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7/15/1977

OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS

State of Oregon
Department of Environmental Quality

Special Meeting

Environmental Quality Commission

July 15, 1977
Room 129, Marion County Courthouse
148 High St., N.E.
Salem, Oregon

2:00 p.m.

A. Field Burning - Public hearing to consider adoption of a temporary rule to amend OAR 340-27-005 through 27-030 to comply with new requirements set forth in House Bill 2196

B. DEQ vs. Teledyne Wah Chang Albany - Request for approval of Stipulation and Final Order regarding anticipated violations of the July 1, 1977 compliance date in Wah Chang's NPDES permit

C. DEQ vs. Georgia Pacific Corporation - Request for approval of Settlement Agreement regarding a civil penalty for an oil spill at Georgia Pacific's Toledo plant

D. Tax Credit - Denial of preliminary certification for tax relief, Woodex, Inc., Brownsville

MINUTES OF THE SPECIAL MEETING
OF THE
OREGON ENVIRONMENTAL QUALITY COMMISSION
July 15, 1977

On Friday, July 15, 1977, a special meeting of the Oregon Environmental Quality Commission convened in Room 129 of the Marion County Courthouse, 148 High Street,N.E., Salem, Oregon.

Present were Commission members: Mr. Joe B. Richards, Chairman; Dr. Grace Phinney, Mrs. Jacklyn Hallock and Mr. Albert Densmore. Commissioner Ronald Somers was not in attendance. Present on behalf of the Department were its Director, Mr. William H. Young, and several members of the Department's staff.

Staff reports presented at this meeting which contain the Director's recommendations mentioned in these minutes, are on file in the Director's Office of the Department of Environmental Quality, 1234 S. W. Morrison, Portland, Oregon.

Field Burning - Public Hearing to Consider Adoption of a Temporary Rule to Amend OAR 340-26-005 through 26-030 to Comply With New Requirements Set Forth in House Bill 2196

Mr. Scott Freeburn of the Department's Air Quality Division presented the staff report on this matter. Mr. Freeburn pointed out that a percentage allocation has been specified, and a 10% additional allocation of permits has been included as initiated last year. Mr. Freeburn wanted to make clear that this would mean that the Department, may, toward the end of the season have permits issued to growers that would run up against the statutory limitation before those permits are actually burned. Mr. Freeburn said that this would mean that some growers may have DEQ permits who would not be able to burn. Chairman Richards asked what would happen if a grower who was registered in the 10% above the allocation, found at the end of the season that the allocation had been used up and he was unable to burn; would he then be entitled to a hardship permit? Mr. Freeburn replied that they would undertake the normal hardship procedure as it applied under the new rules. Chairman Richards said that last year they allowed 10% over the allocation because of the historical estimate that at least 10% more was registered than was actually burned.

Mr. Freeburn said that in the haste to get the field burning bill through the House and Senate the Department did not have time to receive all the public comment normally received in the rule making process. Mr. Freeburn said that both the Oregon Seed Council and Oregon State University had comments to present at this hearing. Mr. Freeburn said that Dr. Harold Youngberg of Oregon State University had called him and said that the role the Department has asked the county extension agents to play in making decisions in regard to emergency burning is not one which they normally fulfill. Mr. Freeburn said that these agents are placed in the county to provide educational information to the farmers in the area and Dr. Youngberg indicated that the rule on inspections of field for hardship permits would put them in the position of being regulatory. Mr. Freeburn said that this would be a moot point this year because of the Legislature having waited until early July to take up the field burning matter, much of the harvest had already begun, and the process of inspecting the fields to determine if an emergency existed would be difficult because the field might have already been harvested and it would be hard to tell if a disease condition existed.

Commissioner Phinney asked if this meant that the Department would not ask the county agents for any of the information specified in the rule, or just that they would not be asked to make a judgment. Mr. Freeburn said that the county agent could supply information if he had seen the field before it was harvested and knew it was in trouble. Mr. Freeburn said that the farmer could contact the county agent for this information and make it part of the farmer's documentation to the Department in support of a hardship permit. Mr. Freeburn said that they do not want to incorporate the county agents into the rule and indicate that they are the agents to work for DEQ. Mr. Freeburn said that the county agents are there to provide education to the farmers and not to act in a regulatory capacity. Commissioner Densmore said that as he read the rule, the county agent was only one alternative and that the State Department of Agriculture and "other public agricultural expert" were other alternatives. Commissioner Densmore asked if county agent was removed from the rule, would the Department of Agriculture or "other agricultural expert" be available. Dr. Harold Youngberg of Oregon State University said that they are concerned about putting their county agents in the position of making inspections. Dr. Youngberg said that the charge of the county extension service was educational and not regulatory and they felt it was not appropriate for them to be inspecting fields, therefore they asked that references to county agent be deleted from the rule. Commissioner Densmore asked if there would be someone available to make the inspections if county agent were to be deleted. Mr. Freeburn said that there were retired agricultural experts, not connected with any public agency, who may be available to make these inspections.

Mr. Freeburn said, that because the Commission had to make a finding in regard to the necessity of experimental burning, he wanted to explain how the 7500 acres outlined in the rule was arrived at. Mr. Freeburn said that experimentation in three areas was contemplated: (1) rapid ignition tests, (2) plume rise tests versus lighting techniques, and (3) plume rise and stability of smoke clouds as a result of burning through a collapsing mixing layer. Mr. Freeburn said the big burn is tentatively outlined to cover the type of rapid ignition that was done last year with acreage amounts varying from 50 acres to 2000 acres. Mr. Freeburn said they would also be testing some of the lighting techniques which have been developed in California and have been found to reduce emissions from open field burning. However, Mr. Freeburn said, they do tend to reduce the plume rise. Mr. Freeburn said they would test these techniques and try to decide if this reduction in plume rise was a logical trade-off to the current techniques. Mr. Freeburn said that experimentation in burning at specific times of the day when the mixing layer was collapsing, was aimed at putting the smoke above the mixed layer where it would be trapped by the stable air below it. Mr. Freeburn said that the 7500 acres was provided to include specifically these three areas of experimentation.

Commissioner Phinney said she felt that #5 under the Director's Recommendation was misleading. This reads as follows:

> "5. Enter a finding that, under the Department's supervision, experimental burning:
>
> a) Can, in theory, reduce the adverse effects on air quality or public health from open field burning; and..."

Commissioner Phinney said that in allowing experimental burning outside the 195,000 acreage allocation, that emissions would not be reduced this year. Commissioner Phinney said that some indication should be made that reduction in emissions was being looked at on a long-term basis and that experimental burning this year may, in the future, result in emission reductions. Mr. Freeburn said that the rule was drafted with the intent of looking toward long-term reductions. Mr. Ray Underwood, Department Legal Counsel, said that the wording "in theory" was taken from the statute. Commissioner Phinney proposed amending the finding in 5.a) to add the words "in the future" between "Can," and "in theory,". Commissioner Hallock asked if item 4 under the Director's recommendation shouldn't be amended to reflect that the finding be made in the interest of the parties involved. Mr. Underwood said that the finding under item 4 was necessary to adopt the rule as temporary.

Mr. Freeburn then read the Director's Recommendation as contained in the staff report. Chairman Richards asked if the recommendation needed to include the deletion of the words "county agent" from the rule. Mr. Underwood said that as he read the rule, it did not mandate the county agents to perform the inspections, and they could refuse if they wanted to. Therefore, Mr. Underwood said, he did not feel the wording needed to be deleted.

Dr. Harold Youngberg of Oregon State University, presented information that had been provided to Ms. Janet McLennan of the Governor's Office, in regard to hardship burning permits. Dr. Youngberg said that Ms. McLennan had asked a committee at Oregon State University for a basis whereby impartial scientific assessment could be made of the severity of specific problems that give rise to hardship applications made by growers. Dr. Youngberg read the following portions of an August 19, 1976 letter to Ms. McLennan. The entire letter is made part of the record for this hearing.

> "Based on historic evidence and experimental data, and because satisfactory alternative field sanitation techniques, chemicals, or other alternatives are not commercially available, any grower who cannot thermally sanitize his field using open burning or mobile sanitizers in 1976 will suffer hardship in 1977. Most fields are infested to some extent with diseases and infested to some extent with weeds that will increase and cause damage, and all unburned fields will probably suffer economic loss in 1977 by reduced yields and quality of seed, which will result in varying degrees of hardship."
>
> "Two types of hardship situations exist. There are those seed growers who applied to burn fields in 1975 but were unable to do so because there were insufficient quotas released before the season ended. As a result of this failure to sanitize in 1975, they suffered losses in yield or quality and increased disease or insect damage in 1975."
>
> "The second type of hardship is faced by growers who have not received permits to burn in 1976 and as a consequence will suffer damage to a grass planting in 1977 through disease losses, increase in weed content, and/or other losses that will cause economic hardship."

"It is difficult to predict accurately on a field-by-field basis the magnitude of the hardship experienced or to be expected after harvest. If any field inspection program is to be undertaken in future years, we stress the importance of making an evaluation before harvest and the importance of proper technical training for the inspectors."

Chairman Richards asked Dr. Youngberg if he had reason to believe that there were a substantial number of fields registered this year that were not burned last year. Dr. Youngberg replied, yes, based on the fact that there were a number of fields registered last year that were unable to be burned because of weather conditions. Chairman Richards asked if a high priority should be given to those fields which were unable to burn last year so that an automatic hardship situation would not develop. Dr. Youngberg said he felt this would not be wise because the growers were in the best position to decide where the burning should be applied.

Mr. George D. Ward appeared on behalf of himself and The Land Use Research Institute. Mr. Ward presented information on the possibility of in-field composting of sewage sludge on grass fields as an alternative to open field burning. Mr. Ward said that he was in favor of the recommendations presented by the staff, however that included in the recommendations could be the stressing of continued research into alternative methods. Mr. Ward said that there is a possibility of funding for this type of research through EPA, and that he had a request for grant before the Pacific Northwest Regional Commission at this time. Mr. Ward submitted copies of his grant request and supporting data for the record.

Ms. Mavis Adams of the City of Eugene presented testimony on behalf of the City Council of Eugene. A copy of this testimony was submitted for the record. The City of Eugene's statement opposed adoption of the proposed rules for the following reasons:

1. The proposed rules should not be adopted until proper notice and opportunity to be heard are afforded concerned citizens.

2. The present hearing cannot be limited in scope, nor can any testimony be excluded because of the hearings conducted by the Legislature.

3. The proposed rules are inadequate in light of the Federal Clean Air Act and Oregon's State Implementation Plan.

Chairman Richards told Ms. Adams that the Commission carried out Legislative intent, and that he felt the Legislature intended that there would be field burning this Summer.

Mr. David S. Nelson, Executive Secretary of the Oregon Seed Council, testified that they concurred in Director's Recommendations 1, 2, and 3 and in Dr. Youngberg's statement that the decision for prioritizing the placement of the allocation on the individual farm should be that of the individual farmer. Mr. Nelson said their recommendation would be that the Commission stay with the percentage allocation adopted previously and that each grower be allocated a percentage. Mr. Nelson said they supported recommendations 4 and 5, but opposed the 7500 acre limitation on experimental burning in the proposed rule. Mr. Nelson said they

did not feel it was the Legislature's intent to place an acreage limit on experimental burning. Mr. Nelson said he felt it was the intent of the Legislature to encourage maximum experimentation and not to arbitrarily limit it by an acreage figure. Mr. Nelson said it was their recommendation, and they felt the intent of the Legislature, that experimental burning be defined by the Commission as to the general parameters the individual experiment must comply with and not to limit the acreage. Mr. Nelson said they would urge that the limit on experimental burning acreage be eliminated and that the Department review each application for experimental burning on the merits of that particular application.

Mr. Nelson said they felt the language in the regulation regarding hardship applications was not confined to exclude economic hardship. Mr. Nelson said they did not agree with the language in proposed rule 340-26-013(6)(a)(A):

> "...failure to allow emergency open burning as requested will result in extreme financial hardship above and beyond mere loss of revenue that would ordinarily accrue due to inability to open burn..."

Mr. Nelson said that "mere loss of revenue" could create extreme financial hardship over the total farm unit that it was applied to. Mr. Nelson proposed that the sentence cited above should be terminated after the word "hardship" so it would read:

> "...failure to allow emergency open burning as requested will result in extreme financial hardship."

Chairman Richards asked Mr. Nelson, if the Commission were to remove the 7500 acre limit on experimental burning, what would be the outside limit? Mr. Nelson said he did not have a figure and that he felt the intent of the Legislature was that the results of the experimental burning would be the limitation on it. Chairman Richards asked what, other than the "big burn" would require a substantial amount of acreage. Mr. Nelson said that there were experiments in rapid ignition not limited to aerial, mechanical or electrical ignition, that would require a number of fields of the same types and sizes. Commissioner Hallock asked if it was conceivable that some farmers who were unable to burn conventionally under the 195,000 acre allocation, would experimental burn. Mr. Nelson said he assumed that that would be the case, if some experimental techniques proved to be more attractive than conventional methods. Commissioner Hallock said she did not feel comfortable in allowing 195,000 acres to be conventionally burned and not putting a limit on experimental burning.

Chairman Richards said that if the Commission were to strike out the wording in the proposed rule about "mere loss of revenue" they would be adopting as a rule that mere loss of revenue would constitute hardship. Mr. Nelson replied that the same loss of revenue to one grower would result in extreme financial hardship, when it might not so seriously affect another grower with greater financial capacity.

Some discussion followed among Commission members on amending the Director's recommendations.

It was MOVED by Commissioner Phinney, seconded by Commissioner Hallock, and carried unanimously that the Director's recommendation, as amended be adopted. The amended recommendation follows:

Director's Recommendation

It is the Director's recommendation that the Commission take the following actions:

1. Acknowledge as of record the consultation with and recommendations of Oregon State University and the Department and any other parties consulted pursuant to ORS 468.460(3) as revised by HB 2196.

2. Find that reasonable and economically feasible alternatives to the practice of annual open field burning have not been developed.

3. Allocate the statutory limit of 195,000 acres to be burned during 1977 pro rata according to acres registered in July 1977.

4. Enter a finding that failure to act promptly will result in serious prejudice to the public interest and interest of the parties involved for the specific reasons cited above.

5. Enter a finding that, under the Department's supervision, experimental burning:

   a) Can, in the future, in theory, reduce the adverse effects on air quality or public health from open field burning; and

   b) Is necessary in order to obtain information on air quality, public health or the agronomic effects of an experimental form of open field burning.

6. Subject to any changes found appropriate as a result of recommendations made to the Commission or findings reached after this (July 15, 1977) hearing, adopt the proposed amendments to OAR Chapter 340, Sections 26-005 through 26-030 as temporary rules to become effective immediately upon filing with the Secretary of State.

7. Instruct the Department to file promptly after HB 2196 (1977 regular Legislative Session) becomes effective, the adopted rules and findings with the Secretary of State as temporary rules to become effective immediately upon such filing and to remain effective for 120 days thereafter.

Stipulation and Final Order Regarding Anticipated Violations of the July 1, 1977 Compliance Date in Teledyne Wah Chang Albany's NPDES Permit

Mr. William Young, Director, told the Commission that an agreement had been made between the Department and Teledyne Wah Chang Albany dealing with violations of their NPDES permit commencing on July 1, 1977. Mr. Young indicated that Mr. Ray Underwood, Department legal counsel, and representatives of the Company were available to answer questions. Chairman Richards asked for clarification of paragraph 5 of the Stipulation and Final Order, which reads:

5. Respondent believes that since issuance of the permit respondent has attempted in good faith to comply with ammonia nitrogen effluent and toxicity limitations imposed thereby and has exercised diligent efforts to acquire the best practicable control technology for limiting discharge of ammonia nitrogen and toxic effluents so as to be in position to comply with the permit standards due to become effective June 30, 1977.

Mr. John Bledsoe, attorney for Teledyne Wah Chang Albany, said that the Company had a study made to determine the best method of handling their stream pollution problem. Mr. Bledsoe said that everything the Company considered that was recommended at the time the permit was granted was installed, however, at times they did not work efficiently enough to comply with the July 1, 1977 standards. Mr. Bledsoe said the Company felt that there was nothing that had been proposed to them that had not been given thorough consideration. Mr. Bledsoe said they felt that restrictions had been put on the Company which were beyond the best practicable control technology.

Chairman Richards asked why the air stripper had not been installed or considered at an earlier time. Mr. Bledsoe replied that the Company considered the air stripper to be above and beyond the best practicable control technology. Mr. Bledsoe said the reasons for this were (1) the amount of energy used to run the stripper, and (2) that they were not sure the stripper could comply with the air pollution standards. Commissioner Phinney asked what timing was involved in installing the air stripper. Mr. Ken Bird, of Wah Chang, replied that they had an August 1 submittal requirement on the Stipulated Order and they intended to comply with that. Mr. Bird said it would take six to eight months to get the final design and install the air stripper. Commissioner Phinney also asked why the Company had waited until after the July 1 deadline to submit plans for the air stripper. Mr. Bledsoe replied that they did not consider the air stripper as best practicable control technology. Mr. Bledsoe said that the Company asked several times exactly what the Department wanted them to install. Commissioner Phinney said that the Department did not ordinarily tell a company what specific equipment to install, rather it sets the emission limits and leaves it to the company to choose the equipment to meet the standards. Commissioner Hallock said that she understood the zirconium plant proposed for Dallesport, Washington would have zero discharge into the river. Mr. Bledsoe replied that the plant was not installed and operating yet and Wah Chang was not aware of the technology available to meet zero discharge.

Mr. Bird said that at the time of the original permit, Wah Chang was discharging about 5000 lbs/day of ammonia. Mr. Bird said they had reduced that from about 26,000 lbs/day in approximately 1965-67. Mr. Bird said they have increased their ammonia usage from 26,000 to 46,000 lbs/day, and most of that is recovered as fertilizer. Mr. Bird said they installed approximately $1 million in equipment to reduce the ammonia from 5000 lbs/day to the current 1200-1300 lbs/day. Mr. Bird said they have installed two steam strippers that always work at maximum efficiency and they are unable to remove more than 98%. Mr. Bird said that if they install the air stripper, they will have to discharge the ammonia they take out of the water into the air. Mr. Bird said they are presently recovering all the ammonia but 2% which they discharge into the water.

Mr. Danial Garigan, Planner with the City of Monmouth, spoke regarding the water supply to the City of Monmouth. Mr. Garigan said that in researching new sources of water supply for the City they are looking at the Willamette River. Mr. Garigan said that they would be the first water supply downstream from the Wah Chang plant. Mr. Garigan said Monmouth planned to use the river through a collection system near the bank of the river which would cost approximately $1 1/2 million to install. Mr. Garigan said that their alternative source of supply would be impoundments in the Coast Range which would cost approximately $4 1/2 million to implement. Mr. Garigan said there is concern in the Monmouth community about pollution in the river and discharges to the river from the Wah Chang plant. Mr. Garigan asked that the Commission assure that the use of the Willamette river as a water supply source would take priority over other uses. Commissioner Phinney asked Mr. Garigan if he knew of any other communities on the Willamette that were considering using it for a water source. Mr. Garigan replied that either Tigard or Newberg were conducting a study on using the river as a water source. Commissioner Hallock said that if it was going to cost municipalities $1 1/2 million to install water treatment plants before they could use the Willamette as a water supply, then it might be cheaper to have Wah Chang clean up. Mr. Bledsoe said that Wah Chang was not the only source that discharged ammonia into the Willamette River. Mr. George Ward, speaking on behalf of himself, cautioned the Commission about concentrating on the elimination of just one pollutant. Mr. Ward said that if the Commission were to apply a limit to any one company on any given discharge, they might have to apply that to sewage treatment plants as well.

Commissioner Densmore asked what the staff had in mind in levying the amount of penalty. Mr. Young said that the amount of penalty during the time the Department is reviewing the issue of water quality and EPA is pursuing best practicable treatment reflects the technical violation of an earlier agreed-upon permit. Mr. Young said, that after this time, the Company had stipulated to a $200/day fine which reflects the daily operational costs and amortization of construction costs on the air stripper. Mr. Young said that this fine would carry through the time of the current permit which expired June 30, 1978. Mr. Young said that the only way the air stripper would not be constructed, is if the Department finds that it would be detrimental to the air quality. Mr. Young said that the Company has agreed to proceed with the most appropriate technology even if permit standards might be altered in review this Summer to suggest that they are within standards doing what they are doing now.

Commissioner Hallock asked when EPA would make their decision on best practicable control strategy. Mr. Young said he assumed that EPA would make their judgments within the next two to three months, and probably sooner. Mr. John Vlastelicia, EPA Oregon Operations Office, said they were working on a report at the present time that would provide an assessment of the technology that would apply to the ammonia removal problem at Wah Chang, as well as an assessment of the Company's pursuit of that technology. Mr. Vlastelicia said they hoped to have the report on technology ready within the next two weeks and a determination of best practicable treatment under the federal program four to five weeks after that. Commissioner Phinney asked if an evaluation of the air stripper would be included in the determination of best practicable treatment. Mr. Vlastelicia said they had asked their person writing the study to look into the technology of the air stripper.

Commissioner Phinney said she understood that an evaluation of the air emissions would include a modeling of the airshed in the vicinity. Mr. Fritz Skirvin of the Department's Air Quality Division, said that some dispersion modeling would be done to determine ambient concentrations of ammonia. Mr. Skirvin said that the concern about the ammonia was that if it was in the ambient air and ran into hydrogen chloride it would react and form ammonium chloride which is a particulate, and then cause visibility reduction. Mr. Skirvin said that the ammonia itself would not be a problem.

Commissioner Phinney asked if there was a possibility of tying in with the USGS model of the Willamette. Mr. Young said that that would be something the Department was going to explore, however he was concerned about time frames involved. He also said that from the contacts the Department had had with the persons involved in that model, it might very well be done within the time frames the Department was looking at.

It was MOVED by Commissioner Hallock, seconded by Commissioner Densmore and unanimously carried that the Director's recommendation to approve the Stipulation and Final Order and authorize the Director to sign on the Commission's behalf be approved.

Georgia Pacific Corporation, Toledo - Civil Penalty Mitigation

Mr. Young said that this matter involved an oil spill of relatively small quantities on which the Department imposed and assessed a fine of $500. Mr. Young said subsequently Georgia Pacific requested a hearing and negotiations occurred. Mr. Young said that based upon these negotiations and the information that came out of them, he is recommending that the penalty be mitigated down to $250.

It was MOVED by Commissioner Hallock, seconded by Commissioner Phinney and carried unanimously that the Director's recommendation to mitigate the civil penalty against Georgia Pacific to $250 be approved.

DENIAL OF PRELIMINARY CERTIFICATION FOR TAX RELIEF - WOODEX, INC.

Chairman Richards wanted to clarify that if the Commission denied the preliminary certification it would be without prejudice to the applicant submitting another request at a later date, which would then be considered on its own merits. Mr. Fritz Skirvin of the Department's Air Quality Division, replied that this was correct.

Commissioner Phinney MOVED, Commissioner Hallock seconded and it was carried unanimously that the request for Preliminary Certification for Tax Credit Relief by Woodex, Inc. be denied without prejudice.

There being no further business, the meeting was adjourned.

Respectfully submitted,

Carol A. Splettstaszer

Recording Secretary

ROBERT W. STRAUB
GOVERNOR

Environmental Quality Commission

1234 S.W. MORRISON STREET, PORTLAND, OREGON 97205 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. A, July 15, 1977, EQC Meeting

Public Hearing to Allocate Acreage to be Open Burned and Consider Adoption of Temporary Agricultural Burning Rules, OAR Chapter 340, Sections 26-005 through 26-030

This report was prepared assuming HB 2196 would be signed by the Governor and become law. All decisions, findings, and conclusions drawn in response to this report are subject to final passage of HB 2196.

Background

The annual burning of grass fields in the Willamette Valley is managed under a statutorily established program based on the cooperative efforts of the State Fire Marshal, local fire district agents, the Oregon Field Sanitation Committee, the Oregon Seed Council, Oregon State University, individual growers, and the EQC and DEQ.

Oregon Law 1975, Chapter 559, established a phase-down in the maximum acreage to be burned in each year as follows:

1. In 1975, not more than 235,000 acres shall be burned.
2. In 1976, not more than 195,000 acres shall be burned.
3. In 1977, not more than 95,000 acres shall be burned.
4. After 1977, not more than 50,000 acres shall be burned annually.

This law also established the Oregon Field Sanitation Committee to conduct research into alternatives and required DEQ to issue permits for open field burning in the Willamette Valley.

The Commission's primary duties under this law have been:

1. Classification of "marginal" and "prohibited" burning conditions.

2. Adoption of rules regulating field burning.

3. Establishment of emission standards for alternative methods to open field burning.

4. Establishment of the maximum acreage to be burned and allocation of field burning permits based on local air quality conditions, soil characteristics, the type or amount of field burning or crops, the availability of alternative methods of field sanitation, proportional share, or other reasonable method.

The Department's major duties have been:

1. Issuance of field burning permits.

2. Enforcement of all field burning rules and statutes.

3. Monitoring and prevention of unlawful burning.

4. Providing aid to fire districts in carrying out their registration and burning duties.

5. Conducting, in cooperation with the Oregon Seed Council, a smoke management program.

6. Review and tabulation of information for the annual field burning report.

On May 27, the Commission met and acted under existing law to allocate acreage for burning. The Department is currently operating under the rules adopted at that meeting.

House Bill 2196 (Attachment I), the new field burning law, provides for several significant changes to the law. The Bill:

1. Revises the scheduled phase-down in maximum acreages to be open burned during the next two years and gives the responsibility to the Commission after that period, so that,

   a) During 1977, not more than 195,000 acres may be burned,

   b) During 1978, not more than 180,000 acres may be burned,

   c) By January 1, 1979 and January 1 of each odd-numbered year thereafter, the Commission shall by order indicate the number of acres for which permits may be issued.

In addition, under the bill the Commission must now authorize the maximum allowable acreage "unless the Commission finds after hearing that other reasonable and economically feasible alternatives to the practice of annual open field burning have been developed." Previous wording allowed the maximum acreage to be permitted only if the Commission found after hearing that:

a) There are insufficient numbers of workable machines that can reasonably be made available to sanitize the acreage if an acreage reduction is ordered;

b) There are insufficient methods available for straw utilization and disposal; and

c) Reasonable efforts have been made to develop alternative methods of field sanitation and straw utilization and disposal, and such methods have been utilized to the maximum reasonable extent.

2. Establishes a $1.00/A non-refundable registration fee in addition to a $2.50/A burning fee. This fee remains constant.

3. Abolishes the Oregon Field Sanitation Committee and transfers its duties, responsibilities, and obligations to the Department and a five-member advisory committee.

4. Authorizes the Commission, instead of the Governor, to permit emergency open burning of extra acres.

5. Authorizes the Commission instead of the Governor, upon finding extreme danger to public health or safety, to order temporary cessation of all open field burning.

6. Provides a $400,000 biennial budget limitation for a smoke management program.

7. Authorizes the Commission to adopt rules allowing experimental open burning under the direction of the Department and outside the specified numerical acreage limitations.

These changes in statute have significant impact on some parts of the field burning program. Rule changes are therefore necessary under HB 2196 to:

1. Establish the acreage to be burned in 1977,

2. Allocate field burning permits,

3. Establish the criteria and procedures under which the Commission may permit emergency burning, and

4. Provide the Department guidance and limitations for experimental burning outside the statutory, numerical acreage limitation.

Discussion

General

As specified in HB 2196, the Commission (1) prior to promulgating field burning rules must consult with Oregon State University and the Department and must hold public hearing and (2) based on testimony received, adopt field burning rules for Multnomah, Washington, Clackamas, Marion, Polk, Yamhill, Linn, Benton and Lane Counties which provide for a more rapid phased reduction by certain permit areas, depending on particular local air quality conditions and soil characteristics, the extent, type or amount of open field burning of perennial grass seed crops, annual grass seed crops and grain crops and the availability of alternative methods of field sanitation and straw utilization and disposal.

Since written comment received from OSU and others at the May 27, 1977 EQC meeting still appears pertinent to conditions under HB 2196 and due to the limited time, no new written material has been requested by staff. However, representatives from Oregon State University have been requested to appear at the July 15, 1977 hearing.

Maximum Acreage to be Burned in 1977

As discussed in the staff report of May 27, 1977, reasonable and economically feasible alternatives to the practice of open field burning are not available. As provided for in ORS 468.475 as revised by HB 2196, the Commission shall authorize that permits be issued for the maximum acreage specified, 195,000 acres for 1977, unless it finds "other reasonable and economically feasible alternatives to the practice of annual open field burning have been developed." The proposed field burning rules (Attachment II) include the maximum statutory allowable acreages to be open burned. Prior to the adoption of these rules, those acreages must be amended if a lower limitation is established, to coincide with the findings of the Commission.

Acreage Allocation

Registration of fields was completed in early April and results have been tabulated. A summary is shown below. More complete information is attached. (Attachment III)

	ACRES REGISTERED			
AREA	Perennial	Annual	Cereal	Total
North Valley	51,529	16,549	24,010	92,088
South Valley	73,117	121,374	29,500	223,491
All Valley	124,646	137,923	53,510	316,079

Since House Bill 2196 revised the registration procedure requiring a non-refundable $1.00 per acre fee to be paid at the time of registration, it was determined that a re-registration of acreages to be open burned would be needed. The Department initiated the re-registration process on July 6, 1977, in an effort to meet the statutorily set completion date of July 10, 1977. To minimize time and effort of the process, the Department requested only a new listing of acreages to be burned, cross-referenced to the detailed information provided to the Department on the March registration form.

Staff currently plans for the July re-registration results to be tabulated and available by the July 15, 1977 meeting. It is expected that the re-registered acres will exceed the 195,000 acre limitation set for 1977, and that acreage must be allocated by the Commission per ORS 468.475.

In general, the comments of the May 27, 1977 staff report and the testimony presented at that meeting apply to the present allocation question.

The attached rules provide for acreage to be allocated on a proportional share basis. Inadequate information in regard to soil and slope, air quality, and crop type problems on an individual basis makes these factors undesirable for allocation criteria at this time.

Emergency Burning

ORS 468.475(6) and (7) as revised by HB 2196 provide for the Commission to decide upon requests for emergency burning based on extreme hardship, disease outbreak, insect infestation, or irreparable damage to the land. The law also provides for a Commission response within ten days upon receipt of application.

The attached amended rules provide for the Department to receive and analyze such requests and provide the Commission with information upon which to base a decision.

Experimental Burning

Section 9 of HB 2196 states that, "the Commission shall by rule, allow experimental open field burning under the direction of the Department for perennial grass seed crops, annual grass seed crops and grain crops in such areas and for such periods of time as it considers necessary." The Commission may allow open burning of acreage for which regular permits have not been issued when it finds that the experimental burning:

a) Can, in theory, reduce the adverse effects on air quality or public health from open field burning; and

b) Is necessary in order to obtain information on air quality, public health or the agronomic effects of an experimental form of open field burning."

Language to incorporate and allow experimental burning has been added to the amended rules. The Department has no plans, at this time, for establishing a burning fee for experimental acreage as is provided for in Section 9 of HB 2196, Subsection (3), however, a 7500 acre limitation over and above the 195,000 acres for 1977 is included based on contemplated experimentation.

Need for Emergency Action

Failure to act promptly will result in serious prejudice to the public interest and to the interest of the parties involved for the specific reasons that the field burning season is upon us and regulatory guidelines are needed immediately to implement the new legislation with regard to field burning.

Adoption of the attached rules as temporary rules will allow operation of the field burning program for 120 days. After 120 days, operation will revert to existing rules which will be adequate for the winter burning season. The Department will present rules for adoption prior to the 1978 field burning season based on best available information.

Director's Recommendation

It is the Director's recommendation that the Commission take the following actions:

1. Acknowledge as of record the consultation with and recommendations of Oregon State University and the Department and any other parties consulted pursuant to ORS 468.460(3) as revised by HB 2196.

2. Re-enter a specific finding whether reasonable and economically feasible alternatives to the practice of annual open field burning have been developed.

3. Allocate the statutory limit of 195,000 acres to be burned during 1977.

4. Enter a finding that failure to act promptly will result in serious prejudice to the public interest for the specific reasons cited above.

5. Enter a finding that, under the Department's supervision, experimental burning:

   a) Can, in theory, reduce the adverse effects on air quality or public health from open field burning; and

b) Is necessary in order to obtain information on air quality, public health or the agronomic effects of an experimental form of open field burning.

6. Subject to any changes found appropriate as a result of recommendations made to the Commission or findings reached after this (July 15, 1977) hearing, adopt the proposed amendments to OAR chapter 340, Sections 26-005 through 26-030 as temporary rules to become effective immediately upon filing with the Secretary of State.

7. Instruct the Department to file the adopted rules and findings with the Secretary of State as temporary rules to become effective immediately upon such filing and to remain effective for 120 days thereafter.

Bill

WILLIAM H. YOUNG
Director

SF/1b
7/12/77

Attachments

OREGON LEGISLATIVE ASSEMBLY--1977 Regular Session

Corrected

B-Engrossed

House Bill 2196

Ordered by the Senate June 25
(Including Amendments by House June 16 and by Senate June 25)

Sponsored by Representative GILMOUR

SUMMARY

The following summary is not prepared by the sponsors of the measure and is not a part of the body thereof subject to consideration by the Legislative Assembly. It is an editor's brief statement of the essential features of the measure.

Abolishes Oregon Field Sanitation Committee. Transfers duties, functions and powers of committee to Department of Environmental Quality. Defines "smoke management" and "smoke management program" as controlled open field burning. Specifies duties of department pertaining to field burning.

Creates advisory committee to assist department in conducting specified programs.

Increases amount of total maximum acreage allowed to be open burned **in 1977** [*each year*] from 95,000 to 195,000 acres. **Limits total maximum acreage to be open burned in 1978 to 180,000 acres.** Allows Environmental Quality Commission, instead of Governor, to permit emergency open burning of extra acres or cessation of burning.

Requires per acre registration and permit fee to be collected by Executive Department for acres to be burned.

Limits biennial expenditure for smoke management program by department to $400,000.

Declares emergency.

NOTE: Matter in **bold face** in an amended section is new; matter [*italic and bracketed*] is existing law to be omitted; complete new sections begin with **SECTION.**

A BILL FOR AN ACT

Relating to field burning; creating new provisions; amending ORS 307.390, 468.455, 468.460, 468.470, 468.475 and 468.480; repealing ORS 468.485; appropriating money; limiting expenditures; and declaring an emergency.

Be It Enacted by the People of the State of Oregon:

SECTION 1. (1) The Oregon Field Sanitation Committee established under section 7, chapter 559, Oregon Laws 1975, is hereby abolished. The tenure of office of the members of the committee shall cease.

(2) There are imposed upon, transferred to and vested in the Department of Environmental Quality all the duties, functions and powers of the committee.

(3) The rights and obligations of the committee legally incurred under contracts, leases and business transactions, executed, entered into or begun before the effective date of this Act, are transferred to the department. For the purpose of succession of such rights and obligations, the department is considered to be a continuation of the committee and not a new authority, and the department shall exercise such rights and fulfill such obligations as if they had not been transferred.

(4) All equipment, materials, supplies, records, books, papers and other property of the committee are transferred to the department and shall be delivered by the committee to the department which shall take possession of such property.

(5) All unexpended and unobligated revenues credited to the account of the committee are hereby credited to the account of the Department of Environmental Quality and continuously appropriated to the department for use as provided in ORS 468.470.

SECTION 2. Sections 3, 7 and 9 of this Act are added to and made a part of ORS chapter 468.

SECTION 3. As used in ORS 468.455 to 468.480:

(1) "Smoke management" means control of the conducting of open field burning to such times and places and in such amounts so as to provide for the escape of smoke and particulate matter therefrom into the atmosphere with minimal intrusion into cities and minimal impact on public health and in such a manner that under existing meteorological conditions a maximum number of acres registered can be burned in a minimum number of days without substantial impairment of air quality.

(2) "Smoke management program" means a plan or system for smoke management. A smoke management program shall include, but not be limited to, provisions for:

(a) Annual inventorying and registering, prior to the burning season, of agricultural fields for open field burning;

(b) Preparation and issuance of field burning permits by affected governmental agencies;

(c) Gathering and disseminating regional and sectional meteorological conditions on a daily or hourly basis;

(d) Scheduling times, places and amounts of agricultural fields that may be open burned daily or hourly, based on meteorological conditions during the burning season;

(e) Conducting surveillance and gathering and disseminating information on a daily or more frequent basis;

(f) Effective communications between affected personnel during the burning season; and

(g) Employment of personnel to conduct the program.

Section 4. ORS 468.455 is amended to read:

468.455. [*In a concerted effort by agricultural interests and the public to overcome problems of air pollution, it is the purpose of ORS 468.140, 468.150, 468.290 and 468.455 to 468.485 to provide incentives for development of alternatives to open field burning, to phase out open field burning and to develop feasible alternative methods of field sanitation and straw utilization and disposal.*] **In the interest of public health and welfare it is declared to be the public policy of the state to control, reduce and prevent air pollution caused by the practice of open field burning. Recognizing that limitation or bar of the practice at this time, without having found reasonable and economically feasible alternatives to the practice could seriously impair the public welfare, the Legislative Assembly declares it to be the public policy of the state to reduce air pollution by smoke management and to continue to seek and encourage by research and development reasonable and economically feasible alternatives to the practice of annual open field burning, all consistent with ORS 468.280.**

Section 5. ORS 468.460 is amended to read:

468.460. In order to regulate open field burning pursuant to ORS 468.475:

(1) In such areas of the state and for such periods of time as it considers necessary to carry out the policy of ORS 468.280, the commission by rule may prohibit, restrict or limit classes, types and extent and amount of burning for perennial grass seed crops, annual grass seed crops and grain crops.

(2) In addition to but not in lieu of the provisions of ORS 468.475 and of any other rule adopted under subsection (1) of this section, the commission shall adopt rules for Multnomah, Washington, Clackamas, Marion, Polk, Yamhill, Linn, Benton and Lane Counties, which provide for a more rapid phased reduction by certain permit areas, depending on particular local air quality conditions and soil characteristics, the extent, type or amount of open field burning of perennial grass seed crops, annual grass seed crops and grain crops and the availability of alternative methods of field sanitation and straw utilization and disposal.

(3) Before promulgating rules pursuant to subsections (1) and (2) of this section, the commission shall consult with Oregon State University and [*the Oregon Field Sanitation Committee and*] may consult with the Soil Conservation Service, the Agricultural Stabilization Commission, the State Soil and Water Conservation Commission and other interested agencies. The [*Oregon Field Sanitation Committee*] **department** shall [*act as a special advisory committee to*] **advise** the commission in the promulgation of such rules. The commission must review and show on the record the recommendations of the [*Oregon Field Sanitation Committee*] **department** in promulgating such rules.

(4) No regional air quality control authority shall have authority to regulate burning of perennial grass seed crops, annual grass seed crops and grain crops.

Section 6. ORS 468.470 is amended to read:

468.470. [*(1) The Oregon Field Sanitation Committee is established and for the purposes of ORS 468.140, 468.150, 468.290 and 468.455 to 468.485 shall be referred to as the "committee." The committee shall consist of two members representing agriculture appointed by the Director of Agriculture from a list of five nominees submitted by the Oregon Seed Council, two members representing the public appointed by the director of the department and a fifth member appointed by the Governor. Members shall be persons knowledgeable concerning agricultural practices and air quality control practices which are the subject of ORS 468.455 to 468.485.*]

[*(2) The committee shall assume the duties and responsibilities formerly held by the field burning committee established pursuant to section 4, chapter 563, Oregon Laws 1971 (regular session), which committee is abolished. However, members of the field burning committee shall be the members of the field sanitation committee until their terms expire pursuant to subsection (3) of this section.*]

[*(3) The term of office of each member of the committee is four years, but a member may be removed for cause. By lot, the committee shall select two of its members whose*

terms expire on December 31, 1976, and one of its members whose term expires December 31, 1977. The remaining members' terms shall expire on December 31, 1978.]

[*(4) The committee shall:*]

[*(a) Monitor and conduct programs for development of feasible alternative methods of field sanitation and straw utilization and disposal;*]

[*(b) Make recommendations for research and development of alternative methods;*]

(1) The department shall:

(a) With the advice and assistance of the advisory committee established under section 7 of this 1977 Act, adopt and implement programs for study, research and development of reasonable and economically feasible alternatives to the practice of open field burning, such programs to include, but not be limited to:

(A) Utilization and marketing of crop residue;

(B) Research on development of alternate crops;

(C) Research on improvement of air quality and smoke management;

(D) A study of methods of field sanitation and the economic, agronomic and environmental effects of mobile burners and other alternatives;

(E) Research on development of alternate weed, pest and disease controls; and

(F) Reseach on the health effects of open field burning;

[*(c)*] **(b)** Provide assistance to persons wishing to obtain the use of feasible methods of field sanitation and straw utilization and disposal and, in so doing, assist in purchasing, purchase and lease to users, and promote extensive use of such methods;

[*(d)*] **(c)** Receive and disburse funds, including but not limited to voluntary contributions from within and outside this state, grants and gifts; [*and*]

(d) Monitor and study the impact of open field burning on air quality in the Willamette Valley;

(e) Report [*quarterly*] **annually** to the Legislative Committee on Trade and Economic Development on the progress being made in discovering and utilizing alternatives to open field burning **and on the effectiveness of the smoke management program and make recommendations regarding the maximum acreage limitations provided in ORS 468.475 due to the development of reasonable and economically feasible alternatives to the practice of annual open field burning; and**

(f) Conduct a smoke management program.

[*(5) Subject to the approval of the Executive Department, the committee*] **(2) The department** may:

(a) Enter into contracts with public and private agencies to carry out the purposes [*of demonstration of alternatives to agricultural open field burning*] **set forth in paragraph (a) of subsection (1) of this section;**

(b) Apply for and obtain patents in the name of the State of Oregon and assign such rights therein as the [*committee*] **department** considers appropriate;

(c) Employ such personnel as is required to carry out the duties assigned to it; and

(d) Sell and dispose of all surplus property of the [*committee*] **department,** including but not limited to straw-based products produced or manufactured by the [*committee*] **department.**

SECTION 7. (1) To aid and assist the department in conducting the programs under paragraph (a) of subsection (1) of ORS 468.470, there is created an advisory committee which shall consist of:

(a) One member representing the Department of Environmental Quality appointed by the Director of the Department of Environmental Quality;

(b) One member representing Oregon State University appointed by the Dean of the School of Agriculture at Oregon State University;

(c) One member representing agriculture appointed by the Director of Agriculture;

(d) One member representing the public appointed by the Governor; and

(e) One member representing the Economic Development Department appointed by the Director of the Economic Development Department.

(2) Each member shall be appointed for a term of two years.

(3) Members of the advisory committee are not entitled to compensation, but at the discretion of the Governor may be reimbursed for actual and necessary travel and other expenses incurred by them in the performance of their official duties, subject to laws regulating travel and other expenses of state officers and employes.

(4) A vacancy for any cause occurring before the expiration of a term shall be filled for the unexpired term by a person appointed by the person who appointed the vacating member.

Section 8. ORS 468.475 is amended to read:

468.475. (1) **Except as provided under section 9 of this 1977 Act,** no person shall open burn or cause to be open burned in the counties specified in subsection (2) of ORS 468.460, perennial or annual grass seed crops used for grass seed production or cereal grain crops, unless the acreage has been registered pursuant to ORS 468.480 and

the permits required by ORS 468.450, 468.458, 476.380 and 478.960 have been obtained.

(2) Except as may be provided by rule under ORS 468.460, the maximum total registered acreage allowed to be open burned pursuant to subsection (1) of this section shall be [*as follows*]:

[*(a) During 1975, not more than 235,000 acres may be burned.*]

[*(b) During 1976, not more than 195,000 acres may be burned.*]

[*(c)*] (a) During 1977, not more than [*95,000*] **195,000** acres [*may be burned*].

(b) During 1978, not more than 180,000 acres.

[*(d) In 1978 and each year thereafter, the commission, after taking into consideration the factors listed in subsection (2) of ORS 468.460, may by order issue permits for the burning of not more than 50,000 acres.*]

[*(e) The acreage amounts provided in paragraphs (c) and (d) of this subsection are declared to be the goals of the Fifty-eighth Legislative Assembly. The commission and the Legislative Committee on Trade and Economic Development shall report to the Fifty-ninth Legislative Assembly with their recommendations for possible modifications.*]

(3) By January 1 of 1979 and by January 1 of each odd-numbered year thereafter, the commission, after taking into consideration the factors listed in subsection (2) of ORS 468.460, shall by order indicate the number of acres for which permits may be issued for the burning of such acreage as it considers appropriate and necessary, upon finding that open burning of such acreage will not substantially impair public health and safety and will not substantially interfere with compliance with relevant state and federal laws regarding air quality.

[*(3)*] (4) In the event of the registration of more than the maximum allowable acres for open burning in the counties specified in subsection (2) of ORS 468.460, the commission, after consultation with the [*committee*] **department**, by rule or order may allocate permits for acreage based on particular local air quality condition, soil characteristics, the type or amount of field burning or crops, the availability of alternative methods of field sanitation, the date of registration, proportional share, or any reasonable classification. Priority shall be given to use of available alternatives to open field burning in Lane County and priority areas in other counties listed in subsection (2) of ORS 468.460.

[*(4)*] **(5)** It is the intention of the Legislative Assembly that permits shall be issued for the maximum acreage specified in subsection (2) of this section [*for each year recited therein only if*] **unless** the commission finds after hearing that[*.*] **other reasonable and economically feasible alternatives to the practice of annual open field burning have been developed.**

[*(a) There are insufficient numbers of workable machines that can reasonably be made available to sanitize the acreage if an acreage reduction is ordered;*]

[*(b) There are insufficient methods available for straw utilization and disposal; and*]

[*(c) Reasonable efforts have been made to develop alternative methods of field sanitation and straw utilization and disposal, and such methods have been utilized to the maximum reasonable extent.*]

[*(5)*] **(6)** The [*Governor*] **commission**, upon finding of extreme hardship, disease outbreak, insect infestation or irreparable damage to the land, may by order permit emergency open burning of more acreage than allowed by subsection (2) of this section. Upon a finding of extreme danger to public health or safety, the [*Governor*] **commission** may order temporary emergency cessation of all open field burning in any area of the counties listed in subsection (2) of ORS 468.460.

[*(6)*] **(7)** The commission shall act on any application for a permit under ORS 468.458 within 60 days of registration and receipt of the fee provided in ORS 468.480. **The commission shall act on any application for a finding of extreme hardship within 10 days upon receipt of the application. The commission may order emergency cessation of open field burning at any time.** Such other decisions as may be required under this section must be made by the commission on or before [*July 10, 1975*] **July 15, 1977**, and on or before June 1 of each subsequent year.

SECTION 9. (1) Notwithstanding the provisions of ORS 468.475, for the purpose of improving by demonstration or investigation the environmental or agronomic effects of open field burning, the commission shall by rule, allow experimental open field burning under the direction of the department for perennial grass seed crops, annual grass seed crops and grain crops in such areas and for such periods of time as it considers necessary. Experimental open field burning includes but is not limited to:

(a) Development, demonstration or training personnel in the use of special or unusual field ignition techniques or methodologies.

(b) Setting aside times, days or areas for special studies.

(c) Operation of experimental mobile field sanitizers.

(2) The commission may allow open burning under this section of acreage for which permits have not been issued pursuant to ORS 468.475 when it finds that the experimental burning:

(a) Can, in theory, reduce the adverse effects on air quality or public health from open field burning; and

(b) Is necessary in order to obtain information on air quality, public health or the agronomic effects of an experimental form of open field burning.

(3) The department may, by rule, establish fees, registration requirements and other requirements or limitations necessary to carry out the provisions of this section.

Section 10. ORS 468.480 is amended to read:

468.480. (1) (a) On or before [*July 1, 1975*] **July 10, 1977**, and on or before April 1 of each subsequent year, the grower of a grass seed crop shall register with the county court or board of county commissioners or the fire chief of a rural fire protection district, or his designated representative, the number of acres to be burned in the remainder of the year. **At the time of registration the Executive Department shall collect a nonrefundable fee of $1 per acre registered. The Executive Department may contract with counties and rural fire protection districts for the collection of the fees which shall be forwarded to the Executive Department.** Any person registering after the dates specified in this subsection shall pay an additional fee of $1 per acre registered if the late registration is due to the fault of the late registrant or one under his control. Late registrations must be approved by the department. Copies of the registration form shall be forwarded to the department. The required registration must be made and the fee paid before a permit shall be issued under ORS 468.458.

(b) Except as provided in paragraph (c) of this subsection, after July 2, 1975, the Executive Department shall collect a fee **of $2.50 per acre of crop burned** prior to the issuance of any permit by the Department of Environmental Quality for open burning of perennial or annual grass seed crops or cereal grain crops under ORS 468.140, 468.150, 468.290 and 468.455 to [*468.485*] **468.480**. The Executive Department may contract with counties and rural fire protection districts for the collection of the fees which shall be forwarded to the Executive Department. [*The amount of the fee shall be $3 in 1975, $4 in 1976, $5.50 in 1977, and $8 in any year thereafter, per acre of crop burned.*]

(c) The fee required by paragraph (b) of this subsection shall be refunded for any acreage where efficient burning of stubble is accomplished with equipment using an

auxiliary fuel or mobile field sanitizer which has been approved by [*the committee and*] the department for field sanitizing purposes or for any acreage not burned.

(2) [*The*] **With regard to the disbursement of funds collected pursuant to subsection (1) of this section, the** Executive Department shall: [*pay to the county or board of county*]

(a) Pay an amount to the county or board of county commissioners or the fire chief of the rural fire protection district, not to exceed 20 cents per acre registered, to cover the cost of and to be used solely for the purpose of administering the program of registration of acreage to be burned, issuance of permits, keeping of records and other matters directly related to agricultural field burning. [*Fifty cents of the acreage fees shall be deposited in a separate fund to be used for the smoke management program which shall be conducted by the Department of Environmental Quality in cooperation with the Oregon Seed Council and other affected agencies. The Department of Environmental Quality shall contract with the Oregon Seed Council to organize rural fire protection districts and growers, coordinate and provide communications, hire ground support personnel, provide aircraft surveillance, provide such added other support services as are mutually agreed upon and advise the department when crops in each area are ready for burning. However, if a reasonable contract cannot be agreed upon, the department shall provide such services directly or by contracting with such other entity as it reasonably shall determine.*]

[*(3) The Executive Department shall cause the balance of acreage fees received pursuant to subsection (1) of this section to be deposited in the State Treasury to be credited to the account of the committee established under ORS 468.470 for use as provided in ORS 468.485.*]

(b) Pay to the Department of Environmental Quality an amount not to exceed $400,000 for the biennium beginning July 1, 1977, as the maximum limit to be used for the smoke management program defined in section 3 of this 1977 Act. The department by contract with the Oregon Seed Council or otherwise shall organize rural fire protection districts and growers, coordinate and provide communications, hire ground support personnel, provide aircraft surveillance and provide such added support services as are necessary.

(c) Deposit the balance of acreage fees in the State Treasury to be credited to the account of the department. Such fees shall be segregated from other funds and used solely for the carrying out of the provisions of ORS 468.470.

SECTION 11. ORS 468.485 is repealed.

Section 12. ORS 307.390 is amended to read:

307.390. Mobile field incinerators owned by farmers or by groups of farmers that are exclusively used for sanitizing grass seed fields by means other than open field burning shall be exempt from taxation if they are purchased within five years after they are certified as a feasible alternative to open field burnings by the [*committee established by ORS 468.470*] **Department of Environmental Quality pursuant to ORS 468.455 to 468.480.**

SECTION 13. This Act being necessary for the immediate preservation of the public peace, health and safety, an emergency is declared to exist, and this Act takes effect on its passage.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Chapter 340

Subdivision 6
Agricultural Operations
AGRICULTURAL BURNING

26-005 DEFINITIONS. As used in this general order, regulation and schedule, unless otherwise required by context:

(1) Burning seasons:

(a) "Summer Burning Season" means the four month period from July 1 through October 31.

(b) "Winter Burning Season" means the eight month period from November 1 through June 30.

(2) "Department" means the Department of Environmental Quality.

(3) "Marginal Conditions" means conditions defined in ORS 468.450(1) under which permits for agricultural open burning may be issued in accordance with this regulation and schedule.

(4) "Northerly Winds" means winds coming from directions in the north half of the compass, at the surface and aloft.

(5) "Priority Areas" means the following areas of the Willamette Valley:

(a) Areas in or within 3 miles of the city limits of incorporated cities having populations of 10,000 or greater.

(b) Areas within 1 mile of airports serving regularly scheduled airline flights.

(c) Areas in Lane County south of the line formed by U.S. Highway 126 and Oregon Highway 126.

(d) Areas in or within 3 miles of the city limits of the City of Lebanon.

(e) Areas on the west side of and within 1/4 mile of these highways; U.S. Interstate 5, 99, 99E and 99W. Areas on the south side of and within 1/4 mile of U.S. Highway 20 between Albany and Lebanon, Oregon Highway 34 between Lebanon and Corvallis, and Oregon Highway 228 from its junction south of Brownsville to its rail crossing at the community of Tulsa.

(6) "Prohibition Conditions" means atmospheric conditions under which all agricultural open burning is prohibited (except where an auxiliary fuel is used such that combustion is nearly complete, or an approved sanitizer is used).

(7) "Southerly Winds" means winds coming from directions in the south half of the compass, at the surface and aloft.

(8) "Willamette Valley" means the areas of Benton, Clackamas, Lane, Linn, Marion, Multnomah, Polk, Washington and Yamhill Counties lying between the crest of the Coast Range and the crest of the Cascade Mountains, and includes the following:

(a) "South Valley," the areas of jurisdiction of all fire permit issuing agents or agencies in the Willamette Valley portions of the Counties of Benton, Lane or Linn.

(b) "North Valley," the areas of jurisdiction of all other fire permit issuing agents or agencies in the Willamette Valley.

(9) "Commission" means the Environmental Quality Commission.

(10) "Local Fire Permit Issuing Agency" means the County Court or Board of County Commissioners or Fire Chief of a Rural Fire Protection District or other person authorized to issue fire permits pursuant to ORS 477.515, 477.530, 476.380 or 478.960.

(11) "Open Field Burning Permit" means a permit issued by the Department pursuant to [~~Section 2 of SB 311~~] ORS 468.458.

(12) "Fire Permit" means a permit issued by a local fire permit issuing agency pursuant to ORS 477.515, 477.530, 476.380 or 478.960.

(13) "Validation Number" means a unique three-part number issued by a local fire permit issuing agency which validates a specific open field burning permit for a specific acreage on a specific day. The first part of the validation number shall indicate the number of the month and the day of issuance, the second part the hour of authorized burning based on a 24 hour clock and the third part shall indicate the size of acreage to be burned (e.g., a validation number issued August 26 at 2:30 p.m. for a 70 acre burn would be 0826-1430-070).

(14) "Open Field Burning" means burning of any perennial grass seed field, annual grass seed field or cereal grain field in such manner that combustion air and combustion products are not effectively controlled. Field burning utilizing a device other than an approved field sanitizer shall constitute open field burning.

(15) "Approved Field Sanitizer" means any field burning device that has been approved by [~~the Field Sanitation Committee and~~] the Department as a feasible alternative to open field burning.

(16) "Approved Experimental Field Sanitizer" means any field burning device that has been approved by [~~the Field Sanitation Committee and~~] the Department for trial as a potentially feasible alternative to open field burning or as a source of information useful to further development of field sanitizers.

(17) "After-Smoke" means persistent smoke resulting from the burning of a grass seed or cereal grain field with a field sanitizer, and emanating from the grass seed or cereal grain stubble or accumulated straw residue at a point ten (10) feet or more behind a field sanitizer.

(18) "Leakage" means any smoke which is not vented through a stack and is not classified as after-smoke, and is produced as a result of using a field sanitizer.

[~~(19)--"Committee"-means-Oregon-Field-Sanitation-Committee.~~]

(19) [~~(20)~~] "Approved Pilot Field Sanitizer" means any field burning device that has been observed and endorsed by [~~the-Committee-and~~] the Department as an acceptable but improvable alternative to open field burning, the operation of which is expected to contribute information useful to further development and improved performance of field sanitizers.

(20) [~~(21)~~] "Approved Alternative Methods" means any method approved by [~~the-Committee-and~~] the Department to be a satisfactory alternative method to open field burning.

(21) [~~(22)~~] "Approved Interim Alternative Method" means any interim method approved by [~~the-Committee-and~~] the Department as an effective method to reduce or otherwise minimize the impact of smoke from open field burning.

(22) [~~(23)~~] "Approved Alternative Facilities" means any land, structure, building, installation, excavation, machinery, equipment or device approved by [~~the-Committee-and~~] the Department for use in conjunction with an Approved Alternative Method or an Approved Interim Alternative Method for field sanitation.

26-010 GENERAL PROVISIONS. The following provisions apply during both summer and winter burning seasons in the Willamette Valley unless otherwise specifically noted.

(1) Priority for Burning. On any marginal day, priorities for agricultural open burning shall follow those set forth in ORS 468.450 which give perennial grass seed fields used for grass seed production first priority, annual grass seed fields used for grass seed production second priority, grain fields third priority and all other burning fourth priority.

(2) Permits required.

(a) No person shall conduct open field burning within the Willamette Valley without first obtaining a valid open field burning permit from the Department and a fire permit and validation number from the local fire permit issuing agency for any given field for the day that the field is to be burned.

(b) Applications for open field burning permits shall be filed on Registration/Application forms provided by the Department.

(c) Open field burning permits issued by the Department are not valid until acreage fees are paid pursuant to ORS 468.480(1)(b) and a validation number is obtained from the appropriate local fire permit issuing agency for each field on the day that the field is to be burned.

(d) As provided in ORS 468.465(1), permits for open field burning of cereal grain crops shall be issued only if the person seeking the permit submits to the issuing authority a signed statement under oath or affirmation that the acreage to be burned will be planted to seed crops (other than cereal grains, hairy vetch, or field pea crops) which require flame sanitation for proper cultivation.

(e) Any person granted an open field burning permit under these rules shall maintain a copy of said permit at the burn site at all times during the burning operation and said permit shall be made available for at least one year after issuance for inspection upon request by appropriate authorities.

(f) At all times proper and accurate records of permit transactions and copies of all permits shall be maintained by each agency or person involved in the issuance of permits, for inspection by the proper authority.

(g) Permit agencies or persons authorized to participate in the issuance of permits shall submit to the Department, on forms provided, weekly summaries of field burning permit data, during the period July 1 to October 15.

(h) All debris, cutting and prunings shall be dry, cleanly stacked and free of dirt and green material prior to being burned, to insure as nearly complete combustion as possible.

(i) No substance or material which normally emits dense smoke or obnoxious odors may be used for auxiliary fuel in the igniting of debris, cuttings or prunings.

(j) Use of approved field sanitizers shall require a fire permit, and permit agencies or agents shall keep up-to-date records of all acreages burned by such sanitizers.

26-011 CERTIFIED ALTERNATIVES TO OPEN FIELD BURNING

(1) Approved pilot field sanitizers, approved experimental field sanitizers, or propane flamers may be used as alternatives to open field burning subject to the provisions of this section.

(2) Approved Pilot Field Sanitizers

(a) Procedures for submitting application for approval of pilot field sanitizers.

Applications shall be submitted in writing to the Department and shall include, but not be limited to, the following:

(i) Design plans and specifications;

(ii) Acreage and emission performance data and rated capacities;

(iii) Details regarding availability of repair service and replacement parts;

(iv) Operational instructions;

[~~(v)--Letter-of-approval-from-the-Field-Sanitation-Committee.~~]

(b) Emission Standards for Approved Pilot Field Sanitizers.

(A) Approved pilot field sanitizers shall be required to demonstrate the capability of sanitizing a representative and harvested grass field or cereal grain stubble with an accumulative straw and stubble fuel load of not less than 1.0 tons/acre, dry weight basis, and which has an average moisture content not less than 10%, at a rate of not less than 85% of rated maximum capacity for a period of 30 continuous minutes without exceeding emission standards as follows:

(i) 20% average opacity out of main stack;

(ii) Leakage not to exceed 20% of the total emissions;

(iii) No significant after-smoke originating more than 25 yards behind the operating machine.

(B) The Department shall certify in writing to [~~the-Field-Sanitation Committee-and~~] the manufacturer, the approval of the pilot field sanitizer within thirty (30) days of the receipt of a complete application and successful compliance demonstration with the emission standards of 2(b)(A). Such approval shall apply to all machines built to the specifications of the Department certified field sanitation machine.

(C) In the event of the development of significantly superior field sanitizers, the Department may decertify approved pilot field sanitizers previously approved, except that any unit built prior to this decertification in accordance with specifications of previously approved pilot field sanitizers shall be allowed to operate for a period not to exceed seven years from the date of delivery provided that the unit is adequately maintained as per (2)(c)(A).

(c) Operation and/or modification of approved pilot field sanitizers.

(A) Operating approved pilot field sanitizers shall be maintained to design specifications (normal wear expected) i.e., skirts, shrouds, shields, air bars, ducts, fans, motors, etc., shall be in place, intact and operational.

(B) Modifications to the structure or operating procedures which will knowingly increase emissions shall not be made.

(C) Any modifications to the structure or operating procedures which result in increased emissions shall be further modified or returned to manufacturer's specifications to reduce emissions to original levels or below as rapidly as practicable.

(D) Open fires away from the sanitizers shall be extinguished as rapidly as practicable.

(3) Experimental field sanitizers [~~identified in writing as experimental units by the Committee and~~] not meeting the emission criteria specified in 2(b)(A) above, may receive Department authorization for experimental use for not more than one season at a time, provided:

(a) The [~~Committee~~] operator shall report to the Department [~~field burning manager~~] the locations of operation of experimental field sanitizers.

[~~(b)--The-Committee-shall-provide-the-Department-an-end-of-season report-of-experimental-field-sanitizer-operations.~~]

(b) [(c)] Open fires away from the machines shall be extinguished as rapidly as practicable.

(4) Propane Flamers. Open propane flaming is an approved alternative to open field burning provided that all of the following conditions are met:

(a) Field sanitizers are not available or otherwise cannot accomplish the burning.

(b) The field stubble will not sustain an open fire.

(c) One of the following conditions exist:

(A) The field has been previously open burned and appropriate fees paid.

(B) The field has been flail-chopped, mowed, or otherwise cut close to the ground and loose straw has been removed to reduce the straw fuel load as much as practicable.

26-012 REGISTRATION AND AUTHORIZATION OF ACREAGE TO BE OPEN BURNED.

(1) On or before July 10, 1977 and on or before April 1 of each subsequent year[,]:

(a) All acreages to be open burned under this rule shall be registered with the local fire permit issuing agency or its authorized representative[.] on forms provided by the Department.

(b) A non-refundable $1.00 per acre registration fee shall be paid at the time of registration.

(2) Registration of acreage after April 1 of each year shall require:

(a) Approval of the Department.

(b) An additional late registration fee of $1 per acre if the late registration is determined by the Department to be the fault of the late registrant.

(3) Copies of all Registration/Application forms shall be forwarded to the Department promptly by the local fire permit issuing agency.

(4) The local fire permitting agency shall maintain a record of all registered acreage by assigned field number, location, type of crop, number of acres to be burned and status of fee payment for each field.

(5) Burn authorizations shall be issued by the local fire permit issuing agency up to daily quota limitations established by the Department and shall be based on registered fee-paid acres and shall be issued in accordance with the priorities established by sub-section 26-010(1) of these rules, except that fourth priority burning shall not be permitted from July 15 to September 15 of any year unless specifically authorized by the Department.

(6) No local fire permit issuing agency shall authorize open field burning of more acreage than may be sub-allocated annually to the District by the Department pursuant to Section 26-013(5) of these rules.

26-013 LIMITATION AND ALLOCATION OF ACREAGE TO BE OPEN BURNED.

(1) Except for acreage authorized to be burned under 26-013(5) and (6), the maximum acreage to be open burned under these rules [~~each year~~] shall not exceed the following:

(a) During 1977, not more than [~~95,000~~] 195,000 acres.

(b) During 1978, not more than 180,000 acres. [~~In 1978 and each year thereafter, the Commission, after taking into consideration the factors listed in sub-section (2) of ORS 468.460, may by order issue permits for the burning of not more than 50,000 acres.~~]

[~~(2)--Each-year-the-Commission-shall-seek-certification-from-the Field-Sanitation-Committee-of-the-numbers-of-acres-that-can-be-sanitized by-feasible-alternative-methods-and-the-Committee's-recommendations-as to-the-general-location-and-types-of-fields-to-be-sanitized-utilizing feasible-alternative-methods.~~]

(2) [~~(3)~~] On or before July 15, 1977 and on or before June 1 of each subsequent year, the Commission shall, after public hearing, establish an allocation of registered acres that can be open burned that year. In establishing said acreage allocation, the Commission shall consult with OSU and [~~the-Oregon-Field-Sanitation-Committee-and~~] may consult with other interested agencies and shall, pursuant to ORS 468.460(2) and ORS 468.475[~~(4)~~] (5) consider means of more rapid reduction of acres burned each year than provided by ORS 468.475(2).

[~~(4)--Acres-burned-on-any-day-by-approved-field-sanitizers-shall-not be-applied-to-open-field-burning-acreage-allocations-or-quotas,-and-such sanitizers-may-be-operated-under-either-marginal-or-prohibition-conditions.~~]

(3) [~~(5)~~] For the 1977 burning season, in the event that more than 195,000 [~~95,000~~] acres are registered to be burned, the Department may issue acreage allocations to growers totaling not more than [~~95,000~~] 195,000 acres plus ten (10) percent [~~104,500~~] or 214,500 acres. The Department shall monitor burning and shall cease to issue burning quotas when a total of [~~95,000~~] 195,000 acres have been reported burned.

(a) The Department shall sub-allocate the [~~104,500~~] 214,500 acre allocation established by the Commission to the respective growers on the basis of individual acreage registered as of [~~April 1~~] July 10, 1977 to the total acreage registered as of [~~April 1~~] July 10, 1977.

(b) The Department shall sub-allocate the [~~95,000~~] 195,000 acre allocation established by the Commission to the respective fire permit issuing agencies on the basis of the acreage registered within each fire permit issuing agency's jurisdiction as of [~~April 1~~] July 10, 1977 to the total acreage registered as of [~~April 1~~] July 10, 1977.

(c) In an effort to insure that permits are available in areas of greatest need, to coordinate completion of burning, and to achieve the greatest possible permit utilization, the Department may adjust, in cooperation with the fire districts, allocations of the [~~95,000~~] 195,000 burnable acres made to those fire districts.

(d) Transfer of allocations for farm management purposes may be made within and between fire districts on a one-in/one-out basis under the supervision of the Department. Transfer of allocations between growers are not permitted after [~~95,000~~] 195,000 acres have been burned within the Valley.

(e) Except for additional acreage allowed to be burned [~~by the Governor pursuant to ORS 468.475(5),~~] under 26-013(5) and (6), no fire district shall allow acreage to be burned in excess of their allocations assigned pursuant to (b), (c) and (d) above.

[~~(f) In 1977 the Department may supervise "wide area energy concen-concentrated convective ventilation experiments" to investigate the possible use of the techniques as an alternative to open burning. The total acreage involved with such experimentation shall be deducted from the total acreage allocations prior to making the sub-allocations of (a) and (b), shall not exceed that amount specifically authorized in writing by the Department and shall not exceed 10,000 acres.~~]

(4) Acreage burned in test fires to determine atmospheric ventilation conditions shall be counted in open field burning acreage allocations.

(5) Notwithstanding the acreage limitations under 26-013(1), the Department may allow experimental open burning pursuant to Section 9 of HB 2196.

(a) Such experimental burning shall be only as specifically authorized by the Department.

(b) Experimental open burning, exclusive of that acreage burned by experimental open field sanitizers, shall not exceed 7500 acres during 1977.

(6) Pursuant to ORS 468.475(6) the Commission may permit the emergency open burning of more acreage than allowed by 26-013(1) under the following procedures:

(a) A grower must submit to the Department an application form for emergency field burning requesting emergency burning for one of the following reasons:

(A) Extreme hardship documented by:

An analysis and signed statement from a CPA, public accountant, or other recognized financial expert which establishes that failure to allow emergency open burning as requested will result in extreme financial hardship above and beyond mere loss of revenue that would ordinarily accrue due to inability to open burn the particular acreage for which emergency open burning is requested. Include a discussion of potential alternatives and probable related consequences.

(B) Disease outbreak, documented by:

An affidavit or signed statement from the County Agent, State Department of Agriculture or other public agricultural expert

authority that, based on his personal investigation, a true emergency exists due to a disease outbreak that can only be dealt with effectively and practically by open burning.

The statement must also include at least the following:

i) time field investigation was made,

ii) location and description of field,

iii) crop,

iv) infesting disease,

v) extent of infestation (compared to normal),

vi) necessity and urgency to control,

vii) availability, efficacy and practicability of alternative control procedures,

viii) probable damages or consequences of non-control.

(C) Insect infestation, documented by:

An affidavit or signed statement from the County Agent, State Department of Agriculture or other public agricultural expert authority that, based on his personal investigation, a true emergency exists due to an insect infestation that can only be dealt with effectively and practicably by open burning. The statement must also include at least the following:

i) time field investigation was made,

ii) location and description of field,

iii) crop,

iv) infesting insect,

v) extent of infestation (compared to normal),

vi) necessity and urgency to control,

vii) availability, efficacy, and practicability of alternative control procedures,

vii) probable damages or consequences of non-control.

(D) Irreparable damage to the land documented by:

An affidavit or signed statement from the County Agent, State Department of Agriculture, or other public agricultural expert authority that, based on his personal investigation, a true emergency exists which threatens irreparable damage to the land and which can only be dealt with effectively and practicably by open burning. The statement must also include at least the following:

i) time of field investigation,

ii) location and description of field,

iii) crop,

iv) type and characteristics of soil,

v) slope and drainage characteristics of field,

vi) necessity and urgency to control,

vii) availability, efficacy and practicability of alternative control procedures,

viii) probable damages or consequences of non-control.

(b) Upon receipt of a properly completed application form and supporting documentation the Commission shall within 10 days, return to the grower its decision.

(c) An open field burning permit, to be validated upon payment of the required fees, shall be promptly issued by the Department for that portion of the requested acreage which the Commission has approved.

(d) Application forms for emergency open field burning provided by the Department must be used and may be obtained from the Department either in person, by letter or by telephone request.

(7)[~~(6)~~] The Department may [~~authorize burning on an experimental basis, and may also~~], on a fire district by fire district basis, issue limitations more restrictive than those contained in these regulations when in their judgement it is necessary to attain air quality.

26-015 WILLAMETTE VALLEY SUMMER BURNING SEASON REGULATIONS

(1) Classification of Atmospheric Conditions. All days will be classified as marginal or prohibition days under the following criteria:

(a) Marginal Class N conditions: Forecast northerly winds and maximum mixing depth greater than 3500 feet.

(b) Marginal Class S conditions: Forecast southerly winds.

(c) Prohibition conditions: Forecast northerly winds and maximum mixing depth 3500 feet or less.

(2) Quotas.

(a) Except as provided in this subsection, the total acreage of permits for open field burning shall not exceed the amount authorized by the Department for each marginal day. Daily authorizations of acreages shall be issued in terms of basic quotas or priority area quotas as listed in Table 1, attached as Exhibit A and incorporated by reference into this regulation and schedule, and defined as follows:

(A) The basic quota represents the number of acres to be allowed throughout a permit jurisdiction, including fields located in priority areas, on a marginal day on which general burning is allowed in that jurisdiction.

(B) The priority area quota represents the number of acres allowed within the priority areas of a permit jurisdiction on a marginal day when only priority area burning is allowed in that jurisdiction.

TABLE 1

FIELD BURNING ACREAGE QUOTAS

NORTH VALLEY AREAS

County/Fire District	Quota	
North Valley Counties	Basic	Priority
Clackamas County		
Canby RFPD	50	50
Clackamas County #54	50	0
Clackamas - Marion FPA	50	0
Estacada RFPD	75	0
Molalla RFPD	50	0
Monitor RFPD	50	0
Scotts Mills RFPD	50	0
Total	375	50
Marion County		
Aumsville RFPD	50	0
Aurora-Donald RFPD	50	50
Drakes Crossing RFPD	50	0
Hubbard RFPD	50	0
Jefferson RFPD	225	50
Marion County #1	100	50
Marion County Unprotected	50	50
Mt. Angel RFPD	50	0

TABLE 1
(continued)

County/Fire District	Quota	
North Valley Counties	Basic	Priority
Marion County (continued)		
St. Paul RFPD	125	0
Salem City	50	50
Silverton RFPD	300	0
Stayton RFPD	150	0
Sublimity RFPD	250	0
Turner RFPD	50	50
Woodburn RFPD	125	50
Total	1675	350
Polk County		
Polk County Non-District	50	0
Southeast Rural Polk	400	50
Southwest Rural Polk	125	50
Total	575	100
Washington County		
Cornelius RFPD	50	50
Forest Grove RFPD	50	0
Forest Grove, State Forestry	50	0
Hillsboro	50	50
Washington County FPD #1	50	50
Washington County FPD #1	50	50
Total	300	200

TABLE 1
(continued)

County/Fire District	Quota	
North Valley Counties	Basic	Priority
Yamhill County		
Amity RFPD	125	50
Carlton RFPD	50	50
Dayton RFPD	50	50
Dundee RFPD	50	0
McMinnville RFPD	150	75
Newberg RFPD	50	0
Sheridan RFPD	75	50
Yamhill RFPD	50	0
Total	600	275
North Valley Total	3575	975

Table 1
(continued)

SOUTH VALLEY AREAS

County/Fire District	Quota	
South Valley Counties	Basic	Priority
Benton County		
County Non-District & Adair	350	175
Corvallis RFPD	175	125
Monroe RFPD	325	50
Philomath RFPD	125	100
Western Oregon FPD	100	50
Total	1075	500
Lane County		
Coburg RFPD	175	50
Creswell RFPD	75	100
Eugene RFPD		
(Zumwalt RFPD)	50	50
Junction City RFPD	325	50
Lane County Non-District	100	50
Lane County RFPD #1	350	[~~50~~] 150
Santa Clara RFPD	50	50
Thurston-Walterville	50	50
West Lane FPD	50	0
Total	1225	[~~450~~] 550
Linn County		
Albany RFPD (inc. N. Albany, Palestine, Co. Unprotected Areas)	625	125
Brownsville RFPD	750	[~~50~~] 100

Table 1
(continued)

County/Fire District	Quota	
South Valley Counties	Basic	Priority
Linn County (continued)		
Halsey-Shedd RFPD	2050	200
Harrisburg RFPD	1350	50
Lebanon RFPD	325	325
Lyons RFPD	50	0
Scio RFPD	175	0
Tangent RFPD	925	325
Total	6250	[~~1075~~] 1125
South Valley Total	8550	[~~2025~~] 2175

26-020 WINTER BURNING SEASON REGULATIONS.

(1) Classification of atmospheric conditions:

(a) Atmospheric conditions resulting in computed air pollution index values in the high range, values of 90 or greater, shall constitute prohibition conditions.

(b) Atmospheric conditions resulting in computed air pollution index values in the low and moderate ranges, values less than 90, shall constitute marginal conditions.

(2) Extent and Type of Burning.

(a) Burning Hours. Burning hours for all types of burning shall be from 9:00 a.m. until 4:00 p.m., but may be reduced when deemed necessary by the fire chief or his deputy. Burning hours for stumps may be increased if found necessary to do so by the permit issuing agency. All materials for burning shall be prepared and the operation conducted, subject to local fire protection regulations, to insure that it will be completed during the allotted time.

(b) Certain Burning Allowed Under Prohibition Conditions. Under prohibition conditions no permits for agricultural open burning may be issued and no burning may be conducted, except where an auxiliary liquid or gaseous fuel is used such that combustion is essentially complete, or an approved field sanitizer is used.

(c) Priority for Burning on Marginal Days. Permits for agricultural open burning may be issued on each marginal day in each permit jurisdiction in the Willamette Valley, following the priorities set forth in ORS 468.450 which gives perennial grass seed fields used for grass seed production first priority, annual grass seed fields used for grass seed production second priority, grain fields third priority and all other burning fourth priority.

26-025 CIVIL PENALTIES. In addition to any other penalty provided by law:

(1) Any person who intentionally or negligently causes or permits open field burning contrary to the provisions of ORS 468.450, 468.455 to 468.485, 476.380 and 478.960 shall be assessed by the Department a civil penalty of at least $20, but not more than $40 for each acre so burned.

(2) Any person planting contrary to the restrictions of subsection (1) of ORS 468.465 shall be assessed by the Department a civil penalty of $25 for each acre planted contrary to the restrictions.

(3) Any person who violates any requirements of these rules shall be assessed a civil penalty pursuant to OAR Chapter 340, Division 1, Subdivision 2, CIVIL PENALTIES.

26-030 TAX CREDITS FOR APPROVED ALTERNATIVE METHODS, APPROVED INTERIM ALTERNATIVE METHODS OR APPROVED ALTERNATIVE FACILITIES.

(1) As provided in Oregon Laws 1975 Chapter 559 and ORS Chapter 468, approved alternative methods, approved interim alternative methods or approved alternative facilities are eligible for tax credit as pollution control facilities as described in ORS 468.155 through 468.190.

(2) Approved alternative facilities eligible for pollution control facility tax credit shall include:

(a) Mobile equipment including but not limited to:

(A) Straw gathering, densifying and handling equipment.

(B) Tractors and other sources of motive power.

(C) Trucks, trailers, and other transportation equipment.

(D) Mobile field sanitizers (approved models and approved pilot models) and associated fire control equipment.

(E) Equipment for handling all forms of processed straw.

(F) Special straw incorporation equipment.

(b) Stationary equipment and structures including but not limited to:

(A) Straw loading and unloading facilities.

(B) Straw storage structures.

(C) Straw processing and in plant transport equipment.

(D) Land associated with stationary straw processing facilities.

(E) Drainage tile installations which will result in a reduction of acreage burned.

(3) Equipment and facilities included in an application for certification for tax credit under this rule will be considered at their current depreciated value and in proportion to their actual use to reduce open field burning as compared to their total farm or other use.

(4) Procedures for application and certification of approved alternative facilities for pollution control facility tax credit.

(a) Preliminary certification for pollution control facility tax credit.

(A) A written application for preliminary certification shall be made to the Department prior to installation or use of approved alternative facilities in the first harvest season for which an application for tax credit certification is to be made. Such application shall be made on a form provided by the Department and shall include but not be limited to:

(i) Name, address and nature of business of the applicant.

(ii) Name of person authorized to receive Department requests for additional information.

(iii) Description of alternative method to be used.

(iv) A complete listing of mobile equipment and stationary facilities to be used in carrying out the alternative methods and for each item listed include:

(a) Date or estimated future date of purchase.

(b) Percentage of use allocated to approved alternative methods and approved interim alternative methods as compared to their total farm or other use.

(v) Such other information as the Department may require to determine compliance with state air, water, solid waste, and noise laws and regulations and to determine eligibility for tax credit.

(B) If, upon receipt of a properly completed application for preliminary certification for tax credit for approved alternative facilities the Department finds the proposed use of the approved alternative facilities are in accordance with the provisions of ORS 468.175, it shall, within 60 days, issue a preliminary certification of approval. If the proposed use of the approved alternative facilities are not in accordance with provisions of ORS 468.175, the Commission shall, within 60 days, issue an order denying certification.

(b) Certification for pollution control facility tax credit.

(A) A written application for certification shall be made to the Department on a form provided by the Department and shall include but not be limited to the following:

(i) Name, address and nature of business of the applicant.

(ii) Name of person authorized to receive Department requests for additional information.

(iii) Description of the alternative method to be used.

(iv) For each piece of mobile equipment and/or for each stationary facility, a complete description including the following information as applicable:

(a) Type and general description of each piece of mobile equipment.

(b) Complete description and copy of proposed plans or drawings of stationary facilities including buildings and contents used for straw storage, handling or processing of straw and straw products or used for storage of mobile field sanitizers and legal description of real property involved.

(c) Date of purchase or initial operation.

(d) Cost when purchased or constructed and current value.

(e) General use as applied to approved alternative methods and approved interim alternative methods.

(f) Percentage of use allocated to approved alternative methods and approved interim alternative methods as compared to their farm or other use.

(B) Upon receipt of a properly completed application for certification for tax credit for approved alternative facilities or any subsequently requested additions to the application, the Department shall return within 120 days the decision of the Commission and certification as necessary indicating the portion of the cost of each facility allocable to pollution control.

(5) Certification for tax credits of equipment or facilities not covered in OAR Chapter 340, Section 26-030(1) through 26-030(4) shall be processed pursuant to the provisions of ORS 468.165 through 468.185.

(6) Election of type of tax credit pursuant to ORS 468.170(5).

(a) As provided in ORS 468.170(5), a person receiving the certification provided for in OAR Chapter 340, Section 26-030(4)(b) shall make an irrevocable election to take the tax credit relief under ORS 316.097, 317.072, or the ad volorem tax relief under ORS 307.405 and shall inform the Department of his election within 60 days of receipt of certification documents on the form supplied by the Department with the certification documents.

(b) As provided in ORS 468.170(5) failure to notify the Department of the election of the type of tax credit relief within 60 days shall render the certification ineffective for any tax relief under ORS 307.405, 316.097 and 317.072.

PRIOR ACRES	RGULR ACRES	REGIS ACRES	ALLOC ACRES	BRNED ACRES	PERN FLDS	PRNIAL ACRES	ANNL FLDS	ANNUAL ACRES	CERL FLDS	CEREAL ACRES	TOT FLDS	TOTL RGIS
SUMMARY FOR CLACKAMAS COUNTY												
366	5829	6195	00	00	155	5445	0	00	16	750	171	62
SUMMARY FOR MARION COUNTY												
4435	45972	50407	00	00	974	35665	85	5798	274	8944	1333	468
SUMMARY FOR POLK COUNTY												
3682	16962	20644	00	00	155	7482	181	8566	84	4596	420	97
SUMMARY FOR WASHINGTON COUNTY												
200	3029	3229	00	00	3	75	0	00	82	3154	85	39
SUMMARY FOR YAMHILL COUNTY												
2604	8809	11613	00	00	79	2862	53	2185	158	6566	290	135
SUMMARY FOR NORTH VALLEY												
11467	80601	92088	00	00	1366	51529	319	16549	614	24010	2299	801
SUMMARY FOR BENTON COUNTY												
10084	14761	24845	00	00	153	9039	152	14425	35	1381	340	107
SUMMARY FOR LANE COUNTY												
10172	21976	32148	00	00	200	14049	159	11360	122	6739	481	123
SUMMARY FOR LINN COUNTY												
33314	133684	166998	00	00	815	50029	1436	95589	521	21380	2772	725
SUMMARY FOR SOUTH VALLEY												
53570	170421	223991	00	00	1168	73117	1747	121374	678	29500	3593	955
SUMMARY FOR ENTIRE VALLEY												
65057	251022	316079	00	00	2534	124646	2066	137923	1292	53510	5892	1756

2248 RECORDS READ 01/09/23

Attachment 111

For Field Burning
Hearing Record

July 15, 1977

ENVIRONMENTAL QUALITY COMMISSION

July 15, 1977

In the Matter of a Hearing by the Environmental Quality Commission Concerning Amendments to Rules Governing Field Burning, OAR 340-26-005 through 26-030	Testimony of the City of Eugene

The City of Eugene opposes adoption of the proposed rules for the following reasons:

I

THE PROPOSED RULES SHOULD NOT BE ADOPTED UNTIL PROPER NOTICE AND OPPORTUNITY TO BE HEARD ARE AFFORDED CONCERNED CITIZENS.

The essence of the constitutional requirement of notice is that the public be informed of what action is to be taken by a public body. The notice circulated by the Commission is clearly inadequate.

First, although the proposed rules could be characterized as "temporary amendments" they are, for all intents and purposes, the only rules which will be in effect throughout the entire field burning season. Therefore, the various and substantial rights of all those affected by field burning will be governed by so-called "temporary amendments."

Second, ORS 183.335(5) requires that in order for an agency to issue "temporary rules," the agency must make specific findings accompanied by reasons for its findings. We submit that the statute cited above has not been satisfied and the proposed rules cannot be adopted until it is.

Third, the notice does not inform the public that the proposed rules constitute a substantial amendment of the Oregon State

Implementation Plan. Both the Clean Air Act and judicial decisions guarantee the public the right to comment on amendments to the State Implementation Plan.

II

THE PRESENT HEARING CANNOT BE LIMITED IN SCOPE, NOR CAN ANY TESTIMONY BE EXCLUDED BECAUSE OF THE HEARINGS CONDUCTED BY THE LEGISLATURE.

Rules applicable to the adoption of legislation are few; essentially, the fact that the legislature is elected justifies the courts reluctance in reviewing the "hearings" that may or may not be held by the legislature. However, administrative agencies do not enjoy the benefit of public scrutiny through the electoral process, so very definite guidelines attach to the rulemaking process. This agency must afford a full hearing on the proposed rules and cannot rely on information submitted at hearings before the Oregon Legislature.

III

THE PROPOSED RULES ARE INADEQUATE IN LIGHT OF THE FEDERAL CLEAN AIR ACT AND OREGON'S STATE IMPLEMENTATION PLAN.

A. Background.

The proposed rules would in all probability put Oregon on a collision course with the Environmental Protection Agency. In the first place, we presently exceed national secondary ambient air quality standards. We are an air quality control region; on occasion we exceed the primary standards. Second, with better testing techniques, EPA estimates we would exceed national primary standards even more frequently. Third, with normal growth, we would exceed the standards for air quality more often in the future.

Under our present state implementation plan as it was recently

revised, EPA approved our acreage phase down. That approval extends the phase down to 95,000 acres in 1977 and 50,000 acres burned in 1978. At the same time, as an inseparable part of the effort to improve the air in the air shed, EPA granted an extension to May 31, 1978, of the attainment date for secondary standards for total suspended particulates in the Eugene Air Quality Maintenance Area.

The proposed rules allow nearly a 100% increase in the number of acres burned.

The federal variance procedures are spelled out clearly in the Clean Air Act. To single out the grass seed industry as the rules do and to allow a weakening of the regulatory measure directed particularly towards that industry might be construed as a circumvention of the federal variance procedures. Moreover, the state through the Environmental Quality Commission does not have authority to delay the attainment of national standards through granting a variance to a particular source. This decision is reserved to the EPA. The proposed rules could be construed as one giant grant of a variance by the state. If our state implementation plan or a portion of it is determined by the administrator not to be adopted in accordance with the requirements of the Clean Air Act, the EPA would then hold the hearings and make the trade-offs between the industries. In other words, Oregon would lose the flexibility to make our own choices in determining how we will meet the standards in the Clean Air Act.

B. Due Process Considerations.

The Clean Air Act mandates that all states must provide for the attainment and maintenance of national primary standards

as expeditiously as possible. The state implementation plan adopted by Oregon is considered in its entirety by EPA as a coordinated effort to comply with the Clean Air Act. The Act provides that the state implementation plan must be adopted by the state after reasonable notice and public hearings. 42 UCS 1857 C-5(a)(3). The administrator of the agency must either hold hearings at the federal level or review the certified record of the state hearings. In fact, we have just gone through the process in adopting the state implementation plan revision. It is our opinion that citizens may claim that due process has been denied them if the proposed rules are adopted. There is no notice to the citizens of Oregon of the implication for other industry because there is no consideration of the trade-offs and the non-degradation policy in the Clean Air Act.

Courts have stricken state implementation plan amendments that were adopted without adequate notice and provision for full consideration of air quality problems.

C. Emission Limitations and Smoke Management.

Under the Clean Air Act the thrust of the federal law is to set emission limitations. Acreage limitations alone are not satisfactory as an emission limitation. For example, the Commission should develop rules which correlate the amount of burning with the emission of particular types of air pollutants. The focus of the proposed rules should be on the amount of actual emissions, not on the acres burned.

Related to this issue is the use of smoke management as a dispersion technique. When the provisions for the Clean Air Act and related court cases are considered together, it is clear

that dispersion techniques do not satisfy the Clean Air Act. Dispersion techniques are advanced by those who would solve the problem of air pollution by putting their dirty air in the neighbor's air shed. This is directly contrary to the mission of the Clean Air Act and its approach to controlling pollution in the air through emission limitations. Dispersion techniques run counter to the Act's purpose of enhancing the air quality. Dispersion techniques are inherently polluting. Such techniques sanction emissions which would ordinarily violate ambient air standards, providing that climatic conditions for such a violation exist. Third, the monitoring requirements of the Clean Air Act are rendered impotent except during the poorest climatic conditions. Finally, the thrust of the Act is to determine the maximum holding ability of our air and to force trade-offs in emission in order to maintain air quality - not merely to allow more pollution through the dilution of its concentrated effect. Dispersion techniques have been held improper except in very limited circumstances.

D. Offsets and Non-Degradation.

The proposed rules do not take into account any of the trade-offs that must be considered in state implementation plans under the Clean Air Act. Under the Act, and especially under the strict New Source regulations which were adopted by the EPA in December, 1976, with even stricter ones scheduled for adoption later this Spring, new industries attempting to locate in an area must be able to show that they have not added to the pollutant burden in the area. Although the New Source regulations permit some growth to occur, progress must be made in attaining

National Ambient Air Quality Standards in dirty areas. The New Source regulations apply to any major source, and a major source is defined as 100 or more tons of emissions a year. For purposes of comparison, field burning in 1976 contributed 5000 tons of particulate matter to the air shed in the Willamette Valley.

Under the New Source regulations as a pre-condition for receiving a construction permit, more than a one for one emission offset must be obtained before the new source begins operation. In plain language, before the new source comes into being and emits pollutants into the air, the other pollutants in the air shed have to be reduced. The air has to get better. One can only conclude after looking at the new source regulations that the proposed 100% increase in field burning will in all probability deny the state, especially the Willamette Valley air shed, any new industry. In addition, as a pre-condition to the construction permit, no construction of a new industry or expansion of an old industry after January 1, 1979, will be permitted within a state implementation plan revision incorporating offsets and approved by the EPA administrator. Our state implementation plan must include these offsets. The proposed rules make no provision as far as we are able to determine for any offsets.

CONCLUSION

Stated as succinctly as possible, the City of Eugene urges the Commission to withhold action on these rules until the Commission has considered the issue fully. The Commission has a duty to carry out the policies of the Clean Air Act in the state of Oregon and to act fairly and responsibly to all

the people of the state.

CITY OF EUGENE

By:
Keith Martin
Assistant City Manager

KM

JUL 15 1977

FIELD BURNING PROGRAM

Comparison of July and March Registrations

1977

North Valley Acres

	July	March
CLACKAMAS – Acres		
A Beavercreek 01	0	0
A Boring 02	0	0
A Canby 03	281	379
A Clackamas #54 04	529	627
A Clackamas-Marion 05 (1)	864	958
A Clarkes 06 (2)	0	0
A Estacada 07	1333	2082
A Molalla 08 (1)	145	158
A Monitor 09	785	1085
A Sandy 10	0	0
A Scotts Mills 11 (1)	887	907
A ____ 12	0	0
Total	4,824	6,198
MARION – Acres		
A Aumsville 13	1567	1717
A Aurora 14	1123	1169
A Drakes Crossing 15	854	876
A Hubbard 16	165	175
A Jefferson 17	6146	6490
A Marion #1 18	4012	4630
A Mt. Angel 19	267	368
A St. Paul 20	4699	5153
A Salem Sunnyslope 21	1213	1224
A Silverton 22	7522	8131
A Stayton 23	4255	4609
A Sublimity 24	7897	8604
A Turner 25	2256	2209
A Woodburn 26	4562	4995
A ____ 27		
Total	46,538	50,350
POLK – Acres		
A Polk Co. F. B. 28	503	533
A S. E. Polk 29	12430	15137
A S. W. Polk 30	4357	4974
A ____ 31		
Total	17,340	20,649
WASHINGTON – Acres		
A Cornelius 32	65	77
A Forest Grove 33	371	543
A Tri-City 34		
A Tualatin 35		
A Wash. #1 36	150	573
A Wash. #2 37	1224	2036
A ____ 38		
Total	1810	3229
YAMHILL – Acres		
A Amity 39	3482	3747
A Carlton 40	844	1137
A Dayton 41	1276	1244
A Dundee 42	0	0
A Gaston 43	0	0
A McMinnville 44	2994	3424
A Newberg 45	190	216
A Sheridan 46	988	1028
A Yamhill 47	792	817
A ____ 48		
Total	10566	11613
Subtotal N	81078	92039

South Valley Acres

	July	March
BENTON – Acres		
A Benton Open 49 (3)	8573	8747
A Corvallis 50	3658	3726
A Monroe 51	6920	7331
A Philomath 52	2401	2853
A W.O. S.F. 53	975	990
A Adair Rural ____ 54	682	1198
Total	23,209	24,845
LANE – Acres		
A Coburg 55	3612	3627
A Creswell 56	3243	2905
A Eugene 57 (4)	867	932
A Junction City 58	9306	11054
A Lane #1 59	8403	9436
A Lane Co. F. B. 60	1981	2756
A Santa Clara 61	112	122
A Thurs-Walterville 62	30	30
A W. Lane 63 63	496	586
A Pleasant Hill ____ 64	710	790
Total	28760	32148
LINN – Acres		
A Albany 65 65	15299	15978
A Brownsville 66	19290	20699
A Halsey 67	45641	50989
A Harrisburg 68	32643	34368
A Lebanon 69 69	13172	14737
A Lyons 70	614	663
A Scio 71	5771	6148
A Tangent 72	21076	23379
A ____ 73		
Total	153506	166961
Subtotal S	205475	223954

NOTE: July values are hand calculated and subject to adjustment.

AQ - 412

TOTAL N + S — JUL 15 1977

July Subtotal N	81,078
Subtotal S	205,475
July Total	286,553
March Subtotal N	92,039
Subtotal S	223,954
March Total	315,993

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
WESTERN REGION

Department of Entomology
Oregon State University
Corvallis, Oregon 97331

August 19, 1976

Ms. Janet McLennan
Assistant to the Governor
Natural Resources
State Capitol
Salem, OR 97310

Dear Ms. McLennan:

The Committee you appointed has reviewed the charge presented in your letter of August 2, 1976, and the goal set forth to respond by August 13. You asked for a basis whereby an impartial, scientific assessment can be made of the severity of the specific problems that give rise to hardship applications made by growers under the provision of ORS 468.475(5).

Due to the disappointing performance of the field burning machines in 1975-76, seed growers will not have this option for field sanitation that the 1975 Legislature believed possible, based on testimony presented. The Legislature dictated a maximum 195,000 acres to be open-burned in 1975 with the balance of the acreage to be sanitized by field sanitizers or other alternatives. The applications from the growers who wish to burn indicate there will be approximately 95,000 acres the growers wish to burn, but cannot be burned under the present law for which there is no other commercially available option.

Based on historic evidence and experimental data, and because satisfactory alternative field sanitation techniques, chemicals, or other alternaitves are not commercially available, any grower who cannot thermally sanitize his field using open burning or mobile sanitizers in 1976 will suffer hardship in 1977. Most fields are infested to some extent with diseases and infested to some extent with weeds that will increase and cause damage, and all unburned fields will probably suffer economic loss in 1977 by reduced yields and quality of seed, which will result in varying degrees of hardship.

Two types of hardship situations exist. There are those seed growers who applied to burn fields in 1975 but were unable to do so because there were insufficient quotas released before the season ended. As a result of this failure to sanitize in 1975, they suffered losses in yield or quality and increased disease or insect damage in 1975. This type of hardship can be documented in one of several ways such as:

1. Seed samples.

2. Observations by neighbors, county agents, Soil Conservation Service technicians, agricultural fieldmen or others who are familiar with the past history of the field.

3. Records of production as compared with previous years and similar fields.

4. Relation to research observations.

The second type of hardship is faced by growers who have not received permits to burn in 1976 and as a consequence will suffer damage to a grass planting in 1977 through disease losses, increase in weed content, and/or other losses that will cause economic hardship. These types of hardships can be documented in one of several ways such as:

1. Inadequate sanitation in earlier years.

2. Type of seed crop and its sensitivity to lack of adequate sanitation.

3. Current level of weed or disease infestation as supported by records or observations.

4. Contractual obligations (specific purity requirements, etc.).

It is difficult to predict accurately on a field-by-field basis the magnitude of the hardship experienced or to be expected after harvest. If any field inspection program is to be undertaken in future years, we stress the importance of making an evaluation before harvest and the importance of proper technical training for the inspectors.

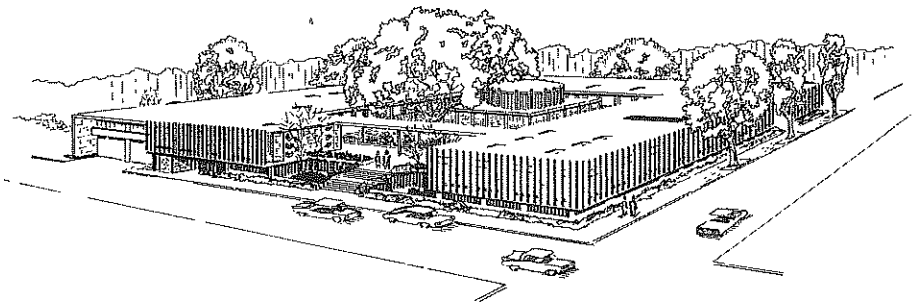
We recommend that a system be set up that provides each grower an opportunity to present on a simple format the basis on which he feels he is suffering extreme hardship under one or more of the categories provided in the law. The grower could be expected to briefly explain the situation in the form of an affidavit providing supporting evidence. We further recommend that supplies of the forms be made available at county extension offices.

In view of the short time remaining for permits to be issued for burning in the 1976 burning season, and the unavailability of alternate methods of field sanitation, we recommend that consideration be given to allowing burning on fields for which growers can properly document hardship.

Respectfully submitted,

David O. Chilcote
John R. Hardison
W. Orvid Lee
Harold W. Youngberg
James A. Kamm, Chairman

CITY OF EUGENE



CIVIL DEPARTMENT — 101 EAST BROADWAY, SUITE 401 — 503/687-5080
EUGENE, OREGON 97401

July 15, 1977

William H. Young, Director
Environmental Quality Commission
1234 S.W. Morrison Street
Portland, Oregon 97205

Place of Hearing: Marion County Courthouse
Room 129
Salem, Oregon
July 15, 1977

Dear Mr. Young:

Attached to this letter is the written testimony submitted on behalf of the City of Eugene. We would, of course, expect it be entered into the official records of the public hearing held July 15, 1977. Please notify this office of any continuations of the hearing, enlargement of the scope of the hearing, or forthcoming rules as a result of the hearing.

Very truly yours,

JOHNSON, HARRANG & MERCER
City Attorneys

By: Joyce H. Benjamin
Joyce H. Benjamin

JHB:jaw

Enclosure

ENVIRONMENTAL QUALITY COMMISSION

July 15, 1977

Mavis Adams

In the Matter of a Hearing by the Environmental Quality Commission Concerning Amendments to Rules Governing Field Burning, OAR 340-26-005 through 26-030	Testimony of the City of Eugene

The City of Eugene opposes adoption of the proposed rules for the following reasons:

I

THE PROPOSED RULES SHOULD NOT BE ADOPTED UNTIL PROPER NOTICE AND OPPORTUNITY TO BE HEARD ARE AFFORDED CONCERNED CITIZENS.

The essence of the constitutional requirement of notice is that the public be informed of what action is to be taken by a public body. The notice circulated by the Commission is clearly inadequate.

First, although the proposed rules could be characterized as "temporary amendments" they are, for all intents and purposes, the only rules which will be in effect throughout the entire field burning season. Therefore, the various and substantial rights of all those affected by field burning will be governed by so-called "temporary amendments." (legislative intent)

Second, ORS 183.335(5) requires that in order for an agency to issue "temporary rules," the agency must make specific findings accompanied by reasons for its findings. We submit that the statute cited above has not been satisfied and the proposed rules cannot be adopted until it is.

ASK Underwood

Third, the notice does not inform the public that the proposed rules constitute a substantial amendment of the Oregon State

Implementation Plan. Both the Clean Air Act and judicial decisions guarantee the public the right to comment on amendments to the State Implementation Plan.

II

THE PRESENT HEARING CANNOT BE LIMITED IN SCOPE, NOR CAN ANY TESTIMONY BE EXCLUDED BECAUSE OF THE HEARINGS CONDUCTED BY THE LEGISLATURE.

Rules applicable to the adoption of legislation are few; essentially, the fact that the legislature is elected justifies the courts reluctance in reviewing the "hearings" that may or may not be held by the legislature. However, administrative agencies do not enjoy the benefit of public scrutiny through the electoral process, so very definite guidelines attach to the rulemaking process. This agency must afford a full hearing on the proposed rules and cannot rely on information submitted at hearings before the Oregon Legislature.

III

THE PROPOSED RULES ARE INADEQUATE IN LIGHT OF THE FEDERAL CLEAN AIR ACT AND OREGON'S STATE IMPLEMENTATION PLAN.

A. Background.

The proposed rules would in all probability put Oregon on a collision course with the Environmental Protection Agency. In the first place, we presently exceed national secondary ambient air quality standards. We are an air quality control region; on occasion we exceed the primary standards. Second, with better testing techniques, EPA estimates we would exceed national primary standards even more frequently. Third, with normal growth, we would exceed the standards for air quality more often in the future.

Under our present state implementation plan as it was recently

revised, EPA approved our acreage phase down. That approval extends the phase down to 95,000 acres in 1977 and 50,000 acres burned in 1978. At the same time, as an inseparable part of the effort to improve the air in the air shed, EPA granted an extension to May 31, 1978, of the attainment date for secondary standards for total suspended particulates in the Eugene Air Quality Maintenance Area.

The proposed rules allow nearly a 100% increase in the number of acres burned.

The federal variance procedures are spelled out clearly in the Clean Air Act. To single out the grass seed industry as the rules do and to allow a weakening of the regulatory measure directed particularly towards that industry might be construed as a circumvention of the federal variance procedures. Moreover, the state through the Environmental Quality Commission does not have authority to delay the attainment of national standards through granting a variance to a particular source. This decision is reserved to the EPA. The proposed rules could be construed as one giant grant of a variance by the state. If our state implementation plan or a portion of it is determined by the administrator not to be adopted in accordance with the requirements of the Clean Air Act, the EPA would then hold the hearings and make the trade-offs between the industries. In other words, Oregon would lose the flexibility to make our own choices in determining how we will meet the standards in the Clean Air Act.

The Legislature did

Didn't the Legislature grant to variance?

B. Due Process Considerations.

The Clean Air Act mandates that all states must provide for the attainment and maintenance of national primary standards

as expeditiously as possible. The state implementation plan adopted by Oregon is considered in its entirety by EPA as a coordinated effort to comply with the Clean Air Act. The Act provides that the state implementation plan must be adopted by the state after reasonable notice and public hearings. 42 UCS 1857 C-5(a)(3). The administrator of the agency must either hold hearings at the federal level or review the certified record of the state hearings. In fact, we have just gone through the process in adopting the state implementation plan revision. It is our opinion that citizens may claim that due process has been denied them if the proposed rules are adopted. There is no notice to the citizens of Oregon of the implication for other industry because there is no consideration of the trade-offs and the non-degradation policy in the Clean Air Act.

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Under the Clean Air Act the thrust of the federal law is to set emission limitations. Acreage limitations alone are not satisfactory as an emission limitation. For example, the Commission should develop rules which correlate the amount of burning with the emission of particular types of air pollutants. The focus of the proposed rules should be on the amount of actual emissions, not on the acres burned.

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that dispersion techniques do not satisfy the Clean Air Act. Dispersion techniques are advanced by those who would solve the problem of air pollution by putting their dirty air in the neighbor's air shed. This is directly contrary to the mission of the Clean Air Act and its approach to controlling pollution in the air through emission limitations. Dispersion techniques run counter to the Act's purpose of enhancing the air quality. Dispersion techniques are inherently polluting. Such techniques sanction emissions which would ordinarily violate ambient air standards, providing that climatic conditions for such a violation exist. Third, the monitoring requirements of the Clean Air Act are rendered impotent except during the poorest climatic conditions. Finally, the thrust of the Act is to determine the maximum holding ability of our air and to force trade-offs in emission in order to maintain air quality - not merely to allow more pollution through the dilution of its concentrated effect. Dispersion techniques have been held improper except in very limited circumstances.

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CONCLUSION

Stated as succinctly as possible, the City of Eugene urges the Commission to withhold action on these rules until the Commission has considered the issue fully. The Commission has a duty to carry out the policies of the Clean Air Act in the state of Oregon and to act fairly and responsibly to all

the people of the state.

CITY OF EUGENE

By:
Keith Martin
Assistant City Manager

KM

THE LAND USE RESEARCH INSTITUTE
821 NW Flanders PORTLAND, OREGON 97209 503-222-4333

February 16, 1977

Mr. Joe Smith, Executive Director
Pacific NW Regional Commission
1205 Washington Street
Vancouver, WA 98660

Re: Utilization of sewage sludge for soil stabilization

Dear Mr. Smith:

In March of 1976, The Land Use Research Institute proposed to the Pacific Northwest Regional Commission a three state, organic waste utilization concept in which essential soil nutrients, trace elements and humus building organic waste materials could be utilized for improving soil structure in the wind sensitive portions of the Columbia Basin farming community.

In view of the impending drought and predictable soil losses from wind erosion to prime agricultural lands throughout the Columbia River Basin, we again urge that planning and coordination be started immediately if a plan is to be implemented in time to offset drought losses.

The most abundant as well as the most scientifically acceptable source of waste nitrogen and phosphoros is from processed municipal sewage sludges. Additionally, significant quantities of carbon are available in the form of short wood fibers currently being discarded by the paper manufacturing industry. By controlled blending, these two normally wasted natural resources can be transformed into a valuable soil improving mulch possesing a controllable carbon to nitrogen ratio.

Previous research, conducted by The Institute for the U.S. Navy at the Boardman Bombing Range, has effectively demonstrated the ability of these two forms of selected waste materials, in establishing a healthy ground-cover capable of stabilizing moving sand dunes. This was accomplished successfully without the benefit of either irrigation or chemical fertilizers. It is anticipated that with support from agricultural and soil specialists from Oregon, Washington and Idaho; a self-supporting and worthwhile waste utilization program can be quickly implemented. If so, it could result in a substantial reduction of costly wind erosion losses in the forthcoming windy season.

In previous discussions and correspondence with representatives of the Pacific Northwest Regional Commission and with the departments of agriculture in each of the three states involved, The Institute asked for an unsolicited grant of approximately $60,000 to fund the interstate coordination of the waste utilization concept. This would include a detailed barge distribution plan capable of serving the most critical wind erosion control needs of each state. In the belief that such a plan might ultimately become a necessity, many of the details of the earlier plan have recently been more closely investigated and it appears that the plan could be made to work. This includes a summary of available sources of nutrients, potential docksites where they can be loaded aboard barges, availability of barges and towboats and several potential upriver offloading and distribution centers.

Most important however, is our continued contact with federal and state regulatory agencies concerning laws and regulations establishing health standards governing the use of these forms of waste in agriculture. I am pleased to say that there are currently no anticipated health or environmental limitations that might seriously block the use of waste organics as suggested.

The extent of our efforts to be funded by the initial $60,000 application included the establishment of a thoroughly planned out three state, regional program broad enough in scale to be assured of safely accepting the day by day production of sludge from the entire metropolitan Portland area through the year 2,000. Absolute reliability of all portions of the plan must be assured if individual municipalities are to move away from energy intensive incineration as a solution to the ever increasing problem of sewage sludge disposal.

It was anticipated that this would also require numerous conferences with many federal and state officials, representatives of the departments of agriculture and of the schools of agriculture in all three states. Many questions would have to be answered on a region by region basis in order to assure all concerned of the safe health aspects of waste utilization. This would include our providing satisfactory answers to questions dealing with such things as local community acceptance, sludges total long range effect on soils and agricultural response, the effect and fate of trace elements, pathogens and virus following their introduction into soils and many more. I'm confident that The Land Use Research Institute, through it's scientific advisor program, is now capable of responding to such questions.

What the initial proposed did not anticipate was the pacific northwest's oncoming drought situation and the tremendous amount of valuable top soil that could be saved if a program can be implemented quickly. In view of the vast amount of background information and site selection details already assembled, it is highly probable that a well coordinated joint/effort could have the critical portions of the plan in motion by early summer of this year! We feel well prepared to head up the entire coordination of the program and have included a revised budget estimate for getting the project underway in the shortest possible time.

As you review the revised budget outline, please note that we have added provisions for receiving concurrent assistance from the appropriate schools of agriculture and soil science in each state. In this manner, soil varification, waste application rates and procedure can be moved ahead simultaneously. This also makes it possible for the concurrent preparation of environmental impact statements applicable to the individual requirements of each state.

The projected budget is as follows:

1.	Basic request from 1976 proposal		$ 60,000
	Adjust for 1977 cost increases and for crash program add on		8,000
2.	Add for preparation of E.I.S. for overall project		12,000
3.	Add for preparation of E.I.S. for individual states:		
		Oregon	5,000
		Washington	5,000
		Idaho	5,000
4.	Add for laboratory and field work and site varification by universities:		
		Oregon	24,000
		Washington	24,000
		Idaho	24,000
5.	Add for immediate field and laboratory analysis of estimated fertilizer value and degree of availability of all potential sources of nutrients.		15,000
6.	Add for cost of preliminary design and cost analysis of emergency docks, piping plan and regional receiving lagoons for initial distribution system.		16,000
			$198,000

As noted, we have not yet included estimated allowances for the actual construction, operation or maintenance costs of fixed facilities. These cannot be determined until both the suitability as well as the legally binding availability of previously selected sites has been established. This would all be done as part of the preliminary design and cost analysis included in part 6 of the budget.

Additionally, once the three state, regional plan is adopted by the Pacific Northwest Regional Commission, it is entirely possible that the emergency capital improvement cost may be obtainable through a joint application for E.P.A. Research and Demonstration funds. I have discussed this informally with officials of E.P.A.'s research program and we have been encouraged to proceed on the assumption that funds might become available. The amount discussed ranged from $200,000 to $400,000. We have been informed that E.P.A. can probably make the grant directly to the Pacific NW Regional Commission. Your agency could then retain The Land Use Research Institute to coordinate the detail design, construction and operation of the initial components of the system. E.P.A. would also expect us to conduct a detail analysis of barge operating costs since this type information, as it relates to liquid waste barging requirements, needs further varification following the gaining of field experience on the Columbia and it's tributaries.

E.P.A. funding might also be necessary to subsidize the cost of barging. However, we think not. It is The Institute's opinion that barging costs both can and should be paid for by the sludge producing communities. A cost analysis conducted by The Institute several years ago strongly indicated that the cost of barging liquid sludge as far as eastern Oregon would cost appreciably less than either heat treatment or incineration due to sludges tendancy to remain in semi-liquid form.

More recently, the city of Portland conducted it's own rather extensive study and came up with identical results. Because of this, city officials have temporarily halted the construction of a multi-million dollar heat treatment and incineration facility and on Oct. 5, 1976, called for sludge disposal alternates from interested parties.

A copy of their 195 page report dated September 2, 1976, is attached. Their Alternative A-1, which includes the barging of anaerobically digested sludge as far as the Boardman area is summarized on pages 71 through 77. As noted, plan A-1 was determined to be the most cost effective of all eight systems considered. Not too surprising was the fact that incineration was proven to be the <u>most</u> <u>costly</u> of all of the eight systems investigated!

If the city of Portland can be assured of a sound, long range barging and agricultural utilization program, it is our opinion they will permanently adopt this as a preferred alternate to incineration. Should this occur; an attempt should then be made to determine if the several million dollars remaining in their incineration construction grant fund could be reassigned for the construction of docks and sludge pumping facilities. Preliminary indications are that the fund transfer would receive strong consideration.

Also attached is a copy of The Land Use Research Institute's Testimony in response to Portland's October 5, 1976 appeal for alternate proposals. Information on page 3, describes how The Institute is chartered to function as a quasi-public intermediate interstate agency (without the benefit of an interstate compact). In this manner it is authorized to ship sludge to all three states and to strive for the lowest possible operating costs due to it's non-profit structure.

As noted on page 4, it was our intention at that time to make Portland's sludge available to Oregon, Washington and Idaho. Using information from O.S.U., the estimated fertilizer value of sewage sludges from the metropolitan area is approximately $2,000 per day or nearly $18 million dollars through the year 2,000! This figure will undoubtedly increase as chemical fertilizers continue to increase in cost as a result of diminishing supplies of natural gas which is used as a feedstock for their manufacture.

In view of the impending drought we have recently searched for additional, and immediately available sources of waste sludges. Contingent on confirmation of available disposal sites and satisfactory shipping rates, the city of Vancouver recently expressed it's willingness to close down it's costly as well as difficult to operate sewage sludge incinerator and to shift to land disposal. Other municipalities are also watching The Institute's progress as we continue our efforts to stimulate a truly regional, sludge utilization program.

The "mother lode" of immediately available waste nitrogen and phosphorous, however, has been found! Your attention is called to Fig. 9, taken from the city of Portland's report. It clearly shows the relationship of the Columbia Blvd. Sewage Treatment Plant and the deep water channel of north Portland Harbor. Also shown is Portland's Triangle Lake Sludge Lagoon. This is the mother lode!

We recently met with representatives of the city of Portland who accepted an informal offer by The Institute to proceed with a plan of our design capable of removing the entire inventory of sludge from the lagoon. The city's concern is that the lagoon is dangerously close to it's maximum capacity and must be emptied soon if they are to maintain it as an emergency disposal site. Currently, they have virtually no back-up alternative and The Institute's offer to help came as a ray of hope as the lagoon level continues to rise by the hour.

Of extreme importance, however, is the fact that city officials have budgeted approximately $1 1/2 million in order to pay for the removal of the lagoon's contents. We are currently trying to determine if these funds could also be made available for the construction of fixed facilities and operating costs. They probably can!

Additionally, The Institute is presently concluding arrangements for the construction of a barge loading dock as marked on Fig. 9. A Corps of Engineers permit has been issued and with funding, construction could start immediately. All necessary pipeline rights-of-way and easements also appear immediately available. It is because of these advance arrangements that we feel a rather sizable quantity of valuable nutrients could be moving to drought stricken areas in time to reduce wind erosion losses this coming summer.

As per the city of Portland's estimate, the lagoon contains approximately 200,000 tons of dense sludge. In terms of soil acceptability and concern for surviving pathogenic organisms or odor, it is the best there is! This is due to the method of pre-treatment and it's aged condition. Additionally, as a result of gravity thickening with time it's solids content is quite high. This means that the fertilizer value per unit of volume is also exceptionally high.

Part of our services would be to accurately determine the lagoon's actual volume and more importantly, to accurately establish it's true comparative fertilizer value. Our present estimate suggests it probably has an equivalent fertilizer value of nearly $3/4 million in nutrients and humus matter.

In conclusion, your serious consideration of The Institute's request for immediate funding would be greatly appreciated. The plan described by this proposal has been under almost continuous development (without federal or public funding) for essentially the past ten years. We believe it to be technically sound and above all, it is know to be environmentally sound in terms of energy and natural resource conservation!

The fact that 200,000 tons of nutrients plus pipeline and barging routes, docksites and years of planning are immediately available, didn't happen by accident. The plan did, however, happen to fall together as the entire northwest approaches perhaps the most destructive drought in recorded history.

Those of us who invisioned and eventually formed the non-profit, Land Use Research Institute are ready to go. We look forward to your response to our request for assistance.

Cordially yours,

George D. Ward

George D. Ward
Director

GW/cn

UNIVERSITY OF ILLINOIS · COLLEGE OF AGRICULTURE

SOIL MANAGEMENT & CONSERVATION

AGRONOMY FACTS

Revised February, 1976 *SM-29*

Utilization of Sewage Sludge on Agricultural Land

Digested sewage sludge is a valuable resource that can be utilized in the production of crops on agricultural land. As it comes from the sewage treatment plant, it can be considered as a dilute liquid fertilizer of variable composition. If applied at a rate equivalent to a moderate irrigation (about two inches), it will supply most plant nutrients except potash in the amounts needed for a growing crop. Sludge will also add appreciable quantities of organic matter, which may improve the physical, chemical, and biological properties of soils. Sludge may be dewatered to varying degrees and may become a bulky solid fertilizer of relatively low analysis.

Sewage sludge is frequently a surplus commodity in municipalities. In some cases, it has accumulated in amounts large enough to pose storage and disposal problems. Environmental and economic restraints limit disposal methods. Utilization on agricultural land appears to be an attractive solution from the viewpoint of cost to the municipality, also as a source of plant nutrients and organic matter for agriculture.

Benefits and problems are associated with the utilization of sewage sludge on agricultural land, as described in the subsequent sections of this paper.

CHARACTERISTICS OF SEWAGE SLUDGE

The term, "sewage sludge," as used in this report means heated, anaerobically digested sludge. It is a stabilized material with an earthy odor and does not contain raw, undigested solids. Liquid sewage sludge is brown-to-blackish in color and contains dissolved, colloidal, and suspended solids. Its physical, chemical and biological properties depend to a great extent on the source of the waste, the type of treatment given the waste, and the type of handling the sludge receives. The number and types of industries in the community, the kind of plumbing used, the efficiency of waste-treatment facilities, and many other factors influence the composition of the sludge.

Liquid sewage sludge may vary from less than 1 percent solids to over 10 percent. As they come from sewage-treatment plants, most sludges are 2 to 5 percent solids.

Sewage sludge that has been stored in holding lagoons for a long time may have lost sufficient water by decanting processes to permit it to be handled as a solid. However, this material may still have a moisture content of 50 percent or more. Sludges can be dried artificially to have low moisture contents. Milorganite is a trade name for one such material, sold for use in greenhouses and in gardens.

The solid portion of sewage sludge is composed of about equal amounts of inorganic and organic material. The inorganic portion is largely silt- and clay-size particles, and contains numerous elements--mainly nitrogen, phosphorus, sulfur, chlorine, carbonate, and metal salts. The organic portion is a complex mixture of digested sewage constituents that are resistant to anaerobic decomposition, compounds synthesized by microbes during the digestion process, and dead and live microbial cells. The organic material contains organic carbon, nitrogen, phosphorus, and sulfur. The carbon/nitrogen ratio of digested sludge varies from 7 to 12, but is usually about 10.

Table 1 gives a range of chemical composition values for sludge and specifications for a "typical" liquid, digested sewage sludge as it comes from the digester. These values are given as a general guideline. The composition of individual sludges can vary appreciably from the values shown. The specific sludge to be used should be analyzed to ascertain its exact composition.

All the nitrogen in sewage sludge is not available for crops during the year of application. Ammonium nitrogen is lost into the air if liquid sludge is spread on the soil surface, forms puddles, and is allowed to dry there. If liquid sludge is incorporated into the soil promptly after application to the surface or if it is injected directly into the soil, most of the ammonium nitrogen is adsorbed by the soil. The ammonium nitrogen is changed into the nitrate form in the soil, where it may be absorbed by the crop or may be subject to leaching. The organic nitrogen in sludge must be mineralized before it can be assimilated by crops.

University of Illinois research indicates that about a fourth of the organic nitrogen in fresh, liquid sludge incorporated into soil becomes available for plants during the year of application. This slow release of nitrogen has definite advantages for some uses and disadvantages for others. Sewage sludge loses most of its ammonium nitrogen in the drying process, so most of the nitrogen in dried sludge is organic in form.

The University of Illinois conducted research with dried sewage sludge for a number of years, beginning in 1956. *Agronomy Fact Sheet SF-58,* issued in 1959, states: "Results to date indicate that dried sludge

may be expected to cause corn yield responses similar to those obtained with mineral fertilizer of 5-5-0 grade. This suggests that rather large amounts of sludge would be required and transporting it long distances would be questionable economy for field crops unless it causes long-lasting residual benefits."

Table 1. Composition of Fresh, Heated, Anaerobically Digested Sewage Sludge

Element	Concentration range	Typical sludge (dry basis) Concentration	Amount
	percent	*percent*	*pounds/ton*
Elements essential for plants			
Nitrogen-organic	2 to 5	3	60
Nitrogen-ammonium	1 to 3	2	40
(Nitrogen-total)	(1 to 6)	(5)	(100)
Phosphorus-as P	0.8 to 6	3	60
(Phosphorus as P_2O_5)		(6.8)	(137)
Potassium-as K	0.1 to 0.7	0.4	8
(Potassium as K_2O		(0.5)	(10)
Calcium	1 to 8	3	60
Magnesium	0.5 to 2	1	20
Sulfur	0.3 to 1.5	0.9	18
Iron	0.1 to 5	4	80
	ppm	*ppm*	
Sodium	800 to 4,000	2,000	4
Zinc	50 to 50,000	5,000	10
Copper	200 to 17,000	1,000	2
Manganese	100 to 800	500	1
Boron	15 to 1,000	100	0.2
Elements not essential for plants			
Cadmium	3 to 3,000	150	0.3
Lead	100 to 10,000	1,000	2
Mercury	1 to 100	3	Trace
Chromium	50 to 30,000	3,000	6
Nickel	25 to 8,000	400	0.8

NOTE: Values vary according to source, treatment, and other factors. Sludges held in storage lagoons for long periods may be considerably lower in nitrogen content.

Sewage sludges may contain relatively large quantities of minor and trace elements, as indicated in Table 1. Some of these elements are essential in plant and animal nutrition, but nearly all can be toxic at some concentration. Zinc, copper, nickel, cadmium, mercury, and lead may occur in quantities sufficient to affect plants and soils. The availability of a metal in the soil is influenced by soil properties--such as pH, organic matter, content of other metals, type of clay mineral, cation exchange capacity, by the variety of crop grown, and many other factors. The absorption of metals is usually lowest at a nearly neutral pH, so keeping the pH near 7 will help prevent problems that might arise from excessive metals in sludge.

APPLICATION METHODS

The large amount of water that must be handled in order to provide the plant nutrients required for a growing crop imposes some limitations on the use of liquid sludge and on the methods of application. Sludges with not more than 10 percent solids can be handled as a liquid, pumped through pipes, and carried in tank trucks, railroad tank cars, and barges. There are some limitations on the types of pumps used; but generally, sludge can be handled by the same types of equipment as used for liquid manure. If sludge is stored in lagoons or tanks, solids will settle to the bottom and special provision for agitation will be needed in order to pump it from the lagoon again. Sludges with more than 10 percent solids have a very high viscosity, and specialized equipment will be needed. Sludge that has been dewatered may be handled in the same manner as solid manure.

Liquid sewage sludge can be spread through some large-diameter irrigation nozzles. It can be applied in furrows through gated irrigation pipe. Most irrigation-supply companies now offer some equipment that will handle sludge satisfactorily. Even though liquid sludge usually contains more than 90 percent water, it is not a satisfactory source of supplemental irrigation water, but may be applied in conjunction with irrigation. If more than a few inches of sludge are applied annually, the crop's needs for nitrogen and phosphorus will be exceeded. In addition to being a waste of plant nutrients, this would increase the chances for polluting surface and ground water, and could result in toxicity to the crop from excess nutrients or salts. Sludges with a solids content in excess of about 1 percent will dry quite slowly on the

soil surface. It may be possible to dilute sludge with additional water, reducing the amount of nutrients added per application.

Liquid sludge can be spread on the soil by tank trucks. The distance of the haul has some obvious limitations, because of the large weight of water to be handled. In some large-scale operations now underway in Illinois, sludge is pumped through a flexible hose to an injection plow travelling through the field. At the plow, the sludge flows through a manifold which connects with outlets by each plowshare or disc. Thus, sludge can be incorporated into the soil immediately.

Caution must be exercised in applying sludge to sloping land to make sure the runoff water does not contaminate streams, ponds, or other water bodies.

APPLICATION RATES

These are specified in terms of inches of liquid (as for rain or irrigation water), tons of liquid per acre, or tons of dry solids per acre. A layer of liquid sludge 1 inch deep amounts to about 27,000 gallons (100 tons) on each acre covered. If the sludge has 3-percent solids, 3 tons of dry solids will be added to each acre by each 1-inch application. At 5-percent nitrogen and 3-percent phosphorus, this sludge will supply 300 pounds of total nitrogen and 180 pounds of phosphorus per acre. If the sludge had 5 percent solids, the 1-inch layer over an acre would still weigh about 100 tons, but would contain 5 tons of dry solids and furnish 500 pounds of total nitrogen and 300 pounds pounds of total phosphorus per acre.

What application rate, repeated year after year, would be needed to provide the nitrogen required for a high-yielding crop of corn on Illinois soils?

Assume, again, a sludge with 3-percent solids and a composition as indicated in Table 1. A 1-inch layer would supply 300 pounds of total nitrogen, 180 pounds in organic form and 120 pounds in ammonium form. Also assume that the sludge is spread on the soil surface and plowed under as soon as it has dried enough to permit incorporation.

We might expect only half the ammonium nitrogen to be retained. If the sludge is injected into the soil, more nitrogen will be saved; if it dries completely on the surface before plowing, less will be saved. In addition to the ammonium nitrogen, about a fourth of the organic nitrogen is mineralized each year and thus becomes available.

Thus, the first year of application, for each 1 inch of sludge applied we would have:

120 x 0.5 = 60 pounds of ammonium N available
180 x 0.25 = 45 pounds of organic N available
Total 105 pounds of N available per acre

Under a high level of management, 2 inches of this sludge would probably be needed the first year and 210 pounds of nitrogen per acre would be available. In succeeding years, increasing amounts of nitrogen will be available from the 2-inch application, because the organic nitrogen in the sludge added the first year will continue to decompose. After five years of successive and equal annual applications, the amount of nitrogen released from the organic fraction each year is about the same as the total organic nitrogen added in the sludge. Thus, 1 inch of such sludge would provide:

120 x 0.5 = 60 pounds of ammonium N available
180 x 1.0 = 180 pounds of organic N available
Total 240 pounds of N available per acre

Consequently, after five years of application, only 1 inch per year would be needed.

If sludge of the composition indicated in Table 1 is applied at the rate of 6 dry tons per acre, 822 pounds of P_2O_5 (phosphate)--equivalent to nearly 1,800 pounds of 46-percent superphosphate--and 60 pounds of K_2O (potash) per acre will be added. This is likely to be more phosphorus and less potash than needed. If the application rate is specified to provide the optimum phosphorus rate, nitrogen and potash may both have to be supplemented. However, if the 6-ton rate is used, the excess phosphorus is not likely to create a serious problem, at least for many years of repeated applications. The factor limiting long-term application rates of sewage sludges may be the level of phosphorus concentration. However, discontinuing applications would probably soon alleviate phosphorus toxicity problems, should they appear.

The content of trace metals, including heavy metals, in the sludge may also limit the long-range usage of sludge on agricultural land. With regard to their metals content, some equations have been proposed for computing the total quantities of sludge which may be applied. Such quantities are directly proportional to the cation-exchange capacity of the soil, and inversely proportional to zinc, copper, and nickel contents of the sludge.

Using one of these equations, an Illinois soil with a cation exchange capacity of 27 milliequivalents per 100 grams can accommodate 21 annual applications of 2 tons of the "typical" sludge per acre. So it would appear that if annual application rates are limited to those sufficient to provide nitrogen for grain

crops (sometimes called "agronomic rates"), there seems little cause for concern about detrimental trace-metal accumulations in soils or plants from the use of most municipal sludges over a period of many years.

Sewage sludge appears to be well adapted for utilization on lands previously disturbed by strip mining and on which the topsoil has not been replaced. Most of these areas have soils high in potassium but low in nitrogen, phosphorus, and some micronutrients. Thus, sludge should be an excellent nutrient source. These soils are generally low in organic matter, and sludge can also provide that. The application of sewage sludge may provide the option of going directly into row-crop production after levelling any "spoil banks." The maximum rate at which sewage sludge can be safely applied on such soils is unknown. There is a lower likelihood of phosphorus toxicity symptoms developing from heavy application rates, since such soils are so low in phosphorus.

The Prairie Plan project in Fulton County used sludge applications as high as 25 dry tons per acre in 1974, anticipating similar applications in 1975. The yields of corn and soybeans were low, and there was no adequate evaluation of the effect of sludge on yields. The area was subjected to adverse weather in 1974, including a wet spring, a drought in mid-summer, and an early frost.

Runoff and ground water are being monitored for nitrogen, heavy metals, and fecal coliform levels. Analyses of soils and crops are also being made. From these studies and from our research at Elwood, an adequate warning should be available if problems develop. Even if the heavy application rates cannot be maintained indefinitely, the safe, long-term application levels on these soils may be higher than similar treatments on undisturbed soils.

Application rates for sludge on agricultural soils must be specified according to the analysis of the sludge being used. The analysis should be provided by the sewage-treatment plant from which the sludge is obtained. If an analysis is not provided or if the figures given are to be checked, analyses can be made by one of the laboratories listed at the end of this paper. Sufficient sampling must be done to measure variability in composition over a reasonable period of time. Various commercial and public laborause different procedures. Remember this when comparing data from one sludge to another, or one laboratory's results with that of another. Laboratories may also use different statistical treatments of analysis data. You may find some using arithmetic means and standard deviations, others geometric means and standard deviations; and sometimes, the median 50 percent value will be used as a mean. These are not strictly comparable, and you need to know what method of reporting is used.

CROP RESPONSE

In 1967, Dr. T.D. Hinesly and his associates at the University of Illinois started research with liquid, anaerobically digested sewage sludge. This research has included intensive laboratory and field lysimeter studies, as well as yield responses of various crops in field experiments at the Northeast Agronomy Research Station near Elwood. Dr. R.L. Jones is the other major University staff member now associated with this project. The yields of corn grown for eight consecutive years are given in Table 2, and the yields of soybeans for seven consecutive years in Tables 3 and 4.

Table 2. Corn yields as Influenced by Sewage Sludge Applications at the Northeast Agronomy Research Center Near Elwood

	Sludge applied				
	Total liquid in eight years (inches)				Maximum
	0	17.25	34.5	69	solids/year
	corn yields, bushels per acre				*tons/A.*
1968.	66	96	114	112	23
1969.	143	149	150	151	21.6
1970.	88	119	122	138	23.5
1971.	97	104	110	126	57.3
1972.	143	137	143	141	11.4
1973.	64	96	107	122	27.7
1974.	55	51	61	82	21.8
1975.	130	149	151	150	14.5
Average	98	113	120	128	25.1

Corn was grown in 30-inch rows, with plant populations ranging from 18 to 25 thousand per acre. Sludge was applied in furrows between the corn rows, starting after corn was about 6 inches high. The check plots (0 sludge) were not fertilized in 1968, but received 240 pounds of N and 270 pounds of P_2O_5 per acre each year thereafter. All plots received 200 pounds of K_2O per acre each year, beginning in 1969. The treatments were 1/4 inch, 1/2 inch, or 1 inch of sludge, applied as frequently during the growing season as the drying of the sludge would permit. The sludge varied from 1.9- to 3.4-percent solids, with an average of 2.9 percent.

Corn yields have generally increased in direct proportion to the amount of sludge added. This study is on Blount silt loam, which is poorly drained and relatively low in organic matter. The organic-matter content

of the surface soil has been raised by an amount related to the quantity of sludge applied the preceeding year. The only evidence of an increase in organic nitrogen below 12 inches came in 1972 following the unusually heavy sludge application of 57 tons per acre in 1971. By 1973, however, this had disappeared. The soil pH dropped from 5.6 to 4.9, following the application of 16.75 inches of sludge during the first two years. Consequently, limestone was added in fall of 1970 at rates calculated to raise the soil pH to at least 6.

Soybean yields have generally increased with the amount of sludge applied. Two series of soybean plots were installed to evaluate phosphorus-sludge interactions on soybean yields. Soybeans were planted on ridges; the furrows were irrigated with sludge in the same manner previously described for corn. All plots received a broadcast application of 240 pounds of K_2O per acre per year.

In 1972, a severe depression of soybean growth was noted in the plots with the highest rate of sludge. The problem was more severe on plots receiving an additional 240 pounds of P_2O_5 per acre. Consequently, only one sludge application was made that year. Phosphorus toxicity symptoms were visible and the phosphorus content of tissues indicated that this was the major problem. Excess soluble salts were also found to be present, no doubt contributing to the problem.

When the excess salts were leached out by rainfall, the phosphorus toxicity problem was alleviated. Yields on the high sludge plot recovered in 1973 and sludge applications were resumed, but only on plots receiving additional phosphorus fertilization. The phosphorus toxicity symptoms appeared only when rates much higher than those needed to supply nitrogen or phosphorus for the crop had been applied.

Table 3. Soybean Yields Resulting from Sewage Sludge Applications at the Northeast Agronomy Research Center Near Elwood

	No additional phosphorus fertilization					
	Total liquid in seven years (inches)					
	Sewage sludge				Water[a]	Maximum
	0	7.8	15.5	31	31	solids/year
	soybean yields, bushels per acre					*tons/A.*
1969	34.0	45.0	48.2	50.0	43.4	19.1
1970	29.9	41.1	45.0	42.4	33.3	26.5
1971	26.8	28.7	31.3	31.7	22.3	60.2[b]
1972	30.3	38.0	40.8	13.8	24.4	2.2
1973	25.0	28.2	29.8	31.4	16.4	-0-
1974	22.0	25.9	26.6	26.7	19.9	-0-
1975	40.6	35.3	43.7	40.9	27.6	-0-
Seven-year average	29.8	34.6	37.9	33.8	27.5	15.4

[a]Water was applied at the same rate and time as the maximum sludge application.
[b]Five of the thirteen inches of sludge applied after harvest.

Table 4. Soybean Yields Resulting from Sewage Sludge Applications at the Northeast Agronomy Research Center Near Elwood

	Additional 240 pounds of P_2O_5 per acre added					
	Total liquid in seven years (inches)					
	Sewage sludge				Water[a]	Maximum
	0	11.5	23	46	46	solids/year
	soybean yields, bushels per acre					*tons/A.*
1969	37.8	44.6	46.8	52.1	51.8	19.1
1970	29.5	39.2	38.4	47.6	38.6	26.5
1971	22.8	27.8	31.0	31.5	25.9	60.2[b]
1972	33.7	44.3	42.3	3.1	29.4	2.2
1973	22.1	24.4	30.9	29.3	18.1	6.1
1974	21.4	25.5	29.7	31.5	25.9	26.2
1975	36.0	42.1	49.7	45.3	31.1	21.9
Seven-year average	29.0	35.5	38.4	34.3	31.6	23.2

[a]Water was applied at the same rate and time as the maximum sludge application.
[b]Five of the thirteen inches of sludge applied after harvest.

As can be seen in Tables 3 and 4, the sludge applications averaged 35 tons per acre per year for 1969 through 1971 at the highest rate of application. No phosphorus toxicity symptoms or yield reduction were found when sludge applications were one-fourth this amount, even where additional inorganic phosphourus fertilizer was applied.

Soybean yields on plots irrigated with well water but receiving no sludge have sometimes been lower than check-plot yields. The reason is unknown. This is not typical of the response expected from soybean irrigation in Illinois, but the reason for this erratic behavior has not yet been found.

A small field experiment on the University of Illinois Vegetable Research Farm in Mason County has compared sludge, manure, and inorganic fertilizer as nutrient sources for irrigated corn on sandy soils. Plots receiving 2 inches of liquid digested sludge annually yielded 154 bushels of corn per acre in 1974 and 192 bushels in 1975. Plots receiving a 300-150-150 fertilizer treatment broadcast before planting averaged 135 bushels in 1974 and 203 bushels in 1975. While crops grown on sandy soils might benefit most from the use of an organic fertilizer source such as sewage sludge, we do not yet have enough experience with sludge on these soils to know whether additional problems may result. These soils have low base exchange capacities; and, consequently, may have a low capability for holding metal ions. Hence, toxicity problems could occur much sooner from repeated applications. Also, nitrogen leaching may occur to a greater extent with a resultant increase in pollution hazards. These things are being studied.

ADDITIONAL LONG-TERM BENEFITS

Sludge provides a source of organic matter that may be beneficial on many soils. Sandy soils or previously strip-mined lands can be particularly low in organic matter. At Elwood, three successive annual sludge applications totaling about 75 tons per acre produced organic-matter increases in the surface layers of three soil types in field lysimeters. The increases were greatest in Plainfield sand, and extended to the 12- to 18-inch layer in the sand but not in the heavier soils. The increases in organic-matter content appeared to be directly related to the amount of sludge applied the preceeding year.

Organic matter is beneficial in holding plant nutrients in the soil complex and in facilitating their slow release. Improved water-holding characteristics, structure, and tilth are generally found to result from an increase in the soil organic-matter content when it is at a low level. Many soils in Illinois have a relatively high organic-matter content, and minimal benefits from additional organic matter could be anticipated on them. One should keep in mind that the plow layer of soil weighs about 1,000 tons per acre; consequently, the percentage of organic matter could not be expected to increase appreciably from annual applications of a very few tons. On the other hand, organic matter provides maximum benefit as it is decomposing. Its moisture- and nutrient-holding ability is many times that of inorganic soils per unit of weight. Thus, benefits from applying sludge could be expected, particularly on soils low in organic matter, even though the percentage of organic matter does not increase appreciably.

POSSIBLE PROBLEMS

ODORS. Odors from sludge can create problems under certain circumstances. Anaerobically digested sludge is usually described as having an "earthy" odor or one similar to that of crude oil. However, persons living adjacent to areas where sludge is applied to land or is held in lagoons frequently complain of objectionable odors. If the sewage has not been properly processed, the resulting odors may be very noticeable.

Sometimes odors similar to ammonia are reported. When sludge is held in lagoons, the upper layers of liquid become rather high in ammonia and some is lost into the atmosphere. The Metropolitan Sanitary District of Greater Chicago has returned to Chicago some supernatant liquid from the top of their holding lagoons in Fulton County in order to alleviate this problem.

There is a considerable difference of opinion at present about the severity of odors. Interestingly, many persons living in rural areas seem to find odors from sewage sludge to be significantly more objectionable than odors from manure. Many who live in cities find manure odor highly objectionable, but they may have little opportunity to compare this odor with that of sludge.

Thus, odors can be a problem, at least in operations in which liquid sludge is spread on large tracts of land and/or stored in lagoons. Minimizing the surface area of such lagoons and the length of time sludge is held in them may help alleviate the problem. Also, injecting the liquid sludge into soil with a special disc or moldboard plow should be preferable to sprinkling it on the surface.

SOLUBLE SALTS. Sludge high in the salts can cause problems if applied in large amounts. High salt concentrations in the upper layers of the soil can retard seed germination and plant growth. The soil structure might be adversely affected, reducing water intake and aeration. However, sludge generally has a low ratio of sodium to calcium and magnesium, indicating a low adsorption of sodium. The sodium that is adsorbed by soils tends to be leached out again in humid areas where there is an annual net movement of water down through the soil profile. Thus, there seems little reason for concern about soluble salts in Illinois if the sludge is applied at agronomic rates.

TRACE METALS. Many of the concerns about possible, detrimental effects from long-term applications of sludge to the soil have centered around the trace metals in sludge. These elements remain bound in the soil, and any problems they create are difficult to correct. The elements of most concern are zinc, copper, nickel, and cadmium; but such concern extends to mercury, lead, boron, chromium, cobalt, selenium, and molybdenum. The fear is that repeated applications of sludge might build up concentrations of these elements in the soil to levels that would be toxic to crops; also, that metals absorbed by plants which are then eaten by man or animals could enter the food chain at undesirable levels.

University research has concentrated on determining total and one-tenth normal, hydrochloric acid extractable concentration levels of trace elements in soils treated with various loading rates of digested sludge. These are efforts to follow the transfer of trace elements into the food chain.

Illinois studies to date indicate that there is little reason for concern about detrimental trace-metal accumulations in soils or plants when most municipal sludges are applied on agricultural soils at agronomic rates. As would be expected, those metals that occur in sludge at higher concentrations than in soils increased in total and one-tenth normal, hydrochloric acid extractable levels in surface soil as sludge was applied. The zinc and cadmium contents of corn leaf, grain, and mature-plant residues were especially increased. The zinc and cadmium contents of soybean tissues and seed were similarly increased. However, none of the increases resulting from agronomic rates of sludge would cause problems with plant growth or with animals consuming the foliage or seed. Increases in the cadmium and zinc contents of foliage were greater than the increases in the seed. Consequently, if problems were to develop from applications over a great many years, such problems might be expected first in the foliage and possibly in animals consuming the foliage. However, only ruminant animals consume large amounts of forage and their digestive systems apparently are less effective in absorbing metals than are those of single-stomached animals. The metal levels observed so far would not be likely to present a serious problem.

Our research will continue, monitoring soil and plant contents of trace elements in order to become aware of any such problems should they develop. There is concern that trace elements may become more available with time as organic matter from the sludge decomposes or as the pH level drops with repeated applications of sludge if a proper liming program is not followed. Observations to date, however, indicate that metals will rapidly decrease in availability when sludge applications cease.

PATHOGENS. There has been serious concern that sewage sludge might contain disease-producing organisms, and that animal and human health problems might result from sludge utilization. Thus, University of Illinois studies have been concerned with this problem. Viruses are unlikely to survive a period of 15 days in a heated anaerobic digester, at least in a condition capable of causing an infection, as determined in 1970. Much the same situation was found in 1973 for several kinds of zoonitic parasites.

NITRATES. In the studies in field lysimeters at Elwood, drainage water from check plots has been found to have about the same nitrate content as that from the lowest sludge application plots (averaging about 6 tons of dry solids per acre per year). Inorganic nitrogen fertilizer is applied to the check plots in an amount approximately equivalent to that on the lowest sludge plots. Thus, it appears that the rate of nitrogen transformation to nitrate and the movement through Blount silt loam is the same regardless of source.

PHOSPHORUS. Phosphorus added to soils as a constituent of sludge appears to be highly available to crops. Hence, it is possible for available phosphorus to accumulate in soils to toxic levels for sensitive crops if sludge application rates are high. Also, the levels of phosphorus concentration in drainage water may possibly increase to the point that they pose a eutrophication threat when drainage water is returned to nonflowing surface waters. Again, these problems are not expected to result as long as agronomic rates of sludge application are not exceeded.

EPA REGULATIONS

Approval by the Illinois EPA is necessary for any application of sewage sludge on agricultural land. Generally, this approval is secured by the sewage-treatment facility from which sludge is obtained. Approval is being given for applications at agronomic rates. Producers who intend to use sludge on land should check to see that such approval has been received.

SUMMARY

Heated, anaerobically digested sewage sludge can be used on agricultural land to provide nitrogen, phosphorus, and perhaps trace elements. An analysis of the sludge should be obtained in order to know the nitrogen and phosphorus content and that of minor and trace elements. Research at the University of Illinois and elsewhere indicates that crop plants can utilize the nutrients in sludge and that few, if any, crop-production or environmental problems are likely to result from low rates of application. The nitrogen content of fresh, liquid digested sludge will determine the application rate. If, however, sludge is applied on the same land over a period of many years, the phosphorus and/or the trace-element content of the sludge may determine the long-term application rate.

LABORATORIES THAT WILL PERFORM SLUDGE ANALYSES

Arro Laboratories, Inc.
P.O. Box 686
Caton Farm Road
Joliet, IL 60434
(815) 727-5436

NU-AG
P.O. Box 239-U.S. 51 South
Rochelle, IL 61068
(815) 562-6060

Olson Laboratories
68 Monterey Street
Box 594
Freeport, IL 61032
(815) 232-9110

Rosner-Hixson Laboratories
3570 N. Avondale Avenue
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Soil Mineralogy
and Ecology

ROBERT W. STRAUB
GOVERNOR

Environmental Quality Commission

1234 S.W. MORRISON STREET, PORTLAND, OREGON 97205 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item B, July 15, 1977 EQC Meeting

Stipulation and Final Order regarding anticipated violations of the July 1, 1977 compliance date in Teledyne Wah Chang Albany's NPDES permit

Background

The Department and Teledyne Wah Chang Albany have come to agreement over anticipated violations of the Company's July 1, 1977 NPDES permit. A consent agreement has been signed by the two parties. A copy is attached.

You have previously been briefed on the situation at Wah Chang. both in writing and orally. A copy of the water quality portion of the Wah Chang status report is attached.

The consent agreement will not take effect until the Commission approves it. The remaining necessary action to make the Order final is for the Commission to authorize the Director to sign the agreement on its behalf.

Recommendation

The Director recommends that the Commission approve Stipulation and Final Order No. WQ-MWR-77-131 and authorize the Director to sign it on its behalf.

Bill

WILLIAM H. YOUNG
Director

MD:vt
7/14/77
Attachments: Consent Agreement
WQ portion of
Wah Chang Status
Report

BEFORE THE ENVIRONMENTAL QUALITY

COMMISSION OF THE STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY of the STATE OF OREGON, Department, v. TELEDYNE INDUSTRIES, INC., dba TELEDYNE WAH CHANG ALBANY, Respondent.	No. WQ-MWR-77-131 Linn County STIPULATION AND FINAL ORDER

WHEREAS:

1. On June 6, 1977, the Department of Environmental Quality ("Department") filed with the Environmental Quality Commission ("Commission") a Notice of Violation and Intent to Assess Civil Penalty in case no. WQ-MWR-77-131 against Teledyne Industries, Inc., a California corporation, doing business as Teledyne Wah Chang Albany, ("Respondent"). Respondent hereby acknowledges receipt of a copy of that notice and waives any and all objections it may have to the form and substance of that notice, to the manner in which it was served and its timeliness.

2. On March 26, 1975, Department issued Respondent a National Pollutant Discharge Elimination System ("NPDES") waste discharge permit number 2012-J ("Permit"). The Permit provides, at special condition 8 thereof, that after June 30, 1977 the quantity and quality of effluent discharged directly or indirectly into Truax Creek: (a) shall not exceed 300 pounds per day of

ammonia nitrogen (NH_3) as a monthly average and 400 pounds as a daily maximum; and (b) shall not be toxic to salmonid fishes after 96 hours of exposure in a dilution of one part total effluent to nine parts of Willamette River water (or equivalent) using bioassay techniques.

3. Respondent will not have in operation on July 1, 1977, any waste treatment or control facilities capable of reducing the ammonia nitrogen in Respondent's waste stream (at Respondent's current rate of operation) so as to comply with the ammonia nitrogen and toxicity effluent limitations set forth in paragraph 2, above.

4. Respondent has requested that the post June 30, 1977 ammonia nitrogen Permit effluent limitations be raised to 1500 pounds per day as a monthly average and 2000 pounds as a daily maximum. That request is the subject of another administrative proceeding. A decision by the Director of the Department on the request for that Permit modification is expected on or before November 1, 1977. Respondent presently is capable of treating its effluent so as to meet the ammonia nitrogen effluent limitations specified in this paragraph.

5. Respondent believes that since issuance of the Permit Respondent has attempted in good faith to comply with the ammonia nitrogen effluent and toxicity limitations imposed thereby and has exercised diligent efforts to acquire the best practicable control technology for limiting discharge of ammonia nitrogen and toxic effluents so as to be in position to comply with the Permit standards due to become effective June 30, 1977.

6. The Department and Respondent recognize that from July 1, 1977 until (a) a sufficient ammonia nitrogen treatment or control facility is planned, constructed and put into operation, or (b) the Permit is modified as requested by Respondent, Respondent will be unable during its normal or above normal manufacturing operation to meet the Permit ammonia nitrogen effluent and toxicity limitations (special condition no. 8). Pursuant to ORS 183.415(4), the Department and Respondent wish to resolve and settle in advance by stipulated final order all claims that said inability to meet those effluent limitations during the period of July 1, 1977 through June 30, 1978 constitutes actionable violations. This stipulated final order is not intended to settle any violation of any ammonia nitrogen effluent limitation set forth in paragraph 4, above. Furthermore, this stipulated final order is not intended to limit, in any way, the Department's right to proceed against Respondent in any forum for any past or future violation not expressly settled herein.

7. Respondent believes that under existing available technologies continued plant operation after June 30, 1977 with resulting discharge of ammonia nitrogen effluents in excess of 300 pounds per day and having a toxicity greater than that specified in paragraph no. 2, above, does not constitute a violation of state or federal law and subject it to penalties. The Department asserts that any such discharge constitutes at least a technical violation of the law subjecting the Respondent to minimum penalties. Department does not assert and will not assert criminal liability

against the Respondent or any other person for any past or future alleged violation which is expressly settled in this stipulated final order.

8. For purposes of determining the appropriate size of the stipulated civil penalties Respondent and the Department have considered, and the Environmental Quality Commission may consider, the following:

(a) Respondent alleges that:

(i) the control facilities constructed and placed in operation by Respondent incorporate the best practicable control technology available on March 26, 1975;

(ii) Respondent has fully cooperated with the Department disclosing all actions undertaken and progress made with regard to installation of control technology;

(iii) The Department has never made any suggestions for control technology to the Respondent which it has refused to consider or to implement if found feasible;

(iv) After issuance of the Permit, changes were made in air pollution standards and harmful effects of chlorination were discovered. This made impractical the control technology then planned by the Respondent.

(b) Respondent and Department anticipate that their proposed conventional air stripping column (see paragraph 9 below) will cost approximately $200,000 to plan and construct.

(c) Respondent and Department anticipate that it will cost approximately $20,000 a year to provide the energy to operate the proposed air stripper.

(d) The Department alleges that Respondent has committed prior violations as described in the following Department administrative notices: no. WQC-75-03 (January 9, 1975); no. WQC-75-03-01 (February 18, 1975); no. WQC-MWR-75-03-02 (August 27, 1975); no. WQC-MWR-76-134 (July 1, 1976); no. ENF-WQ-MWR-76-88 (August 4, 1976); no. WQ-MWR-76-246 (December 10, 1976); and no. WQ-MWR-77-131 (June 6, 1977).

9. Respondent proposes to try to reduce the ammonia nitrogen effluent discharge from its plant by installation of a conventional air stripping column provided that the Department will grant an appropriate permit allowing gases from such facility to be discharged into the air. Respondent has not yet filed with the Department the necessary Department air quality notice of construction and application for a Department air contaminant discharge permit (or modification) therefor.

10. Respondent proposes to meet the following schedule for planning, construction and operation of the conventional air stripping column:

(a) File a Department air quality notice of construction, an application for a Department air contaminant discharge permit (or modification if necessary), and an engineering report and civil works drawings, all by August 1, 1977;

(b) Commence construction by October 1, 1977;

(c) Submit a progress report on January 3, 1978;

(d) Complete construction by May 31, 1978;

(e) Achieve an optimum level of performance as certified by CH_2M Hill by June 30, 1978.

11. The Department and the Respondent consider that the schedule proposed by the Respondent is reasonable.

NOW, THEREFORE, it is stipulated and agreed that:

A. The Commission shall enter an order: imposing civil penalties upon Respondent in the amount of $50 per day for each day during the period commencing July 1, 1977, and ending on the date that the Director of the Department issues a written notice granting or denying Respondent's application to modify the NPDES Permit; and in the amount of $200 per day for each day during the period commencing on the date that the Director of the Department issues a written notice granting or denying Respondent's application to modify the NPDES Permit and ending on June 30, 1978, provided, however, that the penalty shall be remitted for each day which Respondent demonstrates that its discharge was in compliance with the final ammonia nitrogen and toxicity effluent limitations of the Permit.

The penalties shall be due and payable monthly on the fifteenth day of each month, commencing August 15, 1977, for the preceding calendar month. Pursuant to OAR § 340-11-136(1) and (2), the Director, on behalf of the Commission, shall enter such additional or supplemental orders as are necessary to carry out this paragraph. If the Director denies the requested NPDES Permit modification and is subsequently finally reversed on appeal to the Environmental Quality Commission or the courts, then the $200 per day civil penalty shall be remitted for each day that Respondent demonstrates compliance with the ammonia nitrogen and toxicity effluent limitations of the modified Permit, and therefore an appropriate refund shall be made to Respondent.

B. The Commission shall enter a final order requiring Respondent to comply with the effluent limitations contained in paragraph 4, above, during the period of July 1, 1977 through June 30, 1978, and with the construction schedule set forth in paragraph 10, above, and Respondent shall comply therewith.

C. Regarding the alleged violations expressly settled herein, the parties hereby waive any and all their rights under United States and Oregon constitution statutes, and administrative rules and regulations to any and all notices (including under ORS 183.415, 468.125(1) and 468.135), answers, hearings, judicial review and to service of a copy of this stipulated final order.

D. Respondent acknowledges that it has actual notice of the contents and requirements of this stipulated final order and that failure to fulfill any of the requirements hereof would

constitute a violation of this stipulated final order and could subject Respondent to liability for additional and independent penalties in amounts as great as the statutory maximum and would not be limited in amount by this stipulated final order. Therefore, should Respondent commit any violation of this stipulated final order, Respondent hereby waives any rights it might then have to any and all ORS 468.125(1) advance notices prior to the assessment of civil penalties for any and all such violations of this stipulated final order.

DEPARTMENT OF ENVIRONMENTAL QUALITY

Date: 1/July/77

By William H. Young
William H. Young, Director

TELEDYNE INDUSTRIES, INC.,
dba TELEDYNE WAH CHANG ALBANY

Date: 1 July 1977

By V. de Poix
Name: V. P. de Poix
Title: President, Teledyne Wah Chang Albany

FINAL ORDER

IT IS SO ORDERED:

ENVIRONMENTAL QUALITY COMMISSION

Date: _____

By _____
William H. Young, Director
Department of Environmental Quality
Pursuant to OAR 340-11-136(1)

ROBERT W. STRAUB
GOVERNOR

Department of Environmental Quality

1234 S.W. MORRISON STREET, PORTLAND. OREGON 97205 Telephone (503) 229-5395

TO: Environmental Quality Commission June 15, 1977

FROM: Bill Young, Director

SUBJECT: Teledyne Wah Chang Albany Status Report

Teledyne Wah Chang Albany (TWCA) has made significant progress in reducing its waste load to the river since 1968. They have had delays in meeting scheduled deadlines because of equipment failures, inadequate engineering and various other reasons, but all-in-all progress has been made.

Back during the time of Department reorganization and startup of the NPDES Program (reissuance of all permits), TWCA got overlooked for a period of time and they expanded production without Water Quality being fully aware of it. This expanded production caused the company to increase the pollutants discharged.

Because of the unauthorized expansion, the Department established a very tight set of interim permit limits when the first NPDES permit was written. Included also was an intermediate set of limits to be achieved two years prior to the deadline for final limits.

	Initial Limits	Intermediate Limits July 1, 1975	Final Limits July 1, 1977
COD	3,000 lbs/day	1,000 lbs/day	500 lbs/day
Ammonia	5,000 lbs/day	2,000 lbs/day	300 lbs/day
MIBK	800 lbs/day	500 lbs/day	100 lbs/day

One of the requirements put in the permit was to eliminate the chlorine residual and reduce the toxicity. As the chlorine was reduced, the COD increased. Evidently the chlorine had been oxidizing some of the COD and as the oxidant (chlorine) was eliminated, the COD values increased. At the same time, in our investigations at the facilities, we had a difficult time correlating our COD data with theirs. Even after reviewing their lab procedures it was found that the COD analyses were not reproducible and, therefore, very difficult to enforce.

Because of the increase in COD related with the decrease in chlorine and the difficulty in reproducing COD data we determined that we needed to extend TWCA's initial limits for COD rather than enforcing the intermediate limits. At the same time, we decided to eliminate the testing problem by switching to a TOC limit rather than the COD. The recent modification made those changes. TWCA must still meet their final limits by July 1, 1977, although the 500 lbs/day COD limit has been changed to a 200 lbs/day TOC limit.

By reducing the chlorine, TWCA has significantly reduced the toxicity of their effluent. As the ammonia levels decrease, the toxicity will continue to decrease.

Since the permit was issued, TWCA has added an elaborate pH control facility. The toxicity of ammonia is directly related to pH, so this improvement was very important.

TWCA discharges to Truax Creek rather than discharging directly to the Willamette River. Truax Creek is an intermittent stream which would not flow during the summer but for the industrial effluents it receives. We feel a substantial amount of additional treatment is provided in the creek, making the load to the Willamette much less than it would be if it discharged directly. TWCA would like to discharge directly to the Willamette but we have resisted it.

TWCA is currently operating under a valid permit which expires June 30, 1978. It is apparent that they are not going to achieve their final effluent limits which go into effect on July 1, 1977. They are constructing facilities which should bring most parameters into compliance by October, 1977. However, they have not committed themselves to constructing the necessary facilities to reduce the ammonia discharged to 300 lbs/day. Rather, they have requested an increase in their ammonia limits to 2,000 lbs/day. They have also requested an increase in their fluoride and MIBK limits, although they acknowledge that they can probably meet the existing limits by October. They have also requested a relaxation in toxicity.

We intend to evaluate the validity of their request and arrive at a tentative determination by early September. Special studies of the receiving stream will be conducted this summer. A public hearing will be scheduled for early October if a modification is considered appropriate.

Permit Limitations Comparison

	Permit Limits Before 3/10/77 Modification	Permit Limits After Modification		TWCA's Requested Limitations
		Present	Final (July 1, 1977)	
COD	1,000 lbs/day	3,000 lbs/day	---	---
TOC	---	750 lbs/day	200 lbs/day	200 lbs/day
Ammonia	2,000 lbs/day	2,000 lbs/day	300 lbs/day	2,000 lbs/day
MIBK	500 lbs/day	500 lbs/day	100 lbs/day	300 lbs/day
Fluoride	100 lbs/day	100 lbs/day	60 lbs/day	100 lbs/day
Toxicity	---	---	96 hr L.C. 100 in a 10% dilution of effluent	96 hr. L.C. 50 in a 5% dilution of effluent

Actual Discharges During Last Six Months

	Dec. 1976 lbs/day	Jan. 1977 lbs/day	Feb. 1977 lbs/day	Mar. 1977 lbs/day	Apr. 1977 lbs/day	May 1977 lbs/day
COD	2,085	2,001	1,403	1,939	1,257	
TOC	653	543	434	419	276	
Ammonia	1,541	1,425	997	1,572	1,252	
MIBK	560	370	277	178	157	
Fluoride	54	73	69	81	76	

TWCA is very desirous of expanding production. They will not be permitted to expand until the final permit limits are achieved and we can be assured that no increases in the significant parameters will occur as a result of the expansion.

Another problem that has surfaced in recent months is the apparent excessive quantities of radioactive materials showing up in the effluent. As soon as the investigations are over, a limit will probably be added to the permit.

Since TWCA will probably not be in compliance with their final effluent limits by July 1, 1977, enforcement action must be initiated by the Department. This enforcement action may be resolved by issuing a stipulated consent order which establishes a time schedule for compliance and imposes a daily penalty until compliance occurs. We are currently negotiating this consent order.

The primary concern of EPA and interested environmental groups, at the present, is the enforcement posture we take come July 1.

DEFINITIONS

COD — Chemical Oxygen Demand is a measure of the substances in a water sample (mostly organic) that can be oxidized using potassium dichromate in a strong acid solution. The COD is usually two or three times as high as BOD_5.

TOC — Total Organic Carbon is a measure of all of the organic carbon contained in a water sample. The TOC for TWCA is about 1/3 the value of COD.

BOD_5 — Biochemical Oxygen Demand is a measure of the amount of organic substance in water which can be biochemically degraded in a 5-day period at 20°C. The BOD test gives an indication of the amount of oxygen needed to stabilize or biologically oxidize the waste.

MIBK — Methylisobutyl ketone is an organic solvent used in the liquid extraction process at TWCA.

96 hr. L.C. 50 — The percent of effluent diluted by the receiving stream water which would allow 50 percent survival of fish in a 96 hour exposure.

96 hr. L.C. 100 — The percent of effluent diluted by the receiving stream water which would allow 100 percent survival of fish in a 96 hour exposure.

May 27, 1977

Mr. Phillip Crawford
Citizens for Clean Environment
P. O. Box 255
Corvallis, Oregon 97330

Re: Renewal of Air Contaminant
Discharge Permit for
Teledyne Wah Chang - Albany
No. 22-0547

Dear Mr. Crawford:

I hereby wish to acknowledge and confirm the major items discussed at the April 27, 1977 meeting with Mr. Jerry Coffer and you of C_2E and Mssrs. E. J. Weathersbee, H. M. Patterson, J. L. Swenson, S. L. Erickson, T. Groszkiewicz and myself of the Department.

The purpose of the meeting was to resolve as many as possible of the issues put forth to the Department in a series of C_2E letters regarding Teledyne Wah Chang, Albany. In addition, the Department wished to update C_2E on the status and future efforts intended to be completed before renewing the subject permit. The meeting format followed the TWCA Status Report prepared by me dated April 26, 1977 and attached hereto. (Please note that I have corrected the temperature previously listed as 50°F to 70°F on page 3 to match the MIBK concentration cited therein.) Since you have copies of the Attachments A through K referred to in the Status Report, they are not included here.

The following is a summary of the meeting and is intended to supplement the Status Report.

The matter of range of operation of the zirconium oxide calciner was discussed. The Department has observed this operation during the retesting efforts on March 15 and April 7, 1977. Further observations will be made during inspections to document the variability of this operation and determine representative operating mode.

The Department will evaluate your request to include a SO_3 (or H_2SO_4) limit in the permit. If such a limitation is judged effective it will be in the permit. The Department indicated that it will use the emission data developed after the currently underway caustic scrubber is installed. However, if the permit is issued prior to this data being available, the Staff Report will indicate the Department's intent to add a SO_3 (H_2SO_4) limit by addendum if it decides to do so. C_2E was agreeable to this approach.

The possibility of erroneous test results for the ZrO_2 calciner stack during retesting due to condensation in the probe seemed to be resolved, since no condensation was observed by DEQ personnel. This potential problem will be looked for during further testing after completion of the caustic scrubber.

The anticipated effectiveness of the caustic scrubber was discussed. It was decided that the source test results will ultimately demonstrate the effectiveness of this control device.

Available carbon monoxide data and the Department's future modeling of these emissions were discussed. The modeling results will be sent to C_2E when they are completed. It was agreed that venting of methylisobutyl ketone from stripping equipment was not a process requirement. As a result of the MIBK surveys conducted by DEQ, the permit will contain MIBK monitoring requirements for specific sources.

The Department will send a copy of its modeling efforts to evaluate significant stacks as to adequacy of stack heights to C_2E as soon as these efforts are completed.

The proposed permit changes submitted by C_2E in its March 13, 1977 letter will still be considered for inclusion in the final permit as discussed at the meeting. The following recaps the discussion regarding your suggestions:

Suggestion #1 - Re: amending Condition 2(d)(1) to include individual limits for Cl_2 and Cl^- -- The Department will evaluate this using modeling and emission test data on each stack emitting these materials.

Suggestion #2 - Re: amending Condition 2(d) to include limits of H_2SO_4, CO and MIBK -- The Department will evaluate this after the its modeling efforts are completed and TWCA's MIBK reduction strategies are reviewed. Also, a requirement for MIBK sampling will be added to the permit as a result of the DEQ MIBK survey.

Suggestion #3 - Re: specifying the pollutants to be monitored -- The C_2E suggested language will be used. DEQ will implement this as part of source test procedure approvals already required by the permit.

Suggestion #4 - Re: requiring schedules for ZrO_2 calciner for SO_3 (H_2SO_4) and sand and pure chlorinators for CO emission reductions. The Department will require emission reductions programs and schedules using the increments of progress format for these contaminants if the modeling efforts indicate the emissions violate ambient air standards or create health hazard. The matter of MIBK stripper venting was resolved.

Suggestion #5 - Re: requiring taller stacks for the scrubber on Hf calciner, East and West Zr reduction, Mg Recovery, Feed Make-up and Fertilizer Plant. Taller stacks will be required if deemed necessary by results of DEQ modeling studies. If detailed schedules are required, they will be included in the permit in increments of progress format.

The data that the Department and TWCA considers representative of both East and West Zirconium Reduction Scrubbers has now been supplied to C_2E. This information indicates that both systems comply with the proposed permit.

The ZrO_2 calciner is discussed earlier in this letter. However, the Department reaffirms here that the C_2E concerns for condensation in the probe and calciner operating conditions will be addressed during the post caustic scrubber testing. Methods 5 and 8 will be used for particulates and SO_2/SO_3 respectively. Although Mr. Crawford's April 2, 1977 letter was not discussed in any depth, Mr. Norm Edmisten, EPA, did review the scope of the Millersburg Study - Task I in progress. This effort is being performed by GCA/Technology Division of Bedford, Massachusetts.

The matter of the Department obtaining detailed process diagrams and related information was discussed. Regretfully, the Department position that the Department has all, or can obtain at the plant site any additional information it needs to effectively carry out its responsibilities was not acceptable to C_2E. The details behind this posture were also discussed.

This concludes the supplement to the attachment regarding the meeting.

The meteorological review and analyses of the wind data has been essentially completed since the meeting. Modeling efforts will commence within a week. These efforts are expected to take 2 to 4 weeks depending on the workload of the staff involved.

The Department hereby expresses its appreciation for C$_2$E's efforts to date. Although complete accord on all issues was not achieved during this seven hours of discussion, significant understandings and agreements were reached.

Please be advised that your correspondence dated May 17, 1977 has been received and a response will be forthcoming.

If you have any questions or if the Department can be of any assistance please feel free to contact us.

Sincerely,

WILLIAM H. YOUNG
Director

F. A. Skirvin, Supervisor
Air Quality Program Operations
Air Quality Division

FAS:ds
cc: J. Coffer
Grace Phinney
W. H. Young
Midwest Region-DEQ
E. J. Weathersbee
H. M. Patterson
S. L. Erickson
J. L. Swenson
N. Edmisten

Attachment (1)

TELEDYNE WAH CHANG ALBANY STATUS REPORT
ISSUES RAISED BY C_2E REGARDING RENEWAL OF AIR CONTAMINANT DISCHARGE PERMIT
PERMIT NO. 22-0547
BY F. A. SKIRVIN
APRIL 26, 1977

As a part of the permit renewal process for TWCA, Citizens for a Clean Environment (C_2E) in Corvallis has raised several issues regarding atmospheric emissions from the subject facility. The following discusses the status of the resolutions of the major issues. (All letters received from C_2E, without attachments, are appended hereto as Attachment A.)

A. Letter by J. Coffer to T. Nelson dated 2/19/77

This letter attempts confirmation of information discussed at a meeting of C_2E and TWCA on 2/18/77. A major item in this letter is stack heights.

A copy of a surveyors stack height survey is appended hereto as Attachment B.

The concerns relative to process information can be discussed as required on 4/27/77 as long as confidentiality is respected.

The stripper operation on the MIBK-H_2O system will be discussed as needed on 4/27/77.

Method 8 sampling will be discussed later.

B. Letter by J. Coffer to Representative N. Fadeley dated 2/25/77

This letter discusses sulfuric acid discharges from the Zr oxide calciner and alleges adverse health impacts.

For a host of reasons, the data obtained from TWCA in late January 1977 and furnished to C_2E by me erroneously depicted the H_2SO_4 or SO_3 emissions from this source. The calciner was retested on 3/15/77 and 4/7 and 9/77. TWCA and DEQ performed the 3/15/77 tests and split the samples. A total of five valid runs were made. The combined results indicate that an average daily emission of about 46 lbs. H_2SO_4 per day occurs. This compares to a figure of 697.6 lbs. H_2SO_4 as used by C_2E. The DEQ and TWCA results are appended hereto as Attachments C and D respectively.

No additional testing of the ZrO_2 calciner stack is planned until completion of the proposed and approved caustic scrubber installation. Method 5 will be used for particulates (2 hour runs) and Method 8 will be used for SO_2 and H_2SO_4/SO_3 (run time will have to be determined based on amount of SO_2 present). Additional monitoring of calciner production will be made on the later testing.

Since the Department disagrees with the modelling method used by C_2E in this letter and a later letter regarding carbon monoxide, a memo by B. Crews discussing the C_2E modelling is appended hereto as Attachment E. Discussion of Department's intended modelling efforts is presented later herein.

The Department has reviewed the literature cited by C_2E regarding adverse health effects due to sulfates. We will continue to accumulate information but at this time, it does not appear that a health hazard due to sulfates has been identified in the Millersburg area. The caustic scrubber is expected to eventually make the issue moot to TWCA.

C. Letter by J. Coffer to F. Skirvin dated 3/8/77

This letter discusses the possibility of erroneous results in using Method 8 on the ZrO_2 calciner stack due to H_2SO_4 condensation in the probe and carry over from the 1st impinger.

Spencer Erickson has verified that these problems did not occur during the retesting. SLE will be available on 4/27/77 to discuss the previously incurred difficulties as required.

The matters put forth in this letter should be satisfactorily resolved.

D. Letter by J. Coffer to Representative N. Fadeley dated 3/8/77

This letter discusses carbon monoxide (CO) emissions from the Sand and Pure Chlorinators and alleges potential adverse health effects due to CO.

The Department has obtained CO emission data from TWCA which is somewhat limited but generally is of the order of magnitude claimed by C_2E. See FAS memo appended hereto as Attachment F. In addition a substantial amount of wind charts (speed and direction) obtained from TWCA's station atop of their fertilizer plant is being coded for computer format. When this data is available the Sand (36") and Pure Chlorinator stacks will be modelled to determine ground level concentrations. The coded met data is expected within the next week and modelling should be completed within two additional weeks, i.e., by 5/13/77.

As a matter of reference, the CO TLV is 50 ppm (55,000 ug/m^3) as an 8 hour average. However, the Department will compare the modelling results to the CO ambient air standard of 8.7 ppm max. 8 hour average and 35 ppm max. 1 hour average once per year as applied to areas beyond the plant site.

Thus, this matter is pending the outcome of the modelling effort.

D. Letter by J. Coffer to Representative N. Fadeley dated 3/11/77

This letter discusses the removal (stripping) of MIBK from the aqueous Zr raffinate in the separations process and the likelihood that TWCA is venting the MIBK to the atmosphere resulting in or contributing to the "blue haze" at and from the plant site.

The Department has obtained physical data on the MIBK-H_2O system, reviewed text books concerning this unit operation and inspected all three MIBK strippers in the Separations Plant. In addition, two MIBK surveys have been conducted by SLE.

The physical data is appended hereto as Attachment G. A review of this information and the stripping process indicates that large quantities of steam are not required and venting is not a prerequisite. The inspection results of T. Groszkiewicz indicating the lack of vents on all three strippers is included as Attachment H. I think C_2E's position on this has changed. I will discuss this on 4/27/77 as required.

The two MIBK surveys indicate that MIBK is being emitted primarily from the Ammonia and Odor (HfO_2 Calciner) stacks. See Attachment I. The Department has discussed these emissions with TWCA. Possible reduction strategies are being developed by the company.

A review of the vapor pressure data for MIBK and the surveys indicate that this material is not present in sufficient quantities to develop a "blue haze" causing aerosol. For MIBK to condense at 70°F it would have to be present at about 2.1% (21,000 ppm). Not only would this be an explosion hazard, but the odor would be very obvious.

The necessity of additional MIBK surveying and emission testing is being evaluated. This has not been discussed internally or within TWCA. The Department should reach a decision on this within a week.

E. Letter by J. Coffer to Representative N. Fadeley dated 3/13/77

This letter discusses the possible inadequacies of stack heights on six sources in relationship to proposed permit limits for Cl_2, Cl^- and NH_3 or NH_4^+ compounds.

The Department intends to model these sources using the coded met data, actual emission rates determined by source test data and the recently obtained stack heights (Attachment B) for adequacy of stack heights. This is expected to be completed by 5/13/77.

Generally speaking, all but the Feed Make-up stack are essentially insignificant sources of Cl_2, Cl^- and NH_3 or NH_4^+ compounds.

As a matter of reference, TWCA is not now producing $(NH_4)_2SO_4$ crystals. Therefore the Fertilizer Plant stack is not in use at this time.

F. Letter by J. Coffer to F. Skirvin dated 3/13/77

This letter submits C_2E's suggested changes and additions to TWCA's proposed permit.

Since some of the information currently available and the 4/27/77 meeting may change C_2E's position on these items I won't comment on them. This area seems to be where C_2E and the Department can arrive at mutually acceptable postures as a result of our scheduled meeting.

G. Letter by J. Coffer to Representative N. Fadeley dated 3/23/77

This letter discusses West Zirconium Reduction Scrubber Stack data as reported by TWCA.

The data on this source originally furnished by me to C_2E was done so in response to J. Coffer's written request. The dissimilarity between the East Zr Reduction data (obtained in late January 1977) and the West Zr Reduction data (obtained March 4, 1977) was discussed with TWCA. This difference was credited to a lower than normal pressure drop across the West unit's venturi. It was further explained that this problem had been resolved and the unit was now operating at the normal ΔP. A retest was requested and agreed to. The results and an explanation were submitted on March 24, 1977 (Attachment J).

The absence of East Zr Reduction data in the information originally observed by C_2E and subsequent absence of West Zr Reduction data submitted as corrected later is considered to be a clerical oversight by nonclerical TWCA personnel.

Both TWCA and the Department consider the data for the East and West Reduction scrubbers now on file to be representative of and demonstration of the capability of these systems to comply with the proposed permit.

H. Letter by J. Coffer to F. Skirvin dated 3/23/77

This letter questions the great change in the SO_2/SO_3 data obtained during the 3/15/77 retesting of the ZrO_2 calciner stack.

The differences between the original TWCA data and the retesting data were due to correcting a major sampling procedural error, i.e., not purging the impinger train after the run and reducing the sampling time in order to avoid inundating the 1st impinger with condensed H_2O.

As previously indicated, additional testing of the ZrO_2 Calciner exhaust will be done upon completion of the caustic scrubber. The Department intends to observe these tests, monitor and document the operation of these kilns to the fullest extent possible. This operating data will be compared to data obtained in subsequent inspections to determine if kiln operation changes significantly.

I. Letter by P. Crawford to Representative N. Fadeley dated 4/2/77

This letter does not present any issues relative to the TWCA permit not aired in previous correspondence.

The only apparent response to this letter would be an update on the GCA effort. N. Edmisten or I could do this at the 4/27/77 meeting.

J. Letter by J. Coffer to F. Skirvin dated 4/13/77

This letter requests TWCA flow diagrams and written approval of the TWCA SO_2/SO_3 source testing procedure.

The type of information previously discussed with J. Coffer relative to the proposed Western Zirconium plant was a series of line-block diagrams of WZ's air pollution control systems and related technical information. The simplicity in which this information was depicted made it easy to comprehend. Similar presentation of the TWCA systems has been discussed with the Company but not requested.

The TWCA situation differs from WZ in that the former's hardware is existing and has been viewed many times by many people including DEQ and C_2E (Coffer, Zemansky and Crawford) during a DEQ arranged plant visit.

The Department does have descriptions of TWCA control systems on file in the form of source test data and a draft report by a former employee. C_2E has had full access to and inspected these Department files. In addition, copies of source test results have been provided by the Department.

Any additional information of nonpropriety nature will be provided.

The matter of DEQ certification of SO_2/SO_3 test procedures was over looked in previously responding to the 3/8/77 C_2E letter. The Department has not provided written certification of any TWCA testing or analytical procedures. The TWCA submittals and Department reviews and approvals as required in the proposed permit are currently underway. Such approvals for all methods used to obtain the data submitted to date, excluding the ZrO_2 calciner, were the responsibility of the former Mid-Willamette Valley Air Pollution Authority. The Department assumes that agency carried out its responsibilities in these areas. Department approval on methods should be completed within a month.

The Department has met with TWCA source testing staff and concurred with the methods as discussed on 1/13/77 (see Attachment K). Results of this meeting included the Department suggesting a shorter run time for SO_2/SO_3 sampling, separate sampling for particulates from the ZrO_2 calciner using Method 5 and determining that TWCA had not purged the impingers as set forth in Method 8.

Should C_2E wish to review the sampling and analytical procedures submitted to date, these materials will be provided.

K. Status of Proposed Air Contaminant Discharge Permit

To date, the Department has neither decided on nor ruled out any changes in the proposed permit except for the inclusion of metric units. Decisions and action on these matters are contemplated to commence not later than next week. It is hoped that the permit should be ready for EQC presentation at the June meeting.

/ds

ROBERT W. STRAUB
GOVERNOR

Department of Environmental Quality

1234 S.W. MORRISON STREET, PORTLAND, OREGON 97205 Telephone (503) 229- 6414

STAFF STATEMENT FOR PUBLIC HEARING

March 17, 1977

SUBJECT: Informational Hearing Regarding Issuance of An Air Contaminant Discharge Permit to Teledyne Wah Chang Albany

I. INTRODUCTION

This public hearing is being held for the purpose of receiving testimony relative toan Air Contaminant Discharge Permit renewal the Department of Environmental Quality proposes to issue to Teledyne Wah Chang Albany. The Company currently operates under a permit issued by the Mid Willamette Air Pollution Authority. The proposed permit establishes conditions for operating, monitoring, and reporting; establishes limits on particulate and gaseous emissions and on escapement of "cat box" odors; establishes step-wise control programs for significant sources contributing to odors or visibility reduction; and establishes step-wise control programs for sources or processes not currently in compliance with rules of the Commission.

II. PROPOSED PERMIT

The proposed permit is divided into five sections: 1) performance standards and emission limits; 2) monitoring and reporting; 3) special conditions; 4) compliance schedules; 5) general conditions.

Performance Standards and Emission Limits

Condition 1 -

Requires operation and maintenance of processes and control equipment to keep air contaminant emissions to lowest practicable level.

Condition 2 a, b and c -

Requires immediate compliance with opacity and particulate emission limits for all sources except the zirconium oxide calciner which has a specific compliance schedule in Condition 20 and compliance is required by September 1, 1978.

Condition 2 d and e -

Establishes limits for gaseous emission, Cl_2, SO_2, NH_3 from any individual source.

Condition 3 -

Establishes allowable level at plant boundary for "cat box" odor.

Condition 4 -

Requires control of ancillary sources so as to maintain highest air quality.

Monitoring and Reporting

Condition 5 -

Requires effective inspection and keeping of records of plant operation and control facilities.

Condition 6 -

Requires 3 prescheduled source tests on all zirconium/hafnium process emission control facilities.

Condition 7 -

Requires continual monitoring of chlorine and chloride emissions from sand and pure chlorination off gas systems, silicon tetrachloride refining and storage vent system, and SO_2 emissions from the zirconium oxide calciner.

Condition 8 -

Requires ambient air monitoring for ammonia, ammonium ion, chlorine and chloride ion.

Condition 9 -

Requires quarterly report to Department on production, ambient air monitoring, source tests conducted and use of natural gas. (Note: Omit "be" in line 2.)

Special Condition

Condition 10 -

Requires permittee to immediately comply with permit conditions by operating within current base level of production (500,000 lbs/day of total oxide as a monthly average through separations plant).

Condition 11 -

Prohibits permittee from any production or production capacity increases until the ability to comply with emission limits (Conditions 2, 3 and 4) has been demonstrated or until acceptable programs and schedules for doing so are approved by Department.
Note: Add "has been demonstrated" after "4" in line 3.

Condition 12 -

Requires permittee to maintain written procedures for operation, preventative maintenance and for process upsets or equipment failures.

Condition 13 -

Requires prevention of fugitive emissions from chloride handling and transfer procedures and processes.

Condition 14 -

Prohibits open burning at plant site except for disposal of hazardous zirconium metal fines. All open burning is to be phased out by July 1, 1978.

Condition 15 -

Permittee must be prepared to respond to air pollution episodes.

Condition 16 -

DEQ must be notified of malfunctions which cause non-compliance with permit conditions.

DEQ can require improvements for chronic and correctable malfunctions. DEQ can also impose civil penalties for such malfunctions.

Compliance Schedules

Condition 17 -

Requires completion by June 1, 1977 of process modifications to reduce formation of the malodorous "cat box" compound.

Condition 18 -

Requires submission by June 1, 1977 of control program and schedule for reducing fugitive (area type) malodorous emissions.

Condition 19 -

Requires completion by June 30, 1977 of spill sump treatment and MIBK recovery (reduces emissions of organic vapors and associated odors).

Condition 20 -

Requires completion by January 15, 1978 of a hafnium oxide precipitation and calcining system including new air pollution controls (reduces odor and SO_2 emissions).

Condition 21 -

Requires completion by May 15, 1978 of a columbium oxide dryer system including air pollution controls (allows use of current Cb_2O_5 dryer as HfO_2 calciner).

Condition 22 -

Requires completion by July 15, 1978 of additional controls to reduce stack and fugitive emissions from silicon tetrachloride refining and storage.

Condition 23 -

Requires completion by September 1, 1978 of additional controls on zirconium oxide calciner to reduce emissions of sulfur oxides.

Condition 24 -

Requires completion by January 1, 1980 of additional controls on sand chlorination (will reduce chlorides and opacity).

Condition 25 -

Requires completion by January 1, 1980 of additional controls on pure chlorination (will reduce opacity).

Condition 26 -

Requires completion by December 1, 1979 of additional controls for magnesium recovery (will reduce plume opacity).

General Conditions and Disclaimers

Conditions G1 through G10 -

These conditions which are common to all Air Contaminant Discharge Permits are based on Department regulations.

III. INFORMATION RECEIVED TO DATE

The Department has received written information and oral inquiries relative to processes, permit conditions, and the emissions of air contaminants such as sulfuric acid and carbon monoxide. All correspondence has been entered in the record for this hearing.

The Department proposes to evaluate this testimony along with testimony received at this public hearing and present a report to the Environmental Quality Commission prior to issuing the permit renewal.

The evaluation relative to sulfuric acid emission will consider the following:

1) Source Sampling and Analysis Methods:

The source test method has been reviewed and a source test for H_2SO_4 was conducted by the Department on March 15, 1977. In addition, Teledyne Wah Chang is conducting additional source tests. Further action in this area can only be projected after an evaluation is completed of the source test information.

2) Modeling:

A review of the modeling method and assumptions made is underway. The Department intends to do a more refined modeling effort, a necessary input to which is meteorological data. The Department has obtained approximately one year of meteorological data for the Millersburg area and is currently taking steps to have the data reduced to a usable computer (modeling) format. This is expected to be completed by June 1.

3) Literature Review:

The Department will review the literature cited in testimony received to date regarding possible health and vegetation effects. This effort should be completed by late April.

4) Consultants:

If warranted, the Department will seek assistance from consultants recognized to have appropriate expertise.

5) Other Evaluations Underway:

The Department, in conjunction with the Environmental Protection Agency, is participating in a Millersburg

Area Air Quality Evaluation. A contractor, employed by EPA will conduct an in-depth analysis of all available compliance schedules, aerometric data, and other pertinent information to determine the nature and extent of the air pollution problem. The analysis will include statistical, quality assurance and engineering evaluations of the data. The contractor is to derive conclusions and recommendations.

It is expected that the first phase of the consultant's work will be completed by September 1, 1977.

That concludes the Department's Statement in this matter, Mr. Hearings Officer.

FAS
3/17/77

ROBERT W. STRAUB
GOVERNOR

Department of Environmental Quality

1234 S.W. MORRISON STREET, PORTLAND, OREGON 97205 Telephone (503) 229- 6414

February 14, 1977

NOTICE OF PUBLIC HEARING FOR ISSUANCE OF AIR CONTAMINANT DISCHARGE PERMIT

FOR TELEDYNE WAH CHANG ALBANY

NOTICE IS HEREBY GIVEN that a Public Hearing will be held for the purpose of considering the issuance of an Air Contaminant Discharge Permit to the following applicant and to amend, as necessary, the Clean Air Implementation Plan for Oregon (Air Contaminant Discharge Permits containing compliance schedules will result in modification of the Implementation Plan for Oregon):

Teledyne Wah Chang Albany
1600 Old Pacific Highway, Albany, Oregon
Primary Smelting of Zirconium & Hafnium
Renewal of Permit #22-0547

The Public Hearing will be held at the time and place listed below:

Albany City Library
1390 S. Waverly Drive
Albany, Oregon

Commencing at 2:30 p.m. on Thursday, March 17, 1977 and again at 7:30 p.m. on Thursday, March 17, 1977.

The Department proposes to issue a renewal Air Contaminant Discharge Permit for Teledyne Wah Chang Albany. The Company currently operates under a permit issued by the Mid-Willamette Valley Air Pollution Authority. The proposed permit establishes permit conditions for operation, monitoring, and reporting; establishes limits on particulate and gaseous emissions and on escapement of "cat box" odors; establishes step-wise control programs for significant sources contributing to odors or visibility reduction; and establishes step-wise control programs for sources or processes not currently in compliance with rules of the Commission.

Copies of the proposed permit are available upon request from the Department of Environmental Quality, 1234 S. W. Morrison, Portland, Oregon 97205, or are available for review at the Midwest Regional Office, 16 Oakway Mall, Eugene, Oregon 97401.

Any interested person desiring to submit written testimony concerning the permit, the permit conditions or policy related to these matters may do so by mailing them no later than March 14, 1977 to the above Portland address, or may be heard orally at the public hearing on the date and at the time mentioned above.

Questions regarding this matter may be directed to Mr. Frederic Skirvin (229-6414) at the above Portland address. Please inform those who may have an interest in this matter.

DEQ-1

PROPOSED AIR CONTAMINANT DISCHARGE PERMIT

Department of Environmental Quality
1234 S.W. Morrison Street
Portland, Oregon 97205
Telephone: (503) 229-5696
Issued in accordance with the provisions of
ORS 468.310

ISSUED TO:
TELEDYNE WAH CHANG ALBANY
1600 Old Pacific Highway
P. O. Box 460
Albany, Oregon 97321
PLANT SITE:

1600 Old Pacific Highway
Albany, Oregon

ISSUED BY DEPARTMENT OF
ENVIRONMENTAL QUALITY

WILLIAM H. YOUNG
Director

Date

REFERENCE INFORMATION

Application No. 0583

Date Received September 8, 1975

Other Air Contaminant Sources at this Site:

Source	SIC	Permit No.
(1)		
(2)		

SOURCE(S) PERMITTED TO DISCHARGE AIR CONTAMINANTS:

Name of Air Contaminant Source	Standard Industry Code as Listed
PRIMARY SMELTING AND REFINING OF ZIRCONIUM, HAFNIUM AND COLUMBIUM	3339

Permitted Activities

Until such time as this permit expires or is modified or revoked, the permittee is herewith allowed to discharge exhaust gases containing air contaminants including emissions from those processes and activities directly related or associated thereto in accordance with the requirements, limitations, and conditions of this permit from the air contaminant source(s) listed above.

The specific listing of requirements, limitations and conditions contained herein does not relieve the permittee from complying with all other rules and standards of the Department.

For Requirements, Limitations and Conditions of this Permit, see attached Sections

PROPOSED

Performance Standards and Emission Limits

1. The permittee shall at all times maintain and operate all air contaminant generating processes and all contaminant control equipment at full efficiency and effectiveness, such that the emissions of air contaminants are kept at the lowest practicable levels.

2. The permittee shall comply with the following emission limitations:

   a. Particulate emissions from any single air contaminant source unless noted otherwise shall not exceed any of the following:

      1) 0.1 grains per standard cubic foot; and

      2) An opacity equal to or greater than twenty percent (20%) for a period aggregating more than three (3) minutes in any one (1) hour.

   b. Particulate emissions from the zirconium oxide calciner shall not exceed the following:

      1) Until September 1, 1978, 0.2 grains per standard cubic foot; and

      2) After September 1, 1978, 0.1 grains per standard cubic foot;

   c. Particulate emissions from all zirconium/hafnium production processes shall not exceed a total of 25.0 pounds per hour or 110 tons per year.

   d. Gaseous emissions from any single air contaminant source unless noted otherwise shall not exceed any of the following:

      1) A maximum total concentration of chlorine (Cl_2) and chloride ion (Cl^-) equal to 100 ppm;

      2) Until September 1, 1978, excluding the zirconium oxide calciner, a maximum concentration of sulfur dioxide (SO_2) equal to 1000 ppm and

         After September 1, 1978, including the zirconium oxide calciner, a maximum concentration of sulfur dioxide (SO_2) equal to 400 ppm; and

      3) A maximum total concentration of ammonia (NH_3) and ammonium ion (NH_4^-) equal to 50 ppm.

PROPOSED

e. Gaseous emissions from all zirconium/hafnium production processes shall not exceed any of the following:

1) 30 tons per year of total chlorine (Cl_2) and chloride ion (Cl^-);

2) Until September 1, 1978, 600 tons per year of SO_2;

3) After September 1, 1978, 90 tons per year of SO_2; and

4) 2 tons per year of total ammonia and ammonium ion.

3. By no later than January 1, 1978 the "cat box" odor shall be controlled so as not to exceed a zero scentometer reading or cause nuisance conditions beyond the plant site boundaries.

4. The permittee shall at all times control ancillary sources of air contaminants such as, but not limited to, building openings, roads, driveways, open areas and material handling processes so as to maintain the highest possible level of air quality and the lowest possible discharge of air contaminants.

Monitoring and Reporting

5. The permittee shall effectively inspect and monitor the operation and maintenance of the plant and associated air contaminant control facilities. A record of all such data shall be maintained for a period of one year and be available at the plant site at all times for inspection by the authorized representatives of the Department.

6. The permittee shall perform at least three prescheduled source tests per year on all emission control systems in the zirconium/hafnium production process. All tests shall be conducted in accordance with the testing procedures on file at the Department or in conformance with applicable standard methods approved in advance and in writing by the Department.

7. The permittee shall install, calibrate, maintain and operate in a manner approved by the Department, emission monitoring systems for continually monitoring and recording emissions of chlorine and chloride from the sand chlorination off gas system, the pure chlorination emission control system, silicon tetrachloride refining and storage vent emission control system, and emissions of sulfur dioxide from the zirconium oxide calciner emission control system.

8. The permittee shall install, maintain and operate in a manner approved in writing by the Department, a system for monitoring ambient concentrations of ammonia and ammonium ion, chlorine, and chloride.

9. The permittee shall prepare and submit a quarterly report to the Department including, but not necessarily be limited to the following parameters:

a. The quarterly production of the separations plant in terms of total oxide and the total quarterly production of zirconium sponge.

PROPOSED

b. The results of all ambient air measurements made.

c. The results of all emission monitoring and testing data.

d. The quarterly usage of natural gas.

Special Conditions

10. The permittee shall limit or control the level of production at or below base level production as necessary such that the limits of this permit are immediately and continuously met. (Base level production for the purpose of this permit shall be 50,000 pounds per day of total oxide produced averaged over a calendar month as processed through the separations plant.)

11. The permittee shall not increase production or production capacity of any portion of the zirconium or hafnium processes until the ability to comply with the limits of conditions 2, 3 and 4, or until acceptable programs and time schedules for meeting these conditions have been submitted to and approved in writing by the Department.

12. The permittee shall maintain at the plant site for review by the Department written operating procedures, preventative maintenance schedules and procedures, and environmentally acceptable methods to be employed during process upsets or equipment failures for the following areas:

    a. Sand chlorination

    b. Feed make-up

    c. Separations

    d. Precipitation and filtration

    e. Zirconium oxide calcining

    f. Hafnium oxide calcining

    g. Pure chlorination

    h. Silicon tetrachloride refining, storage and shipping

13. The handling of zirconium tetrachloride and silicon tetrachloride including, but not necessarily limited to the transfer of material from the sand chlorination process to the feed make-up process, shall be done in ways which will prevent visible or fugitive emissions to the atmosphere.

14. The permittee shall not conduct any open burning at the plant site or facility except for the disposal of hazardous pyrophoric zirconium metal fines by atmospheric oxidation which is permitted until July 1, 1978. After July 1, 1978, all metal fines shall be disposed of using controlled and environmentally acceptable procedures approved by the Department.

PROPOSED

15. The permittee shall maintain a pre-planned abatement strategy, filed with and approved by the Department to be implemented in response to Air Pollution Alerts, Warnings, and Emergencies as they are declared and terminated by the Department.

16. In the event that the permittee is temporarily unable to comply with any of the provisions of this permit due to upsets or breakdowns of equipment, the permittee shall notify the Department by telephone within one hour, or as soon as is reasonably possible, of the upset and of the steps taken to correct the problem. Upset operation shall not continue longer than forty-eight (48) hours without approval nor shall upset operation continue during Air Pollution Alerts, Warnings, or Emergencies or at any time when the emissions present imminent and substantial danger to health.

    If the Department determines that an upset condition is chronic and is correctable by installing new or modified process or control procedures or equipment, a program and schedule to effectively eliminate the deficiencies causing the upset conditions shall be submitted. Such reoccurring upset conditions causing emissions in excess of applicable permit limits will be subject to civil penalty or other appropriate action.

Compliance Schedule

17. By no later than June 1, 1977 the permittee shall complete modifications to the separations process so as to reduce the formation of malodorous "cat box" compound in this area to the greatest extent possible. These modifications shall include the capability to monitor and record the relative concentration of the "cat box" compound at a specified site in the separations process.

18. By no later than June 1, 1977 the permittee shall submit a final control strategy for reducing the fugitive odor (cat box) so as to comply with Condition 3, including detailed plans and specifications and the schedule for implementation (increments of progress) to the Department for review and approval.

19. The permittee shall provide spill sump treatment and MIBK recovery in order to reduce emissions of organic vapors and associated odors and maintain compliance with conditions 3 and 4 in accordance with the following schedule:

    a. By no later than March 15, 1977 the permittee shall submit a final control strategy, including detailed plans and specifications, to the Department of Environmental Quality for review and approval.

    b. By no later than April 1, 1977 the permittee shall issue purchase orders for the major components of emission control equipment and/or for process modification work.

    c. By no later than May 1, 1977 the permittee shall initiate the installation of emission control equipment and/or on-site construction or process modification work.

d. By no later than June 15, 1977 the permittee shall complete the installation of emission control equipment and/or on-site construction or process modification work.

e. By no later than June 30, 1977 the permittee shall demonstrate that the spill sump and MIBK recovery are capable of operating in compliance with conditions 3 and 4.

f. Within seven (7) days after each item, b through e above, is completed the permittee shall inform the Department in writing that the respective item has been accomplished.

20. The permittee shall install a hafnium oxide precipitation and calcining system including air pollution controls so as to reduce sulfur dioxide and odor emissions from this process and attain and maintain continuous compliance with conditions 2 and 3. This project shall be accomplished in accordance with the following schedule:

a. By no later than May 1, 1977 the permittee shall submit a final control strategy, including detailed plans and specifications, to the Department for review and approval.

b. By no later than August 1, 1977 the permittee shall issue purchase orders for the major components of emission control equipment and/or for process modification work.

c. By no later than November 1, 1977 the permittee shall initiate the installation of emission control equipment and/or on-site construction or process modification work.

d. By no later than December 15, 1977 the permittee shall complete the installation of emission control equipment and/or on-site construction or process modification work.

e. By no later than January 15, 1978 the permittee shall demonstrate that the hafnium oxide precipitation and calcining system is capable of operating in compliance with conditions 2 and 3.

f. Within seven (7) days after each item, b through e above, is completed the permittee shall inform the Department in writing that the respective item has been accomplished.

21. The permittee shall install a new columbium oxide drier including air pollution controls in accordance with the following schedule:

a. By no later than May 15, 1977 the permittee shall submit a final control strategy, including detailed plans and specifications, to the Department for review and approval.

b. By no later than August 15, 1977 the permittee shall issue purchase orders for the major components of emission control equipment and/or for process modification work.

PROPOSED

c. By no later than November 15, 1977 the permittee shall initiate the installation of emission control equipment and/or on-site construction or process modification work.

d. By no later than March 15, 1978 the permittee shall complete the installation of emission control equipment and/or on-site construction or process modification work.

e. By no later than May 15, 1978 the permittee shall demonstrate that the new columbium oxide drier is capable of operating in compliance with Condition 2.

f. Within seven (7) days after each item, b through e above, is completed the permittee shall inform the Department in writing that the respective item has been accomplished.

22. The permittee shall provide additional controls for the silicon tetrachloride refining and storage vents and scrubber emissions so as to attain and maintain continuous compliance with Condition 2 and prevent fugitive emissions due to spills, process upsets and equipment breakdowns. This project shall be accomplished in accordance with the following schedule:

a. By no later than June 30, 1977 the permittee shall submit a final control strategy, including detailed plans and specifications, to the Department for review and approval.

b. By no later than September 30, 1977 the permittee shall issue purchase orders for the major components of emission control equipment and/or for process modification work.

c. By no later than November 30, 1977 the permittee shall initiate the installation of emission control equipment and/or on-site construction or process modification work.

d. By no later than May 1, 1978 the permittee shall complete the installation of emission control equipment and/or on-site construction or process modification work.

e. By no later than July 15, 1978 the permittee shall demonstrate that the silicon tetrachloride refining and storage vents and scrubber are capable of operating in compliance with Condition 2.

f. Within seven (7) days after each item, b through e above, is completed the permittee shall inform the Department in writing that the respective item has been accomplished.

23. The permittee shall provide additional controls for the zirconium oxide calciner so as to reduce particulate and sulfur dioxide emissions and attain and maintain continuous compliance with Condition 2. This project shall be accomplished in accordance with the following schedule:

a. By no later than August 1, 1977 the permittee shall submit a final control strategy, including detailed plans and specifications, to the Department for review and approval.

b. By no later than October 15, 1977 the permittee shall issue purchase orders for the major components of emission control equipment and/or for process modification work.

c. By no later than May 1, 1978 the permittee shall initiate the installation of emission control equipment and/or on-site construction or process modification work.

d. By no later than July 1, 1978 the permittee shall complete the installation of emission control equipment and/or on-site construction or process modification work.

e. By no later than September 1, 1978 the permittee shall demonstrate that the zirconium oxide calciner is capable of operating in compliance with Condition 2.

f. Within seven (7) days after each item, b through e above, is completed the permittee shall inform the Department in writing that the respective item has been accomplished.

24. The permittee shall provide additional controls for reducing the chlorine and chloride emissions and plume opacity from sand chlorination so as to attain and maintain continuous compliance with Condition 2. This project shall be accomplished in accordance with the following schedule:

a. By no later than November 15, 1978 the permittee shall submit a final control strategy, including detailed plans and specifications, to the Department for review and approval.

b. By no later than February 15, 1979 the permittee shall issue purchase orders for the major components of emission control equipment and/or for process modification work.

c. By no later than August 1, 1979 the permittee shall initiate the installation of emission control equipment and/or on-site construction or process modification work.

d. By no later than November 1, 1979 the permittee shall complete the installation of emission control equipment and/or on-site construction or process modification work.

e. By no later than January 1, 1980 the permittee shall demonstrate that the exhaust stack is capable of operating in compliance with Condition 2.

f. Within seven (7) days after each item, b through e above, is completed the permittee shall inform the Department in writing that the respective item has been accomplished.

PROPOSED

25. The permittee shall provide additional controls for reducing the plume opacity from pure chlorination so as to attain and maintain continuous compliance with Condition 2. This project shall be accomplished in accordance with the following schedule:

    a. By no later than November 15, 1978 the permittee shall submit a final control strategy, including detailed plans and specifications, to the Department for review and approval.

    b. By no later than February 15, 1979 the permittee shall issue purchase orders for the major components of emission control equipment and/or for process modification work.

    c. By no later than August 1, 1979 the permittee shall initiate the installation of emission control equipment and/or on-site construction or process modification work.

    d. By no later than November 1, 1979 the permittee shall complete the installation of emission control equipment and/or on-site construction or process modification work.

    e. By no later than January 1, 1980 the permittee shall demonstrate that the plume opacity from pure chlorination is capable of operating in compliance with Condition 2.

    f. Within seven (7) days after each item, b through e above, is completed the permittee shall inform the Department in writing that the respective item has been accomplished.

26. The permittee shall provide additional controls for reducing the plume opacity from magnesium recovery so as to attain and maintain continuous compliance with Condition 2. This project shall be accomplished in accordance with the following schedule:

    a. By no later than October 15, 1978 the permittee shall submit a final control strategy, including detailed plans and specifications, to the Department for review and approval.

    b. By no later than January 15, 1979 the permittee shall issue purchase orders for the major components of emission control equipment and/or for process modification work.

    c. By no later than July 1, 1979 the permittee shall initiate the installation of emission control equipment and/or on-site construction or process modification work.

    d. By no later than October 1, 1979 the permittee shall complete the installation of emission control equipment and/or on-site construction or process modification work.

PROPOSED

e. By no later than December 1, 1979 the permittee shall demonstrate that the magnesium recovery operation is capable of operating in compliance with Condition 2.

f. Within seven (7) days after each item, b through e above, is completed the permittee shall inform the Department in writing that the respective item has been accomplished.

General Conditions and Disclaimers

G1. The permittee shall allow Department of Environmental Quality representatives access to the plant site and pertinent records at all reasonable times for the purposes of making inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant emission discharge records and otherwise conducting all necessary functions related to this permit.

G2. The permittee is prohibited from conducting open burning except as may be allowed by OAR Chapter 340, Sections 23-025 through 23-050.

G3. The permittee shall:
   a. Notify the Department in writing using a Departmental "Notice of Construction" form, and
   b. Obtain written approval

before:
   a. Constructing or installing any new source of air contaminant emissions, including air pollution control equipment, or
   b. Modifying or altering an existing source that may significantly affect the emission of air contaminants.

G4. The permittee shall notify the Department at least 24 hours in advance of any planned shutdown of air pollution control equipment for scheduled maintenance that may cause a violation of applicable standards.

G5. The permittee shall notify the Department by telephone or in person within one (1) hour of any malfunction of air pollution control equipment or other upset condition that may cause a violation of the Air Quality Standards. Such notice shall include the nature and quantity of the increased emissions that have occurred and the expected duration of the breakdown.

G6. The permittee shall at all times conduct dust suppression measures to meet the requirements set forth in "Fugitive Emissions" and "Nuisance Conditions" in OAR, Chapter 340, Sections 21-050 through 21-060.

G7. Application for a modification of this permit must be submitted not less than 60 days prior to the source modification. A Filing Fee and an Application Processing Fee must be submitted with an application for the permit modification.

G8. Application for renewal of this permit must be submitted not less than 60 days prior to the permit expiration date. A Filing Fee and an Annual Compliance Determination Fee must be submitted with the application for the permit renewal.

G9. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

G10. This permit is subject to revocation for cause as provided by law.

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

cc: Bill Young

To: Hal Sawyer, Ernie Schmidt, Jack Weathersbee

Date: June 6, 1977

From: Mike Downs JD

Subject: Status Report on Wah Chang for EQC

Commissioner Phinney has asked for a status report on Wah Chang. One way to handle the request would be to prepare a written report that the Commission can review prior to the June 24 meeting. Commission members could then ask any questions they had at the breakfast or lunch meeting.

Would you please draft a report for your program and forward it to me by June 13 for compilation into a report for the EQC. Please cover the following topics as appropriate:

1. Current status of permit and significant permit conditions.
2. Wah Chang's concerns with existing or proposed permit conditions.
3. Other group's concerns with existing or proposed permit conditions.
4. Special studies underway or proposed, what they are intended to reveal, and approximately when they will be done.
5. Approximate date proposed permit modifications will be brought before EQC.

/cs

FAS Please prepare report as per above for not later than 6-10 or 13 for Review Report

— Not later than Monday Noon June 13 1977 with a few HMP

MJD at all

HMP

ENVIRONMENTAL QUALITY COMMISSION

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

ROBERT W. STRAUB
GOVERNOR

To: Mike Downs for EQC Breakfast Meeting June 24, 1977 @ Eugene

From: F. A. Skirvin through E. J. Weathersbee

Subject: Teledyne Wah Chang Albany - Air Permit Status

Current Status

Since the public hearings on the proposed Air Contaminant Discharge Permit renewal (see attached copy), the Department has attempted to resolve issues and concerns raised by witnesses, has conducted on-site and off-site surveys for methylisobuty ketone (MIBK) and odors respectively and provided information to GCA, the consultants involved in the Millersburg Area Study.

The only certain changes to the proposed permit are inclusion of metric units, requiring MIBK monitoring and reporting and updating the compliance schedules as necessary before issuance of the permit. Other possible changes or additions depend on the outcome of emission modeling efforts in progress by DEQ staff.

Significant Permit Conditions

The attached "Staff Statement for Public Hearing" briefly discusses each condition in the proposed permit.

The following might be considered of greater significance.

Condition 2, d and e. First time non-regulation limits for Cl_2, Cl^-, SO_2, NH_3 and NH_4^+.

Condition 3 - First time application of limit for "catbox" odor beyond plant site. (This condition will be modified grammatically to the language in the former MWVAPA odor standard.)

Condition 10 - Sets limit on production through the Separations Plant which is the same as production limit in current NPDES permit. This will be the first time these numerical limits are identical.

Condition 11 - Stipulates requirements to be met before either production or production capacity increases will be approved. (There is a similar condition in the NPDES permit.)

Condition 14 - Allows continued disposal of pyropheric metal fines (mainly Zr) at plant site and requires complete phase out by July 1, 1978.

Conditions 17, 18, 19 and 20 - These control programs are expected to significantly reduce "cat box" odors.

Condition 23 - Will reduce SO_2 emissions by 85%. A caustic scrubber, which was not contemplated during the permit drafting, is presently being installed and will be completed this summer. Some of the Na_2SO_3 produced by the scrubber will be used to treat chlorine (Cl_2) in a water pollution control effort.

TWCA's Areas of Concern

The Company's strongest apprehensions are oriented towards the production limits (Conditions 10 and 11) and the odor limit (Condition 3). TWCA has requested that the dates in the compliance schedules be updated prior to issuing the permit. The Department intends to do this.

Others Areas of Concerns

The Department has received a substantial quantity of correspondence from Citizens for Clean Environment (C_2E), an environmental group based in Corvallis. A status report regarding issues put forth by C_2E in correspondence dated from February 19, 1977 to April 13, 1977 is attached for your reference. The Department met with C_2E representatives on April 27, 1977 to resolve as many items as possible. A letter dated May 27, 1977 summarizing the meeting is also attached.

The Department is evaluating the last C_2E letter dated May 17, 1977. A response will be prepared.

Community leaders, business interests and union representatives have expressed concerns that the proposed permit may impair TWCA's contribution of jobs and dollars to the Albany area.

Several Albany area citizens have indicated their desire that the atmosphere be improved - mainly reduce or essentially eliminate the "cat box" odor.

Special Studies

The Department is using diffusion modeling techniques to evaluate ground level impacts of TWCA stack emissions and adequacy of stack heights for significant emission points. These efforts are primarily in response to C_2E concerns regarding potential adverse health effects and may result in additional permit conditions. The modeling study should be completed during July.

The Department currently contemplates presenting the revised proposed permit to the Commission at its August meeting.

»»Petition««

We, the undersigned, believe the Teledyne Wah Chang plant in Albany, Oregon to be discharging unacceptable quantities of toxic materials into the environment including our rivers, the ground, and the air we breathe. We believe this condition exists because of the Department of Environmental Quality's (DEQ) lack of understanding of the problem. We demand the DEQ perform a thorough analysis of the pollution discharge. We believe that in order for the DEQ to undertake the responsibility, it must have a complete understanding of Wah Chang's entire production process. We, the undersigned, demand that the DEQ study in detail the effects of nuclear radiation, air toxicity (sulfur dioxide, carbon monoxide), MIBK, phosgene gas, hydrogen cyanide, sulfuric acid and Radium 226. We demand that the DEQ uphold the July 1971 standards on water discharges which will limit no more than 300 lbs. of ammonia nitrogen to be discharged per day. We understand this request to be technologically possible and will not suffer the health and environmental costs in order for Wah Chang to avoid financial inconveniences.

Name	Address	Phone
Harvey Cole	38701 Lacomb Drive Lebanon Ore	258-8996
Nora Israel	Mt Hope Drive Lebanon Ore	8-8202
Susan Hand	38701 Lacomb Drive Lebanon Or.	258-8996
Kenneth Strand	Mt. Hope Drive Lebanon, Oreg	8-8202
Maggie Mc Cole	38701 Lacomb Drive Lebanon	258-8996
Pat Cole	38701 Lacomb Drive Lebanon	258-8996

Please return to: Community Focus
P.O.Box 749
Corvallis, OR 97330

ROBERT W. STRAUB
GOVERNOR

Environmental Quality Commission

1234 S.W. MORRISON STREET, PORTLAND, OREGON 97205 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item C, July 15, 1977, EQC Meeting

Civil Penalty Mitigation

On January 25, 1977, Georgia Pacific Corporation at Toledo spilled oil as a result of a breakdown in communications between the Company and J S & T Pipe, a contractor doing work on the Company's oil line. Approximately 50 gallons of Bunker C oil was spilled into Yaquina Bay. The Department assessed a $500 civil penalty which the Company requested a hearing. Because a hearing was requested, the Department reviewed the incident along with the Company's report.

The Company took immediate action to stop the spill and to clean up the oil. Also, they took internal corrective measures to avoid a similar spill from recurring in the future and the size of the spill caused no long-term damage to the environment. Therefore, I recommend the penalty be mitigated to $250.00.

Sincerely,

WILLIAM H. YOUNG
Director

DDF:gcd
Enclosure

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

DEPARTMENT of ENVIRONMENTAL QUALITY, of the STATE of OREGON, Department, v. GEORGIA-PACIFIC CORPORATION, Respondent.	)	No. WQ-SNCR-77-50 Lincoln County SETTLEMENT AGREEMENT

WHEREAS

1. On January 25, 1977 Respondent allowed oil, a petroleum product, to be discharged from a pipe line which was owned or controlled by Respondent at Respondent's Pulp and Paper Mill located at Toledo, Oregon.

2. The above discharge spilled onto the ground and into Yaquina Bay, waters of the State, in violation of ORS 468.785(1).

3. On March 14, 1977 the Department filed and served upon Respondent a Notice of Assessment of Civil Penalty assessing a $500.00 civil penalty on Respondent for the above violation.

4. Respondent filed a timely request for hearing and answer.

5. The parties wish to compromise and settle the case on the following terms:

NOW THEREFORE, in consideration of the mutual covenants and agreements of the parties hereto, they stipulate and agree as follows:

EXHIBIT B

1. Respondent hereby withdraws its answer and request for hearing, and waives any and all objections to the form, content, manner of service and timeliness of the Notice of Assessment and waives its rights to a contested case hearing on this matter.

2. In lieu of holding a hearing the parties hereby compromise and settle the subject civil penalty. Respondent agrees to pay and the Department agrees to accept $250.00 in full payment of the subject civil penalty, subject to the approval thereof by the Environmental Quality Commission.

3. The oil which was spilled into the waters was contained and collected in a timely fashion.

4. Settlement of the civil penalty is in the public interest.

GEORGIA-PACIFIC CORPORATION

Date: June 15, 1977

by _____
Name: Kenneth M. McCaw, Jr.
Title: Attorney for Georgia-Pacific Corporati

TOLEDO.

DEPARTMENT OF ENVIRONMENTAL QUALITY

Date: May 25, 1977

by _____
Robert L. Haskins
Assistant Attorney General
Of Attorneys for Department

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY, of the STATE OF OREGON, Department, v. GEORGIA-PACIFIC CORPORATION, Respondent.	)	NOTICE OF ASSESSMENT OF CIVIL PENALTY WQ-SNCR-77-50 LINCOLN COUNTY

I.

GEORGIA-PACIFIC CORPORATION, a Georgia Corporation, hereinafter will be referred to as "Respondent." The Department of Environmental Quality is hereinafter referred to as "Department." The Director of the Department is hereinafter referred to as "Director."

II.

On or about January 25, 1977, Respondent allowed oil a petroleum product, to be discharged from a pipe line which is owned or controlled by Respondent at Respondent's Pulp and Paper Mill located at Toledo, Oregon. That discharge spilled onto the ground and into Yaquina Bay (waters of the State) in violation of Oregon Revised Statutes (hereinafter referred to as "ORS") 468.785(1).

III.

Pursuant to ORS 468.125 through 468.140, ORS chapter 183, and Oregon Administrative Rules (hereinafter referred to as "OAR") chapter 340, divisions 11 and 12, and in particular, section 340-12-055(1)(c), the Director hereby imposes upon Respondent a civil penalty of $500.00 for the one or more violations cited in Paragraph II above.

IV.

In determining the precise amount of Respondent's penalty, the Director has

considered OAR, section 340-12-045(1)(a) through (i) as follows:

A. Whether Respondent committed any prior violation, regardless of whether or not any administrative, civil, or criminal proceeding was commenced therefor;

B. Respondent's history in taking all feasible steps or procedures necessary or appropriate to correct any violation;

C. Respondent's economic and financial condition;

D. The gravity and magnitude of the violation;

E. Whether the violation was repeated or continuous;

F. Whether the cause of the violation was an avoidable accident, or Respondent's negligence or intentional act;

G. The opportunity and degree of difficulty to correct the violation;

H. Respondent's cooperativeness and efforts to correct the violation; and

I. The cost to the Department of investigation and correction of the cited violation.

V.

This penalty is being imposed without prior notice pursuant to ORS 468.125(2) and OAR, section 340-12-040(3)(b) because the above-described pollution source would normally not be in existence for five (5) days.

VI.

This penalty is due and payable immediately upon receipt of this

notice. Respondent's check in the above amount should be made out in the name of "State Treasurer, State of Oregon" and returned to the Director.

VII.

Respondent has the right, if Respondent so requests, to have a formal contested case hearing before the Environmental Quality Commission or its hearing officer regarding the matters set out above pursuant to ORS, chapter 183, ORS 468.135(2) and (3), and OAR, chapter 340, division 11, at which time Respondent may be represented by an attorney and subpoena and cross-examine witnesses. That request must be made in writing to the Director, must be received by the Director within twenty (20) days from the date of mailing of this notice (or if not mailed, the date of personal service), and must be accompanied by a written "Answer" to the charges contained in this notice. In the written "Answer," Respondent shall admit or deny each allegation of fact contained in this notice and Respondent shall affirmatively allege any and all affirmative defenses to the assessment of this civil penalty that Respondent may have and the reasoning in support thereof. Except for good cause shown:

A. Factual matters not controverted shall be presumed admitted;

B. Failure to raise a defense shall be presumed to be a waiver of such defense;

C. New matters alleged in the "Answer" shall be presumed to be denied; and

D. Evidence shall not be taken on any issue not raised in the notice and the "Answer."

If Respondent fails to file a timely "Answer" or request for hearing, or fails to

appear at a scheduled hearing, the Director on behalf of the Environmental Quality Commission may issue a default order and judgment based upon a prima facie case made on the record, for the relief sought in this notice. Following receipt of a request for hearing and an "Answer," Respondent will be notified of the date, time and place of the hearing.

March 14, 1977
Date

William H. Young
WILLIAM H. YOUNG, Director
Department of Environmental Quality

Certified Mail #345695

CERTIFICATE OF SERVICE

(Mail)

STATE OF OREGON)
) ss
COUNTY OF Multnomah)

I, Gloria C. Davis, being a competent person over the age of eighteen (18) years, do hereby certify that I served GEORGIA-PACIFIC CORP. (Name of Party) by mailing by certified mail to Ms. Mary A. McCravey Certified Mail #345695 (Name of Person to whom Document addressed)

REGISTERED AGENT
(and if not the party, their relationship)

Notice of Assessment of Civil Penalty - WQ-SNCR-77-50 - Lincoln County
(Identify Document Mailed)

I hereby further certify that said document was placed in a sealed envelope addressed to said person at

900 S.W. 5th Avenue, Portland, Oregon 97204

his last known address, and deposited in the Post Office at Portland, Oregon, on the 14th day of March, 1977, and that the postage thereon was prepaid.

Signature

ddf

RECEIPT FOR CERTIFIED MAIL

No. 345695

SENT TO Georgia-Pacific Corporation
c/o Ms. Mary A. McCravey, Reg.Agent

POSTMARK OR DATE NOA

STREET AND NO.
900 S.W. 5th Avenue

P.O., STATE AND ZIP CODE
Portland, Oregon 97204

Lincoln Co. 3/14/77

OPTIONAL SERVICES FOR ADDITIONAL FEES

RETURN RECEIPT SERVICES
1. Shows to whom and date delivered ..... With restricted delivery .....
2. Shows to whom, date and where delivered With restricted delivery .....

RESTRICTED DELIVERY .....

SPECIAL DELIVERY (extra fee required) .....

CONSULT POSTMASTER FOR FEES

PS Form Jan. 1976 3800 NO INSURANCE COVERAGE PROVIDED— NOT FOR INTERNATIONAL MAIL (See other side)

☆ GPO: 1975—O-591-452

PS Form 3811, Jan. 1975 RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

● SENDER: Complete items 1, 2, and 3.
Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one).
- ☐ Show to whom and date delivered..... 15¢
- ☒ Show to whom, date, & address of delivery.. 35¢
- ☐ RESTRICTED DELIVERY. Show to whom and date delivered..... 65¢
- ☐ RESTRICTED DELIVERY. Show to whom, date, and address of delivery 85¢

2. ARTICLE ADDRESSED TO:
Georgia-Pacific Corporation
c/o Mary A. McCravey, Reg. Agent
900 SW 5th Ave., Portland, Oregon 97204

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	345695	

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent
Victor A. Kaney

4. DATE OF DELIVERY 3-15-77 POSTMARK

5. ADDRESS (Complete only if requested)
SERVICE LEVEL Geo. Pacific BLDG

6. UNABLE TO DELIVER BECAUSE: CLERK'S INITIALS

☆ GPO: 1975—O-568-047

ROBERT W. STRAUB
GOVERNOR

Environmental Quality Commission

1234 S.W. MORRISON STREET, PORTLAND, OREGON 97205 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Addendum to Agenda Item D, July 15, 1977, EQC Meeting, Woodex, Inc.

Preliminary Tax Relief Certification Request Review Report

The Department received a telephone call from Mr. Rudy Gunnerman on 6/12/77. He requested a delay in the consideration of his request for preliminary tax credit certification because he would not be able to attend this meeting.

The Department has considered the matter. Because the 60-day time limit which would automatically approve the application expires prior to the next Environmental Quality Commission meeting, it is recommended that action be taken at this 7/15/77 Environmental Quality Commission meeting.

If the Environmental Quality Commission denies the request, the Department is willing to consider another application on the same facility provided additional information is submitted. If the Department's recommendation remains the same after consideration of the second application, it would be presented to the Environmental Quality Commission at a later meeting.

Bill

William H. Young

/mh
7/12/77
Attachment (1)

State of Oregon

DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

To: File 22-1034

Date: June 12, 1977

From: Ed Woods

Subject: Woodex, Inc. Request for Preliminary Tax Credit Certification

On 6/12/77 Mr. Rudy Gunnerman called concerning the request for construction approval and preliminary tax credit certification for the new dryer and cyclone at the Woodex facility in Brownsville.

A letter dated 6/11/77 had already been mailed which explained the status of the request. Mr. Gunnerman was informed that the Department had approved construction subject to EQC confirmation of the project but would recommend denial of the request for preliminary tax credit certification to the EQC at its meeting on 7/15/77.

Mr. Gunnerman called again and requested that this item be delayed to another meeting. Because of the short notice he would not be able to attend the 7/15/77 meeting. He was told that the Department would consider his request and would notify him the same day of its decision.

Mr. Gunnerman was informed by telephone that this item would remain on the agenda for the 7/15/77 meeting. However, the Department would inform the EQC that the Department would not be opposed to considering a similar application for the same facility. It was suggested to Mr. Gunnerman that he submit a letter to the EQC that should his application be denied, he requests that the EQC consider a similar application for the same facility at a future meeting.

Mr. Gunnerman was also informed that the Department did not speak for the EQC but only made recommendations and that all recommendations to the EQC received prior review by legal counsel and therefore may be subject to change.

Mr. Gunnerman indicated that he would send a request to the EQC in care of the Department.

EW:mh

NC No. 936

State of Oregon
Department of Environmental Quality

Date 7-7-77

Preliminary Tax Relief Certification Request Review Report

Applicant

Woodex Inc.
Route 1, Box 33
Brownsville, Oregon 97327

The applicant owns and operates a wood waste drying and pelletizing facility in Brownsville. The applicant has applied for preliminary certification for tax credit for a proposed dryer and cyclone (Notice of Construction No. 936).

Evaluation of Request

The applicant has an existing dryer and cyclone. Emissions from the cyclone were to be source tested and the results submitted to the Department by March 1, 1976. The test results were not submitted as required and the applicant was sent Notices of Violation on July 26, 1976 and December 27, 1976, and a Notice of Intent to Issue Civil Penalty on April 22, 1977.

On February 10, 1977, the Department approved NC 869 and granted preliminary certification for modifications to the existing process which were to reduce the cyclone emissions. These modifications were made and visual emissions were reduced. However, rather than source test the existing cyclone to demonstrate compliance with all regulations, the company has proposed to replace the system with a used larger dryer and a new cyclone. The existing unit will be placed on standby.

The proposed cyclone and dryer will double the existing plant production. The maximum capacity of the proposed dryer will be ten tons per hour but the actual operating capacity will be approximately eight tons per hour.

The dried wood material is to be transferred from the dryer to the existing pellet mill via the proposed cyclone. Emissions from the cyclone go through the induced draft fan to the atmosphere.

The proposed dryer and cyclone have been reviewed by the Department and will be approved for construction. However, the applicant has also requested preliminary tax credit certification for the cyclone. The Department recommends this request be denied.

The cyclone is part of the air transfer system, the primary purpose of which is to transport the dried material from the dryer to the pellet mill. The existing cyclone is not being retained as it is too small to handle the in creased volume of material from the proposed dryer. It is likely that the new cyclone will meet Department regulations, although there does not appear to be any special features of the cyclone to reduce air pollution. The material handled by the cyclone goes directly into the end product and it is therefore beneficial for the company to capture as much dried material as possible.

The Department has concluded that the substantial purpose of the cyclone is to process dried material (process equipment) and not to serve as an air pollution control device.

Director's Recommendation

It is recommended that the Environmental Quality Commission take the following action:

1. Enter a finding that the cyclone proposed for installation in Notice of Construction No. 936 does not comply with the definition of "pollution control facility" as set forth in ORS 468.155(1).

2. Issue an order denying certification pursuant to ORS 468.175(3).

EW:sw

WILLIAM H. YOUNG