. The temporary injunction against the city was denied by the court because the conditions complained of had existed for some time, and it was noted that the Sanitary Authority was at that time negotiating with the city to gain correction of the conditions described. "There is some doubt in the court's mind as to the effect of Section 22-011 Oregon Administrative Rules prohibiting open burning at dumps; however, this is not to say the Sanitary Authority could not by proper procedure prohibit the open-fire burning at the City of Portland disposal dump."

The City of Portland's air pollution control program grant under the Federal Clean Air Act (Section 4 of P.L. 88-206) contains a specific item in the workable program part of the application to "convert the community refuse disposal program to eliminate open burning at the Swift Boulevard site" with a target date of September 1965.

The staff recommends that the Sanitary Authority require:

That the City of Portland submit by July 1, 1965, a workable plan for conversion from the open burning of all refuse and oil waste at this site to other acceptable methods of disposal. The plan should include a time schedule for conversion method of each class of refuse now being open burned; i.e. oil wastes and solid combustibles.

In view of the long standing nature of this problem and continued receipt of petitions and complaints in this matter, it is believed that open burning of solid and liquid waste should cease at this site by September 1, 1965.

2-3% of [illegible]

Oregon State Sanitary Authority
Air Quality Control
1400 S. W. 5th Avenue
Portland, Oregon

TO : Members of State Sanitary Authority

Mr. Harold F. Wendel, Chairman
Dr. Richard H. Wilcox, Member
Mr. Chris L. Wheeler, Member
Mr. Herman P. Meierjurgen, Member
Mr. B. A. McPhillips, Member
Mr. Edward C. Harms, Jr., Member
Mr. John Amacher, Member

FROM : Air Quality Staff

DATE : May 6, 1965

SUBJECT: Wigwam Waste Burner Regulations

Following the meeting of the Sanitary Authority on February 18, 1965 the staff completed a draft of the proposed regulations for wigwam waste burners.

On April 26, 1965 the Air Quality staff and Don Morrison met with the Associated Industries' representative and the Lumbermen's Air Quality Committee composed of the following:

Robert Olinger	A.O.I. (staff)
S. V. McQueen, Chairman	Kogap Mfg. Co.
Ed Cone	Cone Lumber Co.
Sam E. Hughes	Giusfina Bros.
Tom Reynolds, Jr.	Spalding and Son
Ray Martin	Martin Brothers Container & Timber Products Corp.

Also present were:

Richard Boubel	Oregon State University
Verner J. Adkison	Lane County Air Quality Control Program

With the following exceptions it is believed the committee agreed with the drafted regulations. They requested (1) clarification of auxiliary fuel (2) clarification of the variance granted wigwam waste burners located in sparsely populated areas and (3) removal of the requirement for maintaining a minimum exit temperature of 600° Fahrenheit.

It is believed the first two items have been clarified in the current draft of the regulations.

The exit temperature requirement is still included but has been reduced to 500° Fahrenheit. A variance from existing regulations which will be reviewed annually has been included.

Review of Regulations:

It is recommended that the regulations be adopted in accordance with administrative procedures.

OSBH-AQC
5/5/65-25

DEFINITIONS

To be added to Division 2, Air Pollution,

Subdivision 1, Discharge Standards, Section 21-006 Definitions

(30) "Overfire Air" means air introduced directly into the waste burner in the upper burning area around the refuse or fuel pile.

(31) "Underfire Air" means air introduced into the waste burner under the fuel pile.

(32) "Approved" means approved in writing by the Sanitary Authority staff.

(33) "Wigwam Waste Burner" means a burner which consists of a single combustion chamber, has the general features of a truncated cone, and is used for incineration of wood wastes, refuse or garbage.

(34) "Auxiliary Fuel" means any carbonaceous material which is readily combustible (includes planer ends, slabs, sidings).

Under Division 2, Subdivision 2

Section 22-030 Wigwam Waste Burners - Purpose. Section 22-030 through Section 22-033 are adopted for the purpose of preventing or eliminating air pollution or public nuisance caused by smoke, gases and particulate matter discharged into the air from wigwam waste burners.

Section 22-031 Wigwam Waste Burner Construction Prohibited.

(1) Construction of wigwam waste burners is hereby prohibited after July 1, 1965, unless plans and specifications have been submitted to and approved by the Sanitary Authority prior to construction.

Section 22-032 All Existing Wigwam Waste Burners Shall Comply by January 1, 1966, with the following:

(1) Adjustment of forced draft underfire air shall be by variable speed blower or fans, dampers, by-passes or by other approved means.

(2) The introduction of overfire air shall be principally by adjustable tangential air inlets located near the base of the wigwam waste burner or by other approved means.

(3) A thermocouple and pyrometer or other approved temperature measurement device shall be installed and maintained on the burner at a location six inches above and near the center of the horizontal screen or at another approved location.

(4) Burner exit temperatures shall be maintained above 500° Fahrenheit. The temperature shall not be below 500° Fahrenheit for more than one hour after starting a fire in the waste burner. The starting time shall be limited to one period within any one day.

(5) A daily written log of the waste burner operation shall be maintained to determine optimum patterns of operation for various fuel and atmospheric

conditions. The log shall include, but not be limited to, the time of day, draft settings, exit gas temperature, type of fuel and atmospheric conditions. The log or a copy shall be submitted to the Sanitary Authority within ten days upon request.

(6) Auxiliary fuel shall be used as necessary during start up and during periods of poor combustion to maintain exit temperatures required under subsection (4). Rubber products, asphaltic materials or materials which cause smoke discharge in violation of Section 21-011 or emissions of air contaminants in violation of Section 21-016 or Section 21-021 shall not be used as auxiliary fuels.

(7) Light fuels or wastes shall be introduced into the burning area in such a manner as to minimize their escape from the burner.

Section 22-033 Variance

(1) Waste burners operating within the modifications and criteria of Section 22-032 are granted a variance for one year from the effective date of these rules from compliance with Section 22-011 Smoke Discharge, Section 21-016 Particle Fallout Rate and Section 21-021 Suspended Particulate Matter; however, variances granted under this section shall be reviewed by the Sanitary Authority staff by June 1 of each year to determine if and for how long and under what conditions each variance shall be continued.

(2) Wigwam waste burners located in sparsely populated areas of the state where their potential for causing an air pollution problem in the immediate or surrounding area is slight, may be granted variances from the provisions of Section 22-032 provided the findings after a review of each individual burner by the Sanitary Authority determines that such a variance would not be detrimental to health and in the best interest of the welfare of the citizens of the state.