

**1/24/1975**

**OREGON**

**ENVIRONMENTAL QUALITY**

**COMMISSION MEETING**

**MATERIALS**



State of Oregon  
**Department of  
Environmental  
Quality**

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A G E N D A

OREGON ENVIRONMENTAL QUALITY COMMISSION

January 24, 1975

Second Floor Auditorium, Public Service Building  
920 Southwest Sixth Avenue, Portland, Oregon

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9:00 A. Minutes of December 20, 1974 Commission Meeting

B. December, 1974 Program Activity Report (Myles)

C. Tax Credit Applications (Myles)

AIR QUALITY

10:00 D. Public Hearing to consider adoption of rule on ambient air quality standard for lead (Ray Johnson)

E. Adoption of Proposed Rules Pertaining to Veneer and Plywood Manufacturing (Skirvin)

11:00 F. Public Hearing to consider adoption of proposed amendments to the Indirect Sources Rules (OAR Chapter 340, Sections 20-100 through 20-135)

G. Variance request: Permaneer, Dillard Particleboard Plant (Vogt)

(Burkart)

LAND QUALITY

H. Adoption of Proposed Rules Pertaining to Surety Bonds or Equivalent Security for Sewerage Facilities (Spies)

I. Request for authorization to hold a public hearing for purpose of considering the continuation of certain moratoriums previously established by counties and cities against construction of subsurface sewage systems (Jack Osborne)

LUNCHEON BREAK

NORTHWEST REGION

1:30 J. Public Hearing to consider adoption of rule reducing the maximum sulphur content of residual fuel oil (OAR Chapter 340, Section 22-010(3)) (Kowalczyk)

K. Columbia Independent Refinery, Inc., Public Hearing re: Air Contaminant Discharge Permit (Kowalczyk)

L. Charter Energy Company -- Public Hearing re: Air Contaminant Discharge Permit (Kowalczyk)

M. Cascade Energy, Inc. -- Public Hearing re: Air Contaminant Discharge Permit (Kowalczyk)

MINUTES OF THE SIXTY-FIFTH MEETING

OF THE

OREGON ENVIRONMENTAL QUALITY COMMISSION

January 24, 1975

Pursuant to the required notice and publication, the sixty-fifth meeting of the Oregon Environmental Quality Commission was called to order at 9:00 a.m. on Friday, January 24, 1975. The meeting was convened in the Second Floor Auditorium of the Public Service Building, 920 S.W. Sixth Avenue, Portland, Oregon.

Commissioners present included: Mr. B.A. McPhillips, Chairman; Dr. Morris Crothers; Dr. Grace S. Phinney; and (Mrs.) Jacklyn L. Hallock. Commissioner Ronald M. Somers was unable to attend.

Department staff members present included Kessler R. Cannon, Director; Ronald L. Myles, Deputy Director; and four Assistant Directors, Frederick M. Bolton (Enforcement), Wayne Hanson (Air Quality), Harold L. Sawyer (Water Quality), and Kenneth H. Spies (Land Quality). Chief Counsel Raymond P. Underwood and several additional staff members were present.

MINUTES OF THE DECEMBER 20, 1974 COMMISSION MEETING

It was MOVED by Dr. Crothers, seconded by Dr. Phinney, and carried that the minutes of the December 20, 1974 EQC meeting be adopted as distributed.

PROGRAM ACTIVITY REPORT FOR DECEMBER 1974

Mr. Ronald Myles gave the staff report (summary attached as Appendix A). Mr. McPhillips, noting that in some instances (for example applications for approval for parking facilities) there had elapsed considerable time without action on the application, inquired as to the reasons for delay. Mr. Harold Patterson stated his belief that the principal source of delays was the need for additional information.

Dr. Crothers noted that each time the Commission receives the lists of activities by the Department they seem to follow a different format. Turning to the first page of the form entitled "Air Quality Control Division Information Received," Dr. Crothers noted item number three, dated 12-7-73, had no entries in the columns which would tell the reader what the reason for delay was. He noted there were many other entries which suffered the same lack of explanation cited above. Dr. Crothers asked that, in the future, projects of long standing be reported in terms which would explain the delay. In so doing, he noted that the Department, whether justifiably or not, has been subject to criticism for failure to promptly process applications. Mr. Fritz Skirvin noted that the workload was too great

for staff in certain areas other than the area of applications for parking facilities. Dr. Crothers opined that a shortage of staff, if that were the problem, should be squarely recognized and dealt with. Mr. Cannon recalled that, in many instances, the studies undertaken by staff in conjunction with the applicant were costly in terms of the time needed to evolve a permit satisfactory to both parties. Mr. Patterson agreed with Mr. Skirvin that the problem was, in many cases, workload. He noted that the loss of staff members in the wood products industry and the need to train new staff members had contributed, in part, to the backlog of unprocessed applications. Air contaminant discharge permits and, to a degree, plan review were cited as areas of arrearage. Referring to the previously mentioned application of 12-7-73, Mr. Patterson recalled that, in this particular case, the application was more akin to a proposal than an application. In his view, the applicant was not pressing for immediate action.

Dr. Crothers asked if it was Mr. Patterson's belief that the staff should be increased or the workload decreased. Mr. Patterson noted that there was a request which had been approved in the budget for two additional permit engineers whose presence was expected to relieve the problem.

Mr. McPhillips asked that an age limit be set beyond which reporting should include explanation of delay for each given permit application or plan review action. Dr. Crothers concurred in this wish. Mr. Skirvin noted that, in the case of air contaminant discharge permits, inaction by the Department for a period of sixty days resulted in the applicant's receipt of a temporary permit and saved him from injury occasioned by Departmental delay. He also noted that considerable work was involved in the processing of permits and that, during the last three years, turnover of personnel had been considerable in the area of wood products permits. Mr. McPhillips reiterated his position that an explanation would be appropriate in the case of unusual delay.

It was MOVED by Mrs. Hallock, seconded by Dr. Phinney, and carried that the Department's Program Activity Report receive confirming adoption by the Commission.

#### TAX CREDIT APPLICATIONS

Mr. Ronald Myles reported on the issuance of nine tax credit applications as follows:

<u>App. No.</u>	<u>Applicant</u>	<u>Claimed Cost</u>
T-565	Lester I. & Ruth M. Versteeg	\$ 12,501
T-584	Allen Fruit Company, Inc.	41,212
T-587	Georgia Pacific Corporation	22,005
T-590	Publishers Paper Company	461,373
T-613	Georgia Pacific Corporation	19,611
T-614	Georgia Pacific Corporation	78,169
T-615	Georgia Pacific Corporation	29,835
T-616	International Paper Company	57,859
T-621	International Paper Company	4,640

It was MOVED by Dr. Crothers, seconded by Mrs. Hallock, and carried by the Commission to approve the Department's issuance of the above tax credit applications. Upon the suggestion of Mr. Harold Sawyer, it was MOVED by Dr. Crothers, seconded by Mrs. Hallock and carried to instruct staff to revoke certificate #284 (wigwam burner no longer in use).

It was decided that Agenda Item E would precede Item D, insofar as the latter item was a public hearing whose announced time had not arrived. (Subsequently, Items G, I, and H also preceded Item D).

ADOPTION OF PROPOSED RULES PERTAINING TO VENEER AND PLYWOOD MANUFACTURING

Mr. Fritz Skirvin presented the staff's position that the controversial 10% opacity standard in the proposed rule was, indeed, attainable; that it was a concession to the industry (traded for removal of a previously proposed mass emission limitation; and that the industry had presented no substantial technical support for its position which was not considered by the Department prior to the December hearing on the rule. It was argued that zero opacity was abandoned to avoid occasional technical violations from wisps of blue haze and that 20% opacity would not solve the blue haze problem. Finally, it was noted that plants in violation would receive case-by-case evaluation of their ability to comply and thus be afforded some protection. On these grounds, staff recommended adoption of the rule as proposed with the postponement of compliance requirements from March 1, 1975 to May 1, 1975.

Mr. McPhillips asked if there were mills in compliance at present and received the answer that a few were meeting 10% opacity and that various vendors assured the ability of their products to meet 10% opacity consistently.

Dr. Crothers expressed concern over the case-by-case flexibility argued for the rule, warning that tremendous economic leverage was left in the hands of the Department by such a provision. It was noted that the density of population around a given installation was a simple and valid barometer of how substantial a health hazard existed. In response to Mrs. Hallock's question, Mr. Skivin noted that, while most companies argued initially for a rigid rule, they preferred to be allowed case-by-case consideration when found in noncompliance. Mr. Cannon noted that the possibility of a regional approach had been considered and had met with certain difficulties. On this subject, Mr. Patterson cited an example whereby an area-oriented approach would leave undue discrepancy of compliance dates between Medford and White City. He added that the Department would use a single standard for installations outside special control areas except where an airshed exists. This policy, however, could not properly be drafted into a rule, in Mr. Patterson's opinion.

Dr. Phinney noted that anyone feeling injured by arbitrary or discriminatory behavior of the Department could appeal to the Commission.

She contended also that staff had been very even handed in the past. Dr. Crothers concurred that staff had traditionally been fair in the exercise of latitude granted in the rules.

Mr. Skirvin concurred with Mr. Patterson's view that the mill-by-mill basis was the only practical approach to the problem.

Dr. Phinney noted that the staff had previously agreed to parenthetically include metric units in the presentations where appropriate. Mr. Skirvin opined that the agreement had been prospective in nature, and received Dr. Phinney's magnanimous acquiescence on this point.

Mr. William Coffindaffer, speaking for Timber Products Company of Medford, appeared in answer to a letter submitted by Reid-Strutt through Mr. Ken Parks on November 27, 1974. Mr. Coffindaffer contended that the statement that a Reid-Strutt burner system has been in successful operation for one year at Timber Products Company was misinformation. He asserted that the system had been undergoing tests and revision for two years and that Timber Products would decline to endorse the Reid-Strutt system for veneer dryers. It was argued that particle board sander dust was the fuel for the system and no plywood process wood waste was being used. Mr. Coffindaffer predicted that the use of plywood process wood waste would pose problems to the system. Zero opacity was attained, he said, only under ideal conditions. Mr. Coffindaffer said the system's stack read a number one Ringlemann on many occasions and the system would consistently meet an average opacity closer to 20% than 10%. Finally, Mr. Coffindaffer noted his concern that areas of emission pound/hour and grain loading were not well served by the system unless the particles of sander dust were sifted to reach a minimum size. Mr. Coffindaffer urged that the Commission adopt a 20% opacity limit.

Mr. Patterson, in reply to inquiry from Dr. Crothers, stated the rule would have to be relaxed if (at some future date) a substantial showing was made by industry that the 10% opacity limit was not feasible on an industry-wide basis.

Mr. McPhillips assured those present that there was no intent on the part of the Commission to hurt any industry, much less the timber industry. He noted also, however, that he has never seen a favorable first response by industry to a proposed standard. Past apprehensions of industry shut-down, he noted, never came to fruition.

Dr. Crothers denigrated the claim that no health hazard existed as a claim damaging to the industry and not deserving of credulity. He noted that the "gunk" removed from the emissions by the devices now in use presented a solid waste problem to the installations. It was MOVED by Dr. Crothers, seconded by Mrs. Hallock, and carried that the rule be adopted with a May 1, 1975 compliance date as recommended by the Director.

Mr. Matthew Gould of Georgia Pacific argued that the industry had not denied existence of a health hazard, but had denied existence of proof of a health hazard being present. He noted that the emissions are of a turpenoid hydrocarbon type, normally present in pine or fir forests to a lesser degree of concentration than is present in a veneer dryer. He said the question had been one of visibility of emissions, as opposed to the health ramifications of the emissions. He recalled that the Oregon project to reach a standard for veneer dryers was the first of its kind.

VARIANCE REQUEST - PERMANEER DILLARD PARTICLE BOARD PLANT

Mr. Al Burkart of the Department's Air Quality Division presented the staff report, recommending that the proposed variance be issued based on economic impediments to the applicant's compliance with the original permit. It was MOVED by Dr. Crothers, seconded by Mrs. Hallock, and carried that the variance request be granted as recommended by the Director, requiring a compliance schedule by July 1, 1975 and compliance to conditions 1 and 2 of Permit No. 10-0013 by December 31, 1975.

REQUEST FOR AUTHORIZATION TO HOLD A PUBLIC HEARING FOR PURPOSE OF CONSIDERING THE CONTINUATION OF CERTAIN MORATORIUMS PREVIOUSLY ESTABLISHED BY COUNTIES AND CITIES AGAINST CONSTRUCTION OF SUBSURFACE SEWAGE SYSTEMS

Mr. Kenneth Spies presented the staff report, noting that the Legislature, through enactment of ORS 415.605 to ORS 454.745, had preempted local control over the construction of subsurface sewage systems. The statutes were said to have relegated this chore to the Commission. This action, in Mr. Spies view, invalidated needed local ordinances banning construction of new subsurface sewage systems. It was staff's recommendation that the Commission authorize the Department to hold hearings under ORS 454.685 to determine if those moratoriums of local governments which were legislatively invalidated should be restored by the Commission. Several of the areas involved, including Jackson County, Josephine County, Douglas County, Marion County, Columbia County, and Yamhill County were mentioned by Mr. Spies.

In response to Dr. Phinney, Mr. Spies said that, in the absence of an effective moratorium, the Department was simply failing to act upon new applications or issue new permits. Dr. Phinney questioned whether a temporary rule would be in order and was told by Mr. Ray Underwood that such would not be permitted under ORS 454.685. Mr. Cannon stated it was generally known by interested parties that, at present, the permits were not available.

Senator Lynn Newbry responding to Mr. McPhillips' invitation to speak, stated that the matter needed further discussion which, in his hope, would take place locally and soon.

Mr. McPhillips responded to a telegram of Mr. Tam Moore, Jackson County Board of Commissioners, assuring that Mr. Moore would have ample notice of the time and place at which a contribution to the proposed public hearings could be made.

It was MOVED by Mrs. Hallock, seconded by Dr. Phinney, and carried that the requested permission to hold public hearings be granted the Department.

ADOPTION OF PROPOSED RULES PERTAINING TO SURETY BONDS OR EQUIVALENT SECURITY FOR SEWERAGE FACILITIES

Mr. Kenneth Spies presented the staff report, noting that the requisite rule making hearing had been conducted before the Commission on December 20, 1974. He proposed that the rules be adopted as initially presented with the exception of a limitation to the exemption to items within the statutory language "classes of dwellings of municipalities," (ORS 454.425) so as not to exceed the statutory authority.

It was MOVED by Dr. Crothers, seconded by Mrs. Hallock, and carried that the proposed rule be adopted with the change in wording recommended by the Director.

PUBLIC HEARING RE: ADOPTION OF RULE ON AMBIENT AIR QUALITY STANDARD FOR LEAD

It was staff's recommendation, as presented by Mr. Ray Johnson, that the statutory requirements for rule making be served by the hearing, once again, of the matter of adoption of the proposed amendment to OAR Chapter 340, Section 31-055 (prohibiting concentrations of lead exceeding a monthly arithmetic average of  $3.0 \text{ ug/m}^3$ , as measured by any one sampling station).

Mrs. Hallock, noting that the samplings to date had never exceeded  $2.5 \text{ ug/m}^3$  and were much lower on the average, asked why the Department proposed a standard much more lenient than was now being met. Mr. Johnson answered that the originally recommended  $5.0 \text{ ug/m}^3$  was the lowest level that the Department felt itself able to justify from a health standpoint. He noted that, in its previous hearing, the Commission opted for  $3.0 \text{ ug/m}^3$ , leading to the instant Departmental recommendation.

Mr. Cannon noted that the  $3.0 \text{ ug/m}^3$  was a result found acceptable as both below the requirements of health and above the concentrations recorded.

Mrs. Hallock recalled amending Dr. Crothers' motion for a  $4.0 \text{ ug/m}^3$  limit to a motion for a  $3.0 \text{ ug/m}^3$  at the previous meeting. She stated her reason for doing so to have been doubt of sufficient support for adoption of a  $2.0 \text{ ug/m}^3$  limit.

Dr. Crothers contended that the problem of lead concentrations would solve itself with the onset of unleaded gasoline consumption.

Mrs. Hallock cited Dr. Crothers' contention as further reason for the adoption of a strict standard.



Mr. Johnson informed of a single, isolated sampling which indicated concentrations exceeding  $3.0 \text{ ug/m}^3$  near a freeway.

In response to Dr. Crothers' inquiry, Mr. Johnson noted that enforcement as to existing violations would entail the Draconian measure of shutting down roadways.

Mr. Larry Williams of the Oregon Environmental Council addressed the Commission with his contention that the Commission had inherited the question of lead standards from the Board of Health and introduced Mr. Charles Merten, the Council's attorney to speak for the Council.

Mr. Charles Merten cited the reluctance of the State Board of Health to set lead standards as a source of disappointment which provides a backdrop to the Council's frustration with the Commission's proposal to set a standard more relaxed than can be presently met. He cautioned that it was not to be assumed that the federal government would proceed uninterrupted with its plan to restrict leaded gasoline. In support of this contention he alluded to what he saw as constant revision of federal goals with regard to automobile pollution control devices.

Mr. Merten also argued that the recommendation of the Department was based on the lead concentrations found nontoxic to the average man, not the average child or pregnant woman.

Further, Mr. Merten cited the concept of nondegradation as requiring of a standard more stringent than proposed. He proposed a standard of  $2.0 \text{ ug/m}^3$ , arguing that the same could be met with appropriate highway design.

In response to inquiry by Mrs. Hallock, Mr. Merten declined to cite any specific evidence that the concentrations acceptable to a child or pregnant woman were less than those acceptable to the average man. He asserted vague recollection of such evidence, however.

Dr. Phinney decried the use of the average man as the integer of acceptable concentrations only to be met with Mr. McPhillips' opinion that the statistics were based on the average person.

Mrs. Hallock contended that, counter to Dr. Crothers view with regard to veneer emissions, people should be protected be they however few or unrepresentative.

Dr. Crothers hastened to concur that lead concentrations were more severely damaging to children than adults, but urged that the matter be regarded as moot in the light of impending unleaded gasoline consumption. This event he foresaw as coming with no interruption or difficulty of administration.

Mr. McPhillips stated his experience as an operator of service stations to have indicated less than ease of implementation with regard to unleaded gasoline requirements.

Dr. Crothers asserted the primary child-health problem due to lead was eating paint and lead contaminated dirt, a problem which was disappearing due to the use of unleaded paint. He noted that even concentrations of  $5.0 \text{ ug/m}^3$  had not been demonstrated harmful to children.

Dr. Crothers also noted that the only feasible highway design to reduce ambient air lead concentrations was to widen the corridor between the highway and dwellings. He and Dr. Phinney noted that an admonition to people with infant children not to live in housing with leaded paint or near a freeway was tantamount to an admonition against being poor.

Mr. Clarence A. Hall, speaking for the Ethyl Corporation, asserted that the Goldsmith-Hexter relationship and the Kehoe Study which had both, at varying times, received endorsement in EPA position papers were either invalid (Goldsmith Hexter) or misinterpreted (Kehoe Study). Mr. Hall went on to say that the Director's recommendation of a limit of  $5.0 \text{ ug/m}^3$  was conservative but acceptable. He discounted the proposed  $3.0 \text{ ug/m}^3$  as unsupported on the evidence and unnecessarily costly. It was Mr. Hall's contention that ambient air lead levels even in excess of  $5.0 \text{ ug/m}^3$  had no discernible effect on blood lead levels or health.

Mr. Hall argued that the possibility that future sampling stations closer to the curbside in adverse weather might exceed the  $3.0 \text{ ug/m}^3$  and require costly but nonbeneficial adjustments.

In response to inquiry from Dr. Crothers, Mr. Hall noted that current federal requirements of catalytic converters on all new cars made unlikely any governmental repeal of requirements that gas be unleaded. However, Mr. Hall noted there were hearings going on which he saw as bringing into question the requirement that catalysts be used on new cars.

Dr. Jerome F. Cole of both the International Lead Zinc Research Organization, Inc. and the Environmental Health for the Lead Industries Association, Inc., addressed the Commission with support of the Director's original  $5.0 \text{ ug/m}^3$  recommendation. He objected that the measuring period ought to be 90 days rather than one month. This he asserted, would relate more significantly to the half life of the measured entity. He asserted that there was no basis for the proposed  $3.0 \text{ ug/m}^3$  limit and its adoption would be arbitrary. He cautioned against a state setting standards without scientific support as a move which might influence other states to follow suit, erroneously believing due consideration of the facts had been given in the first state.

Mr. Kip Howlett, representing the Western Environmental Trade Association, addressed the Commission with a resolution favoring a standard of 5.0 ug/m<sup>3</sup>, arguing there was no foundation for a limit of 3.0 ug/m<sup>3</sup>. He noted that land use planning decisions as to the construction of highways to relieve traffic density would have a direct impact on lead concentrations and should be awaited with a standard of 5.0 ug/m<sup>3</sup>, not the lower standard. He further argued there was benefit in the flexibility of the higher standard while more sophisticated information is awaited.

Mr. Bruce Anderson of the Association of Western Contractors and the International Council of Shopping Centers, stressed the importance of avoiding unreasonable standards based on no evidence of a health hazard. He endorsed the original staff report in this matter and supported the proposal for a 5.0 ug/m<sup>3</sup> standard. He cited a Multnomah County study as in support of his position.

In response to the preceding testimony, Mrs. Hallock commented that she had understood the 5.0 ug/m<sup>3</sup> figure to be the upper margin of the area the EPA had determined to constitute a potential health hazard. Also, Mrs. Hallock argued, the Commission was obligated to look at the principle of nondegradation with regard to the quality of ambient air now existing in the State. This would, in her view, require standards no more lenient than are now being met.

Mr. Anderson rejoined that a balancing of the interests involved would dictate a more lenient standard and that the reasons for nondegradation were not served by a standard higher than health would require.

Dr. Crothers noted that his view was that the 5.0 ug/m<sup>3</sup> was safe but that the 3.0 ug/m<sup>3</sup> was reasonable as being achievable and deserving of his continued support. He assured Mrs. Hallock of his conviction that if a single child were better protected by a more stringent standard, it would result in his support of a more stringent standard. It was noted that, in Dr. Crothers' view, the only practical way to assure better health was to remove housing from areas near freeways.

Dr. Phinney, citing the requests that the Commission act only on firm data, noted the lack of firm data and stated the Commission's readiness to act on definitive data whenever such becomes available. She described the existing data as inconclusive.

Mr. McPhillips closed the hearing, there being no more speakers. It was MOVED by Dr. Crothers, seconded by Dr. Phinney, and carried to adopt the proposed rule limiting ambient air lead concentrations to 3.0 ug/m<sup>3</sup> on a monthly average at any given sampling station.

A short recess was taken.

PUBLIC HEARING RE: CONSIDERATION OF ADOPTION OF PROPOSED AMENDMENTS TO  
THE INDIRECT SOURCE RULES

Mr. Dick Vogt of the Department's Air Quality Section presented the staff report. He noted the Department's review of several alternatives before its selection of the proposal at hand. The proposed change in affected facilities from 50 to 100 parking spaces was supported as involving the maximum savings in manpower per loss in program effectiveness. Also recommended were several minor revisions in the wording of the statute. It was recommended that the statute be amended to consider applications incomplete until the applicant has provided the Department evidence that the proposed source is not in violation of any land use ordinances or regulations.

Mrs. Hallock questioned the negative wording of the land use ordinance provision.

Mr. Cannon sympathized with Mrs. Hallock's inquiry, noting that he had once suggested that the burden upon the applicant ought to be the positive one of demonstrating approval of the proposal by any local agency with jurisdiction. He called upon Mr. Wayne Hanson to further explain the proposed wording's negative aspect. Mr. Hanson noted that lengthy discussion with staff and with counsel had led to the conviction that it was improper, in cases where he would not otherwise have been required to do so, to force the applicant to solicit approval of a governmental planning body.

Dr. Phinney expressed concern that the proposal, worded in the negative would reserve to the Department the prerogative to decide whether local ordinances are observed, a decision which, in her view, should be reserved to the local land use planning organization. Mr. Hanson stated that the applicant's provision of evidence would be all that is necessary. The evidence would need only to be of a prima facie degree, Mr. Underwood explained.

In response to Dr. Crothers' question, Mr. Vogt explained that the staff report, in pointing out the effects of "the newly adopted rule," had reference to the rule adopted on November 22, 1974 with regard to Indirect Source regulation.

Noting that, while 73% of the lots accommodated less than 250 vehicles, only 23% of the total parking spaces were in lots of less than 250, Dr. Crothers questioned whether 250 might be a cut-off point which would reduce work and still retain jurisdiction over the bulk of the parking spaces. He asked how many proposed facilities of a size under 250 were rejected or altered by the Department in the normal course. Mr. Vogt, while unable to give a firm statistic, opined that a significant number of lots running from 250 spaces to less were altered because the Department looked at aspects other than size aspects in reviewing a proposal. One such aspect, he said, was the number of parking spaces per employee in office facilities. This was kept at a minimum in an effort to encourage

the use of mass transit. Hence, a small facility would undergo review as well as a large one. Mr. Vogt went on to explain that building codes enter into this area and are varied. He said, however, that he had never experienced an applicant's failure to gain a variance where the Department prescribed fewer spaces than the code allowed. Dr. Crothers noted that in Salem it was hard to gain a variance for more spaces. Mr. Vogt noted that development incentives lead to designs entailing too much off-street parking in commercial facilities and too little in residential developments.

Dr. Crothers went on to question the overall effectiveness of limitations on parking facilities, noting that the addition of buses to Washington Square was not accompanied by increased ridership to any significant degree. Dr. Crothers excepted the downtown Portland area from his skepticism. Mr. Vogt explained that there was insufficient data to gauge the program's efficacy in outlying areas. He noted that the answer would run along two dimensions: He predicted decreased effectiveness with increased distance from urban areas. Also, he projected decreased effectiveness with increasing the size of lots exempt from the rule. Dr. Crothers said it was his understanding that only 3% of the cars entering Portland on the Banfield Expressway have more than two riders. This he viewed as an index of failure.

Mr. McPhillips asked groups to designate a spokesman and requested that presentations be as brief as possible, inviting all parties to submit written material in such volume as they would.

Mr. Allen Weber, representing Portland's Mayor, addressed the Commission. He stated the issue of revision to be one which was fundamental to the question of whether the new gubernatorial administration would be an occasion for the undoing of previous accomplishments. He cited the proposal of staff as based on the worst of all possible requirements - the saving of manpower. He argued that program effectiveness, not economy of administration, should be the guiding rationale. It was feared that a serious cumulative impact through the construction of a large number of 99 space facilities might be the result of the staff proposal. He noted a tendency of present facilities to be lumped into the size category previously exempt from the rule. Also, he directed the Commission's attention to the fact that small lots, since they outnumber large ones, are an item to which attention should be brought. He said the impact of small lots was critical in areas of sensitive receptors. Mr. Weber agreed with the staff's conclusion that the present rule encouraged the adoption of comprehensive parking and circulation plans. He criticized the proposed relaxation as detrimental to the aforesaid goal. Mr. Weber urged the Commission to enforce the present rule vigorously so as to give incentive to planning such as that resulting in the Air Quality Improvement Plan in downtown Portland. Mr. Weber then commended the Clean Air Watchdog Committee. He urged that this citizen's committee be consulted prior to any action of amendment.

Mr. Stephen McCarthy, representing Tri-Met, addressed the Commission with his disappointment at not having received notice of the hearing until one day prior to its scheduled time. He asked that he be given additional time to review the proposal. Mr. McCarthy noted that Tri-Met was in support of the principle of parking regulation through the indirect source rule. He viewed it as an effective integration of transit, clean air, and zoning concerns. He noted for Dr. Crothers' benefit that, while he could not speak for other transit facilities, Tri-Met was meeting its projected ridership for the Washington Square area, hauling about 6,000 passengers per month there.

Mr. Bruce Anderson spoke on behalf of the AGC, the Oregon State Home Builders Association, the Mobile Home Park Association, the Associated Floor Covering Contractors, the Mountain Park Corporation, WETA and other concerned parties. He vehemently warned of dire administrative consequences to be expected from the proposed rule. These consequences, he contended, would surely flow from what he saw to be a serious philosophical ambivalence in the working of the rule. He argued that two concepts were being blurred willy-nilly into a miasma of interpretive difficulty. In Mr. Anderson's view, the underlying concept of Indirect Source Regulation was and should remain maintenance of standards with regard to concentrations of carbon monoxide, etc. through preconstruction review of facilities. Not to be confused with this philosophy was the rationale for federal and local Parking Management Regulations, such as the Portland Transportation Control Strategy. The latter provisions were aimed at attainment of standards in presently deficient areas of carbon monoxide concentration and other concentrations, in Mr. Anderson's view.

Mr. Anderson went on to cite OAR Chapter 340, 20-129(1)(a)(v) as an example of a permit consideration within the province of Parking Management but entirely inappropriate to Indirect Source considerations. The reduction of total vehicle miles travelled, it was contended, goes beyond any proposed facility, and should not be a consideration in an Indirect Source Permit.

Mr. Anderson noted that the rule patently applies to the whole state of Oregon, observing no distinction between those areas where a standard must be maintained and those where a standard must be attained.

Noting the federal decision to postpone the effective date of legislation in this area until review could be had, Mr. Anderson urged the Commission to avoid what he saw to be a dilemma through the expeditious repeal of the rule. He assured Mr. McPhillips and Mrs. Hallock that, absent an Oregon rule, the federal standards would protect adequately against the dangers of carbon monoxide and other concentrations resulting from parking facilities.

Mr. Fred VanNatta of the Oregon Home Builders Association and the Oregon Mobile Home Park Association addressed himself to the coverage of residential dwellings in the rule. He went on record as in support of

the suggestion of Mr. Anderson. He considered coverage of residential dwellings in the rule as unreasonable, citing EPA's comments in the federal register to the effect that indirect source regulations were not intended to apply to single family housing developments. These, in Mr. VanNatta's view, did not present an air quality problem susceptible of quantification.

Mr. VanNatta referred to three studies on Indirect Source Regulations: One by the National Academy of Sciences, one by the National Science Foundation, and one by the Stanford Research Institute. All three were cited as in agreement that indirect source regulations will not accomplish their purpose as stated by the EPA, even on commercial lots. In response to a question from Mrs. Hallock, Mr. VanNatta said changing the entry point from fifty to one hundred spaces did not solve the problem of the residential developer. He noted that the staff report had been diametrically opposed to his view with regard to the inclusion of residential dwellings.

Mr. Larry Williams of the Oregon Environmental Council said reduction of staff workload is the worst rationale to change the rule. He concurred with Mr. Weber that encouragement of comprehensive planning should be continued by use of the present rule. He noted apprehension that in areas where land values were less, such as Salem, a proliferation of small exempt facilities would be invited by relaxation of the existing rule.

In addressing himself to the change of application process which makes the DEQ last in review of proposals for a parking permit, he expressed the opinion that this would put undue pressure on the DEQ to approve, all others having done so. In Mr. Williams' view, DEQ, as dealing with a health problem, should be first to review permits, and thus be allowed to review them unfettered by the influence of other agencies.

Mrs. Hallock recalled the Department's plan to solicit early information from other authorities which were reviewing proposals involving air quality impact.

Mr. Cannon described the problem as a "chicken and egg" situation wherein DEQ, in preceding other authorities, is subject to the charge of trespass upon the domain of the land use planner. This was said to have been the reverse of the problem to which Mr. Williams alluded.

Mr. Williams expressed the hope that the Commission would not be in the position of looking at large developments only after the other authorities had given approval.

Mr. Jack R. Kalinoski, representing the Associated General Contractors, requested that the rule be suspended until July 1, 1975 to allow study of whether repeal should follow. Such study would reveal, in Mr. Kalinoski's view, insufficient knowledge about the consequences of the rule, insufficient

information leading to its inception, and a potential halting of necessary public and private improvements. Mr. Kalinoski went on to express apprehension that the rule would pose an undue economic burden and prove to be perverse in some of its applications (actually increasing air pollution). Mr. Kalinoski cited those studies which Mr. VanNatta had cited and contended that they had concluded as Mr. VanNatta had reported. The states of New York, Alabama, and South Carolina were given as examples of jurisdictions which had suspended indirect source regulations. PL 93-563 (December 31, 1974) was called to the attention of the Commission in its denial of appropriation for use by the EPA to regulate parking facilities.

Ms. Lynda Willis, speaking for the Mid-Willamette Valley Air Pollution Authority, decried the proposed relaxation of the rule as a retreat from what experience has shown to be a practical and effective threshold of review in terms of spaces per parking facility. She reiterated the fear of serious cumulative impact of numerous small surface lots in areas of lesser real estate value. From Ms. Willis' point of view, review of all parking facilities within five miles of the center of cities with 50,000 or higher populations, were it practical, would be desirable. The proposal to raise the threshold was criticized as of potential detriment to the planning of mass transit in downtown areas. It would eliminate the current procedure of conditioning approval to the applicant's agreement to include provisions for alternate mode use in many cases, in Ms. Willis' view.

In answer to Dr. Phinney's question, Ms. Willis said the regulations would permit the Mid-Willamette Valley Authority to adopt more stringent requirements than the EQC.

Mr. Dave Hupp of Multnomah County, speaking for Commissioners Clark and Gordon, opposed change in the rule. He noted that the present rule was only two months old and had been preceded by nearly two years of hearings and study. He stated the county's position of reliance on DEQ, as opposed to the EPA, as the guardian of clean air in Oregon. The county's present policy, it was said favored dramatic shifting from the use of the automobile in downtown areas. In lieu of rejecting the proposal, the Commission might, it was said, delay its inception for at least sixty days. The reasoning behind this suggestion was said to be lack of sufficient notice to the county of the proposed rule, a new county commission's need for orientation, and the orientation of the new administration with regard to land use.

Dr. Crothers expressed support of the concept of some delay, both to allow further input from Multnomah County and to allow for the assessment of the Public Law to which Mr. Kalinoski alluded. It was MOVED by Dr. Crothers, seconded by Dr. Phinney, and carried that the record be left open for ten days and the matter of adoption be placed on the agenda of the next regular meeting.

The meeting was adjourned for luncheon.



VARIANCE REQUEST: SALEM GOLF CLUB OPEN BURNING

The Commission granted permission to the Salem Golf Club to burn in place three Douglas fir trees which are infested by bark beetles and whose removal by burning in place was recommended by the Forestry Service and the local Extension Agent.

RULE MAKING HEARING AND PUBLIC HEARING ON RULE TO LIMIT SULPHUR CONTENT IN RESIDUAL FUELS AND APPLICATION OF COLUMBIA INDEPENDENT REFINERY FOR AIR CONTAMINANT DISCHARGE PERMIT

Mr. John Kowalczyk of the Department's Northwest Region noted in addressing the Commission that the rest of the afternoon was given to discussion of oil: the sulphur content allowable in residual fuel oil and the air contaminant discharge permits of three proposed refineries, one in Portland's Rivergate Area, and two near St. Helens. The Commission and the audience were shown a map of the three proposed sites. It was pointed out that the Portland Metropolitan Special Air Quality Maintenance Area (PMSAQMA) was inclusive of the Rivergate site.

The November 22 Commission meeting dealt with a report which, together with reports to the Commission for today, delineates the staff's position with regard to the interrelated matters of the Columbia Independent Refinery (CIRI) application and the proposed rule whose common name is the Clean Fuels Policy.

Upon the suggestion of Mr. Kowalczyk, the Commission elected to hear the matter of adopting the Clean Fuels Policy and the matter of the CIRI permit application together, since the matters are interrelated and their separate hearing would invite repetition of testimony.

Using visual aids, Mr. Kowalczyk elaborated on the difference in pollution resulting from the burning of distillate as opposed to residual fuel oil. He noted that one could expect five times greater particulate emission, six times greater SO<sub>2</sub> emissions, and approximately two times greater NO<sub>x</sub> emissions from the burning of the latter fuel.

Mr. Kowalczyk alluded to desulfurization as a possible means of reducing the sulfur, the ash, and the nitrogen in residual oils. He noted that a reduction of sulfur to a level of 0.5% would reduce the emission difference between residual and distillate fuel consumption. The residual fuel burned locally was understood to have a present sulfur content of 1.4% on an average.

Slides were shown depicting the plumes over various residual consuming boilers and depicting the detriment to the ambient air in general. It was noted about 11% of the overall particulate, 66% of the SO<sub>2</sub>, and 9% of the NO<sub>x</sub> can be attributed to residual fuel oil consumption.

Mr. Kowalczyk presented the written staff report on the Clean Fuels Policy. It was recalled that the Status Report (Agenda Item E) of the November 22, 1974 EQC meeting had indicated a doubt as to CIRI's ability to meet the ambient air impact criteria of the Department's PMSAQMA rule

(OAR Chapter 340, Sections 32-005 to 32-025) in its proposed 100,000 barrel/day phase. Staff's conclusion as reflected in the report was that a Clean Fuels Policy would be necessary to reduce particulate emissions in the PMSAQMA to conform with the provisions of OAR Chapter 340, Section 32-020(1) beginning in 1979. Since the proposed CIRI facility would constitute a "new or expanded" source within the rule, an air contaminant discharge permit could not be granted without implementation of the Clean Fuels Policy. Reduction of the maximum sulfur weight to 0.5% was viewed as desirable because a 1.0% limit would leave a projection for particulate emissions 113 tons per year above the allowable 870 tons per year increase under the current ambient air standard for the Portland Metropolitan Air Quality Maintenance Area (PMAQMA). Also, it was noted that 0.5% was obtainable, had an economic impact only slightly greater than a 1.0% limit, was in alignment with the standards for Los Angeles and San Francisco, and would include significant reductions in SO<sub>2</sub> emissions, assuring maintenance of the standards in this category for years to come. It was staff's position that the 0.5% limitation was in the way of necessary interim preventive judgment in the light of inadequate information for a ten-year plan. The effective date of January 1, 1979 was defended as soon enough to allow the CIRI installation to start up as planned and late enough to allow for the availability of the conforming residual fuel at the hands of not only CIRI but other refiners as well. Finally, Columbia County was included in the proposed policy both to allow time for the study of contributions to the Portland area by emission bearing winds from the Longview-Portland airshed and to offset emission increases anticipated from the two refineries proposed for Columbia County. The use of county lines was to make the rule easy of enforcement in the political jurisdictions affected.

Mr. Kowalczyk alluded to a recently completed study of the Los Angeles Basin which cites reduced SO<sub>2</sub> emissions as the single most effective measure in the reduction of particulate emissions in that area.

The conclusions and recommendations of staff were predicated on a lack of interference under federal energy allocation prerogatives.

It was staff's recommendation the proposed OAR Chapter 340, Section 20-010 which would prohibit the availability or use in Multnomah, Clackamas, Washington or Columbia Counties of residual fuel oil whose sulfur content by weight exceeds 0.5%. This limitation would take effect January 1, 1979. The recommendation included deletion of county areas where refinery permit applications were disallowed.

Mr. Cannon noted that the rule as proposed is not linked with the CIRI permit application and, should the application be refused, would possibly have to be repealed for lack of available low sulfur fuels.

Mr. Kowalczyk then proceeded to Agenda Item K, the CIRI application for an air contaminant discharge permit, presenting staff's recommendation that the CIRI permit issue for the Phase I facility on the condition that the applicant make available 10,000 bbls/day of 0.5% sulfur content residual fuel and that the Clean Fuels Policy be adopted as proposed. The staff recommended that the CIRI Phase II permit be denied for lack of sound data base and lack of jurisdiction to grant a permit for more than five years. Minor changes in the proposed permit were requested by the applicant.

Dr. Phinney requested that the permit be altered to include metric equivalents.

Mr. McPhillips opened the meeting to public testimony, requesting for the sake of brevity that all written matter be summarized and submitted and that each organization limit itself to one spokesman.

Mr. Lloyd Anderson of the Port of Portland noted the Port's written support of the Clean Fuels Policy and called upon Mr. Walt Hitchcock, the Port's Environmental Coordinator to elaborate on the Port's position. It was the Port's position that the need for the Clean Fuels Policy was well documented, independent of the proposed refineries, and imminent in the light of the proposed refineries. The Port cited the Fuels Policy as a guarantee of SO<sub>2</sub> ambient air standards for the future and urged consideration of SO<sub>2</sub> emissions be dropped from the new or expanded source rule for the PMSAQMA. It was noted that CIRI supplies of low sulfur fuel in the area would encourage competitors also to make conforming fuel available.

Mr. Anderson noted that the CIRI application would result in increased shipping between Astoria and the Port which would, in turn, insure the maintenance of the channel. The Port supported the application as aiding a capital-intensive use of the Rivergate area which, in view of highway access to the area, was considered as an alternative preferable to labor-intensive development. The parent company of the applicant was cited as financially and environmentally responsible. Finally, the Port cited economic benefits in terms of fuel supply, tax base, construction activity, and secondary economic activity which the refinery would bring.

Mr. Edward W. Reed of the U.S. National Bank of Oregon supported the proposed CIRI installation as beneficial to Oregon's economy not only in terms of its direct impact but in terms of its multiplier effect along dimensions of income and employment. In response to inquiry from Dr. Crothers, Mr. Reed stated his employer to be in support of the Clean Fuels Policy despite the fact that the Clean Fuels Policy would cost the bank and others money.

Mr. Thomas Guilbert spoke neither for nor against the proposed actions. He reminded the Commission that certain federal rules and laws should be considered in predictions as to the success of the Clean Fuels Policy.

He cited the Emergency Petroleum Allocation Act of 1973 (7 U.S.C. § 751-756) as authority for the federal energy administrator to take any fuel produced anywhere in the country and send it elsewhere for use. He was said not to have done so to date however. It was noted that the federal Energy Administration Act renders the administrator's actions preemptive of any conflicting state or local actions. Chapter 13, Volume 32-A of the Code of Federal Regulations was designed, Mr. Guilbert recalled, to insure the optimum use of the limited supplies of low sulfur petroleum products in a manner consistent with both the Clean Air Act as amended and the EPA's Clean Fuels Policy. The Energy Supply and Environmental Coordination Act of 1974 (ESECA), it was noted, empowers the federal energy administrator to require any firm burning petroleum to convert to coal. President Ford was reported to have asked that the provisions of ESECA be strengthened to allow conversion to coal to be required even if a primary standard in the Clean Air Act is violated where no direct health hazard for a particular installation's conversion can be proved.

What Mr. Guilbert referred to as a second group of problems was the area of EPA Significant Deterioration Regulations and their class designations. Of the three refinery applications on the Commission agenda, each would use substantially all of the Class II increment and preclude either future Class I designation or added major sources at a Class II level. The Class II increments only apply when the baseline air quality is greater than one increment below the secondary standard, it was contended. Therefore, Mr. Guilbert argued, without knowing the baseline adequately, it is not possible to predict whether the refineries would comply with EPA requirements. It was noted that EPA Class II standards are essentially based on present national secondary Air Quality Standards. For SO<sub>2</sub>, this standard was reported to be 80 ug/m<sup>3</sup> on a national average. This used to be 60 ug/m<sup>3</sup> when the Clean Air Act Implementation Plan for Oregon was adopted with the 60 level. This latter Act would, in Mr. Guilbert's view, necessitate a level of at least one increment below the 60 to avoid violation of the Significant Deterioration requirement. Once again, the baseline data is missing, he contended.

Addressing himself to what he termed the "sulfate question," Mr. Guilbert alluded to three pending reports which are expected to deal with the sulfate problem, pointing to sulfur containing particulates as a greater environmental culprit than SO<sub>2</sub> emission. This may well lead to a national sulfate standard requiring reduced numbers in terms of SO<sub>2</sub> emissions (which are the key to reduced sulfate emissions). Catalytic converters on autos were said to exacerbate the problem further.

Mr. Roger Ulveling of CIRI introduced speakers representing the applicant and offered for the record a copy of a January 14 letter from the applicant requesting wording changes in the proposed permit. The applicant was said to be in understanding with the requirement that the Second Phase of the original permit could not be under consideration at present due to the five-year permit limitation.

Mr. Joseph Pelletier from Pacific Resources, Incorporated of Honolulu, Hawaii spoke for the company's president, Mr. James F. Gary, pointing out that the company was a parent company to the applicant, CIRI. Mr. Pelletier cited his company's successful efforts to provide clean fuels in Hawaii as demonstrative of its ability to provide environmentally compatible fuels to Oregon through its proposed Rivergate site, a site chosen because it had proven to be the most desirable of several investigated. It was further mentioned that many additional refineries would be needed on a national basis and that company policy was to serve local needs first and thus afford Oregon some assurance of clean fuels in the coming energy crunch. It was emphasized that the proposed plant constituted the latest technology in clean fuels design and posed a desirable alternative to requiring fuel consumers to put control devices at the points of consumption. The company withheld commitment as to the final output in terms of product type, stating a desire to await the development of markets for various products.

Mr. William Blosser summarized from a prepared statement the applicant's position with regard to the installation's projected environmental impact. He discussed the use of tankers to bring the crude oil up the Columbia, the use of pipeline and other means to remove the finished products, the effects of construction and operation on the economy, the aspects of water discharge, wildlife, displacement, traffic, electricity usage, compatibility with neighboring land use, air quality, aesthetics, and oil-spill contingency arrangements. In general, it may be said, Mr. Blosser gave the proposed facility a favorable review on all the above subjects.

Mr. Richard S. Reid spoke on behalf of the applicant, addressing himself to the air quality aspects of the proposed facility. He assured highest and best practical standards and isolated particulates and SO<sub>2</sub> as the two predicted emissions of major concern. With regard to particulate emissions, he opined that the installation would meet the requirements of the interim rule for the PMSAQMA without a trade-off in terms of new source maximums (107 tons/year). He noted that a trade-off of 683 tons/year was needed to bring the applicant's projected SO<sub>2</sub> emissions within the rule's allocation provisions. This could be met, he said, by a Clean Fuels Policy limiting sulfur weight to 1.3%. It was noted that reduction of the maximum sulfur content would lead to an even smaller average content. With regard to ambient air concentrations, Mr. Reid argued that the projected .21 ug/M<sup>3</sup> increase at the downtown monitoring station was exceeded by the allowable .25 ug/M<sup>3</sup> increase for any one source and would be further reduced by a Clean Fuels Policy. He stated a similar relationship existed for the projected SO<sub>2</sub> increase (2.1 ug/M<sup>3</sup> predicted and 2.8 ug/M<sup>3</sup> allowed). Finally, Mr. Reid noted that recent information indicates that reduction of SO<sub>2</sub> emissions results in substantial reduction in suspended sulfate particulates.

Mr. Irwin S. Adams of the North Clackamas County Chamber of Commerce addressed the Commission as spokesman for its membership, citing authority from seven local industries and one water district to support the applicant's proposed permit. In response to Dr. Crothers, Mr. Adams noted that a Clean Fuels Policy not incompatible with energy requirements was supported by the Chamber.

A written statement by Mr. W.E. Kuhn of the Industries Committee of the Portland Chamber of Commerce supported the proposed permit.

Mrs. Ruth Spielman of the Portland League of Women Voters spoke in support of the Clean Fuels Policy and the proposed CIRC permit. She expressed concern over possible increase in truck traffic due to the presence of the refinery and requested the staff begin work on a Clean Fuels Policy for home heating fuels.

Mr. Herbert Bowerman of Robert Brown Associates elected to defer comment on the fuels policy until discussion of the Cascade Permit (Agenda Item L) was begun.

Mr. Carl M. Petterson spoke on behalf of Northwest Natural Gas, expressing objection to Special Condition Seven of each of the three proposed refinery permits on the agenda. It was Mr. Petterson's contention that this condition imposed an unwarranted 24-hour production limit on the applicants, one he considered both superfluous in the light of the direct pollution controls and not fulfilling of any environmental goal. It was argued that the limitation indirectly hampered the Synthetic Natural Gas production proposed by the Northwest Natural Gas Company which, in peak periods, would require more production of the refineries.

In response to Mr. McPhillips, a spokesman for CIRC indicated that it was the applicant, not the Commission, that set the output limit. Mr. McPhillips then strenuously asserted that increased output of a facility corresponded to increased pollutants and presented a new environmental circumstance which should be accompanied by Commission jurisdiction for further review. It was noted that increased production with no increase in pollutants could occasion a new permit.

Mrs. Sharon Rosso spoke against the policy of accepting trade-offs offered by new sources, arguing that the impact of CIRC will be most heavy in North Portland while the beneficiaries of the proposed trade-off will be the residents of the entire PMSAQMA who, for the most part, won't share in the detriment.

Mrs. Rosso further contended that a refinery in the PMSAQMA was inappropriate where existing suppliers can supply the area with low sulfur fuels on the same time schedule as CIRC proposes. Mrs. Rosso contended that the Department's figures on the Clean Fuels Policy and the CIRC proposal were inadequate to support its projection of successful results. Finally, Mrs. Rosso questioned whether the Commission would be virtually compelled to issue a more lenient permit in 1980 when the hundred million dollar installation was completed if it proved unable to comply with the original permit. She cited the Harborton installation as an example of such a happenstance.

Mr. Kip Howlett, counsel for the Western Environmental Trade Association (WETA) admonished that, while the refinery was needed, the added cost of its low sulfur fuel under the Clean Fuels Policy might force plant closings or other economic detriment upon local fuel users. Also expressed was the fear that the Portland refineries, with their more expensive fuels, would corner the Oregon market in areas outside Portland, indirectly imposing a cost on consumers in regions other than the problem region. Mr. Howlett noted the Proposed Regulation for the Prevention of Significant Air Quality Deterioration as published in the August 27, 1974 Federal Register would preclude the location of a major energy producing facility in a Class I Region, requiring location in a Class III Region. It was argued that the SO<sub>2</sub> problem in the area might be a lesser problem than is supposed. The Association was said to support controls based on the full industrial development of the area in question. The WETA board recommended that the Commission postpone the adoption of Clean Fuels Policy and approve the addition of oil refining capacity to the area's economic base. Dr. Crothers and Dr. Phinney expressed curiosity about the Association's use of the word "environment" in its title.

Mr. Tom Donaca of the Associated Oregon Industries (AOI) agreed with the position expressed by WETA and added that the SO<sub>2</sub> data being used possibly should be discounted in favor of future expected data. He argued that the Department's projections on fuel consumption were oblivious to a reduction in future consumption that was expected by the AOI. Mr. Donaca reiterated Mr. Guilbert's admonition that ultimate control over the use of energy lies with the federal government. It was urged that the rule be expressed in the form of a Commission "intention" or, in the alternative, that the Commission place the Clean Fuels Policy on the agenda of each September Commission Meeting from now until 1978. Parenthetically Mr. Donaca expressed apprehension that the Director's recommendation, if approved, would result in a state-wide 0.5% sulfur limit, were all three refineries refused permits. Mr. Ray Underwood, Chief Counsel to the Commission, noted that he could not share Mr. Donaca's apprehension in this regard while emphasizing the Commission's option to correct any supposed defect of drafting upon its own motion.

Mr. James Penton, on behalf of Locals 3010, 6380 and 8175, United Steelworkers of America, opposed the proposed CIRI permit contending against adding SO<sub>2</sub> emissions in the Rivergate area. It was argued that existing industries, in the event of a Natural Gas Shortage and resulting conversion to heavy fuel oils, would result in emissions exceeding the amount allowable by the interim PMSAQMA rule. Therefore it was recommended that the remaining airshed of the Rivergate area be reserved or placed on a priority basis to allow continued operation of existing industry. The welfare of not only the union membership at Oregon Steel Mill Mid Rex and Oregon Steelmills, but of related industry workers was said to be of concern.

Douglas Lee of the Multnomah County Department of Environmental Services spoke for the County. The County recommended that the Clean Fuels Policy be adopted without regard to the permit application of CIRI because it was viewed as both sound and feasible through dealing with existing suppliers of fuel. Mr. Lee lamented the lack of appropriate land use planning and review prior to the construction of the refinery. The Commission was urged, as the only body whose action was required, to consider the sagacity of the proposed CIRI facility in the light of the jobs per acre it would provide in the waning supply of industrial land. The Commission was asked to consult with CRAG and the LCDC on this question. Further, the County expressed apprehension of oil spills that might result from the proposed use of 450,000 bbl tankers to bring in crude oil up the Columbia River.

Mr. Al Scheel, a resident of North Portland, noted that the Rivergate North Portland Peninsula Plan used by the Port of Portland was to be in effect only until 1972. Its replacement has yet to be adopted, leaving the door open in the interim for whatever the Commission approves. Mr. Scheel lamented the lack of representation of the North Portland residents in the planning of the use of the land there. CIRI was argued to be a premature proposal in the absence of a comprehensive plan adopted with the residents involved. Turning to CRAG's suggestion that a greenway for recreational pleasure be reserved along the Columbia Slough, Mr. Scheel argued that this suggestion would not be well served by less than 250 feet of leeway between the slough and the fence of the proposed CIRI installation. Mr. Scheel contended that the area was not in need of a refinery because: 1) existing suppliers of fuel have the ability to increase their capacity if need be; 2) the goal of consumers should be reduced dependence on oil; and 3) the federal regulations coupled with the applicant's marketing policies rendered the in-state location of the refinery of no advantage to Oregon users. It was contended that the purely financial nature of the CIRI proposal rendered a financial "trade-off" appropriate. It was recommended that CIRI be required to assist in opening, cleaning, and dyking the Columbia Slough and improving the area roads. Mr. Scheel also urged the permit be amended to require that the applicant make available for sale to Multnomah, Clackamas, and Washington Counties at least 20,000 bbls of #2 distillate and gasoline and make available no fuel above the residual level to consumers intending conversion to other energy forms with a loss factor greater than 60%. In general, Mr. Scheel urged that the applicant be allowed to build only if it does so in a manner beneficial to the area.

Dr. George A. Tsongas of Portland State University addressed to the Commission his concern that SO<sub>2</sub> emission was neither a present nor expected problem in most of the Portland airshed and therefore did not justify the expense of the Clean Fuels Policy to consumers. He noted that the staff's projected \$3 per capita yearly cost was exceeded in urban California due to multiplier effects when a 0.5% limitation was enacted in that area. He urged that economic and energy resources available for clean air be directed at carbon monoxide and particulates, rather than SO<sub>2</sub>.



Upon Dr. Crothers' request, Mr. McPhillips ordered the record left open to give staff an opportunity to respond to Dr. Tsongas' statement. The hearing on the issues of the Clean Fuels Policy and the CIRI air contaminant discharge permit application was closed with leave to all parties to add written materials to the record within ten days. The above action was necessitated by the lateness of the hour, and the comprehensive nature of preceding testimony. It was regretted that time did not permit oral statements by all who wished to offer the same.

PUBLIC HEARING RE: APPLICATION OF CHARTER ENERGY COMPANY FOR AIR CONTAMINANT DISCHARGE PERMIT

Mr. Jack Payne of the Department's Northwest Region presented the staff's report and conclusions with regard to the proposed permit. It was concluded that the proposed permit would not exceed the most stringent air quality rule in the area, the January 6, 1975 EPA rule for the prevention of Significant Deterioration through particulate and SO<sub>2</sub> emission. It was found that the facility would use all of the allowable particulate and 92% of the allowable SO<sub>2</sub> deterioration under the applicable (Class II) deterioration limits. It was recommended that a Clean Fuels Policy, with the applicant's agreement to supply at least 2000 barrels per day of the required fuel and burn this fuel also, would be an appropriate measure. The installation appeared able to meet noise and odor standards and posed no insoluble problems in terms of solid waste or effluents into the Columbia. Oil spill regulations were being observed in the planning of the refinery.

Mr. Fred Foshaug, Chairman of the Columbia County Board of Commissioners, addressed to the Commission the Board's recommendation that the Charter permit be granted with no production restrictions and minimal reporting or other activity under EPA and DEQ rules. Request for approval of the Cascade permit was also made.

Mr. Herbert Bowerman of Robert Brown Associates testified on behalf of the applicant. He offered a compendious written document to the Commission and sought the Commission's consideration of the points set forth in the document. Mr. Bowerman pointed out his prediction that the demand for gasoline would cease its historic yearly increase, and, perhaps, decline. The applicant's refinery was, it was stated, based on the concept of using North Slope Alaskan Crude, distilling the same, separating the results, and treating them for customer usage and pollution requirements. He read into the record a letter from the federal energy administration applauding the plan to produce more of what is now imported instead of producing gasoline. Mr. Bowerman pointed out that the product range sought would keep the applicant's refinery simple. It would operate without cracking facilities, produce only the gasoline native to the crude oil and sell the remaining residual and distillate fuel oil (whose demand is expected to increase). Turning to the sulfur content of the fuel oil, he noted that the applicant did commit itself to 25,000 bbl/day of 0.5% sulfur residual. The suggestions included a plan to install an additional 20 million dollars in equipment which would increase the refinery's fuel use by 25% and its power consumption by 33% to get the job done. The alternative was to divert the most sulfur-laden third of the fuel oil and use the remainder for 0.5% conforming fuel. The former third, however, must be sold to some customer who can use fuel with a sulfur content of over 2%. It was reported that tentative arrangement

might be made to sell this to Reichold Chemical. This would require someone else's capital investment in any event. The financial aspects involved either way, it was argued, warrant consideration of a staged reduction schedule to enable the 0.5% level to be reached.

In response to Mrs. Hallock's inquiry, Mr. Bowerman noted that a 0.5% sulfur policy affecting any substantial portion of Oregon consumers would force Charter to produce 0.5%; as the 1.0% sulfur content residual fuel was not, in his view, saleable in any alternative market. Dr. Crothers noted that some areas of the State could use 1.0%. In response to Dr. Crothers, Mr. Bowerman was unable to state if Charter would go forward with its plan in the event permits were granted the other refineries.

Mr. Bowerman argued with regard to economic advantages that there was no difference to the State whether a refinery was located in St. Helens or in Portland.

With regard to emissions, he noted that diesel fuel would be the basic fuel used in the refinery. This, he said, would be the best fuel available for environmental concerns.

Mr. McPhillips noted his hope that the applicant's permit would be approved or denied by the next monthly Commission meeting.

Mr. Wallace Gainer, Jr. of the Port of St. Helens spoke in support of the proposed permit and alluded to a conversation with the President of Charter wherein he was assured it was Charter's intention to proceed with its construction promptly upon the issuance of the required permits.

(Mrs.) Joyce Tsongas, speaking on behalf of the Citizens for State Planning, wished to raise questions as to why she could find no one in the DEQ who would take the responsibility for being the "refinery expert." She said one was needed since the idea of issuing permits to refineries is one new to Oregon and, in Mrs. Tsongas' view, one requiring objective, expert analysis. She suggested the process of permit consideration be prefaced by: 1) thorough investigation of the legality of permit conditions regarding production limits or quotas; 2) determination of whether the applicant has explored marketing outside the Oregon-Washington area; 3) deferring any permit applications until arrival of new air maintenance computer modeling; 4) to obtain expert guidance; 5) to prepare state-wide plans for refinery siting; and 6) to adhere to them.

Mr. Joh Frewing, speaking on behalf of the Oregon Clean Water Project, a citizen's group, addressed himself to the water aspects of all three refineries on the basis of the inclusion of comments about the water aspects of the proposed refineries in the staff reports for all three permits. He lamented an inability to find documentation to support the staff's findings other than the figures submitted by the applicant. He urged that the hearings be reopened on the NPDES draft permits after the thirty-day public review of the permits is completed, noting that he had not yet had opportunity to see the draft permits. Specifically he wished the Department to determine whether it will require carbon adsorption to remove phenol from the effluent.

Mr. Frewing also noted that the staff report on waste water flow appeared to exceed the EPA guidelines for topping refineries. Complaint was entered over what Mr. Frewing perceived to be a failure to adequately discuss in-plant techniques for dealing with waste water, maintenance procedures, conservatism in design, storage capacity for upset occurrences, and other parameters of effluent control. The oil transport hazards peripheral to any refinery were, in Mr. Frewing's view, not emphasized sufficiently in view of their gravity. The possibility of trade-offs in the areas of Columbia River oil traffic and in the area of waste oil rerefining capability.

Mr. McPhillips concluded the hearing and the option was reserved to interested parties to submit written material to the record in the next ten days.

PUBLIC HEARING RE: APPLICATION OF CASCADE ENERGY INC. FOR AIR CONTAMINANT DISCHARGE PERMIT

Mr. Jack Payne of the Department's Northwest Region presented the staff report. It was staff's conclusion that the proposed refinery would meet all existing requirements with regard to air and water quality as well as noise and odor abatement. The most difficult air quality standard was the EPA requirement with regard to Significant Deterioration in a Class II area. The allowable deterioration would be consumed by the proposed refinery to the extent that trade-offs or reclassification of the area would have to precede additional substantial installations in the vicinity of the refinery.

Mr. Larry Schreiber spoke on behalf of the applicant stressing its financial soundness, intent to preserve Oregon's fuel supplies in a competitive marketplace, and desire to cooperate in seeing that the installation meets all required environmental standards.

Mr. Waldemar Seton a professional engineer spoke on behalf of the application noting that there were details of the proposed permit which the applicant wished to renegotiate. He presented a prepared statement to the Commission elaborating on these points.

Mr. Glen Odell, a consulting engineer, addressed the Commission with regard to an air quality problem which surfaced in the computer modeling for projected emissions on the hillside south of the proposed refinery. Slides were shown to demonstrate the nature of the problem. It was argued in that dispersion modeling techniques with regard to the impact on the nearby hill were inappropriate. It was urged that the applicant be permitted to burn 75% residual fuel oil coupled with 25% refinery gas. This arrangement would, in Mr. Odell's plan, be replaced by the burning of distillate fuel upon those rare occasions when meteorological conditions (to be monitored from one of the installation's highest stacks) indicated impact on the hill from the major in-plant sources. Mr. Odell asserted that such arrangement would be of considerable economic benefit to the applicant, saving between \$1,000 and \$2,500 per day.

Mr. John Frewing contended that the air from the proposed refinery would not rise over the hills to the south, but would remain trapped in the valley, as in the case of pollutants in the Longview area. He lamented the effects of the installation on the U.S. 30 Scenic Turnout, opining that the applicant might appropriately answer monetarily for the loss of aesthetic value which, in Mr. Frewing's view, the proposed refinery would occasion. Oil spills were cited as a particularly dangerous threat due to the downstream proximity of the Columbia River Wildlife Refuge. Mr. Frewing alluded to Oceanographic Commission studies of Washington on Puget Sound as showing that one oil spill of 250,000 gallons every four years could be expected. This potential was exacerbated by the proposed berthing near the major navigation channel. It was Mr. Frewing's contention that off-stream berthing was the modern requirement and should be observed. The effluent phenols Mr. Frewing expects from the proposed plant were lamented due to their effect on the fish (oily flesh and taste). DEQ was asked to consider ozone treatment, coagulation treatment, and total organic carbon analysis (as opposed to simply BOD 5 analysis). Finally Mr. Frewing urged that any cost benefit analysis include the 15% lower area salaries for Oregonians attributable to Environmental Quality.

Mr. McPhillips closed the hearing, reserving opportunity for interested parties to offer written materials to the record for ten days. The EQC meeting was adjourned.

MINUTES OF THE SIXTY-FIFTH MEETING

of EQC

January 24, 1975

APPENDIX A

Water Quality Control - Water Quality Division ( )

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
12-1-74	USA	Cedar Mill Trunk Project - C.O. #1-5	Approved
12-2-74	CCSD #1	Phase II - Interceptor Sewers - C.O. #7	Approved
12-5-74	Ashland	Mt. Ranch Subdn. - Phase I Sewers	Prov. App.
12-5-74	Ashland	Thunderbird Hts. Subdn. Sewers	Prov. App.
12-6-74	Baker	Projects 12 through 18, San. Sewers	Prov. App.
12-9-74	Pendleton	C.O. No. 2 - Mt. Hebron Int. Project	Approved
12-10-74	Lowell	Parker Lane Sewer Project	Prov. App.
12-10-74	Hood River	San. Sewer Ext. Dist. 5, Div. 10 (Project No. 2)	Prov. App.
12-10-74	Springfield	E-Z Living Estates Sewers	Prov. App.
12-10-74	Brookings	Easy Manor Drive Sewer Ext.	Prov. App.
12-10-74	Astoria	C.O. 20, 21 & 22. Sch. A	Approved
		C.O. 7. Sch. B	Approved
		C.O. 8 & 9. Sch. C	Approved
12-10-74	USA	C.O. No. 3 - Franno Cr. Int.	Approved
12-12-74	Warrenton	C.O. No. 2 - E. Warrenton Int. Project	Approved
12-17-74	Coos Bay	C.O. No. 1 - STP Project	Approved
12-18-74	Florence	Shield Prop. Sewer Ext.	Prov. App.
12-18-74	Eastside	C.O. #1 - P.S. & Pressure Sewer Project	Approved
12-19-74	Central Point	Hull Subdn. Sewer	Prov. App.
12-23-74	USA-Sherwood	C.O. Nos. 1 & 2 - Sherwood Trunk Sewer	Approved
12-26-74	USA-Metzger	Metzger Modification 0.95 MGD Factory Built STP	Prov. App.
12-26-74	Astoria	C.O. Nos. 23 & 24 Sch. A	Approved
12-26-74	Hood River	Septage Facilities for Hood River STP	Prov. App.
12-26-74	Skyline West S.D.	Stage I Expansion of STP adding 0.769 Acre Lagoon, Chlorinating and Flow Metering	Prov. App.
12-26-74	Bandon	Ninth & Delaware Sanitary Sewer	Prov. App.
12-30-74	Milwaukie	Interceptor Sewer Schedule II	Prov. App.
12-30-74	Eugene	Willagillespie Area Sewers	Prov. App.

Water Quality Control - Water Quality Division - Industrial Projects (3)

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
12-24-74	Jackson County	Mr. Pitt Dairy, animal waste control and disposal system	App. Denied
12-24-74	Jackson County	Rouhier Farm, animal waste control and disposal system	Prov. App.
12-24-74	Jackson County	Straube Dairy, animal waste control and disposal system	Prov. App.

Water Quality Control - Northwest Region ( )

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
12-3-74	Canby	N. Cedar Street from 5th to Dahlia Place sanitary sewer	Prov. App.
12-4-74	Gresham	Between S.E. Stark Street S.E. 221st Ave. sanitary sewer	Prov. App.
12-11-74	CCSD#1	Estella Avenue sanitary sewer extension	Prov. App.
12-18-74	Oregon City	Oregon City Jr. High School sanitary sewer	Submitted to Portland Metro. Area Local Gov. Boundary Com.
12-23-74	Gresham	Willowbrook-Phase II sanitary sewers	Prov. App.
12-23-74	Central County Sanitary Service Dist.-Inverness (Multnomah Co.)	Argay Square on N.E. 122nd South of N.E. Sandy Sanitary sewers	Prov. App.
12-24-74	Oregon City	Roundtree Court sanitary sewers	Prov. App.
12-31-74	CCSD#1	United Grocers Warehouse complex sanitary sewers A-1 & A-2	
12-31-74	USA (Metzger)	Timmins; S.W. 80th Ave. sanitary sewer	Prov. App.
12-31-74	USA (Aloha)	Shadow Wood III; S.W. 204th Ave. sanitary sewer	Prov. App.

Water Quality Control Industrial Projects - Northwest Region

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
12-10-74	Tillamook County	Animal Waste Disposal System and Holding Tank for Reihl Dairy Farm	Approved
12-18-74	Portland	Zidell Oil Water Separator	Approved
12-20-74	Portland	Stauffer Chemical Co. Tax Credit T-552, "Lined Pond with Pump".	Approved

Air Quality Control - Air Quality Division (17)

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
12-6-74	Washington County	<u>Washington Square - 300 Space temporary employe parking</u>	Cond. App.
12-9-74	Douglas County	<u>Garden Valley Interchange I-5 freeway</u>	A-95 Review Completed
12-9-74	Curry County	<u>Brookings Plywood Veneer Dryer modification (low Temp. operation)</u>	Approved
12-9-74	Jackson County	<u>Olson-Lawyer Timber Installation of scrubber on hogged fuel boiler</u>	Approved
12-10-74	Multnomah County	<u>Pietro's Pizza Parlor - 108 space joint use parking facility</u>	Req. info.
12-13-74	Washington County	<u>Somerset West - 172-space parking facility</u>	Req. info.
12-17-74	Multnomah County	<u>Easthill Church 141-space parking facility</u>	Cond. App.
12-24-74	Coos County	<u>Cape Arago Lumber Source Test</u>	Approved
12-24-74	Washington County	<u>Pacific Northwest Tennis Club 115 space parking facility</u>	Req. info.
12-24-74	Multnomah County	<u>Sommerwood 588 space parking facility</u>	Req. Info.
12-26-74	Lane County	<u>Mahlon Sweet Field - 100 space facility, LRAPA approval</u>	Approved
12-26-74	Lane County	<u>Motel 6 - 86 space parking facility LRAPA approval</u>	Approved
12-26-74	Washington County	<u>Argay Square Commercial Center 154 space parking facility</u>	Req. Info.
12-26-74	Multnomah County	<u>LDS Church, 182nd Ave. 174 space parking facility</u>	Cond. App.
12-30-74	Umatilla County	<u>Louisiana Pacific, Pilot Rock Source test</u>	Approved
12-31-74	Klamath County	<u>Weyerhaeuser Company Source test</u>	Approved
12-31-74	Linn County	<u>American Can Company Installation of Lime Mud oxidation system</u>	Cond. App.

Air Quality Control - Northwest Region (

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
12-9-74	Multnomah Co.	<u>Triangle Milling Dust control</u>	Approved
12-9-74	Clackamas Co.	<u>Oregon Portland Cement Co. New Agg. lime storage bin</u>	Approved
12-9-74	Multnomah Co.	<u>Norwest Publishing-Control of heatset ink dryer</u>	Approved
12-9-74	Clackamas Co.	<u>Oregon Portland Cement roadway paving</u>	Approved
12-10-74	Multnomah Co.	<u>Ross Island Sand &amp; Gravel Concrete Batch Plant</u>	issued permit
12-12-74	Multnomah Co.	<u>Medford Corporation Green wood chip storage and distribution center</u>	Issued proposed permit

Air Quality Control - Northwest Region (continued...)

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
12-17-74	Multnomah Co.	<u>Western Farmers - Dust Control</u> of Truck Receiving	Approved
12-17-74	Multnomah Co.	<u>Resource Recovery By products</u> paper Classifier	Approved
12-24-74	Multnomah Co.	<u>Columbia Independent Refinery</u> Oil Refinery	issued proposed permit
12-24-74	Columbia Co.	<u>Cascade Energy, Inc.</u> Oil Refinery	Issued proposed permit
12-24-74	Columbia Co.	<u>Charter Energy Company</u> New Oil Refinery	Issued proposed permit
12-26-74	Multnomah Co.	<u>Portland Steel Mills</u> New Steel Mill	issued permit
12-30-74	Multnomah Co.	<u>Chamberlain's Pet Crematorium</u> Cremation Incinerator	Issued permit

Land Quality - Solid Waste Management Division (4)

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
12-3-74	Lane County	<u>Florence Sanitary Landfill</u> Existing Site Operational Plan	Approved
12-23-74	Jefferson County	<u>Camp Sherman Container Site</u> New Site Construction & Operational Site	Approved
12-30-74	Klamath County	<u>Weyerhaeuser Co., Bly</u> New Industrial Site (Letter Authorization)	Prov. App.
12-31-74	Wallowa County	<u>Boise Cascade, Joseph</u> Existing Industrial Site Operational Plan	Approved



MINUTES OF THE SIXTY-FOURTH MEETING  
OF THE  
OREGON ENVIRONMENTAL QUALITY COMMISSION

December 20, 1974

Pursuant to the required notice and publication, the sixty-fourth meeting of the Oregon Environmental Quality Commission was called to order at 9:00 a.m. on Friday, December 20, 1974. The meeting was convened in the Redwood Room of the Swept Wing Restaurant at 1212 S.E. Price Road in Albany, Oregon.

All commissioners were present including: Mr. B.A. McPhillips, Chairman; Dr. Morris Crothers; Dr. Grace S. Phinney; (Mrs.) Jacklyn L. Hallock; and Mr. Ronald M. Somers. Staff members present included Kessler R. Cannon, Director; Ronald L. Myles, Deputy Director; Assistant Directors Frederick M. Bolton (Enforcement), Wayne Hanson (Air Quality), and Kenneth Spies (Land Quality). Chief Counsel Raymond P. Underwood and several additional staff members were present.

MINUTES OF THE NOVEMBER 22, 1974 COMMISSION MEETING

It was MOVED by Mr. Somers, seconded by Mrs. Hallock, and carried to adopt the minutes of the November 22, 1974 meeting as distributed.

PROGRAM ACTIVITY REPORT FOR NOVEMBER, 1974

The reading of the activity report was informally waived. Mr. Cannon noted that the AMAX permit application was incomplete. Mr. Somers commended the volume and currency of activity but noted delay on the AMAX proposal. He suggested that consideration of the proposal be begun anew in terms of: a) spring arrival of needed baseline data on environmental effects; b) possible zero fluoride emission feasibility with new Alcoa process; c) irreversible nature of potential hazards; and d) effects of proposed industry on the Northwest power pool. It was MOVED by Mr. Somers, seconded by Mrs. Hallock and carried unanimously to conduct a rule-making hearing on a proposed rule which would designate as a Special Problem Area that area bounded by Youngs Bay Estuary, Fort Stevens State Park, and Fort Clatsop National Monument.

It was MOVED by Mr. Somers, seconded by Mrs. Hallock and carried that the activity report be approved as submitted. (summary attached as Appendix A)

It was MOVED by Mr. Somers, seconded by Dr. Phinney and Mrs. Hallock, and unanimously agreed that Director Cannon have the Commission's vote of confidence based on his past performance.

VEHICLE INSPECTION PROGRAM - STATUS REPORT

Mr. Wayne Hanson and Mr. Somers called public attention to the mobile inspection unit situated in view of the meeting, noting it was available for examination and free testing. It was stated that after July 1, 1975, the program would entail a fee and would be mandatory for vehicle owners in Multnomah, Clackamas, and Washington Counties. Mr. Hanson and Dr. Phinney discussed the difficulties involved in evaluating the results of the inspection program on ambient air quality. It was noted that the cost to bring vehicles into compliance with the Department's interim standards was not prohibitive in most cases.

GOLD MINING IN OREGON-STATUS REPORT

Mr. Terry Westfall, biologist for the Southwest Region presented a series of slides depicting the various types and sizes of placer mining operations now in Oregon.

Mr. Somers expressed interest in the State Police and/or other state agencies as possible sources of assistance in maintaining compliance with NPDES permits.

It was strenuously objected by Mr. George Massie on behalf of the Gold Panners Association of America that manifold local, state, and federal agencies, in their enforcement of complex and nebulous standards, were unduly harassing the recreational miner. Mr. Massie noted that the country is in need of the gold and that voluminous recreational mining constituted the cleanest method of obtaining it. Mr. Cannon, Mr. Somers, and Mr. Westfall emphasized repeatedly that the Department's only concern was with turbidity caused by the operations; and that peripheral concerns with land removal, wildlife, and nuisance problems were not under discussion. Mr. Henry Speaker testified that he had been mining a great number of years and had seen no deleterious effect on fishlife or irrigation facilities. He opined that his operation enhanced surrounding plant and fish life. It was his contention that he was protected by the 1872 Mining Law and attempts to regulate or halt his operation were in derogation of his civil liberties. Mr. Cliff Everett testified that the Commission's adoption of standards on December 3, 1971, which discriminated against the commercial miner was a violation of Section 20, of Article 1 of the Oregon Constitution. He contended that the Department of Geology and Mineral Industries should have exclusive jurisdiction in mining affairs. In the face of repeated irrelevant comment, a point of order was made to close discussion with the assurance that Department personnel would meet with the miners in the future.

RULE-MAKING HEARING RE: PERMANENT RULE ON ALLOCATION OF AIR EMISSIONS IN THE PORTLAND METROPOLITAN AREA

After due publication and notice to all required parties the hearing was convened. Mr. John Kowalczyk of the Northwest Regional Office read the Director's recommendation.

Mr. Tom Donaca of the Association of Oregon Industries testified against the adoption of the rule. He stated concern that future improvements in the area's air quality resulting from improvement in Washington point sources would not be recognizable from current baseline data and could not, therefore, be credited to Oregon Industry. Dr. Crothers pointed out that the budget request for funds to improve data, a request supported by Mr. Donaca's group, would, if approved, equip the Department with data necessary to credit Oregon installations with any improvement attributable to Washington reduction in emissions.

Mr. Donaca also expressed concern that the temporary rule, if made permanent, would possibly be in conflict with the coming Significant Deterioration rules required by the EPA. He said Class II requirements are not yet fully understood and it is uncertain which state agency will be empowered to enforce the Significant Deterioration requirements.

Mr. Kowalczyk stated the Portland area to be in noncompliance with the Significant Deterioration requirements and, therefore, exempt from the provisions of that federal prevention program. With regard to other federal standards, Mr. Kowalczyk noted that the proposed rule's requirements exceeded these.

Written matter offered by Portland's mayor and Port Authority was noted for the record by Mr. McPhillips.

Mrs. Marianne Donnel of the Oregon Environmental Council questioned the exemption of sources emitting less than ten tons annually. Mr. Kowalczyk pointed out that such sources are still subject to the other standards for general air quality and that a deluge of exempt installations would result in reconsideration of the rule. Mr. Cannon noted that the proposed rule came about not to regulate small industry but due to the possibility of a small number of major installations resulting from the Port of Portland's current Rivergate policy.

It was MOVED by Dr. Phinney, seconded by Mrs. Hallock, and unanimously carried that the rule be adopted (OAR 340, 32.005 to 32.025).

BROWN'S ISLAND: MARION COUNTY SOLID WASTE-STATUS REPORT

The staff report indicates that the Brown's Island Fill will be unfit for further use on February 1, 1975. The selection of alternate solid waste disposal for the area now served by the Brown's Island Fill by the deadline is the problem immediately ahead. Mr. Russell Fetrow, Salem District Engineer presented the staff report and showed slides of the Brown's Island Fill and the surrounding area. Mr. Roger Emmons of Sanitary Services Co. Inc. reported that of the 240 tons deposited daily, less than 25% comes from the Santiam Canyon area.

Dr. Crothers stated that Bureau of Recreation approval for the use of a twenty-one acre site to the east of the present fill could not be obtained in time to prepare the site for use on February 1, 1975.

Mr. Harry Carson Jr., Chairman of the Marion County Board of Commissioners noted that the staff report was not in agreement with the County's information with regard to low spots on the old access road to the landfill. The County's information is that the old road is, in fact, below 128 feet in elevation in all but a short portion of it. Mr. Carson's position was that the first objection from the Department to the rebuilding of the new access road was May 9, 1974, after completion of the task.

Mr. Carson went on to state Macleay site was, in the view of the County, an adequate back-up site for periods when the Brown's Island Fill was isolated by floods, (projected to average four to six days per annum). The county proposed to lower the new road to an elevation of 136 feet and use the Macleay site for a backup. The cost estimate for this was \$15,500. It was proposed to extend the fill 400 feet north.

With regard to other suggested improvements at the Brown's Island Site, Mr. Carson noted that the Department had lead the county staff to believe that the flood danger represented by the 1973 flood had been cured by the removal of an upstream dike and the covering, rounding, and sloping of the west end fill area of the facility.

Mr. Carson stated that the County would be in opposition to any further costly studies without financial assistance from other agencies. Marion County objects to the raising of the old access road, reasoning that the estimated \$115,000 for this would be prohibitive. The county is opposed to shouldering the entire financial burden for the implementation and operation of the BOR site.

The County proposed the Department issue a new permit to allow extension of the present site four hundred feet north (toward the main channel of the river) this, in the county's view, could be accomplished by February 1, 1975. The use of the proposed 400 foot extension for fourteen months is a condition to the county's offer to expend moneys to lower the new access road. This would allow more time to negotiate with the BOR to obtain the twenty-one acres to the west. April 30, 1975 was the County's most optimistic estimate for the attainment of the BOR site.

In answer to a question from Mr. Somers, it was noted that half the \$72,000 cost of restoration after the 1973 flood was born by the federal government and that the present site is owned by private interests and leased to the fill operator.

In answer to a question from Dr. Crothers, Mr. Carson stated the County's estimate that the BOR site would last the county five years, affording time to study alternate methods of solid waste disposal. The County is exploring Resource Recovery as a long term goal.

Mr. McPhillips noted that, like the present one, many Oregon Landfills were in a crisis situation.

Mr. Vernon Bradley testified that the use of a river's flood plain for a landfill site is poor policy which should never have been initiated and should not now be perpetuated. He criticized the Clark and Ross Engineering Report as in error with regard to the feasibility of further diking and recommended that the access road be by trestle. Mr. McPhillips noted that the landfill on the flood plain in Yamhill County just above his home had proven satisfactory for two years. Mr. Bradley criticized the management of the Brown's Island Fill.

Mr. Somers questioned the proposition that the river stayed at nineteen feet or over for only a week of the year.

Mr. Glenn Hogg testified that he, his brother, and sister own the farm directly north of the present landfill in Polk County and have resided there for seventy years. During this time, Mr. Hogg reported, he has been a student of the river. He objects to the use of highly arable land for a landfill and objects to the failure to consider the evolution of the river in relation to Brown's Island. Recalling when the river was straight and deep from Halsey to Salem, Mr. Hogg noted that the gradual deposition of materials born from upstream has made the river shallow, forcing it to erode against its banks. Brown's Island, Mr. Hogg contends, is the site of present heavy erosion. He opined that future heavy flooding will result in the taking of part of Brown's Island as the river channel. A dike sufficient to prevent the same would have to run from Illahe Hills to below Salem and would endanger the properties on the other side of the river in case of floods.

Mr. Oliver Fursman who lives near Mr. Hogg objected to the fill on the grounds that it is unsightly, noisome, and malodorous. These conditions, he testified, impaired the operation of his residential apartment complex.

Mrs. W.D. Gwenn of the Dallas Highway spoke on behalf of her neighbors and others from the Eola Hills area of Polk County and objected to the failure of the present proposals to adequately deal with the river's flood cycle which, on a ten year basis, entails flooding more extreme than that encountered in 1974. She further objected to the debris that is continually left on the river banks from the fill. She contended that the fill was not covered with six inches of overlay except on occasion of inspection by officials. The result is a malodorous condition that affects her neighborhood.

Mr. William Schlitt operator of the landfill testified that he was as concerned with solid waste problems as anyone in the community and the community members should recognize that solid waste is everyone's problem. It was noted that the present overlay is material from Boise Cascade.

Mr. Fetrow noted that, on some days, inclemencies of weather render coverage impractical.

Mr. Roger Emmons, representing Mr. Schlitt for the Oregon Sanitary Service Institute, stated that he completely supported the County's proposal. Further, he suggested that a short trestle on the new road is not necessary. He strenuously asserted that no alternatives to the county plan are available, enumerating the impediments to the several alternatives that have been under discussion. Mr. Emmons noted that under current conditions, it takes more than one year to get additional trucks and these were needed for any distance hauling to alternate sites. He stated that the proposed four hundred foot extension was two hundred feet less than the original plan for the use of Brown's Island. He added that the operator would be willing to help Marion County with the proposed road alterations. It was noted that, except for Whiteson and Coffin Butte, every site in Western Oregon is on a flood plain.

Dr. Crothers pointed out that Mr. Schlitt is reputed to be one of the best landfill operators in Oregon.

In response to Dr. Crothers' questions, Mr. Emmons said three to ten years would be the projected time for the implementation of a satisfactory long-term, solid waste disposal system involving resource recovery. This would eliminate 75% by weight of the solid waste. He asked the Department to institute studies on the feasibility of dumping the 25% residue in the gravel pits. In response to a question by Dr. Phinney, Mr. Emmons stated that experiments with source separation had shown it to be too costly, without sufficient public participation, and no help in the disposal of putrescibles. The Environmental Protection Agency holds forth, according to Mr. Emmons, for the source separation of only cardboard and newspapers.

Dr. Phinney, noting that no action is required of the Commission, urged the Department to proceed along the lines set forth and also urged that, as soon as the BOR site is ready, disposal to the North of the present site cease.

Mr. McPhillips noted that the landfill adjacent to his home is covered and well cared for and opined that no sufficient reason is apparent for a failure in this respect on Brown's Island. He requested surveillance of the fill.

#### TELEDYNE WAH CHANG, ALBANY - STATUS REPORT

Mr. Kent Ashbaker read the summary and conclusions of the staff report, indicating that the permittee, Teledyne Wah Chang, had expanded its operations, causing increased emission in violation of its permit. It was contended this was done despite the failure of programs to reduce the effluent discharge into the public waters.

Mr. S.A. Worcester, representing the permittee, testified that the permittee had not expanded production until eleven months after its notification to the Department that it so intended. He argued that expanded production consisted of increasing the number of columns, not the increased use of on-line separation columns. Mr. Worcester stated that the permittee could not meet the 2000 pounds per day interim ammonia emission limit until June 1975. He cited unforeseen failure in the ammonia concentration unit designed to meet the limits. He strenuously insisted that the permittee had not acted in bad faith with relation to its permit.

Mr. McPhillips stated that, in his view, the gravamen of the matter was increased discharge, not increased production.

In response to Mr. Worcester's statement that the permittee was in competition with another plant located in West Virginia which had no controls whatsoever, Mr. Somers noted that West Virginia did not have a tax credit available for such efforts. Mr. Worcester rejoined that it was unwise for the permittee to attempt to "put the problem to bed with money."

In response to questions from Mr. Somers, Mr. Worcester conceded that part of the malodorous condition of the air in Albany was owing to the permittee's operation.

In response to a question from Mrs. Hallock, Mr. Ashbaker stated that the primary violation initiated in April 1973 and had gradually increased beyond the permit limit since then.

Mr. McPhillips noted that he could agree to 5000 pounds per day until June after Mr. Worcester reiterated his commitment to meet 2000 per day as of June 1, 1975.

Mr. Worcester noted that there was no cost benefit but a high incentive to recover ammonia in response to questioning by Mr. Somers. Mr. Worcester stated that the column subject to a tax credit application in 1969 has been extensively modified since and that a shut down to modify such equipment precipitated the permittee's unusually high discharge in August and July.

In response to Dr. Crothers' inquiry, Mr. Worcester estimated the use of a recycling process tested in early December would permit operation at current volume with less than 5000 pounds per day. There was question as to the recycling processes' success due to some problems with an ammonia distillation process apertaining to the recycle. He did not know how often shut down for maintenance (involving pond storage and retrieval of ammonia) would occur.

Mr. Somers, noting that he was reluctant to shut the permittee's operation down and cost jobs, stressed his dissatisfaction with Wah Chang's increase of production and discharge and its implicit public disregard for the authority of the agency. Mr. Somers noted that the public nature of the problem rendered Department inaction, in the face of blatant non-compliance, a poor precedent for the guidance of other permittees.

In answer to Mr. McPhillips' question, Mr. Ashbaker opined that the 5000 pounds per day during high water until June would not have an adverse effect greater than the 2000 per day after June 1. He added that considerably less than 2000 pounds would be required to return the receiving creek to a nontoxic state.

Mr. Worcester commented that the permittee was concerned with a failure of the Department to commit itself as to what would be the ultimate limit of ammonia loading in the creek.

In response to Dr. Phinney's question, Mr. Worcester stated that the two solvents included in the permit were running at 600 pounds per day for the one and 400 for the other, amounts which are under negotiation with the Department.

Mr. Worcester expressed dissatisfaction with the rigidity of enforcement by the Department which, in his opinion, used to exercise flexibility.

Mr. Cannon stressed that the permit was the result of negotiations with the permittee which resulted in a prohibition of expansion until the limits were met. It was noted that, in light of this condition, there was an obvious and deliberate violation. This, Mr. Cannon felt, justified added incentive in the future for compliance; such incentive to come in the form of a civil penalty. Mr. Cannon alluded to strong pressure from the EPA to enforce limits as limits, not as goals.

Mr. Somers concurred in the proposed use of civil penalties as did Dr. Crothers. In voicing her concurrence, Dr. Phinney noted that the effluent involved was significantly dangerous. Mr. McPhillips concurred in the use of the civil penalty to curb future violation. The Commission approved permit limits of ammonia effluent as follows: until June 1, 1975, 5000 lbs per day; after June 1, 1975, 2000 lbs per day with negotiations aimed at further reduction.

Mr. Ashbaker stated that 5000 lbs per day would be enforced along with all other permit parameters until June 1, at which time the limit for ammonia would be reduced to 2000 lbs per day.

Mr. Harold Hiemstra spoke in criticism of the permittee, pointing out that the Department's figures indicate that the permittee has submitted reports showing noncompliance with eight of the permit's twelve parameters during the entire first nine months of 1974.

In response to a question by Mr. Somers, Mr. Ashbaker pointed out that thiocyanate, one of the effluents reported, was not lethal as is cyanide; though it caused a minor oxygen demand on the receiving creek.

RULE-MAKING HEARING RE: PROPOSED RULES PERTAINING TO SURETY BONDS AND OTHER SECURITIES UNDER ORS 454.425

Mr. Patrick D. Curran of the Department's Water Quality Division read the staff's conclusions and recommendation with regard to the proposed rules.

Mr. Craig Starr of Lane County spoke in favor of adoption of the rules as proposed but suggested that OAR Chapter 340, Section 15-015 (2) (a) read: "Subsurface sewage disposal systems designed to serve not more than four single family dwelling units or any other establishment or establishments with a projected sewage flow of not more than 1200 gallons per day." Mr. Starr's suggestion was based on apprehension of a conflict between "four family dwellings" and "1200 gallons per day."



Mr. Somers suggested that the rule be worded in the conjunctive using "and" instead of "or."

Mr. Starr reported his suggested wording to have been almost identical to that used in the subsurface sewage standards and suggested that OAR Chapter 340, Section 15-015 (2)(c) be worded so as not to distinguish between industrial plants having an NPDES permit and those not having the same.

Mr. Somers expressed the viewpoint that the proposed subparagraph (c) was intended to prevent inconvenience to residents where the construction is performed by a plant owner and affects dwellings served by the facility. He noted that the NPDES requirement made no difference in his view.

Mr. Cannon stated that his understanding of the NPDES claims was that such a permit assured the Department of adequate construction, alleviating the necessity of the additional assurance a bond would provide.

Mr. Ray Underwood requested that staff be given time to study Mr. Starr's proposals further.

Dr. Crothers noted that latter day practices of co-habitation out of wedlock brought into question the definition of the word "family."

Mr. I.M. Timm of Albany expressed concern that a small restaurateur might be required to post bond and suffer a significant deprivation of capital until there was formed a service district.

Mr. Somers reiterated that type of protection the rule was intended to give to homeowners as against the misconduct of developers or other homeowners. He noted that there is little cost involved in the organization of a service district with the power to assess all property owners equitably.

Mr. McPhillips closed the hearing with instructions to the Director to hold the record open for ten days for written material. It was planned that the Commission would make its decision at the next meeting with regard to the adoption of the rule.

VARIANCE REQUEST - BOISE CASCADE LUMBER MILL, BEAVER MARSH, OREGON

Mr. John Borden of the Central Region read the Director's conclusion and recommendation with respect to the Boise Cascade Wigwam Burner at Beaver Marsh. It was MOVED by Mr. Somers, seconded by Mrs. Hallock and carried that the variance from OAR Chapter 340, Section 25-020(1) be granted to Boise Cascade Corporation until June 30, 1975, as recommended.

Mr. Borden read the Director's Conclusions and Recommendation with regard to the variance request of Russell Industries for open burning at Lapine. In response to a question by Mr. Somers, Mr. Fritz Skirvin commented that the contribution by Russell Industries to the occasional haze in the Sun River Area was not substantial. It was MOVED by Mr. Somers, seconded by Mrs. Hallock and carried that Russell Industries be granted a variance from OAR, Chapter 340, Section 23-010(1)(a) as recommended by the Director.

AUTHORIZATION TO CONDUCT RULE MAKING HEARING ON PROPOSED CHANGES TO INDIRECT SOURCE RULES

Mr. Richard Vogt of the Department's Air Quality Division, alluding to the Director's recommendation, added the proposal that the rule be worded so as to adopt, as policy, inaction on applications until local land use planning authority has approved the proposed land use. It was MOVED by Dr. Crothers, seconded by Dr. Phinney and carried that the public hearing be held on January 24, 1975 as recommended.

Mr. Vogt read the Director's recommendation that authority to enforce the Indirect Source Rule within their respective areas of jurisdiction (border highway areas excepted) be delegated to LRAPA and MWVAPA. It was MOVED by Mrs. Hallock and seconded by Dr. Phinney and carried that the proposed authority be granted to the LRAPA and MWVAPA.

RULE-MAKING HEARING RE: VENEER AND PLYWOOD MANUFACTURING

After due publication and notice to all required parties the hearing was convened. Mr. Fritz Skirvin of the Department's Air Quality Division began with the reading of the Director's Discussion, Conclusions, and Recommendations. Included in the discussion was the Department's view that "control systems presently available can reduce visible emissions from less than 10% to zero opacity."

The Lane Regional Air Pollution Authority, by correspondence to the Department, supported the proposed rule. Correspondence offered by the North Santiam Plywood Company prior to the hearing was in opposition to the rule.

In response to suggestion by Dr. Crothers and Dr. Phinney, it was agreed by Mr. Skirvin and Mr. Cannon that the Department would include metric figures in parentheses along with the standard measurements in future proposals.

It was noted by Mr. Somers and Mr. Skirvin that the compliance schedule available under the proposed rule would allow a case by case review of the problems facing each operator: he who can immediately comply and he who might find delay necessary.

Mr. Ted Hurd, speaking on behalf of the Task Force on Veneer Dryer Emissions, lead the spokesmen who opposed the adoption of the proposed rule in its current form. He noted that the Task Force was composed of members of the American Plywood Association and the private sector of industry. Mr. Hurd stated that the Task Force was opposed to the 10% opacity limit on several grounds: it was said to exceed the standard required of other industries; exceed the standard required by neighboring states; pose a goal unattainable in the light of present technology; and pose an economic burden of undue proportion on the operators. On this basis the Task Force supported a 20% opacity limit. In response to questioning by Mr. McPhillips, Mr. Hurd opined that the 10% opacity limit would require much more sophisticated equipment, such as mist eliminators, than would the 20% opacity limit. He alluded to estimates of from \$3.50 to \$5.00 per CFM. He also expressed the view that no "off the shelf" equipment was available that was certain to meet 10% opacity for twenty-four hours per day, 365 days per year. In response to questioning by Mrs. Hallock, Mr. Hurd stated 10% or zero opacity might some day be possible. He contended the realm of the reasonable, not the possible, should guide the Commission. In response to questioning by Mr. Somers, Mr. Hurd noted that control devices which incorporate the condensation of materials from the process simply substitute a solid waste problem for an air quality problem. He further opined that the term "characteristic blue haze" might have evolved from a failure of science to comprehend the precise make-up of the emission from veneer dryers.

Mr. Skirvin noted that, while the Weyerhaeuser dryers in Coos Bay were thought to be uncontrolled at present, a mist system on their dryers at Springfield was in the start-up process and would soon be monitored by members of the Department.

Mr. Hurd delivered a prepared statement from Mr. Russell J. Hogue which was said to represent the consensus for the Oregon plywood industry and the American Plywood Association Board of Trustees. Mr. Hogue's statement took issue with the proposed 10% opacity requirement: citing the value of the plywood industry to the community; its present state of economic depression; the value of the industry to Oregon; the competitive disadvantage of 10% opacity requirement for Oregon industry while other states require less stringent control; the industry's history of voluntary effort; and the lack of indication that the emission is harmful to health. He requested that 20% opacity be adopted.

In answer to Mr. McPhillips' inquiry, Mr. Hurd pointed out that he did not contend that the emission was not harmful to health but that there was no evidence sufficient to support such a proposition. He also conceded to Mr. McPhillips that the pulp industry had undertaken efforts to reduce emissions which were on a scale with those undertaken by the plywood industry. Dr. Crothers noted that, in his opinion, the emissions from veneer dryers might well pose a health hazard as yet unproven.

Dr. Phinney noted that particulates and hydrocarbons were health problems per se in her experience. Mr. Wallace Corey, representing Boise Cascade Corporation, delivered a prepared statement objecting to the 10% opacity requirement of the proposed rule on many of the same grounds advanced by Mr. Hurd and Mr. Hogue. He added the information that, should the 10% opacity rate be adopted, one of Boise Cascade's Willamette Valley installations which just spent \$165,000 to reach 20% opacity in one stack and 10% in another will have done so needlessly. It was contended that such happenings would have the effect of reducing the enthusiasm of the industry toward voluntary efforts.

Mr. Corey assured Dr. Crothers that the proposed amendment, if it read 20% opacity, would be supported by Boise Cascade. Mr. Corey expressed to Mr. Somers the opinion that the availability of a tax credit to be directed against property tax during the period of market depression would not pose a particular advantage to industry for attempts to meet 10% during the present inactivity of many facilities. Upon response to Dr. Crothers, Mr. Corey noted that a variety of types of energy might be employed, depending on the systems used, to reach the lesser opacity figure. Dr. Crothers asked if descending opacity corresponded with descending energy use and was given an affirmative answer. Mr. Corey stated Boise Cascade used hog fuel boilers in most places, preferred them, but used gas boilers in one or two locations too small to warrant the use of hog fuel. Mr. Somers was told that the use of hog fuel boilers was impractical in the smaller installations.

In response to a question by Mrs. Hallock, Mr. Patterson commented that the concept of zero opacity evolved from discussions with the industry wherein parameters of emission control other than opacity were dismissed as too expensive, initiating the discussion of opacity.

Mr. Dave Barnhardt of North Santiam Plywood stated that his plant employed 450 people and was required to operate at full capacity to do this. He objected that 20% opacity would be the most stringent regulation that small companies could meet without being forced to shut down. He told Mr. Somers that his installation of a third dryer would allow slowing of the entire dryer process (using three dryers to do the work of two) thus meeting reduced air emission requirements without increased energy use. Commenting on the plywood industry in general, Mr. Barnhardt alluded to his company's traditional willingness to absorb short term losses in order to keep long time employees on the job.

Mr. James Pratt of Roseburg Lumber Company supported the statements of previous speakers in opposition to the 10% opacity requirement. He added that the changing of goals through continual proposal and adoption of more stringent standards created an atmosphere of uncertainty in setting of policy by top management. Finally, noting that 10% opacity was the equivalent of slightly dirty glasses, he urged the Commission to consider the amount of excess energy that might be expended in trying to gain the dubious advantage of 10% opacity over 20% opacity.

Mr. Ehrman Guistina of Guistina Brothers Plywood and Lumber Company in Eugene testified to long cooperation with the regional authority and objected to the 10% opacity on several of the grounds set forth by the preceding speakers. He strenuously asserted insufficiency of proof as to the success of current devices in their ability to meet 10% opacity.

Mr. Guistina added that application of the "highest and best practical treatment" rule might force the removal of expensive devices if they fail to meet the proposed standard. Also, he noted that the emissions of the dryers were much less offensive than auto exhaust emissions.

Mr. Harry Demarry of the Mid-Willamette Valley Air Pollution Authority testified in favor of the proposal. He drew an analogy between the absence of proof of a causal relationship between cigarettes and health five years ago and the lack of proof of a like relationship with regard to veneer dryer emissions today. Further, he noted that the effect of the emissions on the community was more than aesthetic, alluding to the failure of Mr. Hogue to reach the meeting by the use of aircraft. Next, he cited the Department of Revenue as authority for the proposition that the entire cost of emission controls could be written off against taxes. He emphasized that equipment was available, along with full guarantee by its sellers, to meet the 10% opacity requirement. Since March of 1974, 10% has been the standard within the jurisdiction of MWVAPA and, according to Mr. Demarry, several installations are meeting the requirement. Mr. Demarry opined that those installations with hog fuel burners could meet 10% opacity. He contended that the industry's position in negotiation prior to the proposal of rules was that the reduction of "zero blue haze" to a policy would be traded for industry acceptance of 10% opacity at the point source. Mr. Demarry urged that the Department extend, in generous fashion, tax credits to indirect pollution abatement devices, such as green end moisture beaters and fire prevention equipment. Finally, Mr. Demarry noted that the plywood industry could be subjected to fair discrimination such as that proposed. In response to a question from Mr. Somers, Mr. Demarry noted that he now allows the older plants higher emission rates but could not do so were the proposed standards adopted. Mr. Somers expressed concern that some of the older installations might be forced out of business by the rule.

Mr. Lyle K. McDonald, speaking for the industry, argued on the same ground cited by previous advocates of the 20% limit and stressed the threat to small independent plants. He argued that where these are forced to shut down, the state and the communities are the ultimate losers. He estimated for Mr. Somers that the average plant in Oregon is twenty years old. It was noted that paragraph (g) of the proposed amendment provided a protection to the environment which might be considered in lieu of the 10% limit on opacity. Mrs. Hallock asked if meeting a goal of 10% with a limit of 20% would result in a tax credit incentive to exceed the limit and attain the goal. Mr. Skirvin replied that the incentive would be there for either 20% or 10% but such a program would present administrative problems which staff would prefer to avoid. He argued that elimination of the characteristic blue haze, a condition which is susceptible of precise definition in more scientific terms, would require 10% opacity and would not be accomplished with a 20% limit. Mr. Skirvin's opinion was that consideration of the monetary impact of standards was beyond the

pale of staff's concern. It was noted by Mr. Somers that not every installation had sander dust which would enable the use of the Wasteco Burner without the need to process fuel for this purpose.

Mr. Jerry Ambrose of Moore-Oregon stated that his Moore Lo-EM system could reach 10% but could not consistently remain there. He cited 20% as within the capabilities of the system. He recommended that a 20% standard be incorporated into the rule.

Mr. William Capranos of Baker Industries stated the Baker Filter could meet 10% consistently and the maker would guarantee this to the buyer in terms of total refund and removal of equipment. He noted that the hydrocarbon recovered from control systems could be recycled into some of the installations using fuel of a "Bunker C" type. He stated that blue haze has characteristics of longevity and low altitude that render it more detrimental than other emissions. In response to Mr. Somers, Mr. Capranos stated that his filtration system depended on sand which had to be periodically cleaned and required an eighty to one hundred horse power motor.

Mr. Al Buchholz of Buchholz Industries argued that the degree of visibility of the haze is dependent only on the size configuration of the emission. He contended that the materials offensive to health were present regardless of visibility, rendering opacity an insufficient parameter for a standard. Mr. Buchholz further argued that the angle of view and background were factors in opacity which left some plants in a higher category of opacity simply due to their surroundings.

Mr. Burt Vaughn of Boise Cascade noted that the Albany plant with its Wasteco burner was not providing gas savings to his dryer operation. Resultingly, the Sweet Home plant was equipped with a Moore Lo-EM system which does result in gas savings. It appears that the Sweet Home plant can meet 20%. Mr. Vaughn states he cannot meet the 10% limit with the Lo-Em. He objected to the use of the tax credit to give incentive to the installation of these devices.

Mr. McPhillips closed the hearing.

It was MOVED by Dr. Crothers, seconded by Dr. Phinney, and carried that the hearing record be kept open for ten days for the inclusion of written offerings.

Mr. McPhillips adjourned the meeting.

MINUTES OF THE SIXTY-FOURTH MEETING

of EQC

December 20, 1974

APPENDIX A,

Water Quality Control - Water Quality Division (35)

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
11- 1-74	Green S.D.	Happy Valley Rd. - No. 26 sewer crossing	Prov. app.
11- 1-74	Ashland	C. O. #2 TP	Approved
11- 1-74	Unity	Sewage collection system & 7.74 acre non-overflow sewage lagoon system	Prov. app.
11- 4-74	Springfield	Minor Subdivision sewers	Prov. app.
11- 4-74	Bend	Addendum No. 5 - grit chamber and septic tank dumping station	Approved
11- 4-74	Lincoln City	Careage Corp. nursing home sewer	Prov. app.
11- 4-74	Gold Beach	Septic tank dumping station	Prov. app.
11- 8-74	Mosier	Sewage collection system & 0.085 MGD extended aeration STP	Prov. app.
11-12-74	USA (Beaverton)	Allen Avenue sewer diversion	Prov. app.
11-12-74	NTCSA	C.O. A-1, Sch. IV	Approved
11-13-74	Josephine County	Harbeck-Fruitdale-South Allen Cr. int. sewer	Prov. app.
11-13-74	Junction City	Norman Park Subdivision Third Addition sewers	Prov. app.
11-15-74	BCVSA	Valley Estates Subdivision sewers	Prov. app.
11-15-74	BCVSA	Oak Grove Road sewer project	Prov. app.
11-15-74	Gleneden S.D.	Sewerage system to Depoe Bay S.D.	Prov. app.
11-18-74	Boardman	C.O. to contract for interim sewage facilities	Approved
11-19-74	BCVSA	Lozier Lane sewer project and Wilson Rd. sewer Lat. #1 south	Prov. app.
11-21-74	Pendleton	Indian Agency sewer extension	Prov. app.
11-25-74	North Bend	Newmark Street sewer	Prov. app.
11-25-74	Springfield	Gateway Street sewer	Prov. app.
11-25-74	Springfield	SWF Plywood pressure sewer line	Prov. app.
11-25-74	Coquille	East 13th Street sewer	Prov. app.
11-25-74	USA (Forest Grove)	C. O. No. 3 - STP modifications	Approved
11-26-74	Bay City	C. O. B-8, STP contract	Approved
11-26-74	Ashland	Mt. Ranch Subdivision Phase 1 sewers	Prov. app.
11-26-74	Josephine County	Harbeck-Fruitdale S.D. - Alexander Drive sewer	Prov. app.
11-26-74	Salem	Sludge truck purchasing documents	Prov. app.
11-27-74	Corvallis	26th Street sewer replacement	Prov. app.
11-27-74	Gold Beach	C. O. No. 1 - STP contract	Approved
11-29-74	Bly S.D.	C.O. Nos. 3 & 4 - Sch. B, STP contract	Approved
11-29-74	Warrenton	C. O. No. 1 - interceptor project	Approved

Water Quality Control - Northwest Region (35)

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
11- 1-74	Salem (Willow)	Central Services Center near I-5 and State Street sanitary sewers	Prov. app.
11- 5-74	Tualatin	Revised Shawnee Plains sanitary sewers	Prov. app.
11- 6-74	Milwaukie	The Grove, Phase 1, sanitary sewers	Prov. app.
11- 7-74	USA (Aloha)	Ray Sullivan sanitary sewer extension	Prov. app.
11- 7-74	Troutdale	Autumn Park Subdivision sanitary sewers	Prov. app.
11- 8-74	USA (Aloha)	CO-JO No. 2 sanitary sewers	Prov. app.
11- 8-74	USA (Aloha)	Hyland Hills Center, Phase 1, construction sanitary sewers	Prov. app.
11-12-74	USA (Beaverton)	Revised Allen Avenue sewerage diversion	Prov. app.
11-14-74	USA (Aloha)	Torreyview On Site, Phase 1, sanitary sewers	Prov. app.
11-18-74	Portland (Columbia)	Southeast Harney Street sanitary sewers	Prov. app.
11-18-74	USA (Beaverton)	Carolwood 1 sanitary sewers	Prov. app.
11-18-74	Lake Oswego (Tryon)	L.I.D. 163, Lake Shore Road sanitary sewers	Prov. app.
11-19-74	CCSD #1	Rainier Court sanitary sewers	Prov. app.
11-21-74	Amity	Lateral A-2, sanitary sewer on Roth Street	Prov. app.
11-22-74	Monmouth	Southwest Heights Addition No. 5 sanitary sewers	Prov. app.
11-22-74	Hillsboro	Sewell Station sanitary sewers	Prov. app.
11-22-74	Tualatin	Revised 105th Street sanitary sewers	Prov. app.
11-25-74	Salem (Willow)	Railroad Trunk, Phase 11, Main Road-1, sanitary sewers	submitted to Mar-Polk Bound.
11-26-74	Canby	North Cedar Street from 5th to Dahlia Place sanitary sewer	Pending
11-29-74	Gresham	Between SE Stark Street and SE 221st Avenue sanitary sewer	Pending

Water Quality Control Industrial Projects - Northwest Region (3)

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
11- -74	St. Helens	<u>Kaiser Gypsum</u> bay study	Pending
11-19-74	Marion County	<u>Robert Belozer Fryer Farm</u> chicken rearing facilities	Approved
11-29-74	Milwaukie	<u>Proto Tool</u> chrome plated rinse water treatment system	Approved

Water Quality Control Industrial Projects - Midwest Region (1)

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
12-3-74	Linn County	<u>Donald Gabrielli</u> animal waste facilities	Prov. app.



Air Quality Control - Air Quality Division (13)

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
11- 1-74	Clackamas County	<u>Dammasch State Hospital</u> 100-space parking addition	Outside jurisdiction--no action
11- 5-74	Washington County	<u>Farmers Insurance Group</u> relocation of existing facility. 4 spaces added	Cond. app.
11- 5-74	Washington County	<u>Tualatin Plaza</u> 56-space parking facility	Cond. app.
11- 6-74	Marion County	<u>Pringle Creek Parking Facility</u> Hilton Hotel, 520-space parking facility	Cond. app.
11- 7-74	Douglas County	<u>Permaneer</u> door jam plant installation	Approved
11- 7-74	Coos County	<u>Georgia-Pacific, Coos Bay</u> veneer dryer emission scrubber system	Approved
11- 7-74	Coos County	<u>Georgia-Pacific, Coquille</u> veneer dryer emission scrubber system	Approved
11- 7-74	Lincoln County	<u>Georgia-Pacific, Toledo</u> veneer dryer emission scrubber system	Approved
11-13-74	Lane County	<u>State Motor Pool</u> relocation of 175-space parking facility	Cond. app.
11-14-74	Jefferson County	<u>Warm Springs Forest Products</u> new wigwam burner installation	Approved
11-15-74	Josephine County	<u>Fibreboard (Bate Plywood)</u> Air-Guard scrubber for veneer dryer emissions	Approved
11-15-74	Jackson County	<u>Kogap</u> new veneer dryer (no. 3) installation	Approved
11-25-74	Clackamas County	<u>Lincoln International</u> Phased warehouse parking facility	Cond. app.

Air Quality Control - Northwest Region (28)

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
11- 1-74	Washington County	<u>Western Foundry</u> scrubber to control cupola emissions	Approved
11- 1-74	Yamhill County	<u>Publishers Paper, Newberg</u> new digester	Approved
11- 1-74	Multnomah County	<u>Resource Recovery Byproducts</u> paper classifier	Reviewing info on controls
11-2-74	Washington County	<u>Pacific Building Materials</u> concrete readymix plant	Notice of Construction cancelled
11- 4-74	Columbia County	<u>Cascade Energy, Inc.</u> oil refinery	Reviewing emission info and EIA
11- 4-74	Multnomah County	<u>Ross Island Sand and Gravel</u> concrete batch plant	Permit issued
11- 4-74	Multnomah County	<u>Pennwalt Corp.</u> expansion of chlorine-caustic soda manufacturing	Reviewing info on emissions
11- 4-74	Clackamas County	<u>Milwaukie Plywood</u> veneer dryer control	Notice of Construction cancelled
11- 2-74	Washington County	<u>Pacific Building Materials</u> concrete readymix plant	Notice of Construction

Air Quality Control - Northwest Region (cont)

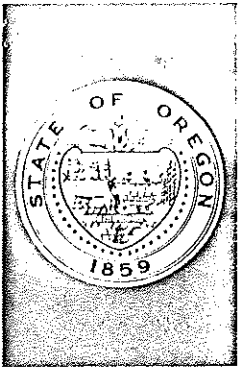
<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
11- 5-74	Multnomah County	<u>Oregon Steel Mills, Front Street</u> ladle fume exhaust	Approved
11- 5-74	Clackamas County	<u>Oregon Portland Cement</u> paving of vehicular traffic areas	Approved
11- 5-74	Multnomah County	<u>Western Farmers</u> control of truck receiving	Evaluating info
11- 5-74	Clackamas County	<u>Oregon Portland Cement Company</u> new aggregate lime storage bin	In process
11- 7-74	Columbia County	<u>Charter Energy Company</u> oil refinery	Evaluating trade-offs and effect on ambient air
11- 7-74	Multnomah County	<u>Pacific Carbide</u> new furnace	Permit Issued
11- 7-74	Multnomah County	<u>Columbia Steel Casting</u> new furnace and controls	Permit issued
11- 8-74	Multnomah County	<u>Teeples &amp; Thatcher, Inc.</u> sawdust cyclones	Approved
11- 8-74	Multnomah County	<u>Schnitzer Steel Products</u> wire incinerator	Permit Issued
11-14-74	Tillamook County	<u>Tillamook Creamery</u> control whey dryer exhaust	Approved
11-14-74	Multnomah County	<u>Chamberlain's Pet Crematorium</u> cremation incinerator	Proposed permit issued
11-15-74	Multnomah County	<u>Triangle Milling</u> dust control	Drafting approval letter
11-15-74	Multnomah County	<u>Zidell Explorations, Inc.</u> new secondary aluminum smelter	Accepted for filing
11-15-74	Multnomah County	<u>Owens Corning</u> fiberglass plant	Awaiting info on controls and tradeoffs
11-18-74	Multnomah County	<u>ESCO - Plant #3</u> new 4-ton induction furnace	Approved
11-19-74	Multnomah County	<u>Portland Steel Mills</u> new steel mill	Proposed permit issued
11-22-74	Multnomah County	<u>Kaiser Permanente Medical Center</u> controlled atmosphere incinerator	Reviewing submitted application
11-25-74	Multnomah County	<u>Rhodia--Chipman Division</u> dichlorophenol distillation expansion	Drafting approval letter
11-26-74	Clatsop County	<u>AMAX Aluminum</u> new aluminum reduction plant	Evaluating info on issues raised at public hearing
11-27-74	Multnomah County	<u>Norwest Publishing</u> control of heatset ink dryer	Reviewing manufacturer's data

Land Quality - Solid Waste Management Division (3)

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
11-14-74	Crook County	<u>Les Schwab</u> new site; tire disposal site	Prov. app.
11-19-74	Union County	<u>Ladd Canyon Disposal Site</u> new site; operational plan	Prov. app.
11-27-74	Lane County	<u>Franklin Landfill</u> existing site; operational and closure plans	Approved

Solid Waste Management - Northwest Region (1)

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
11-1-74	Yamhill County	<u>Willamina Lumber Company</u> new wood waste landfill	Approved



## ENVIRONMENTAL QUALITY COMMISSION

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KESSLER R. CANNON  
Director

### MEMORANDUM

To : Environmental Quality Commission  
From : Director  
Subject: Agenda Item B, January 24, 1975 EQC Meeting  
December 1974 Program Activity Report

During the month of December staff action with regard to plans, permits, specifications, and reports was as follows:

### WATER QUALITY

1. Domestic Sewage: Activity with regard to sixty (60) matters was undertaken as follows:

WATER QUALITY DIVISION - 40 (See Attachment #1)

Approval was given twenty (20) Change Orders.

Provisional Approval was given seventeen (17) Sewers and three (3) Sewage Treatment Plants.

NORTHWEST REGION - 20 (See Attachment #2)

Provisional Approval was given seventeen (17) projects.

Two (2) projects were re-submitted.

One (1) project was referred to the Portland Metropolitan Area Local Government Boundary Commission.

2. Industrial Sewage: Activity with regard to six (6) matters was as follows:

WATER QUALITY DIVISION - 3 (See Attachment #3)

Provisional Approval was given two (2) projects.

A Denial was given one (1) project.

NORTHWEST REGION -3 (See Attachment #4)

Approval was given three (3) plans.

Fourteen plans are Pending.

AIR QUALITY

1. Pollution Control Projects: Activity with regard to twenty-six (26) matters was as follows:

AIR QUALITY DIVISION -3 (See Attachment #5)

Approval was given two (2) projects.

Conditional Approval was given one (1) project.

NORTHWEST REGION - 23 (See Attachment #6)

Approval was given nine (9) projects.

Conditional Approval was given five (5) projects.

Nine (9) projects were Being Processed.

Nine (9) projects were Pending.

2. Parking Facilities: Activity with regard to ten (10) matters undertaken by the AIR QUALITY DIVISION (See Attachment #5) was as follows:

Approval was given two (2) facilities (through LRAPA).

Conditional Approval was given three (3) facilities:

Additional information was Requested for five (5) facilities.

SOLID WASTE MANAGEMENT

1. Projects: Activity with regard to five (5) matters undertaken by the SOLID WASTE MANAGEMENT DIVISION (See Attachment #7) was as follows:

Approval was given three (3) projects.

Conditional Approval was given two (2) projects.

Agenda Item B  
January 24, 1975 EQC Meeting  
Page three

DIRECTOR'S RECOMMENDATION

It is the Director's recommendation that the Commission give its confirming approval to the staff action on project plans and proposals for the month of December 1974.

A handwritten signature in cursive script, appearing to read "K. Cannon", written in dark ink.

KESSLER R. CANNON  
Director

A

Water Quality Division

During the Month of December 1974, the following project plans and specifications and/or reports were reviewed by the staff. The disposition of each project is shown, pending ratification by the Environmental Quality Commission.

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
<u>Municipal Projects - 40</u>			
12-1-74	USA	Cedar Mill Trunk Project - C.O. #1-5	Approved
12-2-74	CCSD #1	Phase II - Interceptor Sewers - C.O. #7	Approved
12-5-74	Ashland	Mt. Ranch Subdn. - Phase I Sewers	Prov. Approval
12-5-74	Ashland	Thunderbird Hts. Subdn. Sewers	Prov. Approval
12-6-74	Baker	Projects 12 through 18, San. Sewers	Prov. Approval
12-9-74	Pendleton	C.O. No. 2 - Mt. Hebron Int. Project	Approved
12-10-74	Lowell	Parker Lane Sewer Project	Prov. Approval
12-10-74	Hood River	San. Sewer Ext., Dist. 5, Div. 10 (Project No. 2)	Prov. Approval
12-10-74	Springfield	E-Z Living Estates Sewers	Prov. Approval
12-10-74	Brookings	Easy Manor Drive Sewer Ext.	Prov. Approval
12-10-74	Astoria	C.O. 20, 21 & 22. Sch. A	Approved
		C.O. 7. Sch. B	Approved
		C.O. 8 & 9. Sch. C	Approved
12-10-74	USA	C.O. No. 3 - Fanno Cr. Int.	Approved
12-12-74	Warrenton	C.O. No. 2 - E. Warrenton Int. Project	Approved
12-17-74	Coos Bay	C.O. No. 1 - STP Project	Approved
12-18-74	Florence	Shield Prop. Sewer Ext.	Prov. Approval
12-18-74	Eastside	C.O. #1 - P.S. & Pressure Sewer Proj.	Approved
12-19-74	Central Pt.	Hull Subdn. Sewer	Prov. Approval
12-23-74	USA-Sherwood	C.O. Nos. 1 & 2 - Sherwood Trunk Sewer	Approved
12-26-74	USA-Metzger	Metzger Modification 0.95 MGD Factory Built STP	Prov. Approval
12-26-74	Astoria	C.O. Nos. 23 & 24. Sch. A	Approved

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
12-26-74	Hood River	Septage Facilities for Hood River STP	Prov. Approval
12-26-74	Skyline West S.D.	Stage I Expansion of STP adding 0.769 Acre Lagoon, Chlorinating and Flow Metering	Prov. Approval
12-26-74	Bandon	Ninth & Delaware Sanitary Sewer	Prov. Approval
12-30-74	Milwaukie	Interceptor Sewers Schedule II	Prov. Approval
12-30-74	Eugene	Willagillespie Area Sewers	Prov. Approval

Sewers	17
STP	3
C.O.	<u>20</u>
	40



DEPARTMENT OF ENVIRONMENTAL QUALITY  
NORTHWEST REGION OFFICE - Technical Services  
Water Quality Division - Project/Plan Review

During the month of December 1974, the following sanitary sewer project plans and specifications and/or reports were reviewed by the staff. The disposition of each project is shown, pending ratification by the Environmental Quality Commission.

Summary of projects

9 sanitary sewer plans received  
9 sanitary sewer plans approved  
3 sanitary sewer plans pending\*

\* Pending refers to scheduling for staff review relative to disposition of projects unless noted on attached sheets as "under study".

Water Quality Division

Industrial Projects (3)

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
12/24/74	Jackson County	Mt. Pitt Dairy, animal waste control and disposal system	Approval denied
12/24/74	Jackson County	Rouhier Farm, animal waste control and disposal system	Prov. approval
12/24/74	Jackson County	Straube Dairy, animal waste control and disposal system	Prov. approval

DEPARTMENT OF ENVIRONMENTAL QUALITY

NORTHWEST REGION OFFICE - Technical Services

Water Quality Division - Project/Plan Review

During the month of December 1974, the following industrial project plans and specifications and/or reports were reviewed by the staff. The disposition of each project is shown, pending ratification by the Environmental Quality Commission.

Summary of Projects:

9	industrial plans/tax credits received
3	industrial plans/tax credits approved
14	industrial plans/tax credits pending

ATTACHMENT # 5  
 January 24, 1975

PROJECT PLANS, REPORTS, PROPOSALS FOR AIR QUALITY CONTROL  
 DIVISION FOR DECEMBER, 1971

EQC Meeting

DATE	LOCATION	PROJECT	ACTION
6	Washington Co.	<u>Washington Square</u> - 300 space temporary employe parking	Appr. with conditions
9	Douglas Co.	<u>Garden Valley Interchange</u> I-5 Freeway	A-95 review completed
9	Curry Co.	<u>Brookings Plywood</u> Veneer dryer modification (low temp. operation)	Approved
9	Jackson Co.	<u>Olson-Lawyer Timber</u> Installation of scrubber on hogged fuel boiler	Approved
10	Multnomah Co.	<u>Pietro's Pizza Parlor</u> - 108-space, joint use parking facility	Req. addl. info
13	Washington Co.	<u>Somerset West</u> - 172-space parking facility	Req. addl. info.
17	Multnomah Co.	<u>Easthill Church</u> 141-space parking facility	Appr. with conditions
24	Coos County	<u>Cape Arago Lumber</u> Source test	Approved
24	Washington Co.	<u>Pacific Northwest Tennis Club</u> 115 space parking facility	Req. addl. info
24	Multnomah Co.	<u>Sommerwood</u> 588 space parking facility	Req. addl. info.
26	Lane County	<u>Mahlon Sweet Field</u> 100 space facility, LRAPA approval	Approved
26	Lane County	<u>Motel 6</u> - 86 space parking facility LRAPA Approval	Approved
26	Washington Co.	<u>Argay Square Commercial Center</u> 154 space parking facility	Req. addl. info.
26	Multnomah	<u>LDS Church, 182nd Avenue</u> 174 space parking facility	Appr. with conditions
30	Umatilla Co.	<u>Louisiana Pacific, Pilot Rock</u> Source test	Approved
31	Klamath	<u>Weyerhaeuser Company</u> Source test	Approved
31	Linn	<u>American Can Company</u> Installation of Lime Mud oxidation system	Approved with conditions

DEPARTMENT OF ENVIRONMENTAL QUALITY  
Northwest Region  
Technical Services

Air Quality Division - Project/Plan Review

During the month of December, 1974, the following air quality project plans and specifications were reviewed by the staff. The disposition of each project is shown pending ratification by the Environmental Quality Commission. See attached sheets for disposition of each project.

Summary of Projects

Air Quality Plan Reviews - Notice of Construction

6 Received  
7 Pending (awaiting additional information requested)  
5 Processing  
6 Approvals

New Source Air Quality Permits

2 Received  
2 Pending (awaiting additional information requested)  
9 Processing  
5 Proposed Permits Issued  
3 Permits Issued

PROJECT PLANSSOLID WASTE MANAGEMENT DIVISION

During the month of December, 1974, the following project plans and specifications and/or reports were reviewed by the staff. The disposition of each project is shown, pending confirmation by the Environmental Quality Commission.

<u>DATE</u>	<u>LOCATION</u>	<u>PROJECT</u>	<u>ACTION</u>
11-29-74	Lane County	International Paper, Vaughn Existing Industrial Site Operational Plan	Prov. Approved
12-3-74	Lane County	Florence Sanitary Landfill Existing Site Operational Plan	Approved
12-23-74	Jefferson County	Camp Sherman Container Site New Site Construction & Operational Site	Approved
12-30-74	Klamath County	Weyerhaeuser Co., Bly New Industrial Site (Letter Authorization)	Prov. Approved
12-31-74	Wallowa County	Boise Cascade, Joseph Existing Industrial Site Operational Plan	Approved



State of Oregon  
 DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

To: E.A. Schmidt

Date: JAN 09 1975

From: W.H. Dana

Subject: Summary of Permit and Plan Review Activities, December 1974

1. Permits

- A. Permits Issued . . . . . 8
  - 1. Coos County Elkside Lumber (Renewal).
  - 2. Crook County Les Schwab Tires
  - 3. Jefferson County - Box Canyon Disposal Site
  - 4. Lane County - Creswell Landfill (Renewal)
  - 5. Multnomah County - Land Reclamation (Renewal by NWRO)
  - 6. Polk County - Willamette Industries, Dallas (by NWRO)
  - 7. Union County - Ladd Canyon Storage Site
  - 8. Yamhill County - Willamina Lumber (by NWRO)
  
- B. Permits Amended . . . . . 2
  - 1. Jackson County - Ashland Disposal Site
  - 2. Jackson County - South Stage Disposal Site
  
- C. Permits Revoked . . . . . 1
  - 1. Klamath County - Crescent Landfill
  
- D. Proposed Permits Mailed . . . . . 9
  - 1. Columbia County - Vernonia Landfill (Renewal by NWRO)
  - 2. Jefferson County - Box Canyon Disposal Site
  - 3. Lane County - Creswell Landfill
  - 4. Lane County - Weyerhaeuser, Hickethier Quarry (Renewal)
  - 5. Lane County - Weyerhaeuser, Truck Road
  - 6. Marion County - Stayton Transfer Station (Renewal by NWRO)
  - 7. Multnomah County - Land Reclamation (Renewal by NWRO)
  - 8. Wallowa County - Boise Cascade, Joseph
  - 9. Yamhill County - Taylor Lumber Co. (issued by NWRO)
  
- E. Letter Authorizations Issued . . . . . 1
  - 1. Klamath County - Weyerhaeuser Co., Bly (issued by CRO)

2. Plan Review

- A. Construction and/or Operational Plans Approved . . . . . 5
  - 1. Jefferson County - Camp Sherman Container Site
  - 2. Klamath County - Weyerhaeuser, Bly (Letter Authorization by CRO)
  - 3. Lane County - Florence Landfill
  - 4. Lane County - International Paper, Vaughn
  - 5. Wallowa County - Boise Cascade, Joseph

3. Groundwater Monitoring Program

- A. Landfills Sampled . . . . . 6
  - 1. Clackamas county - Rossman's Landfill
  - 2. Clackamas County - LaVelle King Road Landfill
  - 3. Columbia County - Santosh Landfill
  - 4. Marion County - Brown's Island Landfill
  - 5. Multnomah County - La Velle and Yett Landfill
  - 6. Yamhill County - Whiteson Landfill





State of Oregon  
 DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

To: E. A. Schmidt

Date: January 9, 1975

From: W. H. Dana

Subject: Work Projects Pending - December 31, 1974

I. Permits

A.	Incomplete Permit Applications Pending - - - - -	17
1.	Existing Sites - - - - -	10
2.	New Disposal Sites - - - - -	7
B.	Complete Permit Applications Awaiting Staff Action - - -	26
1.	Existing Disposal Sites - - - - -	25
2.	New Disposal Sites - - - - -	1
C.	Temporary Permits Pending - - - - -	126
1.	Domestic Sites - - - - -	111
2.	Industrial Sites - - - - -	15

II. PLANS

A.	Operational Plans for Permitted Sites Pending - - - - -	2
B.	Operational Plans for Non-permitted or Temporarily permitted Sites Pending - - - - -	153

Memorandum

TO: Vi Treadwell  
From: John Kowalczyk  
Subject: Supplement To December 1974 Activity Report to EQC

Northwest Region Permit Work Output-Backlog  
December 1974

	<u>Sources</u> <u>Req'd</u> <u>Permits</u>	<u>Appl.</u> <u>Rec'd</u> <u>(mo.)</u>	<u>Permits</u> <u>Drafted</u> <u>(mo.)</u>	<u>Permits</u> <u>Issued</u> <u>(mo.)</u>	<u>Appl. Pending</u> <u>Permits</u>		<u>Sources</u> <u>Under</u> <u>Regular</u> <u>Permit</u>
					<u>To Be</u> <u>Drafted</u>	<u>Permit</u> <u>Drafted</u>	
<u>Air Permits</u>							
Process	300	7	26	4	118	32	123
Fuel Burning	630	0	0	0	0	622	8
<u>Water Permits*</u>							
Industrial	153	0	8	7	2	105	46
Domestic	123	0	0	13	5	30	88
<u>Solid Waste Permits</u>							
General Refuse	26	1	2	0	6	0	20
Demolition	10	0	1	1	3	0	7
Industrial	16	0	1	2	2	1	13

\*NPDES

DEPARTMENT OF ENVIRONMENTAL QUALITY  
Northwest Region  
Technical Services

Air Quality Division - Project/Plan Review

During the month of December, 1974, the following air quality project plans and specifications were reviewed by the staff. The disposition of each project is shown pending ratification by the Environmental Quality Commission. See attached sheets for disposition of each project.

Summary of Projects

Air Quality Plan Reviews - Notice of Construction

6	Received
7	Pending (awaiting additional information requested)
5	Processing
6	Approvals

New Source Air Quality Permits

2	Received
2	Pending (awaiting additional information requested)
9	Processing
5	Proposed Permits Issued
3	Permits Issued

DEPARTMENT OF ENVIRONMENTAL QUALITY

NORTHWEST REGION OFFICE - Technical Services

Water Quality Division - Project/Plan Review

During the month of December 1974, the following industrial project plans and specifications and/or reports were reviewed by the staff. The disposition of each project is shown, pending ratification by the Environmental Quality Commission.

See attached sheets for disposition of each project.

Summary of Projects:

9	industrial plans/tax credits received
3	industrial plans/tax credits approved
14	industrial plans/tax credits pending

DEPARTMENT OF ENVIRONMENTAL QUALITY  
 NORTHWEST REGION - AQ-Plan Disposition

I N F O R M A T I O N R E C E I V E D

DEQ Staff Disposition

No.	Date Received	Location	Project	Review Engineer	Information Req'd	Information Rec'd	Approval Date	Action	By
P144	11/9/73	Clatsop	AMAX Aluminum - New Aluminum Reduction Plant	JFK	11/26/74	Dec. 3, 9, 16, 18, 19, 1974		Assessing adequacy of submitted information as requested by the Department resulting from issues raised at public hearing	
P145	11/21/73	Multnomah	Union Carbide - #1 furnace Product Change	JAP	7/15/74	8/14/74		Proposed permit being drafted	
NC504	2/5/74	Multnomah	Western Farmers - Dust Control of Truck Receiving	JAP	3/21/74	11/5/74	12/17/74	Approved	
P267	2/28/74	Multnomah	Layton Funeral Home Cremation Incinerator	JAP	5/14/74	10/29/74		Evaluating Source Test Results	
P275-7	4/2/74	Multnomah	Columbia Independent Refinery Oil Refinery	JAP	4/30/74	10/28/74	12/24/74	Issued proposed permit 12/24/74	
NC520	5/7/74	Multnomah	Resource Recovery Byproducts Paper Classifier	JAP	5/29/74	11/1/74	12/17/74	Approved	
P294	5/31/74	Columbia	Cascade Energy, Inc. Oil Refinery	JAP	7/16/74	11/4/74	12/24/74	Issued proposed permit 12/24/74	
NC542	6/12/74	Multnomah	Port of Portland Bulk Loading Facility	JAP	7/22/74			Awaiting information on controls (information will be received when Port approves project funding)	

DEPARTMENT OF ENVIRONMENTAL QUALITY  
 NORTHWEST REGION - AQ-Plan Disposition

I N F O R M A T I O N R E C E I V E D

DEQ Staff Disposition

No.	Date Received	Location	Project	Review Engineer	Information Req'd	Information Rec'd	Approval Date	Action	By
P305	6/28/74	Multnomah	Owens Corning Fiberglass Plant	JFK	11/15/74			Awaiting information on more efficient controls and tradeoffs with respect to interim rule adopted 10/25/74	
P306	6/28/74	Multnomah	Portland Steel Mills New Steel Mill	JAP	7/17/74	10/18/74	12/26/74	Issued permit 12/26/74	
NC539	7/9/74	Multnomah	Triangle Milling Dust Control	DDO	9/20/74	11/15/74	12/9/74	Approved	
NC535	7/17/74	Marion	Boise Cascade-Salem New Washers	DDO	8/15/74			Awaiting final engineering design on controls	
NC534	7/17/74	Marion	Boise Cascade-Salem New Digester	DDO	8/15/74			Awaiting final engineering design	
P317	7/18/74	Multnomah	Oregon Steel Mills-Rivergate Pellet Metallizing	DDO	9/16/74	10/29/74		Drafting air contaminant discharge permit	
NC543	7/24/74	Multnomah	Oregon Steel Mills-Front St. Baghouse with Canopy	DDO	10/16/74	11/15/74		Awaiting information on cancellation	
NC548	7/31/74	Clackamas	Barton Sand and Gravel Rock Crusher	JAP	9/17/74			Awaiting information on final process design	
P323	9/11/74	Columbia	Charter Energy Company New Oil Refinery	JAP	10/11/74	11/7/74	12/24/74	Issued proposed permit 12/24/74	

DEPARTMENT OF ENVIRONMENTAL QUALITY  
 NORTHWEST REGION - AQ-Plan Disposition

I N F O R M A T I O N   R E C E I V E D								DEQ Staff Disposition	
No.	Date Received	Location	Project	Review Engineer	Information Req'd	Information Rec'd	Approval Date	Action	By
P324	9/13/74	Multnomah	Chamberlain's Pet Crematorium Cremation Incinerator	JAP	9/19/74	10/8/74	12/30/74	Issued Permit	12/30/73
P325	9/17/74	Multnomah	The Oregon Humane Society Cremation Incinerator	JAP				Issued proposed permit	12/16/74
NC556	9/27/74	Clackamas	Oregon Ready-Mix Concrete Batch Plant	DDO	12/2/74	12/16/74		Drafting Approval Letter	
NC561	10/4/74	Multnomah	Rhodia-Chipman Division Dichlorophenol distillation expansion	DDO	11/15/74	11/25/74		Drafting Approval Letter	
P340	10/7/74	Multnomah	Medford Corporation Greed wood chip storage and distribution center	JAP			12/12/74	Issued proposed permit	12/12/74
P333	10/10/74	Multnomah	Ross Island Sand & Gravel Concrete Batch Plant	JAP			12/10/74	Issued permit	12/10/74
P338	11/1/74	Multnomah	Resource Recovery Byproducts Paper Classifier	JAP				Drafting proposed permit	
NC567	11/4/74	Clatsop	Crown Zellerbach-Wauna Control of TRS emissions	DDO	12/23/74			Awaiting information on system operating parameter	
P343	11/4/74	Multnomah	Pennwalt Corp.-Expansion of chlorine-caustic soda mfg.	DDO				Reviewing emission information	
NC564	11/5/74	Clackamas	Oregon Portland Cement Co. New agg. lime storage bin	DDO			12/9/74	Approved	

I N F O R M A T I O N R E C E I V E D							DEQ Staff Disposition		
No.	Date Received	Location	Project	Review Engineer	Information Req'd	Information Rec'd	Approval Date	Action	By
P342	11/12/74	Multnomah	Zidell Explorations, Inc. new secondary aluminum smelter	JAP				Reviewing submitted information	
P348	11/22/74	Multnomah	Kaiser Permanente Medical Center - Controlled atmosphere incinerator	JAP				Reviewing submitted application	
NC568	11/26/74	Multnomah	Boeing of Portland scrubber for salt fume	DDO	12/19/74			Awaiting information on adequacy of system	
NC565	11/27/74	Multnomah	Norwest Publishing-Control of heatset ink dryer	DDO			12/9/74	Approved	
NC566	11/27/74	Clackamas	Oregon Portland Cement roadway paving	DDO			12/9/74	Approved	
NC569	12/6/74	Clackamas	Clackamas County Public Works Department County rock crusher	JAP	6/12/74			Awaiting information on location of spray nozzles	
NC570	12/20/74	Multnomah	Rhodia-Chipman Expanding formulation facilities	DDO				Additional information letter being drafted	
NC571	12/30/74	Multnomah	Martin Marietta-Control of alumina loading into railroad cars	DDO				Reviewing drawing and information submitted	
P355	12/31/74	Multnomah	Portland Bolt & Mfg. Co. Relocation	DDO				Reviewing permit application	
P361	12/31/74	Washington	USA-Durham Sludge incinerator, lime recalciner and steam boilers	JAP				Reviewing submitted application	



## I N F O R M A T I O N   R E C E I V E D

DEQ Staff Disposition

No.	Received Date	Location	Project	Engineer	Information	Approval Date	Action	By
57-I	7-17-74	Salem	Boise Cascade Digester 8 and Counter Current Washer	Boise Cascade	1 plan	8-15-74	Approved.	RJN
58-I	8-1-74	Tillamook Co.	Animal Waste Disposal System Holding Tank for Joe Donaldson	U.S.Department of Agriculture	1 plan	8-12-74	Approved	RHF
59-I	8-5-74	Tillamook Co.	Animal Waste Disposal System Holding Tank for Glen Metcalfe	U.S.Department of Agriculture	1 plan	8-12-74	Approved	RHF
60-I	8-5-74	Tillamook Co.	Animal Waste Disposal System Holding Tank for Harvey Wyss	U.S.Department of Agriculture	1 plan	8-12-74	Approved	RHF
61-I	8-5-74	Tillamook Co.	Animal Waste Disposal System Holding Tank for Ray Measur	U.S.Department of Agriculture	1 plan	8-12-74	Approved	RHF
62-I	8-5-74	Tillamook Co.	Animal Waste Disposal System Holding Tank for Ron Zuercher	U.S.Department of Agriculture	1 plan	8-12-74	Approved	RHF
63-I	8-5-74	Stayton	Stayton Canning Co. Tax Credit T-566, "Spray Irrigation System".	Clark and Groff	1 plan		Request re-submittal of T-566 & T-567 into one combined application.	RJN
64-I	8-5-74	Stayton	Stayton Canning Co. Tax Credit T-567, "Wastewater Screening System".	Clark & Groff	1 plan			RJN
65-I	7-12-74	Portland	Stauffer Chemical Co. Tax Credit T-552, "Lined Pond with Pump".	Stauffer Chemical Co. Engineering Department	1 plan	12-20-74	Approved	REG

## I N F O R M A T I O N   R E C E I V E D

## DEC Staff Disposition

No.	Received Date	Location	Project	Engineer	Information	Approval Date	Action	By
66-I	8 74	Yamhill Co.	Millers Wholesale Meat Lagoon System	Environmental Associates	1 plan	8-15-74	Approved	RHF
67-I	7-16-74	Polk Co.	Willamette Industries Log Pond Modifications	Willamette Industries	1 plan	8-15-74	Approved	RHF
70-I	8- -74	St. Helens	Kaiser Gypsum Preliminary study of sanitary sewer pressure line	Whiteley/Jacobsen & Associates	1 plan	8-12-74	Approved	LDP
71-I	8- -74	Portland	Zidell Oil Water Separator	Bryan Johnson	1 plan	12-18-74	Approved	LDP
72-I	8-8-74	Portland	Bird & Son Study for Recirculating Cooling Water	UMA		10-17-74	Approved	LDP
73-I	9-4-74	Marion County	Animal Waste Disposal System Holding Tank for Jesse Grieser Dairy Farm	U.S.Department of Agriculture	1 plan	9-10-74	Approved	RHF
75-I	9-11-74	Yamhill County	Dayton Feed Yard Lagoon for Animal Waste	U.S.Department of Agriculture	1 plan	9-18-74	Approved	RHF
76-I	9-9-74	Yamhill County	Animal Waste Disposal System Holding Tank for Richard Kimball	U.S.Department of Agriculture	1 plan	9-18-74	Approved	RHF

## I N F O R M A T I O N   R E C E I V E D

DEQ Staff Disposition

No.	Received Date	Location	Project	Engineer	Information	Approval Date	Action	By
06-1	9-20-74	Washington County	Revised Animal Waste Disposal System for Robert Vandehey	--	--	10-8-74	Approved	SCC
07-1	6-14-74	Washington County	Animal Waste Disposal System Holding Tank for Louis Hillecke	--	--	10-8-74	Approved	SCC
08-1	10-10-74	Tillamook County	Animal Waste Disposal System Holding Tank for Daryl Johnston	U.S. Department of Agriculture	--	10-29-74	Approved	RHF
09-1	10-7-74	Portland	Asbestos Settling Ponds for Pennwalt Corp.	Pennwalt Corp.	1 plan		Pending	WDL
00-1	9-17-74	Willamina	U.S. Plywood, Water Pollution Abatement Modification	Bryan Johnson & Associates	1 plan	10-23-74	Approved	RHF
01-1	9-26-74	Columbia County	Animal Waste Disposal System Holding Tank for Ronald W. Bone	U. S. Department of Agriculture	1 plan	10-21-74	Approved	LDP/ REG
02-1	11-12-74	Marion County	Chicken Rearing Facilities For Robert Belozor Fryer Farm	(Robert Belozor prep. plans)	1 plan	11-19-74	Approved	RHF/ TRF
03-1	11- -74	Milwaukie	Proto-Tool Chrome Plated rinse water treatment system	Delta	1 plan	11-29-74	Approved	RJN
04-1	11- -74	St. Helens	Kaiser Gypsum Bay Study	NCASI	-		Pending	LDP

## I N F O R M A T I O N   R E C E I V E D

DEQ Staff Disposition

No.	Received Date	Location	Project	Engineer	Information	Approval Date	Action
105-1	12-5-74	Tillamook County	Animal Waste Disposal System and Holding Tank for Riehl Dairy Farm	U.S. Department of Agriculture	1 plan	12-10-74	Approved
106-1	12-5-74	USA (Aloha)	Intel Fab IV Neutralization System	CH <sub>2</sub> M/Hill	2 plans		Pending
107-1	12-5-74	Garibaldi	Hoy Brothers, Fish and Crab Co Wastewater screen	Dr. T. Zigler w/Siemag Systems, Inc.	1 plan		Pending
108-1	10-31-74	Garibaldi	Smith Pacific Shrimp Wastewater screen	Hank Siehaug w/Key Equip. Co.	1 plan		Pending
109-1	12-16-74	Portland	Pennwalt Corporation Outfall & Diffusion system plans	Pennwalt Corp.	2 plans		Pending
110-1	2-27-74	Willamina	Slaughter House Holding Tank for Willamina Needs services	Environmental Associates			Pending
111-1	2- -74	Clackamas County	Expansion of Animal Waste Disposal System for James Madsen	L.D. Peak	2 plans		Pending
112-1	2- -74	Clackamas County	Yoder Farms Settling Pit	U.S. Department of Agriculture	-		Pending
113-1	2- -74	Portland	Crown Zellerbach Tax Credit T-619 Construction of piping to separate contaminated wastewater	Crown Zellerbach	-		Pending
114-1	12- -74	West Linn	Crown Zellerbach Tax Credit T-620, Primary clarifier system revisions	Crown Zellerbach	-		Pending

DEPARTMENT OF ENVIRONMENTAL QUALITY

NORTHWEST REGION OFFICE - Technical Services

Water Quality Division - Project/Plan Review

During the month of December 1974, the following sanitary sewer project plans and specifications and/or reports were reviewed by the staff. The disposition of each project is shown, pending ratification by the Environmental Quality Commission.

See attached sheets for disposition of each project.

Summary of projects

9 sanitary sewer plans received  
9 sanitary sewer plans approved  
3 sanitary sewer plans pending\*

\* Pending refers to scheduling for staff review relative to disposition of projects unless noted on attached sheets as "under study".

## I N F O R M A T I O N R E C E I V E D

## DEQ Staff Disposition

Received Date	Location	Project	Engineer	Information	Approval Date	Action	By
362 9-25-74	USA (Sunset)	Extension to 114th Street L.I.D., Edwin J. Peterson property, sanitary sewers	Hilton Engineering Co.	2 plans	9-27-74	Prov. Approval	AHJ
363 9-16-74	Timberline Lodge Clackamas Co.	Timberline Lodge Sewage Effluent Seepage Bed	U.S. Department of Agriculture	2 plans	9-19-74	Prov. Approval	CHG
364 9-26-74	Tualatin	Shawnee Plains sanitary sewers	Compass Corp.	2 plans	10-3-74	Prov. Approval	AHJ
365 9-22-74	West Linn	Portland Ave. L.I.D. sanitary sewers	John W. Cunningham & Associates	2 plans	10-3-74	Prov. Approval	AHJ
366 9-26-74	Tualatin	Western Metro Sewer Extension (West of 65th Ave)	CH <sub>2</sub> MHill	1 plan	10-3-74	Prov. Approval	AHJ
367 9-11-74	Portland	P 8172.0 Tryon Creek infiltration/inflow analysis	City of Portland	2 plans	--	Pending (under study)	REG/PDC
368 10-1-74	Gresham	Casa-De-Lass sanitary sewers	Moffatt Nichol & Bonney, Inc.	2 plans	10-3-74	Prov. Approval	AHJ
369 9-30-74	Troutdale	Sanitary force main connection to a City Manhole	Sleavin-Kors	2 plans	10-3-74	Prov. Approval	AHJ
370 10-2-74	Lake Oswego (Tryon)	Revised Forest Glen subdivision sanitary sewers	Murray-McCormick Environmental Group	2 plans	10-4-74	Prov. Approval	AHJ
371 10-1-74	Tualatin	Conrad Veneer property sanitary sewer	Dorner & Tunks, Inc.	3 plans	10-8-74	Prov. Approval	AHJ

## I N F O R M A T I O N R E C E I V E D

## DEQ Staff Disposition

No.	Received Date	Location	Project	Engineer	Information	Approval Date	Action	By
55	10-3-74	Salem (Willow) E. Salem Sewer & Drainage District 1	Mackel Construction Company Shopping Center sanitary sewer at Silverton & Lancaster Drive	--	2 plans	10-18-74	Prov. Approval	AHJ
372	10-10-74	CCSD#1 (Gladstone)	Monte Carlo Heights subdivision sanitary sewer	Martin Engineering Company	3 plans	10-14-74	Prov. Approval	AHJ
373	10-9-74	Turner	A Sewerage Plan Report for Turner	Clark & Groff	3 plans		Pending (under study)	RHF/ PDC
374	10-10-74	Salem (Willow)	Central Services Center near Interstate 5 & State Street sanitary sewers	Carkin and Sherman AIA and Westech Engineering	1 plan	11-1-74	Prov. Approval	AHJ
375	10-15-74	Canby	North Juniper Street and N.E. First Avenue sanitary sewers	Zarosinski - Tatone Engineering Inc.	2 plans	10-18-74	Prov. Approval	AHJ
376	10-15-74	St. Helens	Kaiser Gypsum Co., Inc. Sanitary Sewage Disposal Modifications	Whitely, Jacobsen and Associates	3 plans	10-24-74	Prov. Approval	AHJ/ LDP
377	10-16-74	Gresham	Gresham Clinic sanitary sewers	Wilsey & Ham	2 plans	10-22-74	Prov. Approval	AHJ
378	10-17-74	Gresham	Camelot Plat 3 subdivision sanitary sewers	Carl E. Green & Associates	2 plans	10-22-74	Prov. Approval	AHJ
379	10-17-74	USA (Aloha)	Tanasbrook Development Neighborhood "C", sanitary sewer line C-1 revision, sanitary sewer line C-2	Alpha Engineering	2 plans	10-22-74	Prov. Approval	AHJ

o.	I N F O R M A T I O N   R E C E I V E D					DEQ Staff Disposition		
	Received Date	Location	Project	Engineer	Information	Approval Date	Action	By
402	11-20-74	Hillsboro	Sewell Station sanitary sewer	Rolland Baxter	2 plans	11-22-74	Prov. Approval	AHJ
403	11-20-74	Tualatin	Revised 105th Street sanitary sewer	Gene T. Ginther	2 plans	11-22-74	Prov. Approval	AHJ
404	---	USA (Beaverton)	Revised Allen Avenue sewerage diversion	-----	---	11-12-74	Prov. Approval	WQ-by CPH
405	11-29-74	Gresham	Between S. E. Stark Street and S. E. 221st Avenue sanitary sewer	Milton R. Emerson	2 plans	12-4-74	Prov. Approval	AHJ
406	11-26-74	Canby	N. Cedar Street from 5th to Dahlia Place sanitary sewer	Zarosinski-Tatone Engineers	1 plan	12-3-74	Prov. Approval	AHJ
407	12-6-74	CCSD#1	Estella Avenue sanitary sewer extension	R.A. Wright	2 plans	12-11-74	Prov. Approval	AHJ
408	12-13-74	Oregon City	Oregon City Jr. High School sanitary sewer	Annand-Boone & Associates/ Morrison, Funatake	1 plan	12-18-74	submitted to Portland Metropolitan Area Local Government Boundary Commission	AHJ
409	12-19-74	Gresham	Willowbrook-Phase II sanitary sewers	Carter, Bringle & Assoc.	2 plans	12-23-74	Prov. Approval	AHJ
410	12-19-74	Central County Sanitary Service District - Inverness (Multnomah Co)	Argay Square on N.E. 122nd South of N.E. Sandy sanitary sewers	Alpha Engineering	2 plans	12-23-74	Prov. Approval	AHJ
411	12-20-74	Oregon City	Roundtree Court sanitary sewers	R.A. Wright Engineering	2 plans	12-24-74	Prov. Approval	AHJ



I N F O R M A T I O N   R E C E I V E D					DEQ Staff Disposition		
Received Date	Location	Project	Engineer	Information	Approval Date	Action	By
12-20-74	CCSD#1	United Grocers Warehouse Complex, sanitary sewers A-1 and A-2	Gary Buford Consulting Engineer	2 plans	12-31-74	Prov. Approval	AHJ
12-26-74	USA (Metzger)	Timmins; S.W. 80th Avenue sanitary sewer	USA	2 plans	12-31-74	Prov. Approval	AHJ
12-27-74	USA (Aloha)	Shadow Wood III; S.W. 204th Avenue sanitary sewer	Gene T. Ginther Civil Eng/ Surveyor	2 plans	12-31-74	Prov. Approval	AHJ
12-23-74	Oak Lodge Sanitary Dist.	Willowdale subdivisions sanitary sewer	Clyde E. Carlson Consulting Civil Engineer	2 plans	-	Resubmitted 12-23-74 (Inadequate Info: sub-standard pipe size, pipe protection & manholes)	AHJ



## ENVIRONMENTAL QUALITY COMMISSION

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

Robert W. Straub  
GOVERNOR

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The Dalles

KESSLER R. CANNON  
Director

### MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Status Report of Air Quality Control Division Workload

Attached is a status report of the various projects in the Air Quality Control Division as of January 1, 1975. This status report covers special projects and ongoing programs, including air contaminant discharge permit applications and source tests.

KESSLER R. CANNON  
Director



Contains  
Recycled  
Materials

HMP - 1/8/75

AIR QUALITY CONTROL SUMMARY OF ACTIVITIES FOR DECEMBER, 1974

Project Plans  
 Plan reviews received 7  
 Plan reviews completed 17

Surveys  
 Area surveys 16  
 Industrial surveys 27  
 Source tests 1

Computer Programs  
 Computer programs completed 2

Meteorological Report  
 Number of days on Alert Status 0  
 Number of days under Air Stagnation Advisory 0

Permit Activities  
 Permit Applications received 5  
 Permits issued 19  
 Public Hearings held 0  
 Notice of Intent to Issue Permits 14  
 Permits revised, reissued 2

Summary of AQCD permits by source categories

	Received*	Issued	Pending
Wood products	210	96	114
Minerals and Metals	164	69	95
Pulp and paper	13	12	1
Miscellaneous	88	20	68

\*Includes applications for renewals

Source Compliance Evaluations  
 Source tests received and/or reviewed 6

Regulation Revisions in process 3

Tax Credits  
 Review reports prepared 9

## AIR QUALITY CONTROL DIVISION

Program - Engineering Services

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
<del>1</del>	<del>4/5/74</del>	<del>Toledo</del>	<del>Georgia-Pacific veneer dryer emission control</del>	<del>Burkart</del>	<del>Notice/Const.</del>		<del>Approved 11/15/74</del>
<del>2</del>	<del>7/29/74</del>	<del>Glide</del>	<del>Little River Box - Hog fuel boiler</del>	<del>"</del>	<del>"</del>	<del>9/27/74</del>	<del>Completed and approved</del>
3	12/7/73	Medford	Boise Cascade - Leckenby scrubber for veneer dryer emissions control	"	" "		
4	3/1/74	Bandon	Rogge Mills, stud mill const.	"	" "		
5	6/28/74	North Bend	Weyerhaeuser Cyclo screen separator	"	" "		
6	8/5/74	Grants Pass	Agnew Plywood Veneer dryer emission control	"	" "		
7	8/15/74	North Bend	Weyerhaeuser - veneer dryer emission control (Air-Air condenser)	"	" "		
8	9/13/74	Klamath Falls	Weyerhaeuser - veneer dryer emissions control	"	" "		
<del>9</del>	<del>11/4/74</del>	<del>Dillard</del>	<del>Permaneer door-jamb plant</del>	<del>"</del>	<del>"</del>		<del>Approved 11/8/74</del>
<del>10</del>	<del>10/31/74</del>	<del>Medford</del>	<del>Kogap - veneer dryer</del>	<del>"</del>	<del>"</del>		<del>Approved 11/26/74</del>
11	11/29/74	Brookings	Brookings Plywood - veneer dryer modifications	"	" "		Approved 12/4/74
12	10/74		Fibreboard (Bate Plywood) veneer dryer emission control	"	" "		Approved 11/15/74

## AIR QUALITY CONTROL DIVISION

Program - Engineering Services

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
1	8/28/74	Dee	Champion International	Burkart	Permit compl.	9/18/74	H. F. boiler in compliance. Letter to be answered
2	9/13/74	North Bend	Weyerhaeuser	"	Compliance status	9/13/74	Letter to be answered
3			<del>Veneer Dryer emissions control program</del>	"	<del>Special Project</del>		Completed 12/74
4	11/11/74	Dillard	Permaneer - particleboard plant variance	"			

1-1-75

AIR QUALITY CONTROL DIVISION

Program - Engineering Services

INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
1	9/30/74	Gold Beach	Champion International Cyclone test	Burkart	Source test		To be reviewed
2	7/5/74	Glendale	Robert Dollar - bark dryer	"	" "		" "
3	6/10/74	Medford	Timber Products Dryer, boilers, cyclones	PBB	" "		" "
<del>4</del>	<del>12/31/73</del>	<del>Medford</del>	<del>Boise-Cascade, cyclones</del>	<del>Burkart</del>	<del>" "</del>		<del>Review completed 12/4/74</del>
<del>5</del>	<del>3/5/73</del>	<del>Redmond</del>	<del>Brooks Willamette, cyclones</del>	<del>"</del>	<del>" "</del>		<del>Review completed 10/18/74</del>
<del>6</del>	<del>10/2/73</del>	<del>Redmond</del>	<del>Brooks Willamette, HF boilers</del>	<del>"</del>	<del>" "</del>		<del>Review completed 10/18/74</del>
<del>7</del>	<del>5/29/74</del>	<del>Redmond</del>	<del>Brooks Willamette, HF Boiler</del>	<del>"</del>	<del>" "</del>		<del>Review completed 10/18/74</del>
<del>8</del>	<del>12/74</del>	<del>Bend</del>	<del>Brooks Willamette, cyclones</del>	<del>"</del>	<del>" "</del>		<del>Review completed 12/4/74</del>
<del>9</del>	<del>5/24/73</del>	<del>Bend</del>	<del>Brooks Willamette, HF Boilers</del>	<del>"</del>	<del>" "</del>		<del>Review completed 10/17/74</del>
<del>10</del>	<del>11/14/72</del>	<del>Redmond</del>	<del>Brooks Willamette, HF Boilers</del>	<del>"</del>	<del>" "</del>		<del>Review completed 10/18/74</del>
<del>11</del>	<del>9/26/73</del>	<del>Kerby</del>	<del>Cabax Mills, H.F. boiler</del>	<del>"</del>	<del>" "</del>		<del>Review completed 12/4/74</del>
<del>12</del>	<del>3/28/73</del>	<del>Cascade Locks</del>	<del>Cascade Locks Lumber H.F. boiler</del>	<del>"</del>	<del>" "</del>		<del>Review completed 11/74</del>
<del>13</del>	<del>7/72</del>	<del>Dillard</del>	<del>Dillard Lbr., H.F. boiler</del>	<del>"</del>	<del>" "</del>		<del>Review completed 11/74</del>
<del>14</del>	<del>6/73</del>	<del>Drain</del>	<del>Drain Plywood, H.F. boiler</del>	<del>"</del>	<del>" "</del>		<del>Review completed 12/4/74</del>
<del>15</del>	<del>6/11/73</del>	<del>Drain</del>	<del>Drain Plywood, cyclones</del>	<del>"</del>	<del>" "</del>		<del>Review completed 11/74</del>

AIR QUALITY CONTROL DIVISION

Program - Engineering Services

INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
16	3/8/74	Hines	Edward Hines Lumber Co. cyclones	Burkart	Source test		Reviewed 11/74
17	1/15/74	Hines	Edward Hines Lumber Co. Hog fuel boiler	"	" "		Reviewed 11/74
18	3/23/72	Gardiner	International Paper - cyclones	"	" "		Reviewed 12/4/74
19	11/22/72	Chiloquin	D. G. Shelter Lbr., HF boiler	"	" "		Reviewed 12/4/74
20	4/17/73	K. Falls	Modoc Lumber, HF boiler	"	" "		Reviewed 11/74
21	4/12/73	White City	Olsen-Lawyer, HF boiler	"	" "		Reviewed 12/4/74
22	4/72	Medford	Medford Corp., cyclones	"	" "		Reviewed 10/22/74
23	9/21/73	White City	Permaneer - cyclones	"	" "		Reviewed 10/22/74
24	2/2/73	Glendale	Robert Dollar Co. - cyclones	"	" "		Reviewed 10/25/74
25	4/19/73	"	" " - HF boilers	"	" "		Reviewed 10/25/74
26	4/72	Grants Pass	So. Oregon Plywood - cyclones	"	" "		Reviewed 12/4/74
27	7/72	Roseburg	Sun Studs - H.F. boiler	"	" "		Reviewed 12/4/74
28	5/5/73	"	" " H.F. boiler	"	" "		Reviewed 12/4/74
29	1/3/72	Grants Pass	Tim Ply - Cyclones	"	" "		Reviewed 10/22/74
30	9/17/74	Grants Pass	Tim Ply - H.F. boiler	Bosserman	" "		To be reviewed

## AIR QUALITY CONTROL DIVISION

Program - Engineering Services

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
31	9/17/74	Medford	Timber Products - HF boiler	Bosserman	Source Test		To be reviewed
32	9/17/74	"	" ", dryer and sander-dust scrubbers	"	" "		" "
33	11/17/71	"	" " cyclones	Burkart	" "		Review completed
34	10/6/71	"	" " cyclones	"	" "		Review completed
35	11/17/71	"	" " H. F. Boiler	"	" "		Review completed
36	1/73	Gold Beach	U.S. Plywood - H.F. boiler	"	" "		Review completed
37	4/10/73	Lebanon	U.S. Plywood - rotary dryer	"	" "		Review completed
38	4/12/73	Port Orford	Western States Plywood H. F. boiler	"	" "		Review completed
39	6/71	Pilot Rock	U.S. Gypsum - stacks, cyclone	"	" "		To be reviewed
40	3/27/73	" "	" ", H. F. boiler, cyclones	"	" "		" "
41	12/6/74	Glendale	Robert Dollar - bark dryer	"	" "		" "



## AIR QUALITY CONTROL DIVISION

Program - Engineering Services

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
1	11/20/73	Brookings	Brookings Plywood, EI 8-0015	Burkart	Permit Appl.		Permit issued 11/74
2	8/1/74	Gold Beach	Pacific Teollisuus, Appl. 473	"	" "		Permit issued 10/74
3		Medford	SWF Plywood, Appl 469	"	" "		Variance approved by EQC Permit Public Hearing scheduled for 9/23/74
4	12/3/73	Brookings	South Coast Lumber, Appl 317	"	" "		
5	11/20/73	Glide	Little River Box, App. 276	"	" "		Permit issued 11/74
6	11/8/73	Drain	Smith River Lbr. App. 259	"	" "		Permit issued 12/74
7	12/6/73	Central Pt.	LA-Pacific, App 346 (Cheney Forest Products)	Bosserman	" "		
8	11/20/73	Grants Pass	SH&W Lumber, App. 275	Burkart	" "		
9	12/6/73	Grants Pass	WEBCO (App. 343) (Brown Bros. Lumber)	"	" "		
10	12/6/73	Alicel	Peacock Lumber, App. 363	"	" "		
11	6/1/73	Union	Ronde Valley Lumber, App 178	"	" "		

## AIR QUALITY CONTROL DIVISION

Program - Engineering Services

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
12	4/2/74	Bandon	Rogge Lumber, App. 436	Burkart	Permit Appl.		
13	4/2/74	Bandon	Rogge Lumber, Appl. 435	"	" "		
14	11/20/73	Bandon	Moore Mill & Lbr. App. 277	"	" "		
15	12/6/73	Broadbent	Alder Pacific, Appl. 350	"	" "		
16	1/18/74	Lakeside	Bohemia, Appl. 406	"	" "		
17	12/6/73	Myrtle Pt.	Leep Logging, Appl. 347	"	" "		
18	12/3/73	Langlois	R. D. Tucker, Appl. 334	"	" "		Permit issued
19	4/2/74	Sixes	Rogge Lumber, Appl. 437	"	" "		
20	11/20/73	Riddle	C & D Lumber, Appl. 274	"	" "		
21	9/18/73	Dillard	Dillard Lumber, Appl. 245	"	" "		
22	11/20/73	Sutherlin	L & H Lumber, Appl. 284	"	" "		
23	1/18/74	Reedsport	Reedsport Mill, Appl. 407	"	" "		
24	11/3/73	Drain	Mt. Baldy Mill, Appl. 261	"	" "		
25	12/6/73	Myrtle Cr.	Green Valley Lumber, App. 355	"	" "		
26	12/18/73	Reedsport	Bohemia, Appl. 385 (Bolon Is. Division)	"	" "		

11-1-75

## AIR QUALITY CONTROL DIVISION

Program - Engineering Services

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
27	12/6/73	Reedsport	Schafer Lumber, Appl. 344	Burkart	Permit Appl.		
28	12/28/73	Riddle	D.R. Johnson Lumber, App. 394	"	" "		
29	1/10/74	Riddle	Herbert Lumber, App. 401	"	" "		
30	5/17/73	Central Pt.	Double Dee Lumber, App. 150	Bosserman	" "		
31	12/3/73	Central Pt.	Steve Wilson Co.	"	" "		
32	12/18/73	Central Pt.	Mt. Pitt Co., Appl. 381	"	" "		
33	5/8/73	White City	Eugene Burrill Lumber, App. 119	"	" "		
34	11/14/73	Grants Pass	Morris Lumber, App. 264	Burkart	" "		
35	11/27/73	Grants Pass	Lew Merrill Lbr., App. 290	"	" "		
36	1/10/74	Grants Pass	So. Ore. Lumber, App. 403	"	" "		
37	12/6/73	Grants Pass	Grants Pass Moulding, App. 367	"	" "		
38	5/7/74	Pendleton	Blue Mtn. Forest Prod. Appl. 455	"	" "		
39	5/10/73	Pendleton	Harris Pine Mills, App. 131	"	" "		
40	6/7/73	Pilot Rock	Kerns Furniture, App. 190	"	" "		

AIR QUALITY CONTROL DIVISION  
INFORMATION RECEIVED

Program - Engineering Services  
DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
41	11/20/73	Athena	S & G Lumber, App. 271	Burkart	Permit Appl.		
42	6/6/73	LaGrande	Boise Cascade, App. 184	"	" "		
43	6/6/73	Joseph	Boise Cascade, App. 185	"	" "		
44	12/3/73	Lostine	Starner Lumber, App. 332	"	" "		
45	11/27/73	Wallowa	Victor & Sons, App. 302	"	" "		
46	7/22/74	Wallowa	Rogge Lumber, App. 470	"	" "		
<del>47</del>		<del>Neal Creek</del>	<del>Champion International U. S. Plywood</del>	<del>"</del>		12/6/74	Permit issued

## AIR QUALITY CONTROL DIVISION

Program - Engineering Services

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
1	8/7/74	LaGrande	Boise Cascade - permit rev.	Bosserman			Letter written 10-6/74 Now in approval routing
2	8/26/74	Coquille	Roseburg Lumber, compliance schedule change	"			" "
3	8/1/74	Grants Pass	Four Ply - permit revisions	"			" "
4	8/1/74	Brookings	Four Ply - permit conditions	"			" "
<del>5</del>	<del>8/29/74</del>	<del>Medford</del>	<del>Timber Products, T582</del>	<del>"</del>	<del>Tax credit</del>	<del>11-22-74</del>	<del>Request information</del>
6	8/28/74	Creswell	Mazama Timber, T581	"	" "		Staff getting more data for January EQC Meeting
7	10-21-74	Roseburg	US Plywood - T-604	"	" "		Letter 12-23-74 requesting more info
8	10-21-74	Roseburg	US Plywood - T-605	"	" "		" " "
<del>9</del>	<del>11-17-74</del>	<del>LaPine</del>	<del>Russell Industries Open-Burn Variance Request</del>	<del>"</del>	<del>Variance</del>	<del>12-20-74</del>	<del>Prepared Staff Report</del>
<del>10</del>	<del>11-27-74</del>	<del>Chemult</del>	<del>Boise Cascade Wigwam Smoking variance request</del>	<del>"</del>	<del>" "</del>	<del>12-20-74</del>	<del>" " "</del>
11	12-23-74	Forest Grove	Wood Waste Boiler-T-618 Woodfold-Marco Mfg. Co.	"	Tax Credit		Gathering Info

## AIR QUALITY CONTROL DIVISION

Program - Engineering Services

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	EI # Information	Approval Date	Action
1	12/27/73	Baker	Ellingson Timber, App. 391	Bosserman	01-0004		Plant closed -
<del>2</del>	<del>5/31/73</del>	<del>Grants Pass</del>	<del>Mountain Fir Lumber, App. 170</del>	<del>"</del>	<del>17-0011</del>	<del>12-10-74</del>	<del>Permit drafted 9/74</del>
3	9/19/73	Lakeview	Louisiana Pacific, App. 246	"	19-0004,0016		In approval routing
4	9/26/73	Baker	Ellingson Lumber, App. 247	"	01-0003		" "
5	6/13/73	Prineville	Hudspeth Pine, App. 208	"	07-0004		Bend Office will draft
6	6/7/73	Prineville	Ochoco Lumber, App. 189	"	07-0005		"
7	1/25/74	Roseburg	Roseburg Shingle, App. 419	"	10-0026		No action yet
8	11/20/73	Dillard	Round Prairie Lumber, 281	"	10-0027		"
9	1/25/74	Prairie City	Prairie City Timber, App. 422	"	12-0003		In approval routing
10	6/11/73	Cascade Locks	Cascade Locks Timber, 198	"	14-0005		No action yet
11	12/3/73	Ashland	Bellview Moulding, App. 322	"	15-0070		Inspected 12-74
12	12/18/73	White City	Cascade Wood Products, 377	"	15-0005		"
13	11/27/73	Madras	Brightwood Corp., App. 301	"	16-0003		No action
14	6/18/73	Grants Pass	Spalding & Son, App. 213	"	17-0013		Inspected 12-74
15	12/3/73	Cave Junction	Rough & Ready Lbr., 309	"	17-0018		No action
16	1/15/74	Selma	M & Y Lumber, App. 405	"	17-0019		"

## AIR QUALITY CONTROL DIVISION

Program - Engineering Services

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	EI No. Information	Approval Date	Action
17	11/8/73	Bly	Weyerhaeuser Co, App. 257	Bosserman	18-0037		In approval routing
18	6/7/73	Klamath Falls	Modoc Lumber, App. 191	"	18-0009		"
19	5/14/73	Lakeview	Lakeview Lumber, App. 141	"	19-0006		"
20	7/30/73	Toledo	Publishers Forest Prod. 233	"	21-0011		Inspected 12-4-74
21	11/8/73	Toledo	Guy Roberts Lbr., Appl. 160	"	21-0013		"
22	1/25/74	Philomath	3-G Lumber, App. 421	"	21-0029		"
<del>23</del>	<del>2/13/74</del>	<del>Spray</del>	<del>Heppner Lumber, App. 428</del>	<del>"</del>	<del>35-0004</del>		<del>Permit issued</del>
24	12/3/73	Bunker Hill	Coos Head Timber, App. 338	"	06-0074		no activity
25	11/20/73	Coos Bay	Pierce Lumber, Appl. 267	"	06-0004		"
26	11/27/73	Prineville	Clear Pine Mouldings, 296	"	07-0001		Bend office will draft
27	12-18-73	Prineville	Coin Millwork, Appl. 373	"	07-0002		" "
28	6/4/73	Prineville	Consolidated Pine, App. 181	"	07-0003		" "
29	5/31/73	Prineville	Pine Products Corp. 169	"	07-0006		" "
30	11/14/73	LaPine	Russell Industries, App. 265	"	09-0031		In approval routing
<del>31</del>	<del>12/18/73</del>	<del>Bend</del>	<del>Cascade Forest Prod., 382</del>	<del>"</del>	<del>09-0014</del>	<del>12-10-74</del>	<del>Permit issued</del>
32	11/27/73	Bend	Oregon Trail Wood Prod. 307	"	09-0033		Bend Office will draft
<del>33</del>	<del>12-73</del>	<del>Bend</del>	<del>F &amp; F Products, App. 360</del>	<del>"</del>	<del>09-0010</del>	<del>12-10-74</del>	

## AIR QUALITY CONTROL DIVISION

Program - Engineering Services

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	EI No. Information	Approval Date	Action
34	5/30/74	Bend	Bend Millwork, Appl. 462	Bosserman	09-0015		Bend office will draft
35	11/20/73	Bend	Oregon Woodwork, App. 283	"	09-0016		"
36	5/7/74	Bend	Northwood Corp. App. 453	"	09-0046		"
37	1/18/74	Bend	DeSoto/Kerns, Appl. 409	"	09-0036		"
38	11/20/73	Redmond	Ponderose Moulding, App. 269	"	09-0017		"
39	12/3/73	Redmond	Whittier Moulding, App. 335	"	09-0018		"
40	12/18/73	Redmond	Boyle Mfg., Appl. 383	"	09-0019		"
41	12/3/73	Redmond	Oregon Fir Supply, Appl. 341	"	09-0009		"
42	6/13/73	Glendale	Superior Lumber, Appl. 206	"	10-0048		No action yet
43	12/6/73	Roseburg	Keller Lumber, Appl. 345	"	10-0019		"
44	12/6/73	Prairie City	Taynton, Appl. 359	"	12-0018		In approval routing
45	6/6/73	John Day	San Juan Lumber, Appl. 186	"	12-0004		"
46	5/7/74	Long Creek	Blue Mtn. Forest Prod., 456	"	12-0022		No action yet
47	11/14/73	Cascade Locks	Gorge Lumber, Appl. 263	"	14-0010		In approval routing
48	<del>6/14/73</del>	<del>Neal Creek</del>	<del>U. S. Plywood, Appl. 211</del>	<del>A. F. B.</del>	<del>14-0009</del>		<del>Re-assigned</del>
49	1/22/74	Hood River	Krieg Millwork, Appl. 413	PBB	14-0007, 0002		In approval routing
50	<del>12/6/73</del>	<del>White City</del>	<del>Alder Mfg., Appl. 349</del>	<del>"</del>	<del>15-0060</del>		<del>Plant shut down</del>



AIR QUALITY CONTROL DIVISION

Program - Engr. Services

INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	EI No. Information	Approval Date	Action
51	1/22/74	White City	Delah Timber Prod., 415	Bosserman	15-0009		Inspected 12/74
<del>52</del>	<del>5/22/73</del>	<del>White City</del>	<del>So. Oregon Dry Kiln, 152</del>	<del>"</del>	<del>15-0053</del>		<del>Plant shut down</del>
<del>53</del>	<del>11/27/73</del>	<del>White City</del>	<del>Olson-Lawyer Lbr., 294</del>	<del>"</del>	<del>15-0046</del>		<del>"</del>
54	11/20/73	White City	Medford Moulding, App. 285	"	15-0037		Inspected 12/74
55	11/27/73	White City	Oregon Cutstock, Appl. 305	"	15-0047		"
<del>56</del>	<del>11/20/73</del>	<del>Talent</del>	<del>Fountain Lumber, Appl. 280</del>	<del>"</del>	<del>15-0013</del>		<del>Plant shut-down</del>
57	6/7/73	Ashland	McGrew Bros. Sawmill, 188	"	15-0016		Inspected 12/74
58	11/20/73	Ashland	Parson Pine Prod., App. 268	"	15-0035		"
<del>59</del>	<del>11/27/73</del>	<del>Ashland</del>	<del>Bigfoot Wood Prod., 287</del>	<del>"</del>	<del>15-0086</del>		<del>Plant shut down</del>
60	6/11/73	Chiloquin	D. G. Shelter, Appl. 199	"	18-0016		Draft to typing 10/1/74
<del>61</del>	<del>7/9/73</del>	<del>Chemult</del>	<del>Boise Cascade, Appl. 227</del>	<del>"</del>	<del>18-0019</del>	<del>12-10-74</del>	
<del>62</del>	<del>11/27/73</del>	<del>Malin</del>	<del>Loveness Co., Appl. 292</del>	<del>"</del>	<del>18-0007</del>	<del>12-10-74</del>	
<del>63</del>	<del>4/25/74</del>	<del>Klamath Falls</del>	<del>Jeld-Wen, Appl. 447</del>	<del>"</del>	<del>18-0059</del>		
<del>64</del>	<del>11/27/73</del>	<del>K. Falls</del>	<del>Chris Moulding, Appl. 298</del>	<del>"</del>	<del>18-0028</del>	<del>12-10-74</del>	
65	1/10/74	K. Falls	Jeld Wen, Appl. 400	"	18-0006		In approval routing
66	11/27/73	Yachats	Dahl Lumber, Appl. 303	"	21-0021		"
67	12 /73	Newport	Paul Barber Hardwoods 387	"	21-0020		"

AIR QUALITY CONTROL DIVISION

Program - Engineering Services

INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	EI No. Information	Approval Date	Action
68	5/29/73	Tygh Valley	Tygh Valley Lbr., App. 163	Bosserman	33-0008		No action yet
69	12/3/73	Maupin	Mountain Fir Lbr., App. 316	"	33-0009		"
70	6/8/73	Kinzua	Kinsua Corp., Appl. 194	"	35-0002		In approval routing

## AIR QUALITY CONTROL DIVISION

Program - Engineering Services

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
1	4/15/74	Coos Bay	Georgia Pacific, log chipper	Bosserman	Notice of Construction		
2	4/4/74	Coos Bay	Geo. Pac., truck dumper	"	"		
3	4/24/74	Dillard	Roseburg Lumber, particle pre-dryer	"	"		
4	8/10/74	Bend	Bend Millwork, cone collectors	"	"		
5	8/9/74	Bend	Northwood, spray booths	"	"		
6	6/24/74	John Day	Edward Hines, H.F. boiler	"	"		
7	5/26/74	Dillard	Roseburg Lumber, truck dump	"	"		
8	5/10/74	Dillard	Round Prairie Lbr., H.F. boiler	"	"		
9	4/9/74	Roseburg	Raintree Wood Products, cyclones	"	"		
10	6/28/74	Nyssa	Amalgamated Sugar, boiler	"	"		
11	7/23/74	Lakeview	Fremont Sawmill, boilers	"	"		
12	8/23/74	Pilot Rock	Louisiana=Pac., boilers	"	"		

## AIR QUALITY CONTROL DIVISION

Program - Engineering Services

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
NO ACDP APPLICATIONS RECEIVED							
1		Coos Co.	Arago Cedar - SIC 2429	Bosserman	06-0042	No permit needed	Letter to be sent
2		Coos Co.	Weyerhaeuser, SIC 2492	"	06-0051	12/14/73	"
3		Coos Co.	Acme Wood Products, SIC 2499	"	06-0018		"
4		Coos Co.	Rose City Archery, SIC 2499	"	06-0069		"
5		Crook Co.	Burnet Box, SIC 2441	"	07-0009		"
6		Douglas Co.	Dillard Veneer, SIC 2430	"	10-0011	Closed	(see #245 for Dillard Lbr.)
7		Douglas Co.	Duco-Lam, Inc., SIC 2433	"	10-0060	Probably no permit needed	Letter to be sent
8		Douglas Co.	B.F. Cleat & Slat, SIC 2441	"	10-0008	"	"
9		Douglas Co.	Poteet Wood Prod., EI 2442	"	10-0062	"	"
10		Douglas Co.	A. F. Saar, SIC 2499	"	10-0065		"
11		Grant Co.	Edward Hines, SIC 2421	"	12-0021	See 12-0001	"
12		Jefferson	Warm Springs Forest Prod. Warm Springs. SIC 2421	"	16-0001		Meeting arranged 9/24/74
13		Jefferson	Warm Springs Forest Prod. Madras SIC 2430	"	16-0008		"
14		Josephine	Cabax Mills Lbr, SIC 2421	"	17-0005		Letter to be sent

AIR QUALITY CONTROL DIVISION

Program - Engineering Services

INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	EI No. Information	Approval Date	Action	
			NO ACDP APPLICATIONS RECEIVED					
15		Josephine	Diamond Indus., SIC 2431	Bosserman	17-0046	Probably does not need permit	Letter to be sent	
16		Klamath	D. G. Shelter, SIC 2421	"	18-0016	App. rec.	"	
17		Klamath	A.L. Pennington, SIC 2441	"	18-0055	Not needed	"	
18		Klamath	Hudson Lumber, SIC 2499	"	18-0022		"	
19		Klamath	Paint Rock Cedar, SIC 2421	"	18-0022	Sold	"	
20		Lake	Dame Lumber, SIC 2431	"	19-0005		Received 8/20/74 (c 29)	
21		Lake	Oregon Windor, SIC 2431	"	19-0008		See Lakeview Lumber Permit	
22		Lincoln	Toledo Shingle, SIC 2429	"	21-0015		Letter to be sent	
23		Umatilla	Exterior Wood, SIC 2429	"	30-0034		"	
24		Umatilla	Harris Pine Mills, SIC 2421	"	30-0005	App. rec.	"	
25		Wasco	J. H. Baxter, SIC 2491	"	33-0003		"	

AIR QUALITY CONTROL DIVISION

Program - Engineering Services

INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
1	4/12/74	St. Helens	Boise Cascade, condensible and non-condensable gas systems, Tax Credit T-550.	Clinton			Requested additional info
<del>2</del>	<del>7/24/74</del>	<del>Toledo</del>	<del>Georgia Pacific No. 1 electrostatic precipitator, Tax Credit No. T-531R</del>	<del>Clinton</del>		<del>10/25/74</del>	<del>Approved</del>
<del>3</del>	<del>7/24/74</del>	<del>St. Helens</del>	<del>Kaiser Gypsum Co., baghouse, Tax Credit No. T-572</del>	<del>Clinton</del>		<del>11/22/74</del>	<del>Approved</del>
<del>4</del>	<del>7/24/74</del>	<del>St. Helens</del>	<del>Kaiser Gypsum Co. scrubber, Tax Credit No. T-571</del>	<del>Clinton</del>		<del>11/22/74</del>	<del>Approved</del>
<del>5</del>	<del>9/18/74</del>	<del>Portland</del>	<del>Terminal Flour Mills Co. baghouses, Tax Credit No. T-585</del>	<del>Clinton</del>		<del>12/20/74</del>	<del>Approved</del>
<del>6</del>	<del>9/23/74</del>	<del>Toledo</del>	<del>Georgia-Pacific Corp. scrubber, Tax Credit T589</del>	<del>Clinton</del>		<del>11/22/74</del>	<del>Approved</del>
<del>7</del>	<del>9/30/74</del>	<del>Newberg</del>	<del>Publishers Paper Co., blow stack emission control tax credit T-591</del>	<del>Clinton</del>		<del>12/20/74</del>	<del>Approved</del>
<del>8</del>	<del>9/30/74</del>	<del>Oregon City</del>	<del>Publishers Paper Co., smoke density recorder Tax Credit No. T-594</del>	<del>Clinton</del>		<del>11/22/74</del>	<del>Approved</del>
9	9/30/74	Oregon City	Fourth stage venturi for Publishers Paper Co. Tax Credit No. T-595	Clinton		12/20/74	Approved

## AIR QUALITY CONTROL DIVISION

Program - Engineering Services

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
10	10/15/74	Wauna	Crown Zellerbach, non-condensable system revision Tax Credit T-603	Clinton		12/20/74	Approved
11	11/26/74	Oregon City	Publishers Paper Co., Blow stack emission control Tax Credit T-608	"		12/20/74	Approved
12	11/26/74	Toledo	Georgia Pacific Corp. No. 2 smelt dissolving tank vent scrubber, Tax Credit T-610	"		12/20/74	Approved
13	11/26/74	Toledo	Georgia Pacific Corp. No. 2 smelt dissolving tank vent scrubber, Tax Credit T-611	"		12/20/74	Approved
14	11/26/74	Toledo	Georgia Pacific Corp. KKP vent line, Tax Credit T-612	"		12/20/74	Approved
15	11/26/74	Toledo	Georgia Pacific Corp. MKP spill tank, Tax Credit T-615	"			Sent to Water Quality
16	12/12/74	Gardiner	International Paper Co. Non-condensable gas incineration system) Tax Credit T-616	"			
17	12/24/74	Gardiner	International Paper Co. TRS Monitor Tax Credit T-621	"			

AIR QUALITY CONTROL DIVISION  
 INFORMATION RECEIVED

Program - Engineering Services  
 DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
1	9/18/74	Halsey	American Can Co. lime mud-oxidation system plan	Clinton		12/31/74	Approved
2		Albany	Pesticide research project	Clinton			First sampling done
3			15 test report reviews	Clinton			
4			Policy on permit violations	Clinton			
5	12/9/74	Gardiner	International Paper Co. Variance Request	"			



## AIR QUALITY CONTROL DIVISION

Program -Engineering Services

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
1	11/27/73	Metolious	Gourmet Food Products, Inc.	Clinton	Permit Appl.		Visited site, to prepare permit
2	4/22/74	Pendleton	Pendleton Community Hospital	"	" "		" " "
3	12/6/73	Pendleton	St. Anthony Hospital	"	" "		" " "
4	11/14/73	John Day	Blue Mountain Hospital	"	" "		" " "
5	5/7/74	Burns	Harney County Hospital	"	" "		" " "
6	4/24/74	Nyssa	Malheur Memorial Hospital	"	" "		" " "
7	12/3/74	LaGrande	Eastern Oregon State College	"	" "		" " "
8	4/26/74	Nyssa	Albertson Land & Cattle	"	" "		" " "
9	12/6/73	Newport	Pacific Communities Hospital	"	" "		" " "
10	1/29/74	Toledo	New Lincoln Hospital	"	" "		" " "
11	12/18/74	Reedsport	Lower Umpqua Hospital	"	" "		" " "
12	11/27/73	Bandon	So. Coos General Hospital	"	" "		" " "
13	10/29/73	Pendleton	General Foods Corporation	"	" "		" " "
14	10/29/73	Pendleton	General Foods Corporation	"	" "		" " "
15	4/22/74	Pendleton	Eastern Oregon Hospital and Training Center	"	" "		" " "

## AIR QUALITY CONTROL DIVISION

Program - Engineering Services

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
16	5/31/73	Medford	Morton Milling Co.	Clinton	Permit Appl.		Visited site, to prepare perm.
17	5/25/73	Central Point	Grange Coop Supply	"	" "		" " "
18	6/1/73	Roseburg	Box J Pellet Co.	"	" "		" " "
19	5/29/73	Grants Pass	Josephine Growers Co-op	"	" "		" " "
20	4/5/73	Boardman	Eastern Oregon Farming	"	" "		To prepare permit
21	4/29/74	Coos Bay	Bay Area Hospital	"	" "		"
22	5/31/73	Klamath Falls	Full Circle, Inc.	"	" "		"
23	5/31/73	Roseburg	Douglas County Farm Bureau	"	" "		"
24	4/16/74	Enterprise	Wallowa Memorial Hospital	"	" "		"
25	1/23/74	Medford	Rogue Valley Memorial Hosp.	"	" "		"
26	5/22/74	Island City	Pioneer Flouring Mills Co.	"	" "		"
27	12/27/73	Roseburg	V. A. Hospital	"	" "		"
28	12/3/73	Hermiston	Lamb-Weston, Inc.	"	" "		"
29	12/6/73	Hermiston	Union Pacific Railroad	"	" "		"
30	11/20/73	Hood River	Diamond Fruit Growers	"	" "		"
31	12/3/73	Hood River	Hood River Mem. Hospital	"	" "		"
32	5/13/74	Umatilla	Umatilla Hospital	"	" "		"

## AIR QUALITY CONTROL DIVISION

Program - Engineering Services

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
33	4/24/74	Hermiston	Good Shepherd Hospital	Clinton	Permit Appl.		To prepare permit
34	11/27/73	The Dalles	Columbia Park Hospital	"	" "		"
35	12/6/73	The Dalles	The Dalles General Hospital	"	" "		"
36	6/4/73	The Dalles	Sunshine Biscuits, Inc.	"	" "		"
37	5/17/74	Grants Pass	So. Oregon General Hospital	"	" "		"
38	3/1/74	White City	3M Company	"	" "		"
39	7/23/74	Ontario	Andrews Seed Co.	"	" "		"
40	4/10/74	Roseburg	Douglas Community Hosp.	"	" "		"
41	11/27/73	Lakeview	Lake Hospital District	"	" "		"
42	12/3/73	Medford	Harry and David	"	" "		"
43	12/18/73	Medford	Providence Hospital	"	" "		"
44	11/20/73	Klamath Falls	Presbyterian Intercommunity Hospital	"	" "		"
45	4/10/74	Grants Pass	Josephine General Hospital	"	" "		"
46	10/26/73	Grants Pass	State Highway Division	"	" "		"
47	12/7/73	Roseburg	Mercy Hospital	"	" "		"
48	12/6/73	Redmond	Central Oregon Dist. Hosp.	"	" "		"

AIR QUALITY CONTROL DIVISION

Program - Engineering Services

INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
49	12/6/73	Roseburg	Pacific Building	Clinton	Permit Appl.		To prepare permit
50	1/7/74	Ashland	Ashland Community Hospital	"	" "		"
51	12/18/73	Ashland	So. Oregon College	"	" "		"
52	6/14/73	McNary	John Mansville Products	"	" "		"
53	10/22/74	Eagle Point	So. Ore. Tallow Co., Inc.	"	" "		Proposed permit drafted
54	10/29/74	North Bend	Menasha Corporation	"	" "		" " "
55	11/8/74	Klamath Falls	Klamath Tallow Co.	"	" "		" " "
56	11/8/74	Redmond	Redmond Tallow Co.	"	" "		" " "
57	10/24/74	Toledo	Georgia Pacific Corp.	"	" "		Requested additional info.

## AIR QUALITY CONTROL DIVISION

Program - Engineering Services

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Permit Applic. EI No.	Approval Date	Action
1		Durkee	Oregon Portland Cement	J.A. Broad	01-0027	Same as 01-0015	Pending review, to prepare permit
2		Huntington	Oregon Portland Cement	"	01-0015		Completed 12-10-74
3		Redmond	Central Oregon Pavers	"	09-0050		Pending
4		Bend	Central Oregon Pumice	"	09-0024		Completed 11-18-74
5		Roseburg	Umpqua Sand & Gravel	"	10-0091		Pending inspection "
6		Roseburg	Roseburg Sand & Gravel	"	10-0044		Completed 10-14-74 Pending inspection "
7		Riddle	Mining Minerals & Mfg.	"	10-0066		Completed 12-17-74
8		Cascade Locks	Hood River S&G & Redimix	"	14-0012		Pending inspection, to issue permit
9		Jacksonville	Sasco Gravel	"	15-0089		Pending inspection "
10		Klamath Falls	Klamath Rock Products	"	18-0047		Pending inspection "
11		Hermiston	Rohde Sand & Gravel	"	30-0055		Pending inspection "
12		Boardman	Ready Mix Sand & Gravel	"	30-0046		Pending inspection "
13		Pendleton	Rogers Construction(Airport)	"	30-0047		
14		Pendleton	Morrison Knudsen	"	30-0053		Pending inspection "
15		Pendleton	Rogers Const. (Pendleton)	"	30-0068		Completed 11-21-74 "
16		Hermiston	E. S. Schnell	"	30-0069		Pending inspection "

## AIR QUALITY CONTROL DIVISION

Program - Engineering Services

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Permit Appl. EI No.	Approval Date	Action
17		Island City	R. D. Mac	Broad	31-0020		Completed 11-21-74
18		Portable	Jarl Construction	"	37-0069		Pend. review, to prepare perm
19		Portable	C. H. Stinson	"	37-0073		Pending review " "
20		Portable	Klamath Road Department	"	37-0019		Pending review " "
21		Portable	J. C. Compton	"	37-0065		
22		Portable	So. Oregon Aggregate	"	37-0067		Pend. insp., to issue permit
23		<del>Bandon</del>	<del>Bullard Sand &amp; Gravel</del>	"	<del>06-0003</del>		Completed 9-18-74
24		Grants Pass	Copeland Paving	"	17-0001		Pending review " "
25		Klamath Falls	George Stacy	"	18-0060		Pending review " "
26		Klamath Falls	Klamath Rock Products	"	18-0012		Pending review " "
27		Malheur Co.	Ontario Asphalt Paving	"	23-0001		Pending review " "
28		<del>Milton-Free water</del>	<del>Ready Mix Sand &amp; Gravel</del>	"	<del>30-0002</del>		Completed 9-24-74
29		Umatilla Co.	Percy E. Jellum	"	30-0003		Pending review " "
30		Hermiston	E. S. Schnell	"	30-0071		Pending review " "
31		<del>Pendleton</del>	<del>Rogers Const. (Airport)</del>	"	<del>30-0066</del>		Completed 10-14-74
32		<del>Pendleton</del>	<del>Rogers Const. (Mission)</del>	"	<del>30-0067</del>		Completed 10-14-74

1-1-75

## AIR QUALITY CONTROL DIVISION

Program - Engineering Services

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Permit Appl. EI No.	Approval Date	Action
49		Baker	Baker Redi Mix	Broad	01-0028		Pend. review-to prepare permit
50		Crook Co.	Ochoco Redi Mix	"	07-0011		Pending review " "
51		Curry Co.	Pacific Redi Mix	"	08-0021		Pending review " "
52		Curry Co.	Ferry Creek Rock & Conc.	"	08-0030		Pending review " "
53		Deschutes Co.	Bend Redi Mix	"	09-0038		Pending review " "
54		Deschutes Co.	Redmond Redi Mix	"	09-0039		Pending review " "
55		Douglas Co.	Beaver State Redi Mix	"	10-0098		Pending review " "
56		Douglas Co.	Tri City Redi Mix	"	10-0087		Pending review " "
57		Douglas Co.	Umpqua Redi Mix	"	10-0086		Pending review " "
58		Douglas Co.	Jimelcrete	"	10-0095		Pending review " "
59		Douglas Co.	Pre Mix Concrete Pipe	"	10-0096		Pending review " "
60		Douglas Co.	Bohemia Umpqua Div.	"	10-0103		Pending review " "
61		Hood River Co.	Hood River S & G	"	14-0015		Pending review " "
62		H. Rvr. Co.	Hood Rvr. S & G & Redimix	"	14-0016		Pending review " "
63		Jackson Co.	M. C. Liniger	"	15-0071		Pending review " "
64		Jackson Co.	Pine St. Redi Mix	"	15-0082		Pending review " "
65		Jackson Co.	Tru Mix Leasing	"	15-0090		Pending review " "

AIR QUALITY CONTROL DIVISION

Program - Engineering Services

INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Permit Appl. EI No.	Approval Date	Action
66		Jackson Co.	M. C. Liniger	Broad	15-0062		Pend. review-to prepare perm
67		Josephine Co.	Davidson Redi Mix	"	17-0041		Pending review " "
68		Josephine	Gilbert Rock & Redi Mix	"	17-0048		Pending review " "
69		Josephine	Mel Barlow	"	17-0051		Pending review " "
70		Josephine	Gary L. Peterson	"	17-0053		Pending review " "
71		Klamath Co.	Klamath Redi Mix	"	18-0042		Pending review " "
72		Klamath Co.	Concrete Products Ind.	"	18-0041		Pending review " "
73		Lincoln Co.	Ocean Lake Redi Mix	"	21-0030		Pending review " "
74		Lincoln Co.	Ocean Lake Redi Mix	"	21-0034		Pending review " "
75		Lincoln Co.	Lincoln Redi Mix	"	21-0035		Pending review " "
76		Lincoln Co.	Lincoln Redi Mix	"	21-0028		Pending review " "
77		Malheur Co.	Oregon Concrete Products	"	23-0014		Pending review " "
78		Malheur Co.	RTP Concrete	"	23-0015		Pending review " "
79		Malheur Co.	Flynn Sand and Gravel	"	23-0013		Pending review " "
80		Morrow Co.	Ready Mix Sand & Gravel	"	25-0014		Pending review " "
81		Umatilla Co.	Ready Mix Sand & Gravel	"	30-0057		Pending review " "



## AIR QUALITY CONTROL DIVISION

Program - Engineering Services

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Permit Appl. EI No.	Approval Date	Action
82		Pendleton	Pendleton Redi Mix	Broad	30-0019		Pend. review--to prepare permit
83		Umatilla Co.	Central Cement	"	30-0020		Pending review " "
84		Union Co.	R. D. Mac	"	31-0010		Pending review " "
85		Wasco Co.	Tygh Valley Sand & Gravel	"	33-0017		Pending review " "
86		Wasco Co.	The Dalles Concrete	"	33-0019		Pending review " "
87		Portable	Acme Vickery	"	37-0077		Pending review " "
88		Portable	Bohemia-Umpqua Division	"	37-0063		Pending review " "
89		Portable	Ready Mix Sand & Gravel	"	37-0054		Pending review " "
90		Portable	ACCO Contractors	"	37-0055		Pending review " "
91		Portable	Bi State Redi Mix	"	37-0056		Pending review " "
92	9-10-74	Portable	O'Hair Construction Co.	"	37-0072		Completed 9-11-74
93	9-30-74	Waldport	Eckman Creek Quarries	"	21-0043		Completed 10-2-74
94	9-30-74	Waldport	Far West Paving	"	21-0044		Completed 10-2-74
95	9-10-74	Ft. Klamath	O'Hair Construction Co.	"	37-0071		Completed 9-11-74
96	9-10-74	Portable	Curry County Crushers	"	37-0081		Completed 10-7-74
97		Portable	Ore. State Highway Dept.	"	37-0002		Comp. 9-26-74

AIR QUALITY CONTROL DIVISION  
INFORMATION RECEIVED

Program - Engineering Services  
DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
98	<del>9-19-74</del>	Portable	J. C. Compton	Broad	37-0044		Comp. 9-23-74
99	9-23-74	Portable	O'Hair Construction Co.	"	37-0083		Comp. 11-1-74
100	<del>10-8-74</del>	Portable	Deschutes RediMix	"	<del>37-0026</del>		Comp. 11-4-74
101	12-1-74	Coquille	Coos County Highway Dept.	"	37-0033		Pending review to issue perm
102	12-1-74	Portable	Babler Bros.	"	37-0021		"
103	12-1-74	Portable	Peter Kiewit Sons'	"	37-0024		"
104	12-12-74	Portable	Roseburg Sand & Gravel Co.	"	37-0006		"
105	<del>12-16-74</del>	Portable	Oregon State Highway Dept.	"	<del>37-0002</del>		Permit issued
106	<del>12-16-74</del>	"	Oregon State Highway Dept.	"	<del>37-0004</del>		Permit issued
107	<del>12-24-74</del>	Gold Beach	Curry County Crushers	"	<del>08-0006</del>		Completed 12-24-74
108	12-23-74	Portable	B & D Paving	"	37-0047		Pending review to issue perm

AIR QUALITY CONTROL DIVISION

Program - Indirect Sources

INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
1	7/22/74	Clackco	Clackamas Town Center	RMJ/RLV	E.A. requested		
2	7/22/74	Mulco	Mt. Hood Mall	RMJ/RLV	E. A. Requested		
3	8/26/74	Mulco	Randall Construction	RMJ	Application to be amended		
4	2/25/74	Mulco	MacDonalds Restaurant	RMJ/RLV	Add'l info requested		
5	7/8/75	Mulco	Safeway Stores Shopping Center	RMJ	"		
<del>6</del>	<del>4/19/74</del>	<del>Clackco</del>	<del>Lincoln International Center</del>	<del>RMJ/RLV</del>	<del>"</del>	<del>11/25/74</del>	
<del>7</del>	<del>7/30/74</del>	<del>Mulco</del>	<del>Presbyterian Church of Laurelhurst</del>	<del>RMJ</del>	<del>"</del>		Approve pending explanation of discrepancy in number of spaces
8	7/2/74	Mulco	McCormick Dock	RMJ/RLV	Info requested		
9		Washco	Lloyd Properties, Inc.	RMJ	Need applic.		
10	6/24/74	Mulco	Owens-Corning Fiberglas	RMJ	Info requested		

## AIR QUALITY CONTROL DIVISION

Program - Indirect Sources

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Status or Information	Approval Date	Action
11	4/3/74	Mulco	Columbia Independent Refinery	RMJ	Applic. request		
<del>12</del>	<del>7/2/74</del>	<del>Washco</del>	<del>Payless Distribution Center</del>	<del>RMJ</del>	<del>Transit rec.</del>		
<del>13</del>	<del>8/29/74</del>	<del>Marion Co.</del>	<del>Pringle Creek Parking</del>	<del>RMJ</del>			<del>Info rec'd 10/1/74 Starting review</del>
<del>14</del>	<del>9/25/74</del>	<del>Washco</del>	<del>Tualatin Plaza 54 spaces</del>	<del>RMJ</del>	<del>Approval</del>	<del>10/25/74</del>	<del>Approval schedule</del>
<del>15</del>	<del>9/26/74</del>	<del>Mulco</del>	<del>Rivergate North Shopping Cen.</del>	<del>RMJ</del>		<del>10/26/74</del>	
16	9/26/74	Washco	Farmers Insurance Modification to existing	RMJ	Applic. rec.	11/5/74	
<del>17</del>	<del>9/15/74</del>	<del>Washco</del>	<del>Tektronix</del>	<del>RMJ/RLV</del>	<del>Requested add'l info</del>	<del>ASAP</del>	<del>Approve with conditions</del>
18	9/18/74	Washco	Sunset West Shopping Center	RMJ	Add'l info req.		
19	9/4/74	Mulco	Tri-Met	RMJ	Needs land use approval		
20	10/28/74	Mulco	Sommerwood	RMJ	Add'l info requested	11/25/74	
21	11/1/74	Mulco	Argay Square Shopping Cen.	RMJ	"	12/1/74	
<del>22</del>	<del>11/7/74</del>	<del>Lane Co.</del>	<del>Eugene Motor Pool</del>	<del>RMJ</del>		<del>11/7/74</del>	
23	11/7/74	Mulco	Aldean Construction	RMJ	Add'l info requested	12/7/74	

AIR QUALITY CONTROL DIVISION  
INFORMATION RECEIVED

Indirect Sources  
Program - Technical Services  
DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
24	<del>11/26/74</del>	<del>Multnomah</del>	<del>LDS Church, 182nd Ave.</del>	<del>RMJ</del>	<del>Appl. rec.</del>	<del>1/6/75</del>	<del>Approved with conditions</del>
25	11/25/74	Mulco	Jantzen Village Apts.	"	"		Addl. info requested
26	11/2/74	Mulco	LDS Church, 16th Ward	"	"	1/7/75	
27	11/21/74	Washco	Pacific NW Tennis Club	"	"		Addl. info requested
28	11/15/74	Mulco	Robt. Randall Apts.	"	"		
29	12/13/74	Mulco	Pietro's Pizza Parlor	RMJ/CAS			Addl. info requested
30	10/22/74	Mulco	Burger King	RMJ			Addl. info requested
31	10/21/74	Mulco	Oregon International Center	RMJ/CAS			Addl. info req.
32	12/12/74	Mulco	Mulco Administrative Services Cent.	RMJ		1/12/75	Addl. info req.

AIR QUALITY CONTROL DIVISION

Program - Indirect Sources

INFORMATION RECEIVED				DEQ Staff Disposition			
No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
1a			Lead Standard	RMJ	Rules Hearing	1/24/75	
2a			Federal Register Search	RMJ	Continuing Program		Review as needed
3a			CRAG, Transportation Committee, Watchdog Comm.	RMJ/RLV	"	"	
4a			Hearings, informational meeting, etc. for various indirect sources	RMJ	"	"	
5a			Indirect Source Regs	RMJ/RLV CAS/PS	Rules Hearing	1/24/75	

1/24/75

AIR QUALITY CONTROL DIVISION

Program - Program Development

INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
<del>1</del>	<del>9/24/74</del>	<del>Portland</del>	<del>Revision of "Pollution Particle Index" portion of daily air pollution advisory</del>	<del>RBP</del>	<del>Statistical re-evaluation</del>	<del>ASAP completed</del>	<del>Revision of active program</del>
<del>2</del>	<del>Indeterminate</del>	<del>Portland</del>	<del>Ferwilliger H.V. Pb study</del>	<del>RBP</del>	<del>Summary report</del>	<del>ASAP completed</del>	<del>Review of data and environmental factors for possible use in setting Pb standard. Some statistical review.</del>
3	March 74	Statewide	Implementation, review of operation of Air Quality Assurance Program as required by EPA	RBP	Operational review, statistical	Continuing	Statewide program to validate methods used to collect and report sample data
4	March 73	Statewide	Operation and execution of Emergency Action Plan for Alert, Emergency and Warning levels of pollutants according to guidelines in Federal Register and OSIP.	RBP	Levels of high pollutants	Continuous	Surveillance of pollutant level at statewide sampling sites. Consultation with EPA, Regional agencies, DEQ staff U.S. Weather Bureau. Determine and recommend declaration of Alert if conditions warrant. Recommend termination of episode conditions when normal levels return.
5	March 73	Statewide	Date handling and validation of accuracy. Inspection of values, trends and summaries. Distribution of same to designated agencies and other parties.	RBP	Date review and distribution. Recall of past data	Continuous	Raw Lab data inspection. Review of data after data processing. Transmittal.

AIR QUALITY CONTROL DIVISION  
INFORMATION RECEIVED

Program - Program Development  
DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
6	Apr.-Oct. 1973 and	The Dalles	Make summary report of sample results for ambient air F <sup>-</sup> levels measured at sampling sites	RBP	Summary report	ASAP	Review of data and weather conditions at location during ambient sampling. Some statistical review.
<del>7</del>	<del>Aug. 74</del>	<del>Portland and Rainier</del>	<del>H.V. and PFO sampling at Rainier for particulates originating from Power Plant in State of Washington</del>	<del>NWRO and part-time RBP</del>	<del>Data collection and review. Transmittal to NWRO</del>	<del>Indeterm.</del>	<del>Dependent on information furnished by NWRO. Review of sampling sites and methods contact with SWAPCA personnel.</del>
8	July 74	Salem Boise Cascade	Air monitoring at Salem for SO <sub>2</sub> , PFO, H.V. and sticky paper. Determine extent and level of B.C. emissions.	NWRO and part-time RBP	Network plans, equipment, correct procedures	Continuous	Dependent on information furnished by many staff members involved outside main DEQ office. Check with EPA.
9	March 73	Portland	Rewrite and update E.A. plan presently being used	RBP	New contacts revised procedures	ASAP	
		Portland	Information on various air quality connected subjects requested by phone calls, written correspondence or staff members	RBP	Air sampling procedures, methods, types of instruments, etc. data requests.	Continuing	Requests from private consultants, other government agencies and interested individuals.
	Dec. 1974	State	Assist in establishing guidelines for sampling requirements for new sources, parking, commercial development.	CAS/RBP	Describe necessary sampling needs	ASAP	Work out basic requirements depending on size, location, etc.

1-1-75



AIR QUALITY CONTROL DIVISION  
INFORMATION RECEIVED

Program - Program Development  
DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
10	Aug. 74	Portland	Supervise operation of Dept. daily air pollution advisory. Answer questions concerning what it means and obtaining information on levels at various times during the day.	RBP	P.R. for TV newspapers and Public Info program	Continuing	Daily reports to TV, news media and staff members Secretaries handle actual work and transmittal of info.
11	Mar. 73	Portland	Miscellaneous assignments which are not part of long range plan. Usually do not require extensive time.	RLV/HMP	Misc. as needed	Continuing as needed	Dependent on need
12	10/31/74	Portland	Summarize Air Quality Assurance Data	RBP	Field data, lab data, operational data	Dec. 15-31, 1974	Review and evaluate efficiency of Air Monitoring Program based on possible maximum effective success rate.
13	Nov. 1974	Portland	Arrange for monitoring trailer use in Portland and Willamette Valley	RLV/HMP	Determine of need and production of useful data for DEQ	ASAP	Write letter, review requests
14	12/74	Centralia Washington	Description of PP&L Power generating facility with data and process info.	RLV/HMP	For DEQ files	By 1/1/75	Collecting necessary information for outline report
15	11/74	Portland	Tri Met "Free Zone" CO study with CAS and Laboratory.	CAS/RBP	Site location for CO	Indefinite	Start Jan. 75 to time when resurvey is indicated

## AIR QUALITY CONTROL DIVISION

Program - Program Development

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
1	Jan. '74	Designated AQMA's	AQMA Plan Development	C. Simons	Coordinated program with COG's, ODOT, EPA, CAC's, etc.	Pending EPA approval	Ongoing program. First phase to be completed by 1975
2	Oct. '72	Portland	Portland Transportation Control Strategy Implementation	C. Simons	Coordinated implementation of approved strategies	Approved by EQC	Ongoing program to be completed by July 1, 1975.
3		As required by I.S. regulations	Developed by Revised Parking Facility Guidelines to conform with new proposed Indirect Source Rules.	C. Simons	Presently being revised	Pending EQC approval of I.S. regulations	To be completed by Jan. 30, 1975
4		Portland	Prepare agenda for Citizens' Watchdog Committee on TCS	C. Simons	To keep Committee abreast of TCS activities		Monthly meetings.
5	Sept. '74	Portland	Represent DEQ on CRAG Air Quality Technical Committee	C. Simons	To coordinate land use, transportation air quality plans.		Monthly meetings.
6	Nov. '74	Portland	Represent DEQ on Ad Hoc Committee on Shopping Centers	C. Simons	To develop land use environmental criteria for Shopping Centers		Periodic

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
7	Sept. '74	Portland	Represent DEQ on CRAG Transportation Committee	C.Simons	To review & comment on all transportation projected effected by A-95 & 3C Processes		Monthly meetings.
8		Portland	Review of Applications for Parking Facility Permits	C.Simons	Review all applications submitted	As required by regulations	Review all applications as required by OAR 20-100 thru 20-135.
9		Portland	Review of draft and final EIS for " transportation projects	"	Prepare DEQ comments as part of A-95 process		Ongoing program
10	Start 11/74	Portland	Coordination of TriMet Transit Incentive Program with DEQ Revised Indirect Source Guidelines	"	Develop, coordination mechanisms for new IS regulations		Periodic meetings. Program to be developed by Jan. 1975
11	Nov. 1974	Portland	Evaluation of Tri-Met Free Fare Zone on downtown air quality	"	Review CAM CO data for downtown.		Coordinate ambient CO data with downtown traffic flows
12	January	Portland	Development of Enforcement Program for "Indirect Source Rule" OAR 20-100 thru 20-135	"	Develop enforcement procedures and mechanisms for IS rule.		To be completed by February 28, 1975

AIR QUALITY CONTROL DIVISION  
 INFORMATION RECEIVED

Program - Field Burning/Meteorology  
 DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
1			<del>Field Burning</del>	<del>LDB</del>		<del>Completion Expected 10/10/74</del>	
2			Slash burning review	LDB		2/1/75	
3			Open burning regulations	LDB	Public Hearing	12/24/74 2/28/75	
4			<del>PGE Boardman site application</del>	<del>LDB</del>			
5			Field burning report 1974	LDB		2/1/75	
6			Daily burning announcements and weather records	LDB		Continuous 365 days per year	
7			Field burning law recommendations	LDB		2/1/75	
8			Episode forecasts	LDB		as occurring	
9			EMSU	LDB		2/15/75	Implementation

AIR QUALITY CONTROL DIVISION

Program - Program Development

INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
1	10/1/74	Portland	Present model package - update - modification - Application	W.B.C.	Calibration, validation, application of existing EPA Model pack for Portland and other areas of interest.		Familiarization with the computing facilities, with the Oregon State Model pack, with the available data base. Simulation testing, calibration and validation using input parameter data base and output monitoring data.
2	10/1/74	Portland	Emissions Inventory	WBC	Development and maintenance of an "up to date" emissions inventory.		Familiarization with present system. Development of logistical procedures necessary for successful maintenance.
3	10/1/74	Portland	Oregon-Washington Diffusion Modeling Study	WBC	Be an integral participant in the development, operation, calibration, sensitivity and other facets of the production of a usable air quality simulation model for the Portland/Vancouver study area		Work in direct connection with the prime and sub-contractors in all phases of model development, as participant and reviewer as conditions dictate.

## AIR QUALITY CONTROL DIVISION

Program - Program Development

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
4	11/1/74	Portland	Present model package EPA UNAMAP Series	WBC	PTDIS PTMAX PTMPT are all modified for our system		In house capability to use EPA Air Quality Models is now available.
5	11/1/74	Portland	Present model package - emission factors	WBC	EMFAC		Written and compiled and validated
6	12/1/74	Portland	Users Manuals for PTDIS PTMAX PTMPT	"	Necessary input and output and formats		Rough draft form
7	12/1/74	Portland	Use of model package by NWRO	"	Verification runs		Coordination with NWRO on duplicate runs of model pack
8	12/1/74	Portland	EI System	"	Prodding for data		Memo's to regions to assist in EI time schedule by getting the data in.
9	1/1/75	Portland	Modeling	"	APRAC-1B ISMAP		Telephone call to Dr. Dabbe (SRI) and follow up literatur
10	1/1/75	Portland	Modeling	"	CAPM		DEQ analysis of traffic mod
11	1/1/75	Portland	Oregon/Wash Model Study	"	Grid cell model choice		Discussion of Laurangian an Eulerian techniques
12	1/1/75	Portland	Emission Inventory	"	Attempts to improve		Logistic development to provide channels of input

AIR QUALITY CONTROL DIVISION  
INFORMATION RECEIVED

Program - Program Development  
DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
13	1/1/75	Portland	Ambient air quality normalization	WBC	CO CAM data		Attempt to account for meteorological influence in AAQD.

## AIR QUALITY CONTROL DIVISION

Program - Data Processing

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
1	9/16/74		<del>ESDS - Write a program to produce extended forecasts of compliance data</del>	Hawthorne	Needed ASAP		Completed 10/1/74
2			<del>VID - Write a program to analyze average cost of repair for motor vehicle inspection program</del>	Hawthorne			Completed 10/17/74
3	10/23/74		<del>Write a program to convert old format of data (3 cards/test) to the new format (2 cards/test)</del>	Hawthorne	Needed ASAP		Completed 10/29/74
3			<del>EI - complete conversion of EI data into new format</del>	Hawthorne	Needed ASAP		Completed 11/8/74
			<del>Update current EI files and generate annual print-out</del>	Hawthorne	Data required from regions		Completed 12/3/74
			<del>Design logic for edit step of new EI system. Code programs and debug</del>	Hawthorne			Tentative completion 1/15/75
			<del>Visit Regions concerning new EI and provide assistance relative to implementation of new system.</del>	Hawthorne Crews			Completed 12/1/74
			<del>Begin learning PL/I for use in new EI System</del>	Hawthorne Rendar			



## AIR QUALITY CONTROL DIVISION

Program - Data Processing

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
4			AQDMA - Assist in analysis of EPA suggested methodology for analyzing ambient data as part of AQMA's	Rendar and Hawthorne			Preliminary results by 2/1/75
5			<del>MDS - Write a program to summarize by station by month by year all data on the meteorological master files</del>	<del>Hawthorne</del>			<del>Completed 11/10/74</del>
6			Motor vehicles	"	In process		Tentative completion 12/18/74
			<del>a. Edit MV file</del>				<del>Completed 12-16-74</del>
			b. Run statistics by model-year group				Being debugged Tentative comp. 12-31-74
			<del>c. Punch cards for OSU stat runs</del>				<del>Completed</del>

AIR QUALITY CONTROL DIVISION

Program - Data Processing

INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Approval Date	Action
1			CSDS	Hawthorne	On-going		Monthly update and generate forecast
2			MDS	Hawthorne	On-going		Monthly update
3			EI	Hawthorne	On-going	October	Completed conversion of 1974 data to new format
				Hawthorne		October	Begin system design for new system
4			Air Quality Data System update, printouts, EPA reports, statistical analysis	Rendar	On-going Monthly, quarterly throughout year		
5	September		<del>Meteorological Data System X-tabulation printouts</del>	<del>Rendar</del>	<del>completed</del>	<del>12/5/74</del>	<del>Currently being debugged</del>
6			Extend Whittaker-Henderson method to HV sites	Rendar/ Hawthorne	In process		Preliminary results comp. 12/1/74
7			Look into EPA statistical tests of significance	Rendar/ Hawthorne	Start Nov. or Dec.		Will try to evaluate applicability to our ambient data
8			<del>Look into PL/I</del>	<del>"</del>	<del>In process</del>		<del>Will be writing part of EI and future ambient programs in PL/I</del>

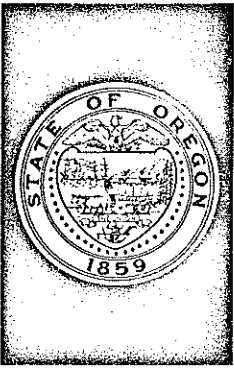
## AIR QUALITY CONTROL DIVISION

Program - Program Development

## INFORMATION RECEIVED

DEQ Staff Disposition

No.	Received Date	Location	Project	Review Engineer	Information	Expected comp. Date	Action
1			<del>Revising E.I. data and format to be somewhat compatible with NEDS and more efficient for our use.</del>	<del>RCH</del>		Dec. 1974	Completed
2			Reviewing NESHAPS	RCH		12/15/74	Handled by Norm Edmisten
3			Source search for users of vinyl chloride or poly vinyl chloride	RCH		12/30/74	Continued
4			Odor survey of Publishers Paper mill, Newberg, Ore.	RCH		Jan-Feb. 1975	Ongoing
5			Emission Inventory update	RCH			Ongoing
6			<del>Working with OSPIRG'S proposed rules for significant deterioration</del>	<del>RCH</del>		11/20/74	Completed
7			<del>Revising and updating listing of 100 ton sources</del>	<del>RCH</del>		11/20/74	Completed
8			Revising and updating listing of 25-100 ton sources	"		1/10/75	



## ENVIRONMENTAL QUALITY COMMISSION

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

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Salem

RONALD M. SOMERS  
The Dalles

KESSLER R. CANNON  
Director

To: Environmental Quality Commission  
From: Director  
Subject: Agenda Item C, January, 24, 1975, EQC Meeting

### Tax Credit Applications

Attached are review reports on 9 Tax Credit Applications. These applications and the recommendations of the Director are summarized on the attached table.

KESSLER R. CANNON

AHE

January 13, 1975

### Attachments

Tax Credit Summary  
Tax Credit Review Reports (9)



Contains  
Recycled  
Materials

TAX CREDIT APPLICATIONS

<u>Applicant</u>	<u>Appl. No.</u>	<u>Facility</u>	<u>Claimed Cost</u>	<u>% Allocable to Pollution Control</u>	<u>Director's Recommendation</u>
Lester I. & Ruth M. Versteeg	T-565	Animal wastes collection system	\$12,501.32	80% or more	Issue
Allen Fruit Company, Inc.	T-584	Tank collection system for spent sulfur dioxide brining solution	41,212.05	80% or more	Issue
Georgia-Pacific Corporation Eugene-Springfield Division	T-587	Water recycling facility consisting of glue waste water recycling and dryer wash water collection	22,005.95	100%	Issue
Publishers Paper Company Tillamook Division	T-590	Hogged non-pulpable residuals utilization	461,373.00	100%	Issue
Georgia-Pacific Corporation Toledo Division	T-613	Oversize material removal system for recycling white water	19,611.00	80% or more	Issue
Georgia-Pacific Corporation Toledo Division	T-614	Outer lagoon water reuse system	78,169.00	80% or more	Issue
Georgia-Pacific Corporation Toledo Division	T-615	Surge tank to collect spent liquor and pulp from kraft pulp washers	29,835.00	80% or more	Issue
International Paper Company Gardiner Paper Mill - Northern Division	T-616	Non-condensable gas incineration system	57,859.88	80% or more	Issue
International Paper Company Gardiner Paper Mill - Northern Division	T-621	Total Reduced Sulfur emission monitor	4,640.00	80% or more	Issue

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
TAX RELIEF APPLICATION REVIEW REPORT

---

L. Applicant

Lester I. & Ruth M. Versteeg  
Route 1, Box 244  
Monmouth, Oregon 97361

The applicants own by contract a hog or pork production facility at Monmouth, Oregon.

2. Description of Claimed Facility

The facilities installed collect animal wastes from two buildings containing up to 600 hogs. Finishing and 28 farrowing stalls along with nursery are drained by gravity through a 6" P.V.C. pipe to a 40,000 gallon concrete holding tank which is pumped through a 4" irrigation line where it is spread over crop and pasture land. The applicant states ample land is available.

The claimed facility was completed and placed in operation October, 1973. Certification is claimed under the 1973 Act with 100% allocated to pollution control.

Facility Cost: \$12,501.32 (Cost documentation was provided)

3. Evaluation of the Application

The animal waste facility was installed pursuant to plans approved by the Department of Environmental Quality. Inspection indicates the facilities are being properly operated.

4. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate be issued for the facilities claimed in T-565, such certificate to bear the actual cost of \$12,501.32 with 80% or more allocable to pollution control.

WDL:ak  
January 13, 1975

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
TAX RELIEF APPLICATION REVIEW REPORT

---

1. Applicant

Allen Fruit Co., Inc.  
P. O. Box 352  
500 E. Illinois Street  
Newberg, Oregon 97132

The applicant owns and operates a plant for the brining of cherries and also manufactures food processing machinery.

2. Description of the Claimed Facility

The facility collects spent sulfur dioxide brining solution in a 50,000 gallon tank. The solution is discharged at a constant rate from the tank, 24 hours per day, 7 days per week, to avoid any slugs to the city sewer. Oxidation/reduction potential and pH are controlled in the process.

The claimed facility was placed in operation in September, 1973. Certification is claimed under the 1969 Act with 100% of the cost allocated to pollution control.

Facility Cost: \$41,212.05 (Accountant's certification was attached to the application)

3. Evaluation of the Application

Installation of the claimed facility was claimed solely for the purpose of water pollution control. Prior to installation slugs of sulfur dioxide solution were upsetting the operations of the City of Newberg's sewage treatment plant and corroding the sewers. Staff has visited these facilities and has stated that they have been installed in accordance with plans.

The pH of the effluent is now controlled to be inside the range 6.5 to 8.5. Oxidation/reduction potential is controlled and flow is evened out and constant.

The applicant states that no income or return on the investment is derived from these facilities.

4. Director's Recommendation

It is recommended that a Pollution Control Certificate be issued for the facilities claimed in Application T-584, such certificate to bear the actual cost of \$41,212.05 with 80% or more of the cost allocable to pollution control.

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
TAX RELIEF APPLICATION REVIEW REPORT

---

1. Applicant

Georgia Pacific Corporation  
Eugene-Springfield Division  
P. O. Box 1618  
Eugene, Oregon 97401

The applicant owns and operates a plywood panel manufacturing plant on Highway 99N at Irving Road, Eugene, Oregon, in Lane County.

2. Description of Claimed Facility

The water recycle facility consists of:

- a. The glue waste water recycling facilities include three 4 ft. by 4 ft. holding tanks with waste water catch troughs under spreaders and a 4 ft. by 4 ft. holding tank at one glue loft and an 8 ft. by 8 ft. holding tank at the other glue loft. Each holding tank is equipped with a waste water pump (five 10 hp motors). All waste water holding tanks are equipped with screens. All other necessary pipe, fittings, valves and electrical equipment are included.
- b. The dryer wash water collection system consists of three holding tanks (one 6 ft. by 6 ft., one 18 ft. by 8 ft., and one 3 ft. by 3 ft.) all with submersible pumps. All water is discharged to the pond through two pipe lines. All other necessary pipe, fittings, valves and electrical equipment are included.

The claimed facility was completed December 1973, but had been placed in operation earlier in October.

Facility Cost: \$22,005.95 (Accountant's certification was attached to the application)

3. Evaluation of Application

Installation of the claimed facility was required by the Department of Environmental Quality (Permit 1399 condition). Prior to the installation of these facilities, dryer wash water, which is caustic and usually had a COD of 1200 mg/l was discharged to a drainage ditch and glue waste waters were discharged to the company log pond.

Georgia Pacific states that there is no income derived from these facilities and that the only benefits derived from them are pollution control.

4. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate be issued for the claimed facilities in T-587, such certificate to bear the actual cost of \$22,005.95 with 100% allocable to pollution control.



TAX RELIEF APPLICATION REVIEW REPORT

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1. Applicant

Publishers Paper Company

419 Main Street

Oregon City, Oregon 97045

The applicant owns and operates a lumber mill at Tillamook, Oregon.

2. Description of Claimed Facility

The claimed facility utilizes hogged non-pulpable residuals from lumber manufacturing operations as a fuel to produce steam. The facility consists of:

- a. One hog fuel boiler
- b. Boiler feed system
- c. Hog, including drive motor.
- d. 36" suspended permanent magnet
- e. Fire protection spinkler system.
- f. Foundation

Construction of the claimed facility was initiated December 1972 and it was placed in operation in October 1973. The construction was fully completed in June 1974. Certification is claimed under the 1973 Act as amended 1974 (ORS 468.165(b)) with 100% of the cost allocated to pollution control for utilization of what would otherwise be a solid waste.

Facility Cost: \$461,373.00 (Accountant's certification was attached to application.)

3. Evaluation of Application

Prior to installation of the claimed facility, 125 barrels/day of Bunker C high

sulfur, residual oil were burned to provide process steam, non-pulpable solid wastes originating from the applicant's lumber manufacturing facilities (approximately 100 units/day) were burned in a wigwam burner. This facility was built for several reasons:

- a. To phase out the wigwam burner in response to DEQ's regulatory air quality program.
- b. To utilize the solid waste which had been burned in the wigwam burner rather than landfill it.
- c. To virtually eliminate large emissions of sulfur oxides and carbon monoxide which are characteristic of the Bunker C fuel oil.
- d. To reduce the costs of oil burned in the former facility and avoid high maintenance costs of operating a wigwam burner.

The claimed facility appears to meet the test of ORS 468.165(b) for a facility, the substantial purpose of which is to utilize by burning a material which would otherwise be solid waste. Under the solid waste portion of the statute, a facility either meets the test for 100% tax credit eligibility or fails the test as not eligible. It is also clear that at the time the decision was made to construct the facility there was no alternative productive use for the wood wastes.

#### 4. Director's Recommendations

It is recommended that a Pollution Control Facility Certificate be issued for the claimed facilities in Application T-590, such certificate to bear the actual costs of \$461,373.00 with 100% allocable to pollution control.

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
TAX RELIEF APPLICATION REVIEW REPORT

---

1. Applicant

Georgia Pacific Corporation  
Toledo Division  
P. O. Box 580  
Toledo, Oregon 97391

The applicant owns and operates an unbleached Kraft pulp and liner board mill at Toledo, Oregon, in Lincoln County on the Oregon Coast near the mouth of Yaquina River.

2. Description of Claimed Facility

The claimed facility, an oversize material removal system for recycling white water, consists of a Rex chain belt, Traveling screen and associated electrical equipment. (The flow diversion box, sump and pumps were existing.)

The claimed facility was completed and placed in operation in August, 1972. The applicant claims that 100% of the cost of the facility is properly applicable to pollution control.

Facility Cost: \$19,611. (Accountant's certification was attached to the application)

3. Evaluation of Application

The installation of the claimed facility was for the purpose of removing oversize materials from recycled white water to protect the pumps to the service water system from plugging. This in turn reduces fiber to the system clarifier eliminating occasional spills to the Yaquina River and fiber to the Pacific Ocean.

No income is derived from the removed materials. There is a small annual operating expense.

The facility is performing as designed.

4. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate be issued for the facilities claimed in Application T-613, such certificate to bear the actual cost of \$19,611, with 80% or more allocable to pollution control.

WDL:ak  
January 13, 1975

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
TAX RELIEF APPLICATION REVIEW REPORT

---

1. Applicant

Georgia Pacific Corporation  
Toledo Division  
P. O. Box 580  
Toledo, Oregon 97391

The applicant owns and operates an unbleached Kraft pulp and liner board mill at Toledo, Oregon, in Lincoln County on the Oregon Coast near the mouth of the Yaquina River.

2. Description of Claimed Facility

The claimed facility, outer lagoon water reuse system, consists of a 3,000 GPM outer lagoon transfer pump, approximately 1,800 ft. of 12-inch pipe, associated pipe fittings, valves, controls and necessary electrical equipment. The 12-inch pipe ties into existing fresh water line with an existing flow preventing check valve.

The claimed facility was placed in operation in July, 1973.

Facility Cost: \$78,169 (Accountant's certification was attached to application)

3. Evaluation of Application

Installation of the claimed facility enables recycle of 1,800 GPM of outer lagoon water for cooling and reduces fresh water usage and total mill effluent.

The application claims 100% of the cost of the claimed facility is allocable to the reduction of water pollution.

The application states that there is some annual income derived from the described facility but is more than offset by operating costs.

The facility is performing as designed.

4. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate be issued for the facility claimed in Application T-614, such certificate to bear the actual cost of \$78,169 with 80% or more of the cost allocable to pollution control.

WDL:ak

January 13, 1975

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
TAX RELIEF APPLICATION REVIEW REPORT

---

1. Applicant

Georgia Pacific Corporation  
Toledo Division  
P. O. Box 580  
Toledo, Oregon 97391

The applicant owns and operates an unbleached Kraft pulp and liner board mill at Toledo, Oregon, in Lincoln County on the Oregon Coast near the mouth of the Yaquina River.

2. Description of Claimed Facility

The claimed facility, a surge tank to collect spent liquor and pulp from Kraft pulp washers during upset, consists of a 20 ft. diameter by 30 ft. high tank equipped with a 40 hp agitator, foam breaker, 1,250 GPM pump, piping, pipe fittings and valves, controls and electrical equipment.

The claimed facility was completed and placed in operation in December, 1973. The application claims that 100% of the cost is properly allocable to pollution control.

Facility Cost: \$29,835 (Accountant's certification was attached to the application)

3. Evaluation of Application

Installation of the claimed facility was included in new construction. Its purpose is to prevent spent liquor and pulp from entering the Pacific Ocean during upset conditions. Such conditions occur intermittently and materials are returned to treatment process.

The application states that there is a small annual income derived from these facilities but it is greatly exceeded by operating expenses.

The facility is performing as designed.

4. Director's Recommendation

It is recommended that a Pollution Control Certificate be issued for the facilities claimed in Application T-615, such certificate to bear the actual cost of \$29,835 with 80% or more of the cost allocable to pollution control.

WDL:ak

January 13, 1975

Date January 7, 1975

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
TAX RELIEF APPLICATION REVIEW REPORT

---

1. Applicant

International Paper Company  
Gardiner Paper Mill - Northern Division  
Post Office Box 854  
Gardiner, Oregon 97441

The applicant owns and operates an unbleached kraft pulp and paper mill at Gardiner, Oregon. The chemical pulp production capacity of this mill is 640 air-dried tons per day.

2. Description of Claimed Facility

The facility described in this application is a non-condensable gas incineration system which collects and ducts odorous gases from the digesters and evaporators to the lime kiln for incineration.

The facility was placed in operation in December, 1973.

Facility cost: \$57,859.88 (Accountant's certification was provided). Certification is claimed under the 1969 Act with 100% allocated to pollution control.

3. Evaluation of Application

The facility was installed in response to the Kraft Pulp Mill Emission Regulation [OAR, Chapter 340, Section 25-165 (1)(d)] which requires the incineration of digester and evaporator non-condensable gases. Prior to the installation of this system, these odorous gases were released directly to the atmosphere.

The plans and specifications for the facility were reviewed and approved by the Department. The facility has been inspected and is operating satisfactorily.

There is no economic return provided by this installation. Therefore, it is concluded that the equipment was installed and is operated for pollution control.

4. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of \$57,859.88 with 80% or more allocated to pollution control be issued for the facility claimed in Tax Credit Application Number T-616.

CRC:ahe  
January 9, 1975

Date January 7, 1975

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
TAX RELIEF APPLICATION REVIEW REPORT

---

1. Applicant

International Paper Company  
Gardiner Paper Mill - Northern Division  
Post Office Box 854  
Gardiner, Oregon 97441

The applicant owns and operates an unbleached kraft pulp and paper mill located at Gardiner, Oregon. The chemical pulp production capacity of this mill is 640 air dried tons per day.

2. Description of Claimed Facility

The facility described in this application is a Total Reduced Sulfur emission monitor. This monitor is used to make annual surveys of "other sources" and special studies.

The facility was placed in operation in August, 1973.

Facility cost: \$4,640 (A copy of the invoice was provided). Certification is claimed under the 1969 Act with 100% allocable to pollution control.

3. Evaluation of Application

This facility was installed in response to the 1973 Kraft Pulp Mill Regulation [OAR, Chapter 340, Section 25-180 (1)(c)] which required annual emissions inventory of other sources.

The equipment performs no other function than the monitoring of air emissions. Therefore, it is concluded that the facility was installed and is operated for pollution control.

4. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of \$4,640 with 80% or more allocated to pollution control be issued for the facility claimed in Tax Credit Application Number T-621.

CRC:ahe  
January 9, 1975



# ENVIRONMENTAL QUALITY COMMISSION

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ROBERT W. STRAUB  
GOVERNOR

January 10, 1975

B. A. McPHILLIPS  
Chairman, McMinnville

## MEMORANDUM

GRACE S. PHINNEY  
Corvallis

To: Environmental Quality Commission

JACKLYN L. HALLOCK  
Portland

From: Director

MORRIS K. CROTHERS  
Salem

Subject: Agenda Item D, January 24, 1975, EQC Meeting

RONALD M. SOMERS  
The Dalles

Public Hearing to Consider Adoption of an Ambient  
Air Quality Standard for Lead

KESSLER R. CANNON  
Director

### Background

At the November 22, 1974 meeting the Commission adopted an Ambient Air Quality Standard for Lead. Subsequent to that adoption, the Attorney General's office expressed concern that the proper notice procedures might not have been completely followed in order to adopt this standard as a part of the Oregon Administrative Rules. In order to insure that the requirements for rule making have been satisfied a new notice has been issued and this second hearing has been scheduled. Proper public notice has been made, and the public has been given the opportunity to comment.

### Discussion

Inasmuch as this hearing is primarily of a procedural nature, no discussion section is presented. Attached to this report is a graph illustrating the previously adopted standard superimposed on sampling results obtained from freeway oriented sampling stations. At the time of writing of this report, no public comment pertinent to this hearing has been received by the Department.

### Director's Recommendation

It is the recommendation of the Director that the Commission, after considering any public testimony at this hearing, adopt the following ambient air standard for Lead as a part of Oregon Administrative Rules, Chapter 340:

OAR Chapter 340, Division 3, Subdivision 1

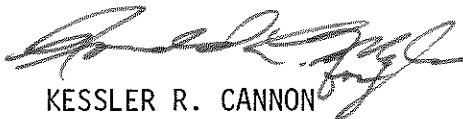
Section 31-055 AMBIENT AIR QUALITY STANDARD FOR LEAD



Contains  
Recycled  
Materials



The lead concentration measured at any individual sampling station, using sampling and analytical methods on file with the Department, shall not exceed 3.0 ug/m<sup>3</sup> as an arithmetic average concentration of all samples collected at that station during any one calendar month period.



KESSLER R. CANNON  
Director

RMJ:df

MONTHLY AVERAGES

Kneeland & Kneeland

View Point Terrace

Proposed Ambient Lead Standard

Lead Concentration  $\mu\text{g}/\text{m}^3$

3.0

2.0

1.0

Aug.

Sept.

Oct.

Nov.

Dec.

Jan.

Feb.

Mar.

Apr.

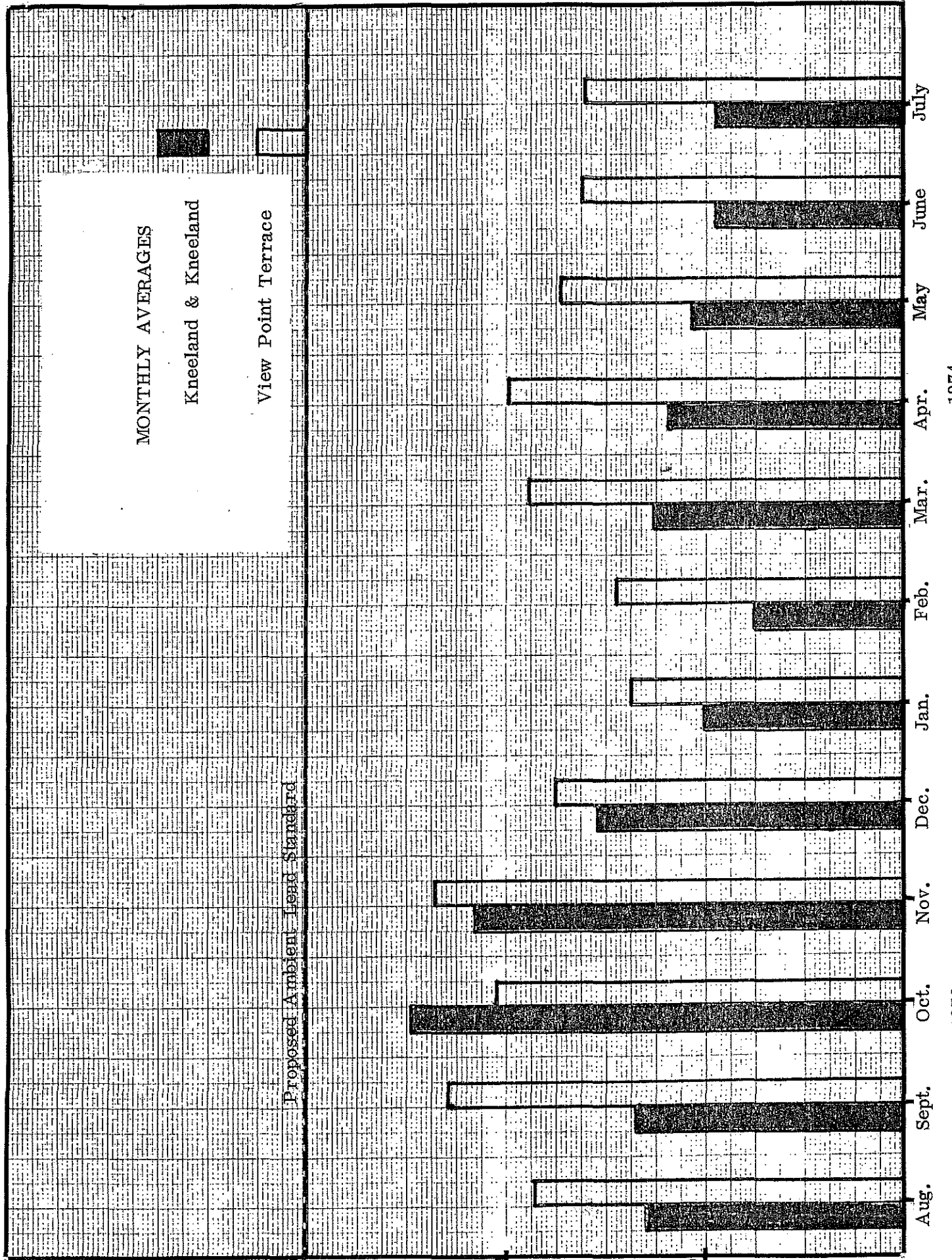
May

June

July

1973

1974



# 3 MONTH RUNNING AVERAGES

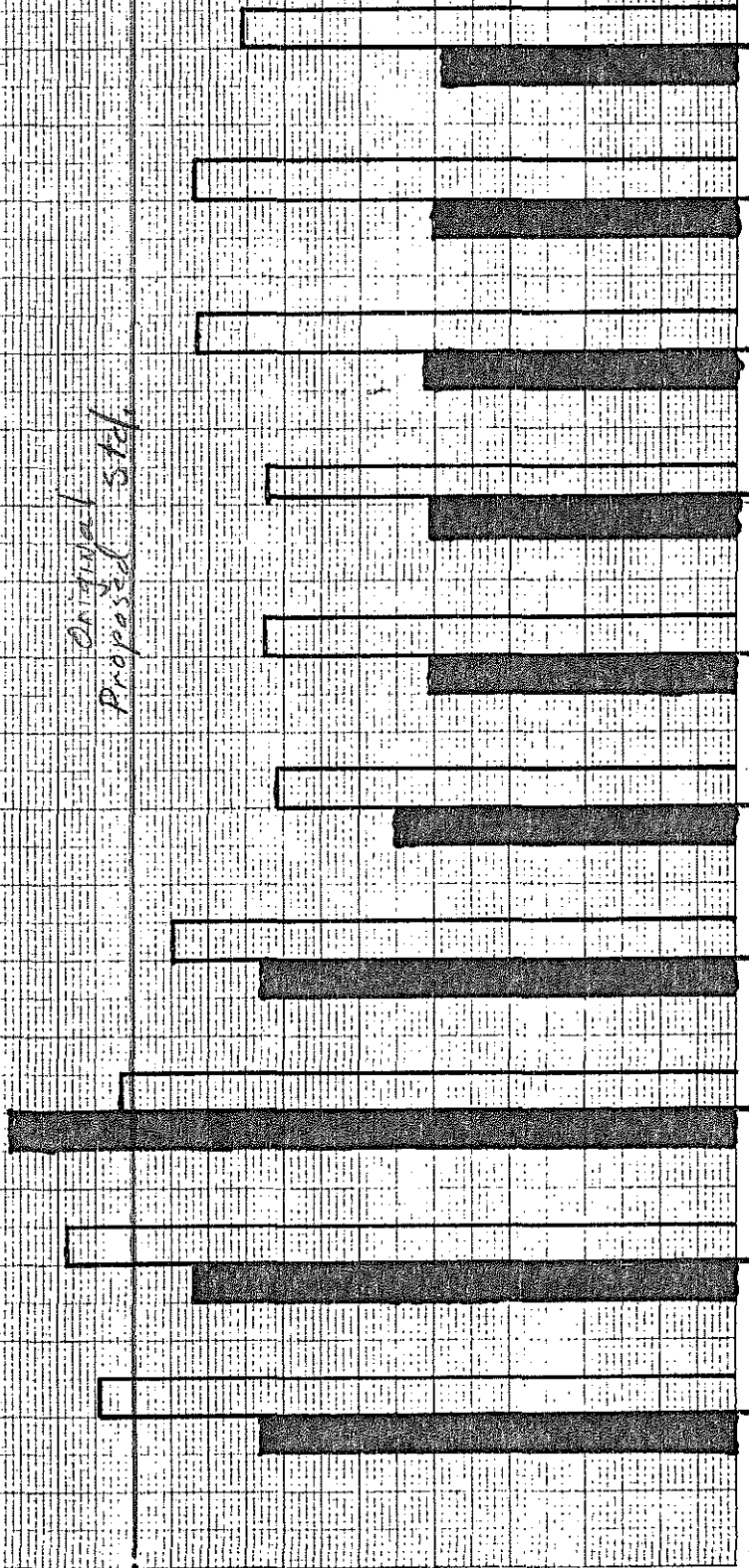
KNEELAND X KNEELAND  
 VIEW POINT TERRACE

Original  
 Proposed

LEAD 3 CM PER

2 1 0

AUG. TO C.T. 1972  
 SEPT. TO NOV. 1972  
 OCT. TO DEC. 1972  
 NOV. TO JAN. FEB. 1973  
 DEC. TO FEB. 1973  
 JAN. TO MARCH. APRIL 1973  
 FEB. TO APRIL MAY 1973  
 MARCH. TO MAY JUNE 1973  
 APRIL TO JUNE JULY 1973  
 MAY TO JULY 1973



West Soc Note 5 Dec

DEPARTMENT OF ENVIRONMENTAL QUALITY

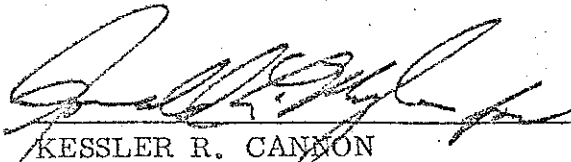
NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that the Department of Environmental Quality is considering the adoption of an ambient air quality standard for lead, to be made a part of Oregon Administrative Rules, Chapter 340, Division 3, Subdivision 1, Section 31-055.

Copies of the proposed rule may be obtained upon request from the Department of Environmental Quality, Office of the Administrator, Air Quality Control Division, 1234 S. W. Morrison Street, Portland, Oregon, 97205.

Any interested person desiring to submit any written documents, views or data on this matter may do so by forwarding them to the above address, or may appear and submit his material, or be heard orally at 10 a.m. on the 24th day of January, 1975 in the Second Floor Auditorium of the Public Service Building, 920 S. W. Sixth Avenue, Portland, Oregon. The Environmental Quality Commission has been designated as Hearings Officer.

Dated this 5<sup>th</sup> day of December, 1974.

  
KESSLER R. CANNON  
Director

## EXPLANATION

The Environmental Quality Commission considered the proposed ambient air standard for lead at the November 22, 1974 meeting in Salem, Oregon. The Attorney General's office expressed concern relative to the legal content of the public notice issued for the June 24, 1974 public hearing.

The Department has considered this matter and concluded that it is in the best interest of the Department and State of Oregon to schedule an additional public hearing under authorized procedures. All testimony previously submitted or available to the Department will be considered as having been submitted for this public hearing.

The proposed ambient air standard for lead is the same as that approved by the Environmental Quality Commission at their November 22, 1974 meeting.

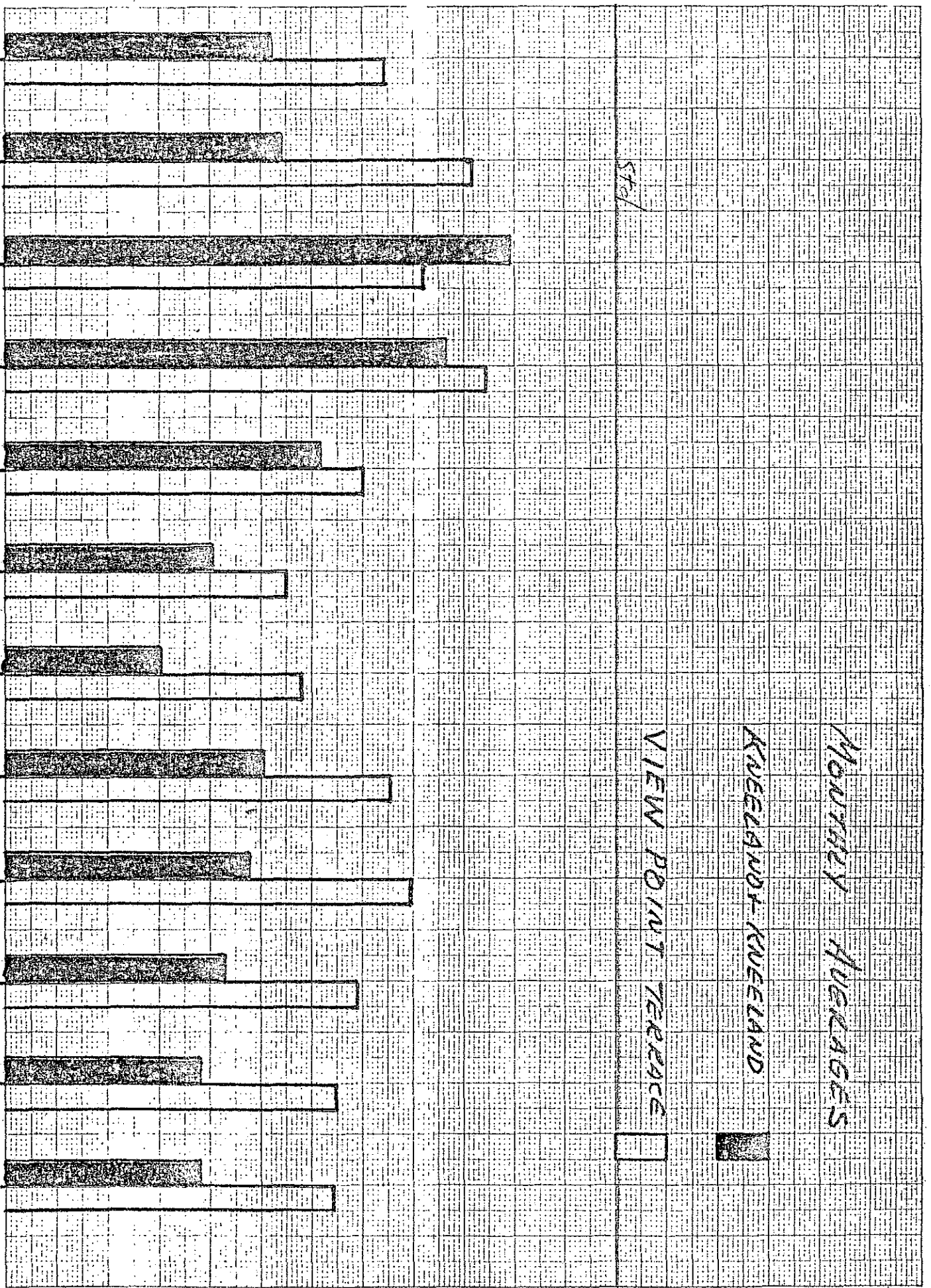
In summary, the public hearing is scheduled to assure that the ambient air standard is adopted as a rule of the Department.

Attached for informational purposes is a graphic representation of results of samples obtained during freeway oriented sampling with the standard as initially proposed and as adopted referenced for comparison.

1973

1974

A S O N D J F M A M J J



5/2/73

VIEW POINT TERRACE

KUEGLAND + KUEGLAND

MONTHLY AVERAGES



0 1 2 3 4 5 6 7 8 9 10 11 12

27 Nov. 74

## ANALYSIS OF KNEELAND & KNEELAND DATA

NUMBER OF SAMPLES 57 (24 HR. AVE.)  
PERIOD OF SAMPLES AUGUST 73 - JULY 74  
ARITHMETIC MEAN 1.34  $\mu\text{g}/\text{m}^3$   
APPROX. GEO. MEAN 1.0  $\mu\text{g}/\text{m}^3$   
APPROX. GEO. STD 1.8

1) KNEELAND & KNEELAND DATA SUMMARY PLOTS ARE PRESENTED.

a) HISTOGRAM OF DAILY DATA

b) LOG-PROBABILITY PLOT OF DAILY DATA

c) LARSON-AVERAGING TIME PLOT

2) FROM THE AVERAGING TIME PLOT, IT APPEARS THAT THE  $3 \mu\text{g}/\text{m}^3$  FOR A 1 MO. AVE WOULD BE SLIGHTLY LESS STRINGENT THAN  $2 \mu\text{g}/\text{m}^3$  FOR 3 MONTHS. (BASED ON KNEELAND & KNEELAND DATA)

3) VIEW POINT TERRACE DATA WAS NOT USED BECAUSE IT DID NOT APPROXIMATE A LOG-NORMAL DISTRIBUTION AND THUS WAS NOT VALID FOR LARSON'S MODEL.

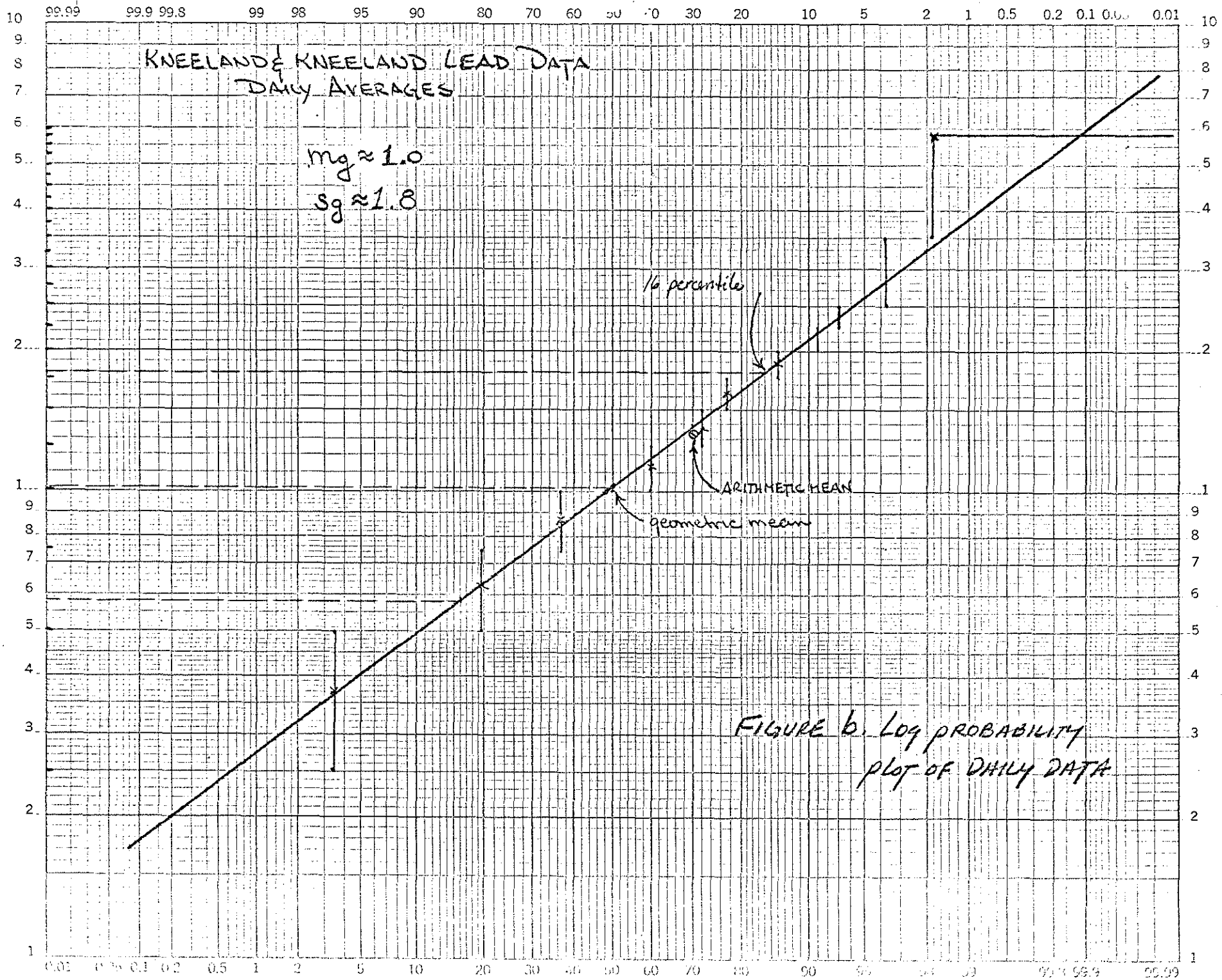
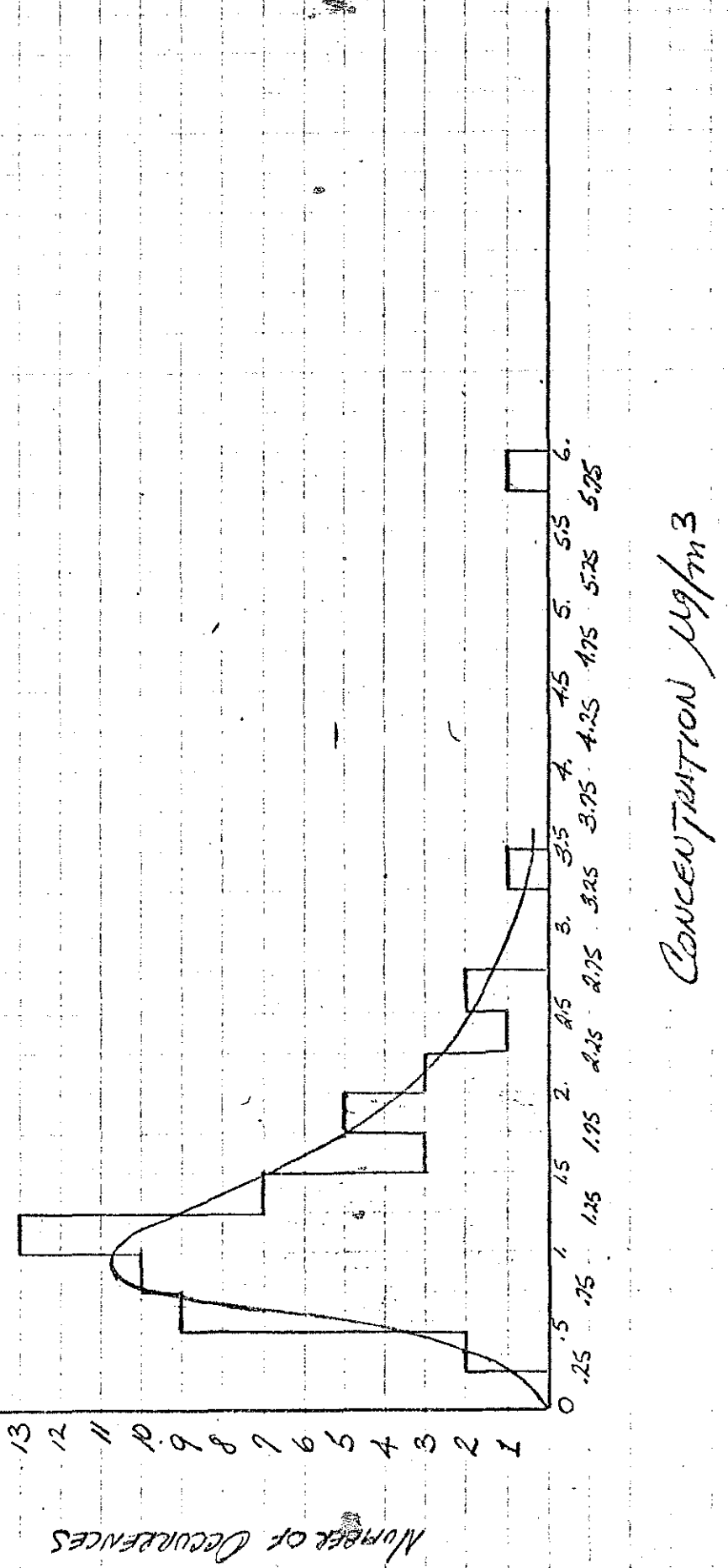


FIGURE b. Log PROBABILITY  
PLOT OF DAILY DATA



FIGURE a. KUEELAND'S KUEELAND  
HISTOGRAM OF DAILY DATA



12 mo. data - NON CONTINUOUS  
57 obs.

max.

ANNUAL MAXIMUM

3.0 (1 mo. ave)

$\Delta t = .5$

2.0 (3 mo. Ave)

$\Delta t = .2$

1 mo max

annual arithmetic mean

annual geo. mean

x

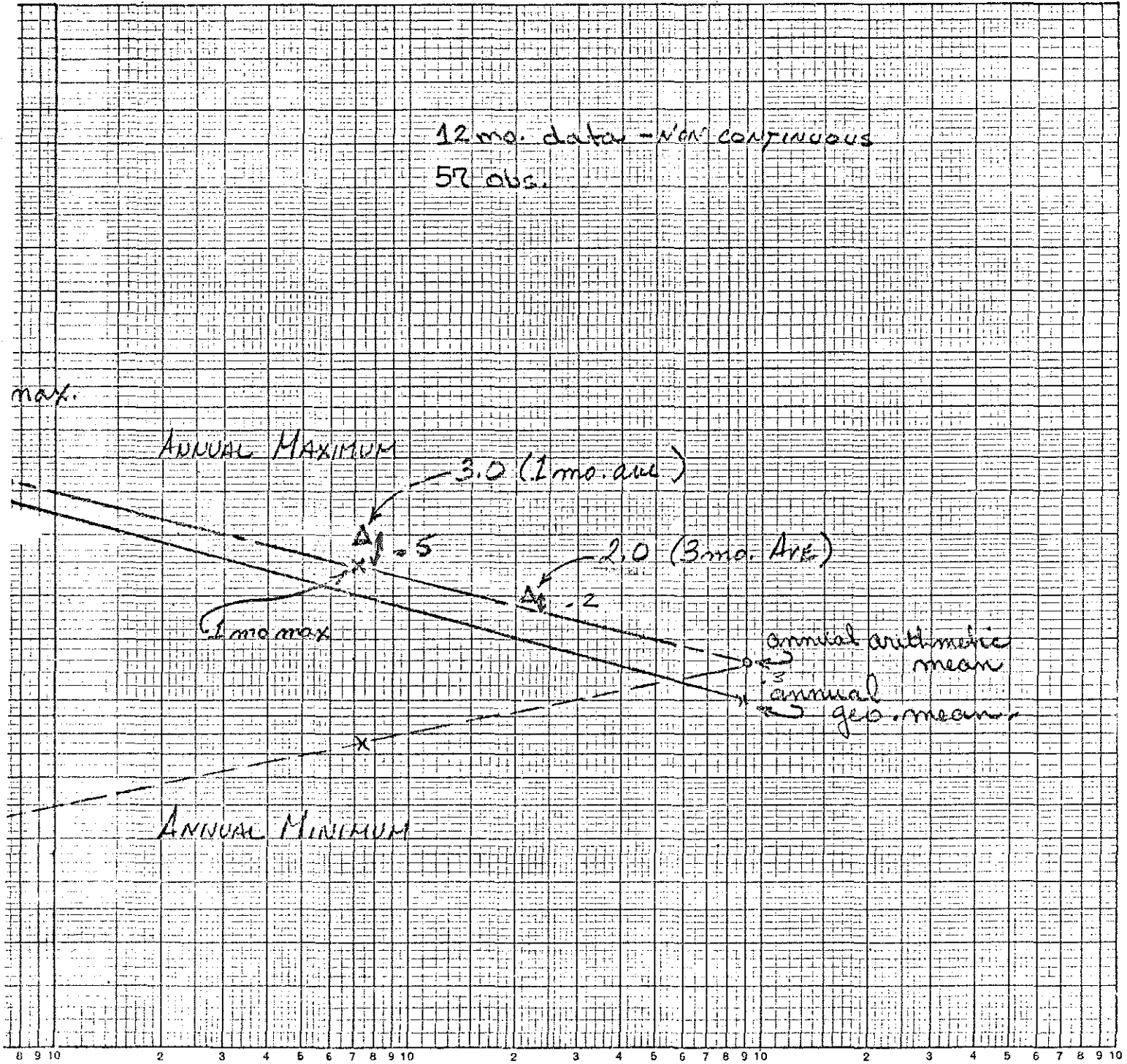
ANNUAL MINIMUM

100 hr

1000 hr

10,000 hr

ms



Concentration  $\mu\text{g}/\text{m}^3$

# FIGURE C: KNEELAND & KNEELAND - LARSON - AVERAGING TIME PLOT

## ASSUMPTIONS

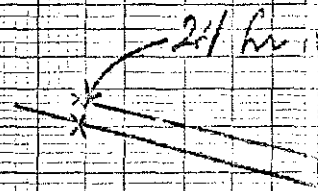
Concentrations are log normally distributed for all averaging times

For longest averaging time the arithmetic mean, geometric mean, max and minimum concentrations are all equal

Maximum concentration is approximately inversely proportional to averaging time raised to an exponent for averaging times of less than 1 month

## NOTE

LARSON'S MODEL DOES NOT PREDICT TOO WELL IN THE MONTH TO YEAR AVERAGING TIMES & THAT IS WHY TWO LINES OF REFERENCE ARE PRESENTED.



1 hr

10 hr

Averaging t

46 7402  
MADE IN U.S.A.  
LOGARITHMIC  
3 X 3 CYCLES  
NEUFFEL & ESSER CO.

NOTICE OF PUBLIC HEARING

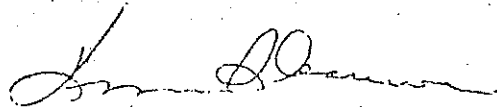
DEPARTMENT OF ENVIRONMENTAL QUALITY

STATE OF OREGON

NOTICE IS HEREBY GIVEN that the Department of Environmental Quality is considering the adoption of an ambient air quality standard for lead particulate pursuant to ORS 468.020 and ORS 468.295 to adequately protect the public welfare, the health of humans, plant and animal life, public and private property, and the enjoyment of life and property throughout such areas of the state as may be affected by this air contaminant.

Copies of the proposed standard may be obtained upon request from the Department of Environmental Quality, Office of the Director, Air Quality Control Division, 1234 S. W. Morrison Street, Portland, Oregon 97205.

Any interested person desiring to submit any written document, views or data on this matter may do so by forwarding them to the Office of the Director, Air Quality Control Division, 1234 S. W. Morrison Street, Portland, Oregon 97205, or may appear and submit his material, or be heard orally at 9:00 a.m. on the 24th day of June, 1974 in the Second Floor Auditorium of the Public Service Building, 920 S. W. Sixth Avenue, Portland, Oregon. The Hearing will be held before a Hearings Officer appointed by the Director.



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KESSLER R. CANNON  
Director



# ENVIRONMENTAL QUALITY COMMISSION

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

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KESSLER R. CANNON  
Director

## MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item E, January 24, 1975, EQC Meeting

### Consideration of the Adoption of Proposed Rules Relating to Veneer and Plywood Manufacturing Operations

#### Background

The proposed rule (attached) relating to Veneer and Plywood Manufacturing was considered at a public hearing held on December 20, 1974 at the Swept Wing, Albany. A summary and listing of written and oral testimony received at that meeting is contained in the Environmental Quality Commission minutes for that December 20, 1974 meeting. The hearing record was kept open for an additional 10 days.

Since that public hearing, the following communications, copies of which are attached, were received:

1. Reid Strutt, Inc., Portland: A letter dated December 27, 1974.
2. Moore Oregon Canada, Portland: A letter dated December 31, 1974.
3. American Plywood Association, Tacoma: A letter and statement dated December 26, 1974.
4. Southern Oregon Timber Industries Association, Medford: A letter dated December 20, 1974.

#### Discussion

Although the testimony received from the industry has been predominately non-supportive of the proposed rule limit, it has not provided any substantial technical information beyond that presented in the Department report to the Environmental Quality Commission.



Contains  
Recycled  
Materials

Conclusions

1. The Department and Commission modified the initially proposed rule presented at the October 4, 1972 EQC meeting to remove the proposed mass emission limitation and adopted the current "blue haze" rule. The removal of the mass emission limitation was a concession to industry to eliminate extensive (and costly) source testing.
2. The current rule modification was undertaken not because of substantial information that technology was not available to meet rule limits, but rather industry testimony that a wisp or plume of blue haze might occasionally be observed beyond current regulatory limits and place them in technical violation of the current rule.
3. Control technology is available to meet the proposed rule.
4. An opacity limitation of 20% is not considered restrictive enough to solve the "blue haze" problem.
5. The proposed rule is flexible and allows adjustment of schedules on a case-by-case basis.
6. Extreme hardship cases will be brought to the Commission for appropriate action.

Director's Recommendation

It is the recommendation of the Director that the proposed rule pertaining to Veneer and Plywood Manufacturing Operations be adopted with the time for compliance schedule requirements (25-315(1)(c)) changed from March 1, 1975 to May 1, 1975.



KESSLER R. CANNON  
Director

PROPOSED RULES RELATING TO  
VENEER AND PLYWOOD MANUFACTURING OPERATIONS

OAR 340, Section 25-315, Subsection (1)(a) through (h) are repealed and the following Subsections (1)(a) through (1)(g) are adopted in lieu thereof, and Subsection (2)(c) is repealed.

25-315 VENEER AND PLYWOOD MANUFACTURING OPERATIONS

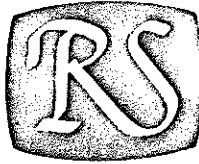
(1) Veneer Driers

- (a) Consistent with Section 25-310(1) through (4), it is the objective of this section to control air contaminant emissions, including but not limited to condensible hydrocarbons such that visible emissions from each veneer drier are limited to a level which does not cause a characteristic "blue haze" to be observable at any point beyond the exterior wall of the building housing the veneer drier or at any point further than 50 feet in any direction from the veneer drier, whichever is greater.
- (b) No person shall operate any veneer drier such that visible air contaminants emitted therefrom exceed 10% opacity, opacity as defined by Section 21-005(4), from any one stack. Where the presence of uncombined water is the only reason for the failure to meet this requirement, said requirement shall not apply.
- (c) After March 1, 1975 no person shall operate a veneer drier which is not in compliance with the emission limitations of this rule or is not subject to a compliance schedule approved by the Department which is incorporated into an enforceable air contaminant discharge permit.

- (d) Each veneer drier shall be maintained and operated at all times such that air contaminant generating processes and all contaminant control equipment shall be at full efficiency and effectiveness so that the emissions of air contaminants are kept at the lowest practicable levels.
- (e) No person shall willfully cause or permit the installation or use of any means, such as dilution, which, without resulting in a reduction in the total amount of air contaminants emitted, conceals an emission which would otherwise violate this Rule.
- (f) Where effective measures are not taken to minimize fugitive emissions, as defined by Section 21-050, OAR, Chapter 340, the Department may require that the equipment or structures in which processing, handling and storage are done be tightly closed, modified or operated in such a way that air contaminants are minimized, controlled, or removed before discharge to the open air.
- (g) The Department may require more restrictive emission limits than provided in Section 25-315(1)(b) for an individual plant upon a finding by the Commission that the individual plant is located or is proposed to be located in a special problem area. The more restrictive emission limits for special problem areas may be established on the basis of allowable emissions expressed in opacity, pounds per hour, or total maximum daily emissions to the atmosphere, or a combination thereof.



**REID · STRUTT**



**INC.**

929 N. E. 23rd Avenue • P. O. Box 14247 • Portland, Oregon 97214

Phone 234-5011

Area Code 503

December 27, 1974

Environmental Quality Commission  
1234 S. W. Morrison St.  
Portland, Oregon 97205

Attention: Mr. Wayne Hanson  
Assistant Director, Air Quality

Dear Mr. Hanson:

Friday, December 20, it was our privilege to attend the EQC hearing concerning the proposed amendments to veneer and plywood manufacturing operations.

Our company designs and supplies pollution control systems for veneer and other types of dryers. We have reviewed with interest the various comments made at the meeting, such as:

"10% opacity is unreasonable and possibly illegal."

"There is no equipment presently available to run continually at 10% opacity or below."

"10% opacity is too low, 20% is reasonable."

"No equipment supplier would guarantee compliance with 10% opacity."

"10% opacity is not achievable, we are unitedly opposed to 10% opacity requirements."

In light of these and other comments, we felt our response would be in order.

We understand the apprehension exhibited by a number of Oregon plywood manufacturers concerning sizeable capital expenditures for pollution abatement equipment, especially considering the present economic trends. We do not, however, agree that the proposed 10% opacity regulations are "not attainable" with present technology. In fact, we believe that the regulations requiring zero opacity with mass emissions rates of 0.1 grains per dry standard cubic foot are fully achievable with present technology and at reasonable cost.

Reid-Strutt, Inc. is presently under contract with Multnomah Plywood Corp., St. Helens, Oregon, to supply two 100% recycle-incineration systems using the closed loop, incineration principle as heat source replacement and pol-

lution abatement modifications to two existing gas-fired Prentice veneer dryers. We specifically guarantee compliance with applicable pollution regulations, including zero opacity and 0.1 grains per dry standard cubic foot mass emissions. Completion and acceptance of the contract is contingent upon meeting these requirements. We are prepared to extend this guarantee on any such contract.

Multnomah Plywood Corp. issued the contract to satisfy action demanded by the Department of Environmental Quality, Northwest Region, State of Oregon. A construction permit was applied for and obtained from this Agency. Construction is under way with start-up and full operation expected before March 1, 1975. This system achieves more than just pollution abatement. It also provides the heat source for the drying operation and utilizes in plant generated waste wood as the main fuel source. The elimination of natural gas and propane as fuel mean monthly savings of approximately \$15,000.00 at today's natural gas prices. At this anticipated fuel cost savings, the total installed price of the system will be covered in less than three years.

Multnomah Plywood is our first application of the 100% recycle system to veneer dryers. However, we have five such systems operating on particleboard and hardboard dryers. Two of these systems are installed at Timber Products in Medford, Oregon, and have been in operation for more than one year. The source test reports for both are included herein. The first report, conducted on Dryer #3, shows compliance with the regulations for new sources in both opacity and mass emissions rate. This unit, as shown by test report data sheet, is capable of running at zero opacity and under 0.1 grains per dry standard cubic foot. The source test report for Dryer #4 was made, at the request of the D.E.Q., using the newly proposed veneer dryer testing procedures. As its data sheets show, #4 Dryer is also in compliance with the regulations for new sources; namely, zero opacity and less than 0.1 grains per dry standard cubic foot.

The particleboard dryer produces the same blue haze as the veneer dryer with the added problem of combustible particulate carry-over from the cyclone separator used to collect the dry furnish following the drying process. (The blue haze is often a bigger problem with the particleboard dryer than the veneer dryer due to higher temperature differences across the average particleboard dryer.)

Our other three systems are installed and operating at Pope & Talbot Hardboard Plant at Oakridge, Oregon. Source tests for these units will be made in the near future. A fourth unit at Oakridge will be installed in mid-1975. The units at Timber Products in Medford and Oakridge use sanderdust waste as fuel.


Drawing #B-0099 shows the 100% recycle loop applied to a "dual zone" veneer dryer. Actually, the dryer could be virtually of any type, since the thermodynamics would be essentially the same.

It will be noticed that all gasses leaving the dryer must pass through the "air heater" before being exhausted to atmosphere. It is while in the air heater that the gasses are raised to a temperature high enough to burn up or incinerate any combustibles including the "blue haze," usually 1000-1200°. The vent gasses therefore are free of combustibles and mass emission rates are low enough to provide colorless vent stack gasses at zero opacity.

We appreciate the opportunity you have given industry to submit data that could be helpful to you in setting veneer dryer pollution standards. We thus thought it important that we acquaint you with our company and the type of systems and guarantees that we offer to the Plywood Industry. Any opportunity to meet with you personally on these matters would be welcomed.

Sincerely,

REID-STRUTT, INC.



Ken Parks

KP:su

Enclosure

**MOORE**  
**OREGON / CANADA**

An Industrial America Company

North Portland

OFFICE OF DEPUTY DIRECTORS

**R E C E I V E D**

JAN - 2 1975

DEPT. OF ENVIRONMENTAL QUALITY

December 31, 1974

Mr. Kessler R. Cannon  
Department of Environmental Quality  
1234 S. W. Morrison Street  
Portland, Oregon 97205

Dear Mr. Cannon:

O.A.R. 340 Section 25-315 (Standards for  
Veneer Dryer Emissions)

On December 20, a public hearing was held in Albany, Oregon, to discuss proposed amendments to existing air quality standards relating to veneer dryers. Our company had representatives at that meeting to observe and to speak on behalf of our organization. By way of submitting this letter, we wish to reiterate our position for the benefit of the Environmental Quality Commission.

Moore Oregon was incorporated in the State of Oregon in 1927. Our company has been engaged in the manufacture of machinery for the sawmill and the plywood industry for many, many years. We began manufacturing equipment for drying veneer in 1939. Since that time we have produced a great many veneer dryers that are located in plywood mills throughout the Pacific Coast as well as in Western Canada and in the Southeastern United States.

As one of the leading manufacturers of veneer drying equipment, we recognized several years ago the importance of controlling emissions from veneer dryers. We were substantial contributors to the Plywood Research Foundation (a division of the American Plywood Association) whose purpose it was to define the magnitude of the veneer dryer emission control problem and to address itself to possible solutions to that problem.

Through the expenditure of our own development funds, we sought to achieve methods which would control veneer dryer emissions at acceptable levels but which would not result in significant increased operating costs for our customers, the manufacturers of plywood. We have been relatively successful with our development work for those manufacturers who utilize direct-heated, (gas, oil or wood-fired) veneer dryers. This is through a device that we refer to as our "Lo-Em System". This system introduces heat into the veneer dryer in such a manner that the atmosphere within the dryer is continually cleaned up. This results in fewer emissions from the dryer. The system makes a most significant improvement over what the users' current dryer emissions are; however, there is a limit to how well the Lo-Em system operates on an absolute basis.

If a user has a very severe emission problem, the Lo-Em system will reduce the emission substantially, but they still may not be in the range of a 10% opacity.

continued.....



P.O. Box 4208, Portland, Oregon 97208 • (503) 286-8231 • Telex 36-0313

Mr. Kessler R. Cannon

12/31/74

We do believe, however, that any dryer can have emissions reduced to a 20% opacity level through the use of this system.

The Lo-Em system is a one-time capital cost to the plywood mill operators. There is no operating cost after the initial change is made to the equipment. As you can well appreciate, this is the type of improvement that a mill operator prefers over one that has a continuing energy cost; i.e., high energy scrubber.

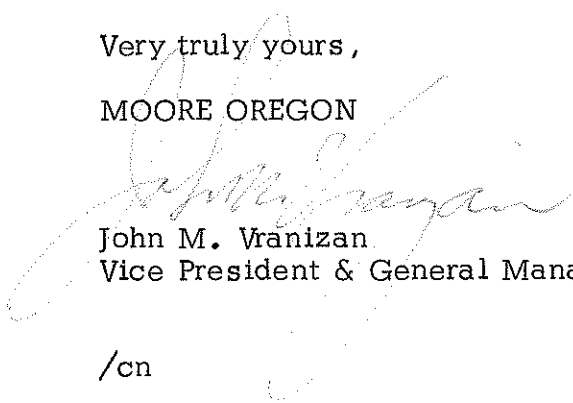
Moore Oregon has been an observer to tests that have been conducted with low temperature veneer drying in steam veneer dryers. By employing this technique, veneer dryer emissions can be substantially reduced, but it is doubtful that they can be reduced to the 10% opacity level on a continuing basis. We have observed that the low-temperature technique is successful in meeting a 20% opacity level.

We urge you to change the air quality standards to allow a maximum opacity of 20% from any one stack. Our reasons for urging you to consider this are that there are (1) techniques for achieving 20% opacity reliably; (2) the techniques do not result in increased operating costs for the plywood manufacturer; (3) the equipment and/or technology is readily available and can be put into use almost immediately; (4) there are no successful proven techniques for achieving the 10% opacity level which do not either (a) result in substantial increases in the consumption of energy, or (b) result in solid waste disposal problems which are at least equal to the air quality control problems that we seek to eliminate.

Your kind attention to this recommendation is appreciated.

Very truly yours,

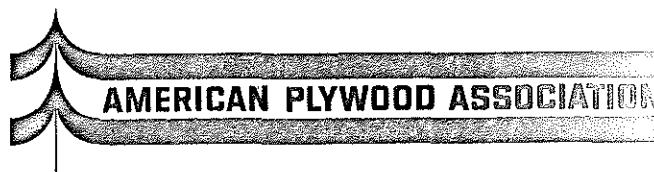
MOORE OREGON



John M. Vranizan  
Vice President & General Manager

/cn

R. HUGH LOVE  
Director of Communications



December 26, 1974

Mr. Kessler R. Cannon  
Director  
Environmental Quality Commission  
1234 S. W. Morrison Street  
Portland, Oregon 97205

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
**RECEIVED**  
DEC 27 1974

OFFICE OF THE DIRECTOR

Dear Mr. Cannon:

As the record has been left open for 10 days, I would like to submit the enclosed additional statement to the Commission on behalf of the American Plywood Association relative to the hearing in Albany on December 20 (Proposed Amendments to Rules Relating to Veneer and Plywood Manufacturing Operations).

Sincerely,

A handwritten signature in cursive script that reads "Carl Erb".

CARL M. ERB, JR.  
Manager, Gluing Studies  
Division For Product Approval

CME/cb



Statement of Carl Erb, a member of the research staff of the American Plywood Association, Tacoma, Wash.

I am a chemistry graduate of the University of Puget Sound, Tacoma, Wash. I was project leader for the four year study conducted by the Plywood Research Foundation into veneer dryer technology and the nature of veneer dryer emissions.

I would like to take this opportunity to submit additional testimony relative to the proposed establishment of a 10 percent opacity limit for veneer dryers in the State of Oregon.

Before proceeding with a qualification concerning testimony on dryer energy requirements, I wish to comment briefly on the impromptu statement made to the Environmental Quality Commission on December 20 by Mr. H. M. Demeray, of the Mid-Willamette Valley Air Pollution Authority. Mr. Demeray's remarks on dryer emissions and cigarettes were undoubtedly well intended. However, we suggest that they can be characterized as essentially emotional and not supportable by fact. There is no evidence that veneer dryer emissions are harmful to health.

With regard to energy requirements, the matter of the energy needed for the operation of the veneer dryer at Boise Cascade's Albany, Ore., plant was brought to the attention of the Commission on December 20.

In retrospect, it seems to me that there is some confusion which was not satisfactorily clarified with regard to the use of natural gas in conjunction with the sander dust burner.

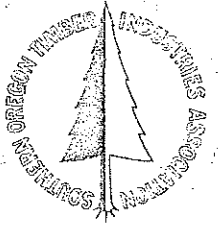
The dryer in question was initially a direct-fired dryer using natural gas as fuel. This is still the case. The sander dust burner was installed to dispose of the sander dust while at the same time eliminating the "blue haze" from the dryer exhaust. It was hoped that some use could be made of the heat generated by burning the sander dust, thereby reducing total natural gas usage.

Using this method, the company has made a lengthy and determined effort to reduce natural gas consumption. They have reported, however, that under everyday production conditions gas savings are negligible. The predominant heat source is the same gas burner which was original equipment in the dryer.

Further, the total volume of sander dust produced by the mill is not quite adequate to supply fuel for the control of the emissions from one of the two dryers required for full mill operation.

# # # #





# SOUTHERN OREGON TIMBER INDUSTRIES ASSOCIATION

2680 N. PACIFIC HWY.

MEDFORD, OREGON 97501

TELEPHONE 773-5329

December 20, 1974

Department of Environmental Quality  
Air Quality Control Division  
1234 S.W. Morrison  
Portland, Oregon 97205

Gentlemen:

Please accept this letter for placement in the hearing record on "Proposed Rules Relating to Veneer and Plywood Manufacturing Operations"; OAR 340, Section 25-315, Veneer Driers.

Consistent with testimony from other industry representatives, this organization strongly urges modification of the proposed rules to a 20% opacity standard rather than 10% so that the industry, as well as the Department, may have a goal which is attainable. We also support the suggestion that the extension of the deadline to March 1, 1975.

Southern Oregon communities are significantly dependent on the forest products industry as the economic mainstay, as is being so forcibly illustrated in the current economic slump. We strongly feel that without demonstration that public health is endangered in any manner, southern Oregon citizens would much prefer to tolerate a level of "blue haze" from operating plywood plants than to further jeopardize the ability of those plants to employ workers who so desperately seek gainful employment.

There is serious doubt in our minds that the alleged benefits of the regulation as proposed merit the costs required to comply and the risk of the cost burden on an industry already economically crippled. There seems to be some justification for delay to permit time for technological development which may be able to provide better answers with improved economic feasibility.

Sincerely yours,

Martin Craine  
Secretary-Manager

MEC:cw



State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

To: KRC through EWH                      cc: FAS                      Date: January 14, 1975

From: H. M. Patterson

Subject: Veneer and Plywood Manufacturing Operation Rule

Commissioner Crothers suggested that the Department look at area or population differences particularly as related to health to see if a criteria for scheduling the implementation of the rule could not be found.

Urban-Rural: The staff looked at plant site locations to determine if proximity to municipalities would allow differentiation in scheduling plants. Those located in or near populated areas could be required to develop schedules earlier than those in more remote areas.

In summary no readily identifiable criteria were found. Illustrative is that in conferring with LRAPA, only four of the twenty-six plants would be considered non-urban (see attached list).

If an arbitrary distance of 3 miles was chosen, then those plants in Medford would be in one class, while those in White City would be in another.

Health Aspects: Contacts were made with both the Oregon Lung Association and the Health Division, the former having no information considered usable.

Health Division records are maintained only by county. Only communicable ~~respiratory~~ diseases are required to be reported by physicians and local health departments.

Morbidity and mortality records of the Health Division were reviewed relative to respiratory conditions. However, because of the small population of some counties, unknown birth, past residence, etc. of individuals, unknown smoking habits, etc., no obvious correlation was found between population, industrial development and deaths per 1000 population.

Table A is illustrative of a 3 year period.

Total deaths from various respiratory diseases are listed in Table B. Based upon the year 1973, 546 deaths of a total of 729 were reported in the ten listed counties. To maximize early scheduling of veneer dryer controls in those counties where a large number of deaths occur attributable to respiratory diseases, the rule could be revised as follows:

(c) After March 1, 1975 no person shall operate a veneer drier in Multnomah, Marion, Lane, Clackamas, Washington, Jackson, Douglas, Coos, Linn or Josephine Counties, which is not in compliance with the emission limitations of this rule or is not subject to a compliance schedule approved by the Department which is incorporated into an enforceable air contaminant discharge permit.

new

(d) After November 1, 1975 no person shall operate a veneer drier in any county which is not in compliance with the emission limitations of this rule or is not subject to a compliance schedule approved by the Department which is incorporated into an enforceable air contaminant discharge permit.

Current (d) changed to (e) etc.

I have not reviewed this with Ray Underwood.



cc Ray Underwood

TABLE A

10 HIGHEST RANKING OREGON COUNTIES IN DEATHS FROM  
VARIOUS RESPIRATORY CONDITIONS

	1970	Deaths/ 1000 pop.	1971	Deaths/ 1000 pop.	1973	Deaths/ 1000 pop.
	County		County		County	
1	Sherman	.9	Crook	.9	Jefferson	1.0
2	Baker	.7	Baker	.6	Wallowa	.8
3	Grant	.6	Deschutes	.5	Crook	.7
4	Harney	.6	Douglas	.5	Malheur	.6
5	Josephine	.6	Gilliam	.5	Tillamook	.6
6	Curry	.5	Josephine	.5	Coos	.5
7	Gilliam	.5	Lincoln	.5	Curry	.5
8	Linn	.5	Morrow	.5	Douglas	.5
9	Morrow	.5	Umatilla	.5	Gilliam	.5
10	( Deschutes	.4	Union	.5	( Josephine	.5
	( Hood River	.4			( Morrow	.5
	( Tillamook	.4				

TABLE B\*

10 HIGHEST COUNTIES NUMBER OF DEATHS FROM VARIOUS RESPIRATORY  
CONDITIONS

1970	Total deaths	1971	Total deaths	1973	Total deaths
County		County		County	
Multnomah	182	Multnomah	195	Multnomah	199
Lane	66	Lane	72	Marion	56
Marion	54	Marion	46	Lane	51
Clackamas	32	Jackson	41	Clackamas	44
Washington	30	Clackamas	34	Washington	44
Jackson	28	Douglas	34	Jackson	40
Douglas	23	Washington	30	Douglas	36
Josephine	22	Umatilla	22	Coos	29
Coos	15	Linn	20	Linn	28
Klamath	15	Coos	20	Josephine	19
	<u>467</u>		<u>514</u>		<u>546</u>
All counties	623		678		729

\*Ref. Oregon State Health Division, Vital Statistics Annual Reports for  
1970, 1971 and 1973

COMPANY ADDRESSES

LANE COUNTY

Bohemia, Inc.  
Culp Creek Division  
P.O. Box 1819  
Eugene, OR 97401

Bohemia, Inc.  
Culp Creek Division  
P.O. Box 1819  
Eugene, OR 97401

Brand S Corporation  
Natron Division  
P.O. Box 2  
Springfield, OR 97477

Cabax Mills - Mill A  
P.O. Box 449  
Eugene, OR 97401

Cabax Mills - Mill B  
P.O. Box 449  
Eugene, OR 97401

Cress-Ply Company  
82898 North Butte Road  
Creswell, OR 97402

Eugene Stud & Veneer, Inc.  
P.O. Box 389  
Eugene, OR 97401

Georgia Pacific Corp.  
Irving Road Plant  
P.O. Box 1618  
Eugene, OR 97401

Georgia Pacific Corp.  
Junction City Plant  
Junction City Gen. Del.  
Junction City, OR 97448

Georgia Pacific  
Prairie Road Plant  
900 Irving Road  
Eugene, OR 97402

Georgia Pacific  
Springfield Division  
P.O. Box 789  
Springfield, OR 97477

Giustina Bros.  
Lumber & Plywood Company  
P.O. Box 989  
Eugene, OR 97401

Edward Hines Lumber Co.  
Westfir, OR 97492

International Paper  
P.O. Box 308  
Veneta, OR 97487

Lane Plywood, Inc.  
465 S. Bertelsen Road  
Eugene, OR 97402

Leading Plywood  
P.O. Box 2486  
Eugene, OR 97401

Rosboro Lumber Company  
P.O. Box 1098  
Springfield, OR 97477

States Veneer  
P.O. Box 2309  
Eugene, OR 97402

States Veneer  
Unisphere  
P.O. Box 2309  
Eugene, OR 97402

SWF Plywood Company  
P.O. Box 1008  
Springfield, OR 97477

Triangle Veneer  
2340 Irving Road  
Eugene, OR 97402

J.S. Plywood  
P.O. Box 37  
Mapleton, OR 97453

Weyerhaeuser Company  
Wood Prod. Division  
P.O. Box 667  
Cottage Grove, OR 97428

Weyerhaeuser Company  
P.O. Box 275  
Springfield, OR 97477

Willamette Industries  
Box L  
Springfield, OR 97477

Trus Joist Corporation  
195 N. Bertelsen Road  
Eugene, OR 97402



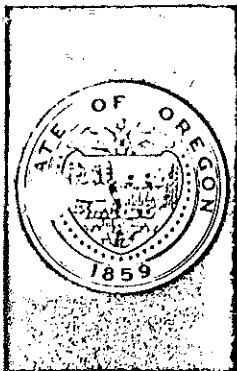
KESS CANNON  
Director

December 26, 1974

W. Hanson, P. Patterson, F. Skirvin,  
E.J. Weathersbee:

I kind of agree with all of this and think that  
the staff does too. We need to sit down and  
discuss this to see what direction we are going.

Kess.



## ENVIRONMENTAL QUALITY COMMISSION

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

TOM McCALL  
GOVERNOR

December 26, 1974

B. A. McPHILLIPS  
Chairman, McMinnville

GRACE S. PHINNEY  
Corvallis

JACKLYN L. HALLOCK  
Portland

MORRIS K. CROTHERS  
Salem

RONALD M. SOMERS  
The Dalles

—  
KESSLER R. CANNON  
Director

TO: Members, Environmental Quality Commission  
Kessler R. Cannon, Director

FROM: Morris K. Crothers, M.D.

SUBJECT: Blue Haze

Plywood manufacturers objected to the 10% opacity limit and plead for a 20% limit.

They argued:

- (1) That there is no health hazard from the blue haze, only an esthetic offense.
- (2) That imposition of a lower limit on plywood plants than on other industries is "discriminatory" and therefore unfair and even illegal.
- (3) That technology is not available to achieve 10%.
- (4) That the economic impact of new standards in a seriously depressed market would be devastating, leading to further unemployment and business failures.

None of the first three arguments is persuasive.

- (1) The material which constitutes the blue haze is primarily a large amount of very minute particles of hydrocarbons from wood. Inhaling these cannot possibly be beneficial or even harmless. The assumption must be that they are harmful to the public health.



Contains  
Recycled  
Materials

EQC  
Director Cannon  
December 26, 1974  
Page Two

- (2) The materials in the blue haze differ from those coming from wigwam burners, steel mills, grain elevators and probably more hazardous. It is essential that we discriminate between varieties of effluents. This is neither unfair nor illegal.
- (3) The argument that technology is not available is a familiar one, invariably used in objection to higher standards. Perhaps 10% cannot be achieved without occasional violations. But testimony established that it can be done most of the time.

There could not be a worse time to impose higher standards on an industry than upon this industry at this time. Yet we cannot lose sight of the fact that the ultimate goal is zero emission (perhaps unattainable). The close goal is 10% opacity, surely attainable given healthy economic conditions.

The staff which has an impeccable record of fairness to industry proposed a case by case application of the new standards. I would prefer that there be more specific guidelines. Might we not consider something along the following?

- I. Any new plant shall be subject to the 10% standard.
- II. Plants in areas where the health hazard is statistically greater because of population densities (Eugene-Springfield, Medford, Grants Pass shall attain 10% within a stated period. Two? Three? years)
- III. Plants in sparsely populated areas shall be given more time with the firm objective of attaining 10% as soon as reasonable but in no event longer than five (?) years.





State of Oregon

DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

To: PBB, FAS, HMP

Date: November 8, 1974

From: Al Burkart

Subject: Mills with Veneer Dryers in the State

The attached map indicates the number of mills and the number of veneer dryers in each county as of October, 1974. Tabulation indicates that there are 93 mills with 253 veneer dryers in the state of Oregon. This total does not include any of the permanently closed mills.

AFB:mh

Enclosure

A handwritten signature in black ink, appearing to be "AFB".

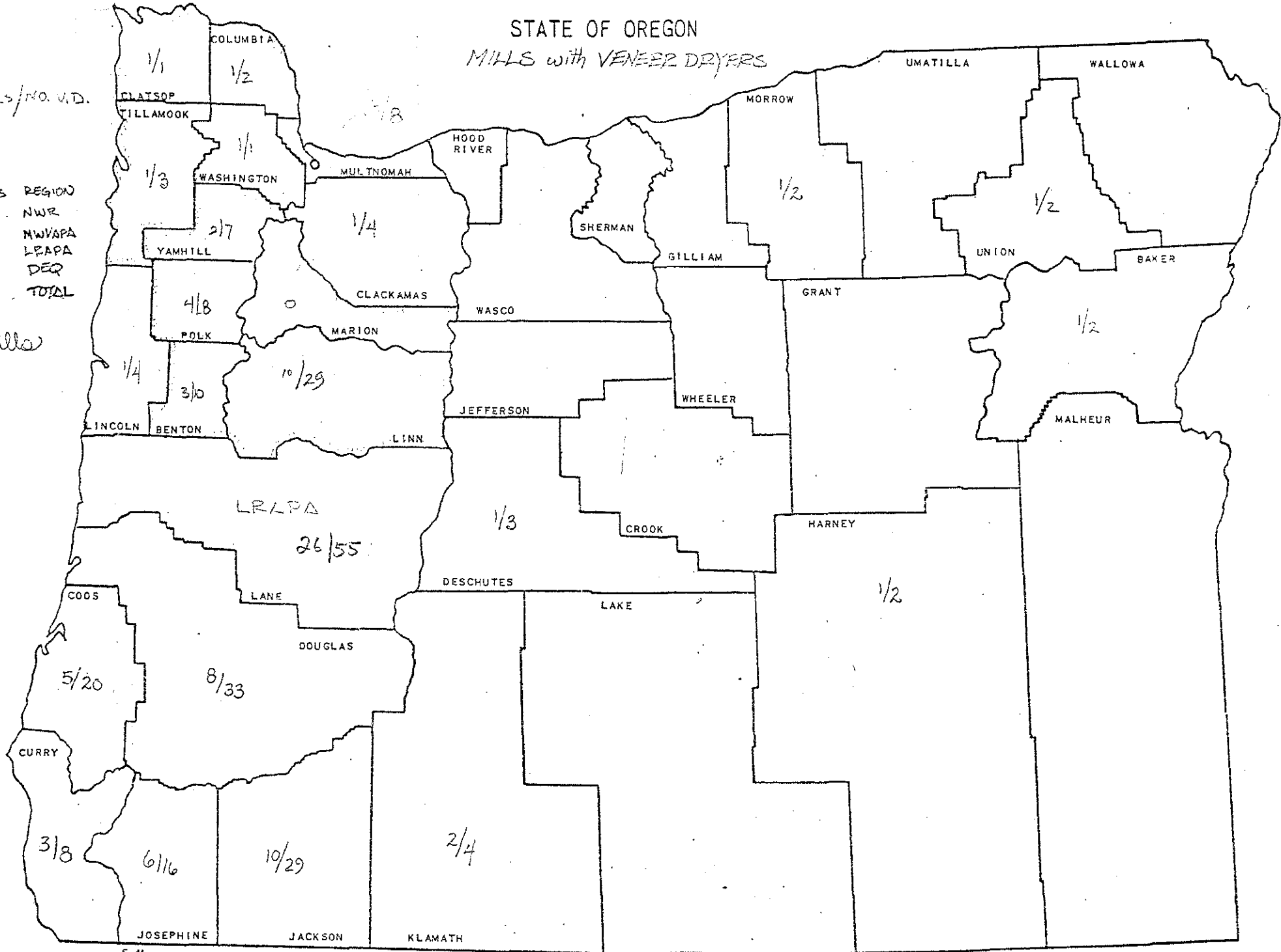
STATE OF OREGON

MILLS with VENEER DRYERS

NO. MILLS/NO. V.D.

NO. DRYERS	REGION
19	NWR
57	MWVAPA
55	LRAPA
125	DER
253	TOTAL

93 mills

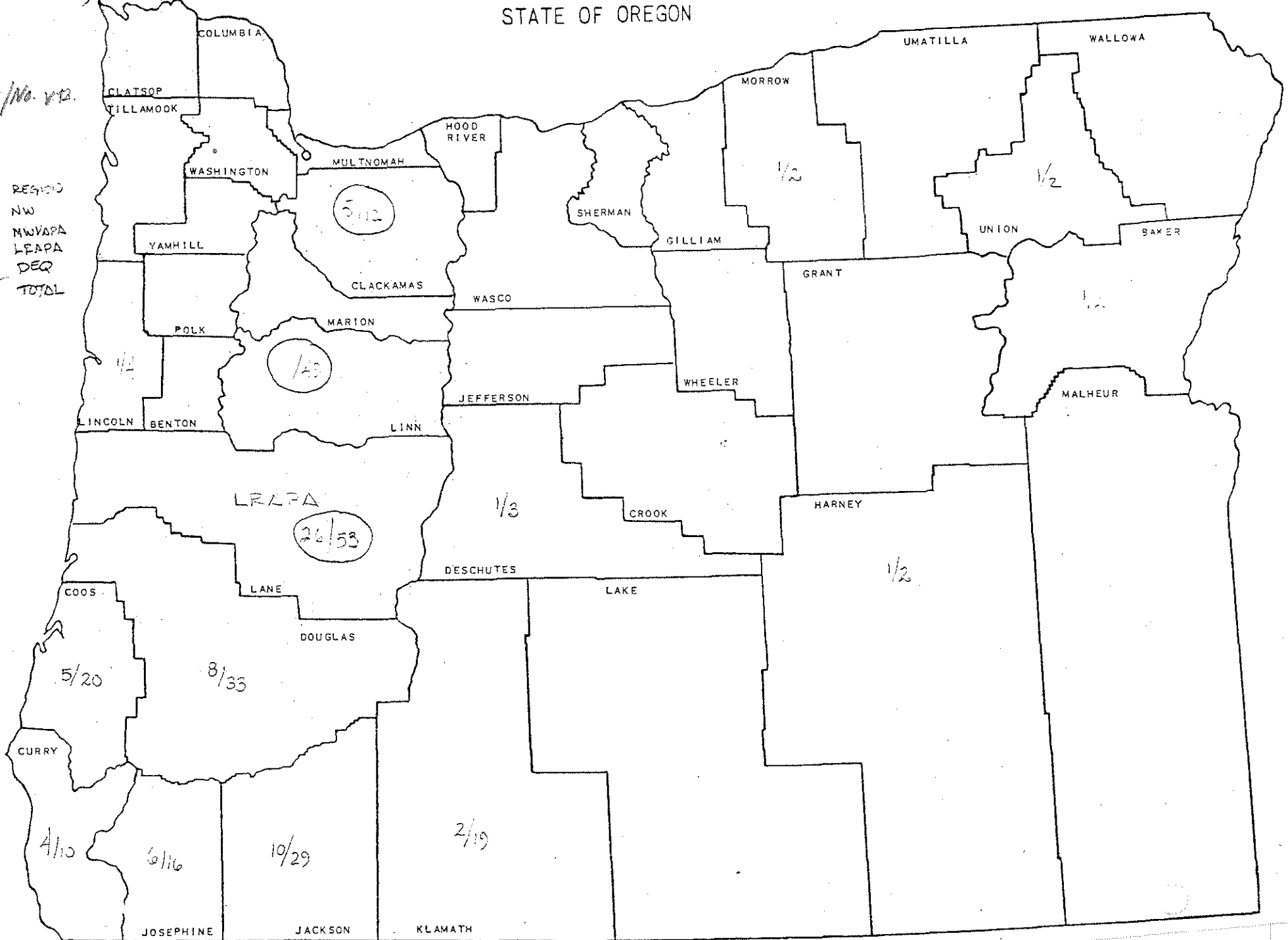


11-10-21-74

# STATE OF OREGON

No. mills / No. yrs.

No. DMS	REGIO
12	NW
49	MWVAPA
53	LEAPA
142	DEQ
<u>256</u>	TOTAL



EMISSION DATA - G-P SCRUBBER

System Tested	Group Testing and Date	Grain Loading In Dry Basis	Grain Loading Out Dry Basis	Temperature in °F.		System SCFM In Out	Moisture Content		Efficiency	lbs/hr		lbs/M 3/8 @ 10,000 3/8/ hr (estimate)
				In	Out		In	Out		In	Out	
Pilot Unit	Lane Regional 1972	0.125 0.141	0.046 0.060	361 372	142 147	1200 1598	29.8% 27.3%	20.6% 21.5%	55-65%			(Total pressure drop in system 17-20H)
Cyclone with Demister in Tower	Dave Junge Feb. 1973	0.25* 0.246	0.180 0.154	310 305	133 140		16.0% 16.7%	18.3% 19.1%	28.0% 37.4%			
Cyclone and Packed Tower Pine	G.P. May 31, 1973	0.17	0.07				13.7%	19.4%	58.8%			
Cyclone and Packed Tower Fir	G.P. June 18, 1973	0.0975	0.047	337	152	8900 8850	15.33%	16.96%	51.8%			
Cyclone and Packed Tower and Demister	G.P. July 20, 1973	0.1369	0.0361	319	137	11,300 10,600	14.8%	14.7%	74%	12.44	3.28	1.24 lbs/M in .33 lbs/M out
same	G.P. Sept. 1973	0.235	0.079	311	143	11,122 11,114	19.75%	17.0%	70%	22.39	7.53	2.24 lbs/M in .75 lbs/M out
Cyclone Packed Tower and Demister	G.P. May 7, 1974	Low Temperature 0.037	0.014	235	125	11,488 8,054	11.0%	9.8%	62.2%			based on 6200 3/8 / M 2.01-.53 lbs/M 3.61-1.21 lbs/M
Packed Tower Only concurrent Flow	G.P. May 13, 1974	0.164	0.115	153	152	11,488 8,054	24.4%	14.2%	29%			$\bar{x}$ grain loading 1.402/8=.17
same	Monsanto Jan. 21-25, 1973	13.32 mg/ACF .205 g/ACF	6.23 mg/ACF .0961gr/ACF						53.2%			@ 10,000 SCFM as estimated for Brink
Brink Pilot Unit	G.P. July 12, 1974	0.101	0.017	140	138	437 469	20.5%	21.2%	83.2%	14.57	1.46	1.46 lbs/M in .15 lbs/M out
Cyclone and Packed Tower and Demister	G.P. July 31, 1974											2.35-.23 lbs/M based on 6200 3/8 / M

\* Tubing contaminated test - no final demister

TABLE II

## Summary of Veneer Dryer Emission Control Methods (1, 2, 3)

Dryer Type	Control Equipment	Flow Rate SCFM	Pressure Drop Across System In. Water Gauge	Particulate Concentration Gr/SCF		Efficiency %	Average Opacity %		Production Model Installed
				In	Out		In	Out	
Steam	American Air Filter Kinpactor	3,800	33.5	.065	.013	37	40	6	
Steam	American Air Filter Kinpactor and glass fiber demistor	3,000	27	.142	.049	65	28	5	
Steam	Baker Filter	335	25-40	.138	.02	85	50	≈ 0	
Steam	Buchholz Foam System	405	2-3	.086	.010*	88	Brown Plume		
Steam	Dupont Catalytic Afterburner	133	2	.086	.014 (361° F)	84			[3/74]
		140		.099	.0067 (499° F)	93			
		136		.134	.0087 (601° F)	93			
NG	Energex Burner	8,130			.084 @ 12% CO <sub>2</sub>			≈ 0	7/73
NG	G-P Scrubber	11,000	[5]	.137	.036	74	55	5-20	7/73
NG	Johns-Manville Reath NEAF	265	17-29	0.144	.018	87	60	≈ 5	Early 7
		272	17-29	0.0789	.0019	98	20	≈ 5	
		250	17-29	0.0779	.0017	98	20	≈ 5	
Steam	Leckenby	3,000	[5]	.070	.055 <sup>1</sup>	21		≈ 10	
				.080	.055 <sup>1</sup>	31		≈ 10	
				.054	.034 <sup>2</sup>	37		≈ 10	
				.137	.069 <sup>2</sup>	48		≈ 10	
NG	Moore Lo-Em	3,415		.0946	.0944 <sup>3</sup>		[60]	5-25	7/73
		3,200		.093	.070 <sup>3</sup>	25			2/73
	Seversky Electrostatic Precip.	700	1.3		.004			≈ 0	
		1,300	3.6		.007			20	
Steam	Weyco Condenser	Pilot	< 5			51	Red Plume		[2/74]
Steam	Wheelabrator	13,000	16	.048	.035	26		22	10/72
			14.6		.016 Run #1			7	
			14.6		.015 Run #2			20	
NG	Wasteco Incinerator	7,760			.108 @ 12% CO <sub>2</sub>				9/71
Steam	Hogfuel Boiler Incineration	73,100			.115 @ 1% CO <sub>2</sub> *			10	2/73
Steam	Temperature Reduction							20-40	
Steam	Temperature Reduction				.004-.009				[1975]

\* Not Standard PNWIS-APCA S-8-2 Test Method

1. Corrected for dilution air, green end

2. Dry end

3. Not concurrent tests

4. Estimate value

VENEER DRYER WET BULB COMPILATION  
SCRUBBER PARTICULATE EMISSION EVALUATIONS

Run No.	Scrubber		% Moisture $\phi$		Inlet GR/SCF <sup>a</sup>	Outlet GR/SCF <sup>a</sup>	Opacity		Eff. %
	Temperature (°F)		Inlet	Outlet			Inlet	Outlet	
	WB/DB*	WB/DB*							
A1	133/299	135/137	10.9	20.0	0.0701	0.0437	20	17	41
A2	141/302	127/135	15.1	14.0	0.0799	0.0413			48
B1	120/232	119/124	5.9	11.0	0.0544	0.0336			38
B2	118/288	107/110	4.1	8.1	0.1321	0.0689			48
C1	159/268	102/113	27.6	6.7	0.6890	0.2213			68
C2	154/268	104/111	25.1	7.6	0.6302	0.2867			55
D1	125/309	103/108	7.3	7.0	0.1708	0.1113			35
D2	118/308	107/111	4.3	8.2	0.0818	0.0622			24
E1	117/295	131/160	4.4	14.7	0.1108	0.0534			52
E2	130/284	120/116	10.9	12.6	0.0744	0.0439			41
F1	117/308	118/124	3.6	11.1	0.0748	0.0357			52
F2	132/307	117/116	10.6	11.4	0.1237	0.0612			51
G1	144/310	122/128	16.7	12.3	0.0785	0.0429			45
G2	140/312	90/90	14.4	12.1	0.1377	0.0928	20		33
H1	148/332	100/100	18.8	11.5	0.0541	0.5673			0
H2	147/331	125/130	17.8	13.0	0.1954	0.0808		17	59
H3	142/310	130/135	15.2	15.1	0.1015	0.0401		11	60
I1	108/300	115/124	5.0	9.9	0.0595	0.0587			1.3
I2	126/299	121/129	8.0	11.6	0.0377	0.0306			19
J1	120/286	110/112	6.5	8.6	0.0607	0.0358			41
J2	120/281	105/107	6.5	7.5	0.0383	0.0301			21
J3	120/290	110/109	6.0	7.6	0.1124	0.0631			44
J4	121/290	105/110	7.6	7.5	0.1287	0.0779			39
K1	137/291	143/150	13.4	21.8	0.1382	0.0526			62
K2	152/307	142/147	21.3	20.8	0.1609	0.0681			58
L1	148/297	137/139	19.8	18.5	0.1600	0.0589			63
L2	150/314	133/137	20.2	16.2	0.1469	0.0464			68
M1		140/142		19.6		0.0829			--
M2		139/152		18.8		0.0661			--
N1	130/289	118/128	10.0	10.7	0.0612	0.0158		5	74
N2	130/293	114/118	10.4	9.6	0.0617	0.0087		10	86
O1	146/363	131/146	16.4	14.9	0.1115	0.0661			41
O2	154/368	136/150	26.3	17.3	0.1065	0.0405			62

\* DB is stack temperature

$\phi$  Percent water vapor by volume

<sup>a</sup> Adjusted to pressure, 70°F.

WILLAMETTE INDUSTRIES, INC.

TEST NO. I

	<u>INLET STACK</u>		<u>OUTLET STACK</u>	
	1	2	1	2
Run Number				
Rate, Ft <sup>2</sup> /hour 3/8 Basis	11,475	8,567	11,475	8,567
Species	DFH	DFH	DFH	DFH
Veneer Size	1/8	1/8	1/8	1/8
Stack Temperature, °F	265	273	130	125
Stack Gas Volume, SCFM Wet	3830	3770	3830	3770
Part. Conc. gr/SCF Dry	.112	.0945	.0693	.0606
Pressure Drop Across Scrubber	33.5	33.5	33.5	33.5
Average Opacity			6.4 38%	5.8 35%
Efficiency			↓	↓

*American Air Filter  
Vertical Scrubbers*

WILLAMETTE INDUSTRIES, INC.

TEST NO. II

	<u>INLET STACK</u>		<u>OUTLET STACK</u>	
	1	2	1	2
Run Number				
Rate, Ft <sup>2</sup> /hour 3/8 Basis	10,770	10,250	10,770	10,250
Species	DFH	DFH	DFH	DFH
Veneer Size	1/8	1/8	1/8	1/8
Stack Temperature, °F	332	325	136	134
Stack Gas Volume, SCFM Wet	3000	3000	3000	3000
Part. Conc. gr/SCF Dry	.156	.129	.059	.038
Pressure Drop Across Scrubber	30.3"	30.3"	30.3"	30.3"
Average Opacity			5%	5%
Efficiency			62%	70%

AAE  
Vertical



✓ 0 file  
Tech file

PUBLISHERS PAPER CO.  
Portland Division

SUMMARY OF RESULTS

Buchholtz Scrubber Emissions - #1 Small Steam Veneer Dryer

	Run 1 12/27/73	Run 2 12/28/73	Average
Stack Temperature	541° R 81° F	535° R 75° F	538° R 78° F
Stack Gas Moisture Content	3.48%	2.91%	3.20%
Stack Gas Volume	662,000 $\frac{\text{scf}}{\text{hr}}$	496,700 $\frac{\text{scf}}{\text{hr}}$	579,350 $\frac{\text{scf}}{\text{hr}}$
Stack Area	5.585 ft <sup>2</sup>	5.585 ft <sup>2</sup>	5.585 ft <sup>2</sup>
Emissions at STP	0.055 $\frac{\text{gr}}{\text{scf}}$	0.036 $\frac{\text{gr}}{\text{scf}}$	0.046 $\frac{\text{gr}}{\text{scf}}$
Emission Rate	5.24 $\frac{\text{lb}}{\text{hr}}$	2.53 $\frac{\text{lb}}{\text{hr}}$	3.89 $\frac{\text{lb}}{\text{hr}}$
% Isokinetic Sampling Rate	97.3%	97.1%	97.5%
Ringlemann No. Reading	No reading - weather cond. prohibitive	Zero	----
Entrained H <sub>2</sub> O	21.2 $\frac{\text{gr H}_2\text{O}}{\text{scf}}$	15.6 $\frac{\text{gr H}_2\text{O}}{\text{scf}}$	18.4 $\frac{\text{gr H}_2\text{O}}{\text{scf}}$

Bob Smith Publishers OK to release data  
talk to Dave Forsyth about details & to arrange  
visit

GEORGIA-PACIFIC  
EUGENE, OREGON

TABLE II

PARTICLE SIZE DISTRIBUTION FOR PARTICLES LESS  
THAN 7 MICRONS IN DIAMETER

VENEER DRYER OFF-GAS

Total Avg 14.54

INLET TO PACKED TOWER

<u>PARTICLE DIAMETER SIZE RANGE (MICRONS)</u>	<u>SAMPLE #8</u>		<u>SAMPLE #9</u>	
	<u>mg/ACF</u>	<u>WT. %</u>	<u>mg/ACF</u>	<u>WT. %</u>
7 - 3.4	0.09	1.44	0.03	0.40
3.4 - 2.0	0.24	3.60	0.09	1.20
2.0 - 1.4	0.0	.00	0.35	4.42
1.4 - 0.7	1.56	23.74	3.24	41.36
0.7 - 0.4	3.12	47.48	2.58	32.93
<0.4	<u>1.56</u>	23.74	<u>1.54</u>	<u>19.68</u>
TOTAL	7.57		8.83	

94.96

EXIT OF PACKED TOWER

Total Avg 14.04

<u>PARTICLE DIAMETER SIZE RANGE (MICRONS)</u>	<u>SAMPLE #5</u>		<u>SAMPLE #6</u>	
	<u>mg/ACF</u>	<u>WT. %</u>	<u>mg/ACF</u>	<u>WT. %</u>
7 - 3.4	0.04	0.95	0.04	1.00
3.4 - 2.0	0.06	1.42	0.06	1.50
2.0 - 1.4	0.10	2.37	0.06	1.50
1.4 - 0.7	1.17	26.54	1.15	27.50
0.7 - 0.4	2.18	49.29	1.84	44.00
<0.4	<u>0.86</u>	<u>19.43</u>	<u>1.03</u>	<u>29.50</u>
TOTAL	5.41		5.18	

95.26

APPENDIX A

PROPOSED RULES RELATING TO  
VENEER AND PLYWOOD MANUFACTURING OPERATIONS

OAR 340, Section 25-315, Subsection (1)(a) through (h) are repealed and the following Subsections (1)(a) through (1)(g) are adopted in lieu thereof, and Subsection (2)(c) is repealed.

25-315 VENEER AND PLYWOOD MANUFACTURING OPERATIONS

(1) Veneer Driers

- (a) Consistent with Section 25-310(1) through (4), it is the objective of this section to control air contaminant emissions, including but not limited to condensible hydrocarbons such that visible emissions from each veneer drier are limited to a level which does not cause a characteristic "blue haze" to be observable at any point beyond the exterior wall of the building housing the veneer drier or at any point further than 50 feet in any direction from the veneer drier, whichever is greater.
- (b) No person shall operate any veneer drier such that visible air contaminants emitted therefrom exceed 10% opacity, opacity as defined by Section 21-005(4), from any one stack. Where the presence of uncombined water is the only reason for the failure to meet this requirement, said requirement shall not apply.
- (c) After March 1, 1975 no person shall operate a veneer drier which is not in compliance with the emission limitations of this rule or is not subject to a compliance schedule approved by the Department which is incorporated into an enforceable air contaminant discharge permit.

- (d) Each veneer drier shall be maintained and operated at all times such that air contaminant generating processes and all contaminant control equipment shall be at full efficiency and effectiveness so that the emissions of air contaminants are kept at the lowest practicable levels.
- (e) No person shall willfully cause or permit the installation or use of any means, such as dilution, which, without resulting in a reduction in the total amount of air contaminants emitted, conceals an emission which would otherwise violate this Rule.
- (f) Where effective measures are not taken to minimize fugitive emissions, as defined by Section 21-050, OAR, Chapter 340, the Department may require that the equipment or structures in which processing, handling and storage are done be tightly closed, modified or operated in such a way that air contaminants are minimized, controlled, or removed before discharge to the open air.
- (g) The Department may require more restrictive emission limits than provided in Section 25-315(1)(b) for an individual plant upon a finding by the Commission that the individual plant is located or is proposed to be located in a special problem area. The more restrictive emission limits for special problem areas may be established on the basis of allowable emissions expressed in opacity, pounds per hour, or total maximum daily emissions to the atmosphere, or a combination thereof.

Board Products Industries  
(Veneer, Plywood,  
Particleboard, Hardboard)

[ED. NOTE: Unless otherwise specified, sections 25-305 through 25-325 of this chapter of the Oregon Administrative Rules Compilation were adopted by the Department of Environmental Quality March 5, 1971 and filed with the Secretary of State March 31, 1971 as Administrative Order DEQ 26].

25-305 DEFINITIONS. (1) "Department" means Department of Environmental Quality.

(2) "Emission" means a release into the outdoor atmosphere of air contaminants.

(3) "Hardboard" means a flat panel made from wood that has been reduced to basic wood fibers and bonded by adhesive properties under pressure.

(4) "Operations" includes plant, mill or facility.

(5) "Particleboard" means mat formed flat panels consisting of wood particles bonded together with synthetic resin or other suitable binder.

(6) "Person" means the same as ORS 449.760 (1).

(7) "Plywood" means a flat panel built generally of an odd number of thin sheets of veneers of wood in which the grain direction of each ply or layer is at right angles to the one adjacent to it.

(8) "Tempering oven" means any facility used to bake hardboard following an oil treatment process.

(9) "Veneer" means a single flat panel of wood not exceeding 1/4 inch in thickness formed by slicing or peeling from a log.

25-310 GENERAL PROVISIONS. (1) These regulations establish minimum performance and emission standards for veneer, plywood, particleboard and hardboard manufacturing operations.

(2) Emission limitations established herein are in addition to, and not in lieu of, general emission standards for visible emissions, fuel burning equipment, and

refuse burning equipment.

(3) Emission limitations established herein and stated in terms of pounds per 1000 square feet of production shall be computed on an hourly basis using the maximum 8 hour production capacity of the plant.

(4) Upon adoption of these regulations, each affected veneer, plywood, particleboard, and hardboard plant shall proceed with a progressive and timely program of air pollution control, applying the highest and best practicable treatment and control currently available. Each plant shall at the request of the Department submit periodic reports in such form and frequency as directed to demonstrate the progress being made toward full compliance with these regulations.

25-315 VENEER AND PLYWOOD MANUFACTURING OPERATIONS. (1) Veneer Driers.

(a) As soon as practicable, but no later than December 31, 1974, no person shall operate any veneer drier, or driers, such that visible air contaminants, including condensible hydrocarbons, are emitted in such quantities so as to create any characteristic "blue haze" which is observable at any point beyond the exterior wall of the building housing the veneer drier or driers; or at any point further than 50 feet in any direction from the veneer drier, whichever is greater.

(b) As soon as practicable, but no later than December 31, 1974, no person shall operate any veneer drier, such that visible air contaminants emitted therefrom at any time exceeds 20% opacity, opacity as defined by section 21-005 (4), from any one stack or an arithmetic average of 10% opacity from all stacks of that veneer drier. Where the presence of uncombined water is the only reason for failure of an emission to meet these requirements, said requirements shall not apply.

(c) As soon as practicable, but not later than July 1, 1973, every person operating a veneer drier shall submit to the Department of Environmental Quality:

(A) Written information, reports, or analysis which demonstrates compliance with the emission limitations contained in

Repealed

subsections (1) (a) and (1) (b), of this section, or

(B) A specific written compliance schedule for complying with the emission limitations contained in subsections (1) (a) and (1) (b), of this section, or

(C) A written notice that the person is participating in a study approved by the Department as sufficient to identify the emissions from said veneer drier or similar veneer drier, and to design an "air cleaning device", as defined by ORS 449.760(c), which will achieve compliance by said veneer drier or similar veneer drier with the emission limitations contained in subsections (1) (a) and (1) (b) of this section.

(d) Any veneer drier complying with the emission limitations contained in subsections (1) (a) and (1) (b) of this section shall be exempt from compliance with section 21-030, (pertaining to particulate emission limitations).

(e) Any veneer drier, the construction of which is completed subsequent to the effective date of this rule, shall from time of initial operation comply with the emission limitations contained in subsections (1) (a) and (1) (b) of this section.

(f) No person shall attempt to comply with the emission limitations of subsection (1) (a) or (1) (b) of this section by diluting the emissions from the drying process with outside air or other gases. Emissions which are so diluted shall be deemed to be in violation of subsection (1) (a) and (1) (b) of this section.

(g) Unless otherwise agreed to by the Department in writing, any person operating one or more veneer driers in compliance with subsection (1) (a) and (1) (b) shall test at least one (1) representative veneer drier in such manner as specified by the Department in its published standard test method, as it may be amended from time to time, copies of which are on file and available at the main office of the Department. A written report of the results of the test or tests shall be filed with the Department within 90 days of the earliest to occur of the following:

(A) The date compliance with the emission limitations contained in subsections (1) (a) and (1) (b) of this section is reported to the Department, or

(B) The date the "air cleaning device", as defined by ORS 449.760 (6), designed to achieve compliance with the emission limitations contained in subsections (1) (a) and (1) (b) of this section is put into operation, or

(C) The date agreed to by the Department and established in the compliance schedule.

(h) A public hearing shall be held by the Department no later than January 1, 1975, to review current technology and the adequacy of these regulations and the necessity and practicability of adopting a mass emission limitation.

(2) Other Emission Sources.

(a) No person shall cause to be emitted particulate matter from veneer and plywood mill sources, including but not limited to, sanding machines, saws, presses, barkers, hogs, chippers and other material size reduction equipment, process or space ventilation systems, and truck loading and unloading facilities in excess of a total from all sources within the plant site of one (1.0) pound per 1000 square feet of plywood or veneer production on a 3/8 inch basis of finished product equivalent.

(b) Excepted from subsection (a) are veneer dryers, fuel burning equipment and refuse burning equipment.

(c) Compliance Schedule. No later than September 5, 1971, every person operating a plywood or veneer manufacturing plant shall submit to the Department of Environmental Quality a proposed schedule for compliance with this section. The schedule shall provide for compliance with the applicable provisions at the earliest practicable date, but in no case shall final compliance be achieved by later than December 31, 1973.

(3) Open Burning. Upon the effective date of these regulations, no person shall cause or permit the open burning of wood residues or other refuse in conjunction with the operation of any veneer or plywood manufacturing mill and such acts are hereby prohibited.

Repealed

Repealed

Repealed

- Hist: Amended 2-15-72 by DEQ 37
- Amended 5- 5-72 by DEQ 43 (T)
- Amended 9-20-72 by DEQ 48
- Amended 4- 9-73 by DEQ 52

NOTICE OF PUBLIC HEARING

RELATIVE TO PROPOSED AMENDMENTS TO RULES RELATING TO VENEER  
AND PLYWOOD MANUFACTURING OPERATIONS

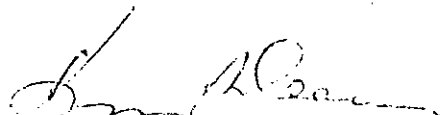
NOTICE IS HEREBY GIVEN that a Public Hearing will be held for the purpose of considering amendments pertaining to rules relating to Veneer and Plywood Manufacturing Operations. Pursuant to OAR Chapter 340, Section 25-315 (1) (h) a public hearing shall be held by the Department no later than January 1, 1975, to review current technology and the adequacy of OAR 340, Sections 25-305 to 25-315. The hearing is scheduled for that purpose and to consider proposed amendments to The Clean Air Act Implementation Plan for Oregon. The public hearing will be held before the Environmental Quality Commission:

At 2:30 p.m. on December 20, 1974  
Redwood Room  
Sweptwing Motel  
Albany, Oregon

Any person desiring to submit testimony related to this matter may do so by forwarding testimony within 30 days from the date of this notice to the Office of Department of Environmental Quality, Air Quality Control Division, 1234 S. W. Morrison, Portland, Oregon 97205, or may be heard orally at the public hearing on the date and at the time and place mentioned above.

Copies of the proposed rule amendment are available upon request from the Department of Environmental Quality, Portland.

Dated this 31st day of October, 1974.



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KESSLER R. CANNON  
Director



APPENDIX B

Board Products Industries  
(Veneer, Plywood,  
Particleboard, Hardboard)

[ED. NOTE: Unless otherwise specified, sections 25-305 through 25-325 of this chapter of the Oregon Administrative Rules Compilation were adopted by the Department of Environmental Quality March 5, 1971 and filed with the Secretary of State March 31, 1971 as Administrative Order DEQ 26.]

25-305 DEFINITIONS. (1) "Department" means Department of Environmental Quality.

(2) "Emission" means a release into the outdoor atmosphere of air contaminants.

(3) "Hardboard" means a flat panel made from wood that has been reduced to basic wood fibers and bonded by adhesive properties under pressure.

(4) "Operations" includes plant, mill or facility.

(5) "Particleboard" means mat formed flat panels consisting of wood particles bonded together with synthetic resin or other suitable binder.

(6) "Person" means the same as ORS 449.760(1).

(7) "Plywood" means a flat panel built generally of an odd number of thin sheets of veneers of wood in which the grain direction of each ply or layer is at right angles to the one adjacent to it.

(8) "Tempering oven" means any facility used to bake hardboard following an oil treatment process.

(9) "Veneer" means a single flat panel of wood not exceeding 1/4 inch in thickness, formed by slicing or peeling from a log.

25-310 GENERAL PROVISIONS. (1) These regulations establish minimum performance and emission standards for veneer, plywood, particleboard and hardboard manufacturing operations.

(2) Emission limitations established herein are in addition to, and not in lieu of, general emission standards for visible emissions, fuel burning equipment, and

refuse burning equipment.

(3) Emission limitations established herein and stated in terms of pounds per 1000 square feet of production shall be computed on an hourly basis using the maximum 8 hour production capacity of the plant.

(4) Upon adoption of these regulations, each affected veneer, plywood, particleboard, and hardboard plant shall proceed with a progressive and timely program of air pollution control, applying the highest and best practicable treatment and control currently available. Each plant shall at the request of the Department submit periodic reports in such form and frequency as directed to demonstrate the progress being made toward full compliance with these regulations.

25-315 VENEER AND PLYWOOD MANUFACTURING OPERATIONS. (1) Veneer Dryers-Public Hearing for Emission Standard. By no later than July 1, 1971, the Director of the Department shall schedule a public hearing for the purpose of determining the feasibility of adopting an emission standard for particulate and gaseous emissions from veneer dryers, setting forth allowable emission levels and dates for compliance.

(2) Other Emission Sources.

(a) No person shall cause to be emitted particulate matter from veneer and plywood mill sources, including but not limited to, sanding machines, saws, presses, barkers, hogs, chippers and other material size reduction equipment, process or space ventilation systems, and truck loading and unloading facilities in excess of a total from all sources within the plant site of one (1.0) pound per 1000 square feet of plywood or veneer production on a 3/8 inch basis of finished product equivalent.

(b) Excepted from subsection (a) are veneer dryers, fuel burning equipment and refuse burning equipment.

(c) Compliance Schedule. No later than September 5, 1971, every person operating a plywood or veneer manufacturing plant shall submit to the Department of Environmental Quality a proposed schedule for compliance with this section. The schedule shall provide for compliance with the ap-

plicable provisions at the earliest practicable date, but in no case shall final compliance be achieved by later than December 31, 1973.

(3) Open Burning. Upon the effective date of these regulations, no person shall cause or permit the open burning of wood residues or other refuse in conjunction with the operation of any veneer or plywood manufacturing mill and such acts are hereby prohibited.

25-320 PARTICLEBOARD MANUFACTURING OPERATIONS. (1) Truck Dump and Storage Areas.

(a) Every person operating or intending to operate a particleboard manufacturing plant shall cause all truck dump and storage areas holding or intended to hold raw materials to be enclosed to prevent wind-blown particle emissions from these areas from being deposited upon property not under the ownership of said person.

(b) The temporary storage of raw materials outside the regularly used areas of the plant site is prohibited unless the person who desires to temporarily store such raw materials first notifies the Department of Environmental Quality and receives written approval for said storage.

(A) When authorized by the Department of Environmental Quality, temporary storage areas shall be operated to prevent windblown particulate emissions from being deposited upon property not under the ownership of the person storing the raw materials.

(B) Any temporary storage areas authorized by the Department shall not be operated in excess of six (6) months from the date they are first authorized.

(c) Any person who proposes to control windblown particulate emissions from truck dump storage areas other than by enclosure shall apply to the Department for authorization to utilize alternative controls. The application shall be submitted pursuant to Section 20-020 to 20-030, Ch. 340, OAR, and shall describe in detail the plan proposed to control windblown particulate emissions and indicate on a plot plan

the nearest location of property not under ownership of the applicant.

(2) Other Emission Sources.

(a) No person shall cause to be emitted particulate matter from particleboard plant sources including, but not limited to, hogs, chippers and other material size reduction equipment, process or space ventilation systems, particle dryers, classifiers, presses, sanding machines and materials handling systems, in excess of a total from all sources within the plant site of three (3.0) pounds per 1000 square feet of particleboard produced on a 3/4 inch basis of finished product equivalent.

(b) Excepted from subsection (a) are truck dump and storage areas, fuel burning equipment and refuse burning equipment.

(3) Compliance Schedule. Not later than September 5, 1971, every person operating a particleboard manufacturing plant shall submit to the Department of Environmental Quality a proposed schedule for complying with Sections (1) and (2) of this regulation. The schedule shall provide for compliance with the applicable provisions at the earliest practicable date, but in no case shall final compliance be achieved by later than December 31, 1973.

(4) Open Burning. Upon the effective date of these regulations, no person shall cause or permit the open burning of wood residues or other refuse in conjunction with the operation of any particleboard manufacturing plant and such acts are hereby prohibited.

25-325 HARDBOARD MANUFACTURING OPERATIONS. (1) Truck Dump and Storage Areas.

(a) Every person operating or intending to operate a hardboard manufacturing plant shall cause all truck dump and storage areas holding or intended to hold raw materials to be enclosed to prevent windblown particle emissions from these areas from being deposited upon property not under the ownership of said person.

(b) The temporary storage of raw materials outside the regularly used areas of

the plant site is prohibited unless the person who desires to temporarily store such raw materials first notifies the Department of Environmental Quality and receives written approval.

(A) When authorized by the Department of Environmental Quality, temporary storage areas shall be operated to prevent windblown particulate emissions from being deposited upon property not under the ownership of the person storing the raw materials.

(B) Any temporary storage areas authorized by the Department shall not be operated in excess of six (6) months from the date they are first authorized.

(c) Alternative Means of Control. Any person who desires to control windblown particulate emissions from truck dump and storage areas other than by enclosure shall first apply to the Department for authorization to utilize alternative controls. The application shall be submitted pursuant to Section 20-020 to 20-030, Ch. 340, OAR, and shall describe in detail the plan proposed to control windblown particulate emissions and indicate on a plot plan the nearest location of property not under ownership of the applicant.

(2) Other Emission Sources.

(a) No person shall cause to be emitted particulate matter from hardboard plant sources including, but not limited to hogs, chippers and other material size reduction equipment, process or space ventilation systems, particle dryers, classifiers, presses, sanding machines, and materials handling systems, in excess of a total from all sources within the plant site of one (1.0) pound per 1000 square feet of hardboard produced on a 1/8 inch basis of finished product equivalent.

(b) Excepted from subsection (a) are truck dump and storage areas, fuel burning equipment and refuse burning equipment.

(3) Emissions from Hardboard Tempering Ovens.

(a) No person shall operate any hardboard tempering oven unless all gases and vapors emitted from said oven are treated in a fume incinerator capable of raising the temperature of said gases and vapors to at least 1500° F for 0.3 seconds or longer.

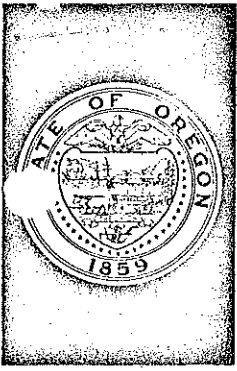
(b) Specific operating temperatures lower than 1500° F may be approved by the Department upon application, provided that information is supplied to show that operation at said temperatures provides sufficient treatment to prevent odors from being perceived on property not under the ownership of the person operating the hardboard plant.

(c) In no case shall fume incinerators installed pursuant to this section be operated at temperatures less than 1000° F.

(d) Any person who proposes to control emissions from hardboard tempering ovens by means other than fume incineration shall apply to the Department for authorization to utilize alternative controls. The application shall be submitted pursuant to Section 20-020 to 20-030, Chapter 340 OAR, and shall describe in detail the plan proposed to control odorous emissions and indicate on a plot plan the location of the nearest property not under ownership of the applicant.

(4) Compliance Schedule. No later than September 5, 1971, every person operating a hardboard manufacturing plant shall submit to the Department of Environmental Quality a proposed schedule for complying with Sections (1), (2), and (3) of this regulation. The schedule shall provide for compliance with the applicable provisions at the earliest practicable date, but in no case shall final compliance be achieved by later than December 31, 1973.

(5) Open Burning. Upon the effective date of these regulations, no person shall cause or permit the open burning of wood residues or other refuse in conjunction with the operation of any hardboard manufacturing plant and such acts are hereby prohibited.



## ENVIRONMENTAL QUALITY COMMISSION

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

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The Dalles

KESSLER R. CANNON  
Director

### MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item L, December 20, 1974 EQC Meeting

Public Hearing Relative to Proposed Amendments to Rules  
Relating to Veneer and Plywood Manufacturing Operations

### Background:

The rule amendment under consideration is a proposed emission limitation relative to veneer dryer emissions and is attached as Appendix A.

During the manufacture of plywood, the veneer passes through a dryer in which the moisture content is reduced from the range of 30-200% to about 3%. During this process, the steam driven off carries with it small quantities of organic volatiles present in the wood.

An investigation made in 1970 by Washington State University found that emissions from veneer dryers in the Pacific Northwest and in the South consist of small quantities of solid particulate matter (generally under 0.002 grains per standard cubic foot) and hydrocarbons.

Veneer dryer emissions, consisting of the particulates, volatilized and condensed hydrocarbon compounds, are capable of forming a characteristic blue haze upon emission to the atmosphere.

When the initial Board Product Industries Rules were adopted (March 5, 1971), no emission limit was set for veneer dryers pending completion of a series of studies of emissions and control methods for this source by the American Plywood Association. Instead a section requiring a public hearing was adopted as follows: (Also see Appendix B)

"25-315 VENEER AND PLYWOOD MANUFACTURING OPERATION.

(1) Veneer Dryers-Public Hearing for Emission Standard. By no later than July 1, 1971, the Director of the Department shall schedule a public hearing for the purpose of determining the feasibility of adopting an emission standard for particulate and gaseous emissions from veneer dryers, setting forth allowable emission levels and dates for compliance."



Contains  
Recycled  
Materials

Washington State University published findings of the previously referred to study in a report, "Investigation of Emissions from Plywood Veneer Dryers", dated March 1971 (Contract supported by the Plywood Research Foundation and the EPA). While significant information was received, much served to verify that emissions varied with wood species, type of dryer, and drying cycle including speed, moisture content, temperature, etc. The report provided the following summary: "Eight Pacific Northwest and five southern plywood veneer dryers were tested for emission rates and process variables. Gas- and steam-heated, longitudinal and jet dryers were studied drying ten wood species types. Wood particles in concentrations of less than 0.002 gr/std dry ft<sup>3</sup> were the only significant particulate found at stack temperatures. The visible blue-haze plume consists of hydrocarbon materials that condense after the plume cools below stack temperature. The blue-haze plumes averaged about 20% in equivalent opacity. Douglas fir and ponderosa pine produced the most visible plume. Some dryers have visible water plumes. Total hydrocarbon emissions from the stacks averaged 5.7 lbs/10,000 ft<sup>2</sup> of 3/8" plywood produced, of which 3.6 lbs represented the condensable fraction. The other fraction is termed volatile hydrocarbons." The conclusions of that report are attached as Appendix E.

The report discussed above was not received by control agencies until May 13, 1971. The American Plywood Association (APA) was then engaged in an evaluation of several additional dryers, examining the effect of changing dryer operating conditions upon the emission of contaminants. The Department had also arranged with the APA to conduct independent emission tests along side the WSU group at installations in Eugene and Lebanon. This information was transmitted to the Environmental Quality Commission at the June 4, 1971 meeting with a request for authorization for a public hearing in December of 1971, which was approved.

It is considered sufficiently relative to the matter before the Commission today to report that discrepancies in source sampling of hydrocarbon emissions and the analytical methods and procedures which were under review by WSU and DEQ were technical in nature and were resolved by diligent and cooperative work.

In late 1971 a proposed rule for veneer dryer emissions was incorporated with other amendments and new rules prepared for Oregon's Clean Air Act Implementation Plan. Public hearings were held in Portland, Medford and Eugene. The proposed rule contained a visible emission limitation (opacity) and a particulate grain loading emission limitation of 0.05 grains per standard cubic foot. The maximum allowable concentration of particulate matter (0.05 gr/scf) was deleted, primarily as a result of a large amount of new data submitted by the American Plywood Association on January 10, 1972. The new test results essentially confirmed the industry hearing testimony to the effect that the 0.05 gr/scf limit would have been considerably more stringent than the opacity limitation on visible emissions.

The Environmental Quality Commission and the Director, at the request of members of the plywood industry, granted an additional nine months to complete investigations into control hardware. As a condition, the American Plywood Association was to submit quarterly reports in March, June, and September of 1972 delineating industry efforts and progress in finding and installing various types of control equipment. After submission of the second report, the Department appointed a study committee, composed of individuals from various plywood manufacturing companies and equipment representatives who were involved in research and development programs on veneer dryers.

The continued investigation by the Department made clear the extreme difficulty of effectively controlling veneer dryers with only a visible emission limitation. The multiplicity of emission points in close proximity to one another frequently resulted in interference to a degree that no valid individual readings was possible. Further the staff concluded that the visible haze which hangs over plants and areas was related to the total mass emission of the particulates (hydrocarbons) from the plant and that limitations in terms of mass measurements had to be established. A number of other significant items were developed at that time: 1) there is little uniformity in the operation of veneer dryers; 2) there was still a limited amount of hard data relating to veneer dryer emissions to various operating parameters; 3) there was not agreement within industry that a quantitative emission regulation was warranted.

The Department during this period investigated several means of quantitatively relating veneer dryer emissions including 1) process weight limitation, 2) grain loading, and 3) mass emission versus production. Each of the control systems were considered to have advantages and disadvantages.

The report to the Environmental Quality Commission at its October 4, 1972 meeting requesting authorization for a public hearing for a proposed rule amendment which included a quantitative mass emission limitation had these conclusions:

"It is the conclusion of the Department that a quantitative mass emission limitation should be considered at this time. This conclusion is not shared by the industry.

The presently recommended emission limitation of 0.5#/1000 ft<sup>2</sup> total veneer (3/8" basis) is the level which, on the basis of limited data, will assure the relief of the current visible emission problem, and is achievable with currently available control equipment.

The limitations imposed by insufficient data makes it desirable that a definite date for further review should be included in this regulation. There are several members of the industry currently embarked on emission control programs. The review date is to coincide with these control programs and further amendments of the regulation will be predicated on the results of these installations. Should these control installations demonstrate an adequate control of visible emissions and indicate a higher or lower mass emission limitation, the presently recommended 0.5 pounds per 1000 square feet (3/8 inch basis) would be adjusted. All adjustments will be made on the basis of operating test data."

A final report from the Plywood Research Foundation dated October 12, 1972 was received and is attached in Appendix F. The report, in addition to stating the cost of testing veneer dryers could be prohibitive depending upon dryer configuration and frequency of testing required, suggested there was inadequate data to set an emission limit. It was estimated that source testing could cost \$1200 to \$1600 per emission point per test which could approach \$2 million for the Oregon segment of the plywood industry. Industry also requested a review date for emission limits if limits were set at that time. A dual standard for new and old equipment did not appear justified. The report also reviewed the status of control equipment trials.

The initially proposed rule presented at the October 4, 1972 meeting for the January 26, 1973 public hearing was revised to reflect results of conferences and further evaluation by the Department. Basically it removed the mass emission limitation and it recognized the difficulty in reading opacity from individual stacks and new language was added addressing visible air contaminants and the area blue haze problem by the following:

"....no person shall operate any veneer drier, or driers, such that visible air contaminants, including condensible hydrocarbons, are emitted in such quantities so as to create any characteristic "blue haze" which is observable at any point beyond the exterior wall of the building housing the veneer drier or driers, or at any point further than 50 feet in any direction from the veneer drier, whichever is greater."

At the public hearing on January 26, 1973 much of the testimony was in contrast to the precepts and conclusions drawn from the industry evaluations and conferences with control agency staffs over the prior year. The Department reviewed the testimony and obtained an Attorney General's Opinion relative to the enforceability of "the characteristic blue



haze" section. The Industry Committee basically agreed with only setting an opacity limitation on veneer dryer emissions, however suggested that the section (1)(a) relative to "characteristic blue haze" should be labelled a policy section. The complete testimony is attached as Appendix G.

The Department report to the Environmental Quality Commission for the April 2, 1973 meeting had these conclusions:

- "1. The proposed veneer drier regulation is an enforceable regulation and will require a substantial reduction in the visible emissions from veneer driers.
2. The proposed regulation may make it impractical to attempt to achieve compliance with low energy scrubber systems and will have an impact on and require control of veneer drier leakage that occurs at many installations.
3. The enforcement of the "limitations on visible emissions" are concluded to be a sufficient control requirement and neither process weight nor grain loading requirements need be applicable at this time.
4. Several word changes were recommended and are incorporated in the attached draft regulation dated March 16, 1973.
5. The emission measurements required in the regulation will result in data which will provide a basis for emission inventory purposes and decisions regarding the emission control accomplished."

The Commission adopted the proposed rule as amended on April 2, 1973 (a copy is contained in Appendix D).

The rule as adopted contained in subsection (a) a restriction on visible emissions such that the "blue haze" was not observable beyond the exterior wall of the building housing the dryer or at any point greater than 50 feet; subsection (b) contained an opacity limitation; subsection (c) required submission of a compliance schedule or notice of participation in an approved study; and in addition to other requirements relative to fugitive emissions, etc. required a public hearing be held not later than January 1, 1975 to review current technology and the adequacy of these regulations and the necessity and practicability of adopting a mass emission limitation.

Discussion:

The public hearing today has been called to fulfill the hearing requirement in the adopted rule. The proposed rule as amended, and being considered here today, would require: 1) applying highest and best practicable treatment as does the current rule in Section 25-310(4); 2) establishing as an objective instead of a regulation the limitation on the distance from the dryer or beyond buildings that the characteristic "blue haze" may persist, proposed in Section 25-315(1)(a); 3) establishing an opacity limitation of 10% from any one stack, proposed Section 25-315(1)(a), which is considered more restrictive than the current rule; 4) those persons operating veneer dryer(s) to be in compliance with the rule or under a compliance schedule approved by the Department by March 1, 1975, proposed section 25-315(1)(c); 5) operation at all times such that emissions of air contaminants are kept at the lowest practicable levels, proposed section 25-315(1)(d); 6) prohibiting any practice of willfully concealing emissions by such means as dilution, proposed section 25-315(1)(e); 7) control of fugitive emissions, proposed section 25-315(1)(f); and 8) more restrictive emission limitations for problem areas upon a finding by the Commission that such was necessary, proposed section 25-315(1)(g).

Since late 1969, the Department has met with industrial committees and through consultation and the regulatory process, industry and others have developed control technology to control the visible emissions from veneer dryers. Unfortunately at this point in time, not all of the developed and evaluated control systems have been installed on operating plants. Thus, performance capabilities over long periods of time have not been established. In fact, a few control systems have been operated only as pilot plant installations. Appendix H contains a staff evaluation of all the control installation technology reviewed or observed by the Department. Of those systems for which emission test data are available, including the Georgia Pacific System, Buchholz Foam System, Baker Filter, Dupont Catalytic Afterburner, Energex Burner, Leckenby and Moore Lo-Em System, opacities of less than 10% are achievable and the reported grain loading are frequently at 0.05 grains per standard cubic foot (gr/scf) and some are reported as less than 0.03 gr/scf. Essentially all are at less than 0.08 gr/scf. It is concluded from data available that a mass emission limitation is not necessary at this time, alleviating a significant cost for source testing to determine compliance. General particulate emission limitations are 0.1 gr/scf for "new" sources, and 0.2 gr/scf for "existing" sources, OAR 340, Section 21-030. However, the proposed 10% opacity is expected to be more restrictive than either 0.1 or 0.2 gr/scf. It should be noted that under OAR 340, Section 20-035, the Department can require source testing to determine type, quality and quantity of emissions.

The currently proposed rule revision is the result of a number of meetings with a representative industrial committee responsible in part for reporting to the Department control progress and test data. The committee position is that available highest and best practicable control technology if installed cannot comply with the essentially zero visibles 50 feet beyond the dryer stacks or buildings contained in the existing rule. They claim there is insufficient evidence to assure that a wisp or plume of "blue haze" might not occasionally be observed beyond the current regulatory limits and place them in technical violation of the current rule.

The Department concludes that the proposed rule changes, which makes an objective out of the distance "blue haze" may persist and adds a 10% maximum allowable opacity, have the following merits. They remove an argument that current control technology is not available on a reasonable basis to meet the rule. Control systems, presently available, can reduce visible emissions from less than 10% to zero opacity. These same systems will be installed under the highest and best practicable rule section providing a high degree of control. Each such proposal is subject to review and approval by the Department.

The industrial committee initially proposed an opacity limitation of 20% as set forth in their letter and attachment of September 16, 1974, attached as Appendix I. In that letter it was stated that cost of control per dryer will range from \$60,000 to as high as \$175,000 per unit, exclusive of costs for control of fugitive emissions.

According to Department records, 93 mills in Oregon will be subject to the rule and those mills have a total of 253 dryers. The Department agrees with the industry statement that the proposed rule will have its greatest impact on older smaller mills. In view of current economic conditions submitted schedules will be approved on a case-by-case basis.

Testimony relative to the proposed rule received by December 9th includes a letter from the Lane Regional Air Pollution Authority supporting the proposed rule change, and a letter from the North Santiam Plywood Company at Mill City objecting to the proposal as too costly, causing curtailment of production and possibly forcing closure of the average mill. Both letters are also attached in Appendix J.

Conclusions:

The Department concludes that:

1. Control technology is available to reduce visible emissions from veneer dryers to the proposed rule requirements.
2. The proposed rule change is not projected to result in any significant change in applied control technology so as to comply with the proposed rule as compared to the current rule.
3. The 10% opacity limitation will result in grain loadings below 0.1 grain per scf, and based upon current information a mass emission limitation is not considered necessary.
4. The adoption of the proposed rule will allow the Department to receive and approve schedules of compliance in an orderly manner.

Director's Recommendation:

It is the recommendation of the Director that public testimony be heard concerning the proposed amendments to Veneer and Plywood Manufacturing Operations and appropriate action be taken on the regulation after giving consideration to the testimony received.



KESSLER R. CANNON  
Director

## APPENDIX C

Board Products Industries  
(Veneer, Plywood,  
Particleboard, Hardboard)

[ED. NOTE: Unless otherwise specified, sections 25-305 through 25-325 of this chapter of the Oregon Administrative Rules Compilation were adopted by the Department of Environmental Quality March 5, 1971 and filed with the Secretary of State March 31, 1971 as Administrative Order DEQ 26].

25-305 DEFINITIONS. (1) "Department" means Department of Environmental Quality.

(2) "Emission" means a release into the outdoor atmosphere of air contaminants.

(3) "Hardboard" means a flat panel made from wood that has been reduced to basic wood fibers and bonded by adhesive properties under pressure.

(4) "Operations" includes plant, mill or facility.

(5) "Particleboard" means mat formed flat panels consisting of wood particles bonded together with synthetic resin or other suitable binder.

(6) "Person" means the same as ORS 449.760 (1).

(7) "Plywood" means a flat panel built generally of an odd number of thin sheets of veneers of wood in which the grain direction of each ply or layer is at right angles to the one adjacent to it.

(8) "Tempering oven" means any facility used to bake hardboard following an oil treatment process.

(9) "Veneer" means a single flat panel of wood not exceeding 1/4 inch in thickness formed by slicing or peeling from a log.

25-310 GENERAL PROVISIONS. (1) These regulations establish minimum performance and emission standards for veneer, plywood, particleboard and hardboard manufacturing operations.

(2) Emission limitations established herein are in addition to, and not in lieu of, general emission standards for visible emissions, fuel burning equipment, and

refuse burning equipment.

(3) Emission limitations established herein and stated in terms of pounds per 1000 square feet of production shall be computed on an hourly basis using the maximum 8 hour production capacity of the plant.

(4) Upon adoption of these regulations, each affected veneer, plywood, particleboard, and hardboard plant shall proceed with a progressive and timely program of air pollution control, applying the highest and best practicable treatment and control currently available. Each plant shall at the request of the Department submit periodic reports in such form and frequency as directed to demonstrate the progress being made toward full compliance with these regulations.

25-315 VENEER AND PLYWOOD MANUFACTURING OPERATIONS. (1) Veneer Driers.

(a) No person shall cause to be emitted from any veneer drier, visible air contaminants of an opacity equal to or greater than 20% for a period or periods aggregating more than 3 minutes in any one hour. Where the presence of uncombined water is the only reason for failure of an emission to meet this requirement, said requirement shall not apply.

(b) No person shall cause to be emitted from any veneer drier constructed or installed after March 1, 1972, visible air contaminants of an opacity exceeding 10% for a period or periods aggregating more than 3 minutes in any one hour. Where the presence of uncombined water is the only reason for failure of an emission to meet this requirement, said requirement shall not apply.

(c) No person shall attempt to comply with the requirements of (1) (a) or (1) (b) of this subsection by dilution with outside air or by otherwise increasing the exhaust gas volume above that generally occurring under normal operating conditions.

(d) No later than September 30, 1972, every person operating a veneer drier shall submit to the Department of Environmental Quality, a specific proposal for complying with this subsection, and by no later than March 30, 1973, a spe-

cific detailed schedule of compliance. The schedule shall provide for compliance with the applicable provisions at the earliest practicable date, consistent with local air quality conditions and the difficulty and complexity of compliance, and shall employ the highest and best practicable treatment and control. In no case shall final compliance be achieved by later than December 31, 1974.

(2) Other Emission Sources.

(a) No person shall cause to be emitted particulate matter from veneer and plywood mill sources, including but not limited to, sanding machines, saws, presses, barkers, hogs, chippers and other material size reduction equipment, process or space ventilation systems, and truck loading and unloading facilities in excess of a total from all sources within the plant site of one (1.0) pound per 1000 square feet of plywood or veneer production on a 3/8 inch basis of finished product equivalent.

(b) Excepted from subsection (a) are veneer dryers, fuel burning equipment and refuse burning equipment.

(c) Compliance Schedule. No later than September 5, 1971, every person operating a plywood or veneer manufacturing plant shall submit to the Department of Environmental Quality a proposed schedule for compliance with this section. The schedule shall provide for compliance with the applicable provisions at the earliest practicable date, but in no case shall final compliance be achieved by later than December 31, 1973.

(3) Open Burning. Upon the effective date of these regulations, no person shall cause or permit the open burning of wood residues or other refuse in conjunction with the operation of any veneer or plywood manufacturing mill and such acts are hereby prohibited.

Hist: Amended 2-15-72 by DEQ 37

25-320 PARTICLEBOARD MANUFACTURING OPERATIONS. (1) Truck Dump and Storage Areas.

(a) Every person operating or intending to operate a particleboard manufacturing plant shall cause all truck dump and storage areas holding or intended to hold raw

materials to be enclosed to prevent wind-blown particle emissions from these areas from being deposited upon property not under the ownership of said person.

(b) The temporary storage of raw materials outside the regularly used areas of the plant site is prohibited unless the person who desires to temporarily store such raw materials first notifies the Department of Environmental Quality and receives written approval for said storage.

(A) When authorized by the Department of Environmental Quality, temporary storage areas shall be operated to prevent windblown particulate emissions from being deposited upon property not under the ownership of the person storing the raw materials.

(B) Any temporary storage areas authorized by the Department shall not be operated in excess of six (6) months from the date they are first authorized.

(c) Any person who proposes to control windblown particulate emissions from truck dump and storage areas other than by enclosure shall apply to the Department for authorization to utilize alternative controls. The application shall be submitted pursuant to Section 20-020 to 20-030, Ch. 340, OAR, and shall describe in detail the plan proposed to control windblown particulate emissions and indicate on a plot plan the nearest location of property not under ownership of the applicant.

(2) Other Emission Sources.

(a) No person shall cause to be emitted particulate matter from particleboard plant sources including, but not limited to, hogs, chippers and other material size reduction equipment, process or space ventilation systems, particle dryers, classifiers, presses, sanding machines and materials handling systems, in excess of a total from all sources within the plant site of three (3.0) pounds per 1000 square feet of particleboard produced on a 3/4 inch basis of finished product equivalent.

(b) Excepted from subsection (a) are truck dump and storage areas, fuel burning equipment and refuse burning equipment.

(3) Compliance Schedule. Not later than September 5, 1971, every person operating a particleboard manufacturing plant shall

submit to the Department of Environmental Quality a proposed schedule for complying with Sections(1) and (2) of this regulation. The schedule shall provide for compliance with the applicable provisions at the earliest practicable date, but in no case shall final compliance be achieved by later than December 31, 1973.

(4) Open Burning. Upon the effective date of these regulations, no person shall cause or permit the open burning of wood residues or other refuse in conjunction with the operation of any particleboard manufacturing plant and such acts are hereby prohibited.

#### 25-325 HARDBOARD MANUFACTURING OPERATIONS. (1) Truck Dump and Storage Areas.

(a) Every person operating or intending to operate a hardboard manufacturing plant shall cause all truck dump and storage areas holding or intended to hold raw materials to be enclosed to prevent wind-blown particle emissions from these areas from being deposited upon property not under the ownership of said person.

(b) The temporary storage of raw materials outside the regularly used areas of the plant site is prohibited unless the person who desires to temporarily store such raw materials first notifies the Department of Environmental Quality and receives written approval.

(A) When authorized by the Department of Environmental Quality, temporary storage areas shall be operated to prevent windblown particulate emissions from being deposited upon property not under the ownership of the person storing the raw materials.

(B) Any temporary storage areas authorized by the Department shall not be operated in excess of six (6) months from the date they are first authorized.

(c) Alternative Means of Control. Any person who desires to control windblown particulate emissions from truck dump and storage areas other than by enclosure shall first apply to the Department for authorization to utilize alternative controls. The application shall be submitted pursuant to Section 20-020 to 20-030, Ch. 340, OAR, and shall describe in detail the

plan proposed to control windblown particulate emissions and indicate on a plot plan the nearest location of property not under ownership of the applicant.

#### (2) Other Emission Sources.

(a) No person shall cause to be emitted particulate matter from hardboard plant sources including, but not limited to hogs, chippers and other material size reduction equipment, process or space ventilation systems, particle dryers, classifiers, presses, sanding machines, and materials handling systems, in excess of a total from all sources within the plant site of one (1.0) pound per 1000 square feet of hardboard produced on a 1/8 inch basis of finished product equivalent.

(b) Excepted from subsection (a) are truck dump and storage areas, fuel burning equipment and refuse burning equipment.

#### (3) Emissions from Hardboard Tempering Ovens.

(a) No person shall operate any hardboard tempering oven unless all gases and vapors emitted from said oven are treated in a fume incinerator capable of raising the temperature of said gases and vapors to at least 1500°F for 0.3 seconds or longer.

(b) Specific operating temperatures lower than 1500°F may be approved by the Department upon application, provided that information is supplied to show that operation of said temperatures provides sufficient treatment to prevent odors from being perceived on property not under the ownership of the person operating the hardboard plant.

(c) In no case shall fume incinerators installed pursuant to this section be operated at temperatures less than 1000°F.

(d) Any person who proposes to control emissions from hardboard tempering ovens by means other than fume incineration shall apply to the Department for authorization to utilize alternative controls. The application shall be submitted pursuant to Section 20-020 to 20-030, Chapter 340 OAR, and shall describe in detail the plan proposed to control odorous emissions and indicate on a plot plan the location of the nearest property not under ownership of the applicant.

(4) Compliance Schedule. No later than



September 5, 1971, every person operating a hardboard manufacturing plant shall submit to the Department of Environmental Quality a proposed schedule for complying with Sections (1), (2), and (3) of this regulation. The schedule shall provide for compliance with the applicable provisions at the earliest practicable date, but in no case

shall final compliance be achieved by later than December 31, 1973.

(5) Open Burning. Upon the effective date of these regulations, no person shall cause or permit the open burning of wood residues or other refuse in conjunction with the operation of any hardboard manufacturing plant and such acts are hereby prohibited.

## APPENDIX D

Board Products Industries  
(Veneer, Plywood,  
Particleboard, Hardboard)

[ED. NOTE: Unless otherwise specified, sections 25-305 through 25-325 of this chapter of the Oregon Administrative Rules Compilation were adopted by the Department of Environmental Quality March 5, 1971 and filed with the Secretary of State March 31, 1971 as Administrative Order DEQ 26].

25-305 DEFINITIONS. (1) "Department" means Department of Environmental Quality.

(2) "Emission" means a release into the outdoor atmosphere of air contaminants.

(3) "Hardboard" means a flat panel made from wood that has been reduced to basic wood fibers and bonded by adhesive properties under pressure.

(4) "Operations" includes plant, mill or facility.

(5) "Particleboard" means mat formed flat panels consisting of wood particles bonded together with synthetic resin or other suitable binder.

(6) "Person" means the same as ORS 449.760 (1).

(7) "Plywood" means a flat panel built generally of an odd number of thin sheets of veneers of wood in which the grain direction of each ply or layer is at right angles to the one adjacent to it.

(8) "Tempering oven" means any facility used to bake hardboard following an oil treatment process.

(9) "Veneer" means a single flat panel of wood not exceeding 1/4 inch in thickness formed by slicing or peeling from a log.

25-310 GENERAL PROVISIONS. (1) These regulations establish minimum performance and emission standards for veneer, plywood, particleboard and hardboard manufacturing operations.

(2) Emission limitations established herein are in addition to, and not in lieu of, general emission standards for visible emissions, fuel burning equipment, and

refuse burning equipment.

(3) Emission limitations established herein and stated in terms of pounds per 1000 square feet of production shall be computed on an hourly basis using the maximum 8 hour production capacity of the plant.

(4) Upon adoption of these regulations, each affected veneer, plywood, particleboard, and hardboard plant shall proceed with a progressive and timely program of air pollution control, applying the highest and best practicable treatment and control currently available. Each plant shall at the request of the Department submit periodic reports in such form and frequency as directed to demonstrate the progress being made toward full compliance with these regulations.

25-315 VENEER AND PLYWOOD  
MANUFACTURING OPERATIONS. (1)  
Veneer Driers.

(a) As soon as practicable, but no later than December 31, 1974, no person shall operate any veneer drier, or driers, such that visible air contaminants, including condensible hydrocarbons, are emitted in such quantities so as to create any characteristic "blue haze" which is observable at any point beyond the exterior wall of the building housing the veneer drier or driers or at any point further than 50 feet in any direction from the veneer drier, whichever is greater.

(b) As soon as practicable, but no later than December 31, 1974, no person shall operate any veneer drier, such that visible air contaminants emitted therefrom at any time exceeds 20% opacity, opacity as defined by section 21-005 (4), from any one stack or an arithmetic average of 10% opacity from all stacks of that veneer drier. Where the presence of uncombined water is the only reason for failure of an emission to meet these requirements, said requirements shall not apply.

(c) As soon as practicable, but not later than July 1, 1973, every person operating a veneer drier shall submit to the Department of Environmental Quality:

(A) Written information, reports, or analysis which demonstrates compliance with the emission limitations contained in

subsections (1) (a) and (1) (b), of this section, or

(b) A specific written compliance schedule for complying with the emission limitations contained in subsections (1) (a) and (1) (b), of this section, or

(C) Written notice that the person is participating in a study approved by the Department as sufficient to identify the emissions from said veneer drier or similar veneer drier, and to design an "air cleaning device", as defined by ORS 449.760(6), which will achieve compliance by said veneer drier or similar veneer drier with the emission limitations contained in subsections (1) (a) and (1) (b) of this section.

(d) Any veneer drier complying with the emission limitations contained in subsections (1) (a) and (1) (b) of this section shall be exempt from compliance with section 21-030, (pertaining to particulate emission limitations).

(e) Any veneer drier, the construction of which is completed subsequent to the effective date of this rule, shall from time of initial operation comply with the emission limitations contained in subsections (1) (a) and (1) (b) of this section.

(f) No person shall attempt to comply with the emission limitations of subsection (1) (a) or (1) (b) of this section by diluting the emissions from the drying process with outside air or other gases. Emissions which are so diluted shall be deemed to be in violation of subsection (1) (a) and (1) (b) of this section.

(g) Unless otherwise agreed to by the Department in writing, any person operating one or more veneer driers in compliance with subsection (1) (a) and (1) (b) shall test at least one (1) representative veneer drier in such manner as specified by the Department in its published standard test method, as it may be amended from time to time, copies of which are on file and available at the main office of the Department. A written report of the results of the test or tests shall be filed with the Department within 90 days of the earliest to occur of the following:

(1) The date compliance with the emission limitations contained in subsections (1) (a) and (1) (b) of this section is reported to the Department, or

(B) The date the "air cleaning device", as defined by ORS 449.760 (6), designed to achieve compliance with the emission limitations contained in subsections (1) (a) and (1) (b) of this section is put into operation, or

(C) The date agreed to by the Department and established in the compliance schedule.

(h) A public hearing shall be held by the Department no later than January 1, 1975, to review current technology and the adequacy of these regulations and the necessity and practicability of adopting a mass emission limitation.

(2) Other Emission Sources.

(a) No person shall cause to be emitted particulate matter from veneer and plywood mill sources, including but not limited to, sanding machines, saws, presses, barkers, hogs, chippers and other material size reduction equipment, process or space ventilation systems, and truck loading and unloading facilities in excess of a total from all sources within the plant site of one (1.0) pound per 1000 square feet of plywood or veneer production on a 3/8 inch basis of finished product equivalent.

(b) Excepted from subsection (a) are veneer dryers, fuel burning equipment and refuse burning equipment.

(c) Compliance Schedule. No later than September 5, 1971, every person operating a plywood or veneer manufacturing plant shall submit to the Department of Environmental Quality a proposed schedule for compliance with this section. The schedule shall provide for compliance with the applicable provisions at the earliest practicable date, but in no case shall final compliance be achieved by later than December 31, 1973.

(3) Open Burning. Upon the effective date of these regulations, no person shall cause or permit the open burning of wood residues or other refuse in conjunction with the operation of any veneer or plywood manufacturing mill and such acts are hereby prohibited.

Hist: Amended 2-15-72 by DEQ 37  
Amended 5- 5-72 by DEQ 43 (T)  
Amended 9-20-72 by DEQ 48  
Amended 4- 9-73 by DEQ 52

25-320 PARTICLEBOARD MANUFACTURING OPERATIONS. (1) Truck Dump and Storage Areas.

(a) Every person operating or intending to operate a particleboard manufacturing plant shall cause all truck dump and storage areas holding or intended to hold raw materials to be enclosed to prevent wind-blown particle emissions from these areas from being deposited upon property not under the ownership of said person.

(b) The temporary storage of raw materials outside the regularly used areas of the plant site is prohibited unless the person who desires to temporarily store such raw materials first notifies the Department of Environmental Quality and receives written approval for said storage.

(A) When authorized by the Department of Environmental Quality, temporary storage areas shall be operated to prevent windblown particulate emissions from being deposited upon property not under the ownership of the person storing the raw materials.

(B) Any temporary storage areas authorized by the Department shall not be operated in excess of six (6) months from the date they are first authorized.

(c) Any person who proposes to control windblown particulate emissions from truck dump and storage areas other than by enclosure shall apply to the Department for authorization to utilize alternative controls. The application shall be submitted pursuant to Section 20-020 to 20-030, Ch. 340, OAR, and shall describe in detail the plan proposed to control windblown particulate emissions and indicate on a plot plan the nearest location of property not under ownership of the applicant.

(2) Other Emission Sources.

(a) No person shall cause to be emitted particulate matter from particleboard plant sources including, but not limited to, hogs, chippers and other material size reduction equipment, process or space ventilation systems, particle dryers, classifiers, presses, sanding machines and materials handling systems, in excess of a total from all sources within the plant site of three (3.0) pounds per 1000 square feet of particleboard produced on a 3/4 inch basis of finished product equivalent.

(b) Excepted from subsection (a) are truck dump and storage areas, fuel burning equipment and refuse burning equipment.

(3) Compliance Schedule. Not later than September 5, 1971, every person operating a particleboard manufacturing plant shall submit to the Department of Environmental Quality a proposed schedule for complying with Sections (1) and (2) of this regulation. The schedule shall provide for compliance with the applicable provisions at the earliest practicable date, but in no case shall final compliance be achieved by later than December 31, 1973.

(4) Open Burning. Upon the effective date of these regulations, no person shall cause or permit the open burning of wood residues or other refuse in conjunction with the operation of any particleboard manufacturing plant and such acts are hereby prohibited.

25-325 HARDBOARD MANUFACTURING OPERATIONS. (1) Truck Dump and Storage Areas.

(a) Every person operating or intending to operate a hardboard manufacturing plant shall cause all truck dump and storage areas holding or intended to hold raw materials to be enclosed to prevent wind-blown particle emissions from these areas from being deposited upon property not under the ownership of said person.

(b) The temporary storage of raw materials outside the regularly used areas of the plant site is prohibited unless the person who desires to temporarily store such raw materials first notifies the Department of Environmental Quality and receives written approval.

(A) When authorized by the Department of Environmental Quality, temporary storage areas shall be operated to prevent windblown particulate emissions from being deposited upon property not under the ownership of the person storing the raw materials.

(B) Any temporary storage areas authorized by the Department shall not be operated in excess of six (6) months from the date they are first authorized.

(c) Alternative Means of Control. Any

person who desires to control windblown particulate emissions from truck dump and storage areas other than by enclosure shall first apply to the Department for authorization to utilize alternative controls. The application shall be submitted pursuant to Section 20-020 to 20-030, Ch. 340, OAR, and shall describe in detail the plan proposed to control windblown particulate emissions and indicate on a plot plan the nearest location of property not under ownership of the applicant.

(2) Other Emission Sources.

(a) No person shall cause to be emitted particulate matter from hardboard plant sources including, but not limited to hogs, chippers and other material size reduction equipment, process or space ventilation systems, particle dryers, classifiers, presses, sanding machines, and materials handling systems, in excess of a total from all sources within the plant site of one (1.0) pound per 1000 square feet of hardboard produced on a 1/8 inch basis of finished product equivalent.

(b) Excepted from subsection (a) are truck dump and storage areas, fuel burning equipment and refuse burning equipment.

(3) Emissions from Hardboard Tempering Ovens.

(a) No person shall operate any hardboard tempering oven unless all gases and vapors emitted from said oven are treated in a fume incinerator capable of raising the temperature of said gases and vapors to at least 1500 F for 0.3 seconds or longer.

(b) Specific operating temperatures lower than 1500 F may be approved by the De-

partment upon application, provided that information is supplied to show that operation of said temperatures provides sufficient treatment to prevent odors from being perceived on property not under the ownership of the person operating the hardboard plant.

(c) In no case shall fume incinerators installed pursuant to this section be operated at temperatures less than 1000 F.

(d) Any person who proposes to control emissions from hardboard tempering ovens by means other than fume incineration shall apply to the Department for authorization to utilize alternative controls. The application shall be submitted pursuant to Section 20-020 to 20-030, Chapter 340 OAR, and shall describe in detail the plan proposed to control odorous emissions and indicate on a plot plan the location of the nearest property not under ownership of the applicant.

(4) Compliance Schedule. No later than September 5, 1971, every person operating a hardboard manufacturing plant shall submit to the Department of Environmental Quality a proposed schedule for complying with Sections (1), (2), and (3) of this regulation. The schedule shall provide for compliance with the applicable provisions at the earliest practicable date, but in no case shall final compliance be achieved by later than December 31, 1973.

(5) Open Burning. Upon the effective date of these regulations, no person shall cause or permit the open burning of wood residues or other refuse in conjunction with the operation of any hardboard manufacturing plant and such acts are hereby prohibited.

**APPENDIX E**

## CONCLUSIONS

Eight dryers in Pacific Northwest mills and five dryers in southern mills were studied. Steam- and gas-heated longitudinal and jet dryers were studied drying ten different species types.

The nature of veneer dryer emissions varies between species types, heat source, and dryer type. A number of basic similarities exist, however. At stack temperatures the only particulate emission consists of wood particles in concentrations less than 0.002 gr/standard dry cubic feet of stack gas. Outside the stack, however, at cooler than stack temperature, hydrocarbons and water typically condense to form blue haze and/or a water plume or both. Plume opacities of the blue-haze emission ranged from 0% to 100% but averaged 20%. Other volatile hydrocarbons do not condense.

The average total hydrocarbon emission from all dryers tested was 5.7 lbs/10000 ft<sup>2</sup> of 3/8" plywood produced. The average condensable hydrocarbon emission was 3.6, same basis.

There were large differences in the operation of veneer dryers. These differences, coupled with the condition of the dryers, combined to give varying results for opacity readings of the stacks, water vapor emitted from the stack, and the total hydrocarbon emitted from the stack. If, for example, a stack was operated with its dampers open, the volume flow of gases out the stack was very high, plume opacity was very low, and the volatile and condensable concentration figures seemed generally to be at the lower values. If, however, the dryer was operated with the dampers closed, production was generally higher, air volume was lower, plume opacity was higher, volatile and condensable hydrocarbon concentrations were higher, and total hydrocarbons on a 10,000 ft<sup>2</sup> (of 3/8"



plywood) production basis were also lower. An important factor, therefore, in veneer dryer operation is the damper setting.

Routine GC analyses of the volatile hydrocarbons in the stack gas at the thirteen dryers studied showed that  $\alpha$  pinene was the major monoterpene emitted except for ponderosa pine where  $\Delta^3$  carene was the major component. Alpha and  $\beta$  pinene are recognized to be potentially reactive hydrocarbons. Studies to determine the relative reactivities of  $\alpha$  and  $\beta$  pinene, ethylene, isobutene, and 1-butene are in progress.

During the drying of Douglas fir,  $\alpha$  pinene accounted for 75 to 90% of the monoterpene emission; for southern pine, 55 to 65%; and for ponderosa pine, 40 to 50%. The data also showed that the monoterpene composition of the stack gas was characteristic of the wood species being dried. However, the concentrations were not as characteristic as the composition. During the drying of Douglas fir, southern pine, and ponderosa pine, the concentrations were quite variable; whereas the concentrations measured during the drying of western hemlock, larch, and white fir were at the lower limits of sensitivity of the GC used.

The condensed hydrocarbon fraction has been preliminarily studied. A tentative identification of the bulk of the condensate as a mixture of abietic-pimaric acids has been made. The data also indicate the presence of sesquiterpenes, fatty acids, resin esters, and resin alcohols. Analyses to more precisely identify the components in the condensate would require an effort equal to a separate research project and as such is outside the scope of the present project.

APPENDIX F



## Plywood Research Foundation

1119 A Street

Tacoma, Washington 98401/206-272-2283

October 12, 1972

### FINAL REPORT TO OREGON DEQ ON VENEER DRYER EMISSION CONTROL PROGRESS

#### BACKGROUND

During January 1972, hearings were held by the Environmental Quality Commission of the Oregon Department of Environmental Quality to consider an emission standard for veneer dryers. During and after that hearing, the DEQ indicated interest in periodic reports on activity within the plywood industry relative to the control of veneer dryers. Since that time, two quarterly reports have been prepared covering intermediate progress made and a series of three joint industry-DEQ meetings have been held, at the invitation of DEQ, to discuss the progress made in dryer emission control and its relation to future control regulations. This report is the final in the series and will summarize the ground covered in the three meetings as well as update information on emission control equipment that has been tried, is in operation or is planned for future trial or installation. Minutes of the three meetings are appended.

#### JOINT INDUSTRY-DEQ MEETINGS

Meetings were held at the DEQ offices at 1234 S.W. Morrison - Terminal Sales Building, Portland, Oregon at 10:00 a.m. on August 3, August 24 and September 14, 1972. During the first meeting, the current status of control equipment trials was presented by industry representatives. This will be covered later in the report when the status of control equipment is discussed.

The subject of testing of veneer dryers was discussed and it was pointed out that, if the recommendations of the S-8 Source Test Committee for testing of veneer dryers were followed, the cost of testing dryers could be prohibitive depending on the dryer configuration and frequency of testing required. It was estimated that testing would cost from \$1,200 to \$1,600 per emission point per test. It was reported that this cost could approach 2 million dollars annually for the Oregon segment of the plywood industry. It was pointed out that this cost to the industry would be unproductive and would not result in any improvement in air quality. DEQ representatives indicated it was not the wish of DEQ that industry spend large amounts of money on testing. Although the permit program which has been introduced for registration of sources of air pollutants will involve some testing, DEQ representatives indicated that permits may run for up to five years and that the testing would only be required if there was an obvious visible problem or when changes were made in the emission source.

When questioned regarding the industry coverage of possible means of controlling the emissions from veneer dryers, DEQ representatives stated that there appeared to be no possibilities that remain to be investigated. In other words, those areas that should be looked at either have been, or are being, studied now.

There was some discussion of employing a process weight standard to limit total weight of particulate matter emitted. One manufacturer was in favor of this approach on the basis that it does give some latitude in selecting which emission sources in a plant to control. However, other manufacturers expressed the view that not enough data are available to make any decision on a total emission requirement at this time.

The subject of sampling and testing of the emissions was discussed at each of the meetings. The establishment of a standard procedure was also discussed and it was pointed out that the S-8 Committee of PNWIS APCA was in the process of developing such a test procedure which would be recommended to all Pacific Northwest air pollution control authorities. At the second meeting, Mr. Phillips of DEQ discussed the subject in depth and stated that they would prepare a standard method for review prior to the next meeting. The procedure was distributed at the third meeting and was found to vary somewhat from the method under study by the S-8 Committee. There was considerable concern voiced by industry that the test procedure adopted by the various local and state air pollution control agencies should be the same. Otherwise, comparison of test results could be confusing.

The subject of an emission weight limit was discussed at the second and third meetings. The position of DEQ was that a measurable number is needed to apply to veneer dryer control for the times when opacities cannot be read due to darkness or weather conditions. At the third meeting, a proposed standard was distributed which set forth limitations of 0.5 lb./1,000 sq. ft. 3/8" production for existing dryers and 0.3 lb./1,000 sq. ft. 3/8" for new dryers. There was considerable discussion with questions raised by industry representatives as to the validity of the dual standard for new and existing dryers as well as the fact that the 0.5 lb. figure is based on measurements of uncontrolled dryers while the standard is to apply to controlled dryers, other than incinerator controlled, to determine compliance. It was suggested that since the standard would, if adopted, apply to controlled dryers, of which there are none at the present time, there is really no urgency in incorporating a mass emission limitation in the standard as the opacity limitation is in the current standard.

It was pointed out that a provision for a review date which had been discussed previously was not included in the standard which was distributed September 14. Mr. Phillips indicated that it was the feeling of the DEQ that if a review of data were indicated for any reason, the Department would call for the review.

Near the close of the third meeting, Mr. Patterson summarized the following points which had been presented by Industry representatives to date:

1. Not enough reliable data has been collected to set a standard.
2. Industry would like a review date for the emission limits if a standard is proposed at this time.
3. The dual weight standard for new and old equipment does not appear justified.

A more detailed account of the information covered at the three meetings can be had by referring to the complete minutes which are attached.

### STATUS OF CONTROL EQUIPMENT TRIALS

At the first of the three meetings, each participant whose company had been involved in testing of veneer dryer emission control equipment gave a brief report on the current status and progress. Their reports follow with added information included where updating is appropriate.

Glen King and Dave Rice of Carolina-Pacific reported on the Mill Conversion Contractors, Inc. burner now in operation at their Grants Pass mill as reported in the August 3 minutes. This burner is a suspension burner that can be fired with wood waste which has been dried and finely ground. At the current time, the burner is being fired on sanderdust but additional storage capacity is being constructed to allow mixing and storing of ground plywood trim with the sanderdust to increase the firing capacity of the burner. Mr. Case of Mill Conversion reports a gas saving at Carolina-Pacific amounting to \$5,500 per month as a result of the use of the burner on one dryer. He also reported that the burner has the capacity and flexibility in ducting to fire six zones of drying space whether it be all in one dryer or separated into two or three dryers.

John Vranizan of Moore Oregon reported on the burner they have constructed at Lane Plywood. This burner is currently being fired with sanderdust and is being utilized to heat the green zone of the dryer. In the current application, it is not being used to incinerate the dryer emissions directly from the stack however, since a portion of the circulating air within the dryer is ducted from the dryer to the burner and blended with 2400°F. gases in the burner and then ducted back to the dryer to supply heat, a portion of the organics in the dryer are burned. The result is that the exhaust stack from the green zone of the dryer, although not treated directly, does not emit a visible plume.

Wally Cory reported on the experiences with the first of the sanderdust fired burners which was installed at their Albany plant by Wasteco of Portland. This burner is incinerating all of the emissions from one of two dryers in the mill and burning all of the mill's sanderdust. Heat is ducted back to the dryer from the burner to supply a portion of the heat to the dryer. It has been reported that during short test periods, the usage of natural gas has been reduced by as much as 35%. However, on a monthly basis, apparent gas savings have been negligible due to inadequate supplies of sanderdust.

In all three cases of the wood waste fired incinerators, sanderdust has been used as the fuel. In the case of the Mill Conversion unit, equipment is being installed to enable other wood waste to be used as supplementary fuel. The concept of the suspension burner is not limited to burning sanderdust although sanderdust is the only fuel available in a plywood plant without additional treatment. Any type of wood waste can be burned in a suspension burner provided it is first dried and ground. This additional treatment would add considerably to the cost of the installation and the need to dry the fuel prior to burning would reduce the amount of heat available for incineration and veneer drying.

As an example of the cost involved in the use of a suspension burner system designed to dry, grind and burn general plywood mill wood waste, Bill Swindells of Willamette Industries, reported quotes from two manufacturers in the range of \$600,000 and up to treat emissions from two veneer dryers. That is more than the initial cost of the dryers. Willamette Industries has also conducted studies to maximize dryer efficiency and minimize stack exhaust volumes as well as make necessary repairs on the dryers in preparation for design work for construction of control equipment, regardless of the type of control equipment which will ultimately be used.

Willamette Industries has indicated recently that they will be trying a medium energy scrubber manufactured by American Air Filter Co. This scrubber will be a pilot model that will treat 4,000 CFM and will be supplied with the exhaust from one dryer stack. The order has been placed with completion of construction and installation anticipated by the end of November. Testing and evaluation will follow with preliminary results expected by years end.

Harry Bartels of U.S. Plywood reported on the status of the Wheelabrator high velocity filter at their Willamina plant and the proposed Leckenby scrubber at their Seattle plant. The Wheelabrator unit at Willamina will treat the emissions from one dryer. Due to delays in shipment from the manufacturer, startup has been delayed. It is now anticipated that the unit will be operational by the second or third week in October.

The Leckenby scrubber is of the low energy type. A small 500 CFM unit has been tried at the Seattle plant with promising results. Based on these results, an order has been placed with Leckenby for construction of a scrubber that will treat the emissions from a single stack. It is anticipated that fabrication of the scrubber will be completed by November 1 with the unit to be set in place on the roof of the mill on November 5 with completion of the installation taking about two weeks for the unit to be operational by November 17. A period of intensive evaluation and testing will follow the installation of these two units.

In addition to the testing of the Leckenby and Wheelabrator pilot plant units, U.S. Plywood has also evaluated the Electroprecipitrol made by the Electronatom Corp., a wet electrostatic precipitator, and an air cooled condenser which was constructed and tested by a University of Washington student working toward his Master's Degree.

Dave Junge of Weyerhaeuser Co. reported on the work they had done on in-line jet dryers toward control of emission opacity by changing operating conditions; mainly lowering drying temperatures. After several months of testing and evaluation, they reached the following conclusions:

1. Lower opacity readings were achieved with reduced drying temperatures. However, even under extreme temperature reduction conditions, they were unable to consistently meet an opacity limitation of 20%. The control of the blue haze through temperature reduction would be possible if the limitation was greater than 20%.
2. Dryer temperature reduction will mean a substantial productivity loss, depending on the magnitude of the temperature drop employed. For a specific situation at Coos Bay, an average temperature reduction through the dryer of 27 to 29°F. showed a productivity loss of 10 to 12%. These amounts will vary, depending on specific dryers and drying conditions.
3. Control of drying conditions to achieve increased moisture content of 5% or more at normal temperature settings had little impact on blue haze control.

During the past six months, Georgia-Pacific has been operating and evaluating a wet scrubber at their Eugene plant on a pilot scale. The results of testing of this pilot model have been promising enough that they are currently constructing a larger unit that will treat the exhaust from one stack. It is estimated that the construction of this larger unit will be completed by about the middle of November. Assuming that construction is completed on schedule, testing and evaluation will follow and will be completed by the end of the year.

Simpson Timber Company reports no changes in the schedule for completion of their system for ducting the exhaust from their two dryers at Albany to their boiler and injecting the exhaust gases as overfire air. They report that the engineering is nearly completed and they anticipate completion of construction by or shortly after the first of the year.

Another system is being offered for the control of veneer dryer emissions and heating of veneer dryers although it has not actually been tried on a veneer dryer. This system is available from Automated Combustion Division of Michel Lumber Co. At this time, a mill in Southern Oregon is negotiating with Automated Combustion for installation of a unit to eliminate the dryer emissions and supply heat for their veneer drying.

The Automated Combustion burner is of the wood-gas generator type. This type of burner has the advantage over suspension burners in that it does not require any fuel pre-treatment. Any wood waste fuel that can be fed through a 12 inch auger can be burned. All combustion controls are automatic. The wood-gas generator concept can be applied to the heating of veneer dryers, firing boilers, etc.

In the application to veneer dryer, the exhaust from the dryers would be ducted to the burner and injected as primary or secondary combustion air. A portion of the hot gases from the burner would, in turn, be ducted back to the dryers to supply the heat required. Any plywood mill wood waste can be used for fuel without drying or grinding. It is only necessary that the wood waste be hogged to the point that it can be fed through the auger.

The burner has been demonstrated in static firing using a wide variety of fuels from hydraulic barker residue to sanderdust. Emission testing was conducted on a number of different fuels and the only combustable that did not meet all existing air pollution control standards was rubber tires. All wood waste products were well within the emission limitations.

Mt. Jefferson Plywood has constructed a condensing system for the control of veneer dryer emissions. The system consists of ducting which connects the two stacks together and carries the dryer exhaust to ground level where it is introduced into condensing chambers. Cooling can be accomplished either by air or water or both. The system employs a fan to insure that there is no back pressure against the dryer. It is estimated, on the basis of visual observations, that the system, in its present configuration, has a removal efficiency of about 50%. Mt. Jefferson plans modification and continued evaluation of the system over the remainder of the year.

In addition to the air pollution control equipment mentioned above as having been tried or planned, equipment manufacturers are working on new concepts in the control of veneer dryers. The proprietary nature of this work precludes mention of the equipment and concepts at this time.

**APPENDIX G**



INDUSTRY COMMITTEE STATEMENT ON VENEER DRYER STANDARDS  
ENVIRONMENTAL QUALITY COMMISSION HEARING

January 26, 1973

My name is Vincent J. Tretter, Jr. and I am Senior Environmental Engineer with Georgia-Pacific Corporation. I am here today representing the Industry Committee on Veneer Dryers. The plywood industry recognizes that the visible blue haze coming from plywood veneer dryers is a problem and has sponsored a study conducted by Washington State University to define the problem. When the Washington State Study was completed, industry embarked on a crash program to develop equipment to control veneer dryer emissions. Industry's progress has been reported on a quarterly basis to the Oregon Department of Environmental Quality by the American Plywood Association. Several types of control equipment have been tested and we now feel that control of the blue haze emissions can be accomplished.

Industry is in agreement with the approach of setting only opacity limitations on veneer dryer emissions because of the lack of correlation between opacity and any mass emission rate. The problem associated with veneer dryer emission is one of visibility reduction and it is logical to have a standard that reflects the amount of visibility reduction. Stack opacities have been used extensively for control of other types of emissions and the technique of reading opacities is well defined.

We offer the following two suggestions for changes in the proposed regulations:

SECTION (1)(a)

Section (1)(a) may be subject to different interpretations and introduces terminology that may result in enforcement difficulties. The term "condensable hydrocarbons or characteristic 'blue haze'" has no precise definition and could be subject to a number of interpretations. We believe that if Section (1)(b) of the regulation is met, Section (1)(a) will also be met. We therefore suggest that section (a) be included at the beginning of the regulation and be labeled as a policy statement, using the following wording: "It is the policy of the commission that no later than December 31, 1974, no person shall operate any veneer dryer or veneer dryers such that visible air contaminants including condensable hydrocarbons or the characteristic blue haze are emitted in such quantities that create any 'blue haze' to be observed in the area surrounding a veneer dryer. A public hearing shall be held by the Department no later than January 1, 1975 to review current technology and to determine if these regulations are adequate to meet this policy." The regulations would then start out with the present Section (1)(b).

SECTION (1)(b)

We suggest insertion of the word "arithmetic" before "average" in the first sentence to prevent misinterpretation. The regulation would

then read" "As soon as practicable, but no later than December 31, 1974, no person shall operate any veneer dryer such that visible air contaminants emitted therefrom at any time exceed 20% opacity as defined by Section 21-005(4) from any one stack or an arithmetic average of 10% opacity as so defined from all stacks of that veneer dryer."

APPENDIX H

## VENEER DRYER EMISSIONS CONTROL SYSTEMS

1. Veneer dryer emission control systems fall into two general categories plus additional approaches.
  - A. Adiabatic scrubbers
  - B. Incineration
  - C. Others - condensation, filtration, low temperature veneer drying
2. Adiabatic scrubbing
  - A. Adiabatic scrubbing depends upon:
    1. Condensing the veneer dryer emissions adiabatically, i.e., the heat removed in condensing the organics is absorbed in vaporizing water;
    2. Collecting the condensed vapors by intimate contact with the scrubbing medium; and
    3. Separation or removal of the condensed phase.
  - B. The intimate contact step is crucial to removing the condensed drops from the air stream, as most of them are small (<1.0 $\mu$ ) and thus they are insensitive to inertial effects. Intimate contact is based on the parameters of time, turbulence and the influence of a contact agent, such as packing in a packed scrubbing tower. Two novel approaches to the contact problem are: 1) the foam in the Buchholz scrubbing system and the sand bed in the Becker Sand Filter.
  - C. Adiabatic scrubbing systems

<u>System</u>	<u>Remarks *</u>	<u>Performance</u>
Air Guard	1, 2, 4	Unit at Cloverdale, California had blue tail (no zero blue haze, but could meet 10% opacity)
Becker Sand Filter	3	Pilot plant unit achieved zero blue haze on yellow pine for 1 hr. run
Buchholz	1, 2, 4	Pilot plant observed to be 10% opacity
Emissions Reactor Control Corp.	1, 2, 4	Has not been observed in normal operation
Georgia-Pacific w/o demister	1, 2, 4	Large steam plume, visible emissions evaluation difficult, estimated to be about 10% opacity
w/ demister	3	Pilot Plant Brink Unit was observed at zero blue haze
Leckenby	1, 2, 4	Data from Leckenby indicate their unit can operate consistently 10% opacity

\* See footnotes on next page.

1. Size and/or design varies
2. Operating above pilot scale
3. Not operating above pilot scale
4. Readily available for full scale installation

3. Incineration

- A. Complete incineration is a practical approach especially if there is a heat source, i.e., furnace, boiler or WWB, located near the veneer dryer.
- B. Partial incineration - part of the air circulated in the veneer dryer is passed through a high temperature chamber where the organic components are oxidized to CO<sub>2</sub> & H<sub>2</sub>O. This heated air is then blended with cooler air being recirculated to the veneer dryer. By combusting a fraction of the organic vapor it is hoped that the discharge from the veneer dryer can meet the veneer dryer regulations.

C. Incineration systems:

<u>System</u>	<u>Company</u>	<u>Performance</u>
Incineration in H.F. Boiler	Simpson Timber, Albany Weyerhaeuser, Cottage Grove - Startup 1/75	Meets H.F. Boiler Regs. No blue haze
Incineration in WWB	Drain Plywood	Should be completed by 1/75
Incineration in N.G./R.O. Boiler	Willamette Industries	Scheduled for startup 1/75
Partial Incineration (Energex)	Lane Plywood	Installed on Green End - Little blue haze - no opacity
Catalytic Afterburner	U. S. Plywood	Opacity data not avail- able

4. Other approaches

A. Air/Air condensation - Weyerhaeuser Company

At Snoqualmie Falls little or no blue haze was observed on pilot scale. Condenser at Springfield to start up 12/12/74.

B. Low temperature drying - Unique, attempts to prevent the formation and emission of the organics, rather than removing them from gas stream. In operation at Roseburg Lumber, Dillard. Can meet the 10% opacity regulation.

C. Johns-Manville - HEAF Filter - can meet 10% opacity, but there is a solid waste disposal problem.

D. AAF Kinpactor - was demonstrated to operate at 5 to 10% opacity.

TABLE II

## Summary of Veneer Dryer Emission Control Methods (1, 2, 3)

Dryer Type	Control Equipment	Flow Rate SCFM	Pressure Drop Across System		Particulate Concentration Gr/SCF		Efficiency %	Average Opacity %		Production Model Installed
			In.	Water Gauge	In	Out		In	Out	
Steam	American Air Filter Kinpactor	3,800		33.5	.065	.013	37	40	6	
Steam	American Air Filter Kinpactor and glass fiber demistor	3,000		27	.142	.049	65	28	5	
Steam	Baker Filter	335		25-40	.138	.02	85	50	≈ 0	
Steam	Buchholz Foam System	405		2-3	.086	.010*	88	Brown Plume		
Steam	Dupont Catalytic Afterburner	133		2	.086	.014 (361°F)	84			[3/74]
		140			.099	.0067 (499°F)	93			
		136			.134	.0087 (601°F)	93			
NG	Energex Burner	8,130				.084 @ 12% CO <sub>2</sub>			≈ 0	7/73
NG	G-P Scrubber	11,000		[5]	.137	.036	74	55	5-20	7/73
NG	Johns-Manville Heath HEAF	265		17-29	0.144	.018	87	60	<5	[Early 74]
		272		17-29	0.0789	.0019	98	20	<5	
		250		17-29	0.0779	.0017	98	20	<5	
Steam	Leckenby	3,000		[5]	.070	.055 <sup>1</sup>	21		<10	
					.080	.055 <sup>1</sup>	31		<10	
					.054	.034 <sup>2</sup>	37		<10	
					.137	.069 <sup>2</sup>	48		<10	
NG	Moore Lo-Em	3,415			.0946	.0944 <sup>3</sup>		[60]	5-25	7/73
		3,200			.093	.070 <sup>3</sup>	25			2/73
	Seversky Electrostatic Precip.	700		1.3		.004			≈ 0	
		1,300		3.6		.007			20	
Steam	Wayco Condenser	Pilot		<5			51	Red Plume		[2/74]
Steam	Wheelabrator	13,000		16	.048	.035	26		22	10/72
				14.6		.016 Run #1			7	
				14.6		.015 Run #2			20	
NG	Wasteco Incinerator	7,760				.108 @ 12% CO <sub>2</sub>				9/71
Steam	Hogfuel Boiler Incineration	73,100				.115 @ 1% CO <sub>2</sub> *			10	2/73
Steam	Temperature Reduction								20-40	
Steam	Temperature Reduction					.004-.009				[1975]

\* Not Standard PNWIS-APCA S-8-2 Test Method

1. Corrected for dilution air, green end

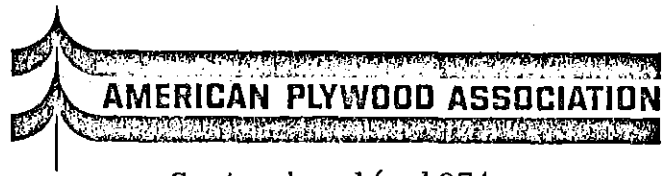
2. Dry end

3. Not concurrent tests

4. Estimate value



APPENDIX I

CC  
FAS-2  
EWH

September 16, 1974

Mr. Harold Patterson  
 Director, Air Quality Control  
 Department of Environmental Quality  
 1234 S.W. Morrison  
 Portland, Oregon 97205

Dear Mr. Patterson:

Subject: Veneer Dryer Emission Control

The revised veneer dryer regulation is submitted for your review and consideration. The industry advisory committee feels this proposal to be a reasonable compromise, particularly in view of the considerable industry opinion that only the basic Oregon air regulations should apply to veneer dryers.

Industry, at the time the present regulation was formulated, fundamentally disagreed with the concept of "zero" visibility. At the time of the Environmental Quality Commission action on this subject, the Chairman, Mr. McPhillips, recommended Commission passage of the present regulation as a "goal" for industry's control efforts. Plywood manufacturers, in good faith, have tried to find workable control mechanisms that would meet this "goal." We have now reached a conclusion, based on actual operating experience, that the Commission "goal" cannot be met consistently with any control equipment presently available.

No regulation that discriminates against a segment of a particular industry is fair or equitable. Veneer dryer emission has been defined as an aesthetic concern, in that the emission does not constitute any danger to the health and welfare of the public. The industry advisory committee believes the regulation, revised as appended, can be met by equipment the industry has developed under stimulus of the original goal set by the Commission. Furthermore, the committee feels the proposed revision, based on the following criteria, will provide an effective and enforceable regulation:

1. It is consistent with opacity regulations in California and Washington.

SEP 18 1974

AIR QUALITY CONTROL




2. It is consistent with opacity regulations governing emissions from other sources within the State of Oregon.
3. Compliance can be achieved with a number of available control devices.
4. The existing regulation allows no additional time for study and testing of untried or unproven control techniques.
5. Delay of the final compliance date, to permit the industry to install the needed equipment, will not jeopardize Oregon's attainment of the National Ambient Air Standards as required by the U. S. Environmental Protection Agency.
6. Fugitive emissions are provided for in such manner that each plant can most effectively cope with its own unique situation.
7. More restrictive requirements may be imposed where special, local conditions warrant.

The magnitude of capital and operating costs of veneer dryer control equipment remains of great concern to the industry. Controlled expenditures per dryer will range from a minimum installed cost of \$60,000 to as high as \$175,000 per unit, exclusive of costs for fugitive emission control. A single plant can have as many as seven dryers for which total control costs may exceed a million dollars for the facility. To put these costs into perspective, it should be pointed out that the original cost of a veneer dryer in an average Oregon plant was around \$80,000. Thus, the investment in control equipment will exceed the depreciated value of the dryer in the majority of cases. The impact of the veneer dryer regulations will fall heaviest on the older, smaller plants, and will be particularly oppressive in today's depressed plywood markets.

In view of the approaching December 1974 deadline of the existing regulations, we look forward to working with you toward an expeditious revision of the existing veneer dryer standards.

Respectfully submitted,

TASK FORCE ON  
VENEER DRYER EMISSIONS

  
Matthew Gould, Chairman

MG:dl  
Enc.

## 25-315 VENEER AND PLYWOOD MANUFACTURING OPERATIONS

### (1) Veneer Dryers

- (a) As soon as practicable, but no later than December 31, 1975, no person shall cause to be emitted from any veneer dryer stack, visible air contaminants of an opacity equal to or greater than 20%. Where the presence of uncombined water is the only reason for failure of an emission to meet this requirement, said requirement shall not apply.
- (b) Where required, because of valid adverse local geographical or meteorological conditions, and for dryers installed after December 31, 1974, no person shall cause to be emitted from any veneer dryer stack, visible air contaminants of an opacity equal to or greater than 10%. Where the presence of uncombined water is the only reason for failure of an emission to meet this requirement, said requirement shall not apply.
- (c) As soon as practicable, but no later than December 31, 1975, or upon application for approval to operate a new source, each owner or operator of a veneer dryer shall submit to the Department for approval a schedule for repair and maintenance to control of fugitive emissions.
- (d) As soon as practicable, but not later than May 1, 1975, every person operating a veneer dryer shall submit to

the Department of Environmental Quality:

1. Written information, reports, or analysis which demonstrates compliance with the emission limitations contained in subsections (1) (a) or (1) (b) of this section, or
  11. A specific written compliance schedule for complying with the emission limitations contained in subsections (1) (a) or (1) (b) of this section.
- (e) Any veneer dryer complying with the emission limitations contained in subsections (1) (a) or (1) (b) and (1) (c) of this section shall be exempt from compliance with section 21-030, (pertaining to particulate emission limitations).
- (f) Any veneer dryer the construction of which is completed subsequent to the effective date of this rule, shall, from time of initial operation, comply with the emission limitations contained in subsection (1) (a) or (1) (b), and (1) (c) of this section.
- (g) No person shall attempt to comply with the emission limitations of subsections (1) (a) or (1) (b) of this section by diluting the emissions from the drying process with outside air or other gasses. Emissions which are so diluted shall be deemed to be in violation of subsections (1) (a) or (1) (b) of this section.

**APPENDIX J**

BOARD OF DIRECTORS

Lane  
Regional  
**AIR  
POLLUTION  
AUTHORITY**

16 OAKWAY MALL  
EUGENE, OREGON 97401  
AC 503 686-7618

VERNER J. ADKISON  
Program Director

November 27, 1974

NANCY HAYWARD  
Lane County  
DARWIN COURTRIGHT  
Springfield  
WICKES BEAL  
Eugene  
GERALD CATES  
Cottage Grove  
GUS KELLER  
Eugene

Department of Environmental Quality  
Air Quality Control Division  
1234 S.W. Morrison Street  
Portland, OR 97205

Re: Comments on revised veneer dryer regulation.

Gentlemen:

We have worked closely with Department of Environmental Quality staff and Industry representatives in the last few months in their attempt to draft a regulation which will reduce the problem of "blue haze" from veneer dryers, while not causing undue hardship on mill owners. We feel that the proposed regulation fulfills this purpose.

This regulation should cause fine particulate emissions in our region to be reduced. This will benefit the health of the community by reducing the amount of suspended particulate in the air. Visibility reduction, caused by this source should be diminished. We also feel that Industry will be able to meet this regulation with existing control equipment.

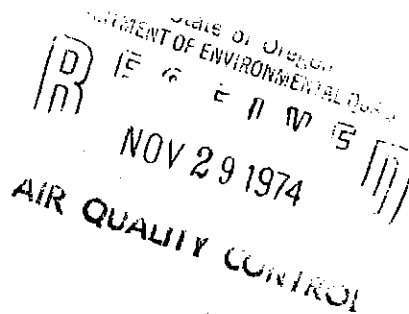
We fully support the proposed regulation and have appreciated the opportunity to work with the staff on the proposed regulation.

Sincerely,



Verner J. Adkison  
Director

DMB/rh



# NORTH SANTIAM PLYWOOD COMPANY

P. O. Box 377 MILL CITY, OREGON

AREA CODE 503 897-2391

November 19, 1974

Office of Department of Environmental Quality  
Air Quality Control Division  
1234 S. W. Morrison  
Portland, Oregon 97205

Sirs:

SUBJECT: Written comments concerning Public Hearing, 2:30 PM,  
December 20 at Albany for Environmental Quality Division

We, as one of the major plywood producers of the area, have concluded that your proposal to limit all visible blue haze emissions to within fifty feet of the building will be so costly to accomplish and would curtail production of dry veneer to such a degree that the average Douglas Fir mill would be forced to shut down. This seems a drastic statement but several years of investigating this problem has convinced us that the economics of accomplishing this are insurmountable at this time.

We would like to state at this time that we do not believe the small amount of blue haze our present dryers produce are in any way harmful to the health and well being of the people of Oregon. This same process is repeated thousands of times over by nature in the process of sun drying of forest matter and is essential to the growth of plants and trees. This is a well recognized and documented fact.

We would also like to point out that in event this was made a law of the land, the additional energy required to dry Douglas Fir veneer would be enormous and at a time when for national survival we are trying to decrease our need for energy and to make every ounce of energy consumed produce a maximum effort.

Due to these and many more reasons, we ask that you do not implement this ruling.

Sincerely,

NORTH SANTIAM PLYWOOD COMPANY, Inc. of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

*David Barnhardt*

David Barnhardt

NOV 22 1974

AIR QUALITY CONTROL





To: EJWeathersbee *HMP your copy*  
From: TRBispham  
Subject: AQ - Veneer Dryers in NWR

Date: December 11, 1974

The following report presents the status of each veneer drying operation in the NWR:

Columbia County

Multnomah Plywood Corporation - this company operates two gas-fired dryers which are scheduled to be controlled by February 1, 1975. The method of control will employ recirculation and incineration of contaminants. It is believed this system will comply with existing and proposed rules.

Multnomah County

Linnton Plywood - presently operates one gas dryer and one steam dryer. With the addition of a new steam dryer which will utilize a Moore Energy system, the existing dryers will operate at a temperature of 300° which should result in compliance. Completion is scheduled in February 1975.

Publishers Paper Company, Portland Division - this mill is presently down, but has completed hook - up of the dryers (2 gas, 1 steam) to a Buckholz Scrubber. A fourth dryer presently under construction will also be placed on this system. Based upon observations conducted under experimental conditions, the system appears capable of compliance.

Washington County

Alpine Veneer - this plant only manufactures veneer. Due to the nature of the product, this gas-fired dryer was generally found to be in compliance. However, recent observations while drying sugar pine found visible emissions in excess of Department standards. The company has agreed to submit final engineering for a control system by March 1, 1975, with final compliance to be attained by December 31, 1975. This compliance schedule is to be incorporated into the forthcoming ACDP.

Clackamas County

Alpine Veneer - operation is presently down. A Moore Lo-Em system has been approved by the Department and purchased by the Company. The equipment which is in storage is projected to be installed in June of 1975, or within thirty days after plant start-up. The C.S. will be incorporated in ACDP.

Milwaukie Plywood - operates 2 gas dryers and one steam dryer. The Department previously disapproved a Lo-Em system due to the sensitive location of the plant and magnitude of emissions. The Company has agreed to submit final engineering for a new system by March 1, 1975, with final compliance by December 31, 1975. The schedule will be incorporated in forthcoming ACDP.

Clatsop County

Astoria Plywood - operates 2 dryers and has agreed to submit final engineering for a control system by March 1, 1975, with final compliance by December 31, 1975. A permit addendum will modify existing C. S.

Tillamook County

Oregon - Washington Plywood - presently not operating. Future start-up being reconsidered at which time a C.S. will be negotiated.

Louisiana-Pacific - has not complied with original compliance schedule. A meeting is scheduled for December 18, 1975, to re-negotiate a compliance schedule.

However

DEPARTMENT OF ENVIRONMENTAL QUALITY

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that the Department of Environmental Quality is considering the adoption of amendments to the Rules for Indirect Sources, Oregon Administrative Rules, Chapter 340, Sections 20-100 through 20-135.

Copies of the proposed amendments may be obtained on request from the Department of Environmental Quality, Office of the Administrator, Air Quality Control Division, 1234 S.W. Morrison Street, Portland, Oregon 97205.

Any interested person desiring to submit any written documents, views or data on this matter may do so by forwarding them to the above address, or may appear and submit his material or be heard orally at 11:00 a.m. on the 24th day of January, 1975 in the Second Floor Auditorium of the Public Service Building, 920 S.W. Sixth Avenue, Portland, Oregon.

The Environmental Quality Commission has been designated as Hearings Officer.

Notice is also given that adoption of the proposed changes to these Rules will amend the State of Oregon Clean Air Act Implementation Plan.

Dated this 17th day of December, 1974.



---

KESSLER R. CANNON  
Director

108  
S W Oregon (5 counties)

Yenex Oxid emissions in 1970 were  
826 Tons/year or 2.6% of the annual total.

In 1975 it was estimated they would be 5.6%

Eliminating slashburning, agricultural operations which are  
seasonal or periodic (Hanna Nicksel @ Riddle) of 1970

consist of 6.4% to in 1975 10.5%

No data available to suggest emission of gaseous & particulate  
emissions are more hazardous than other gaseous  
hydrocarbon or suspended particulate in the atmosphere.

In 1971 it was stated in a Departmental report that 20-50%  
of Yenex Oxid were in compliance with 20% limitation

21 January 1972 it was said of evaluation of WSH studies  
"Of the 67 stacks measured, 38 (or 55%) showed 20% opacity  
or less."

It has a permanent stack holder of the atmosphere.

Nature's Hydrocarbon WSH not as in form of a  
re Annual decomposition, simple the national gas usage,  
Annual growing regulation products in distribution generally

Veneer Dryers

99 All 5.70 lbs of HC / 100 cu ft<sup>2</sup> of  $\frac{3}{4}$ " plywood produced per dryer (production bar)  
 3.59 lbs condensable  
 2.43 " volatile

Steam 5.16  
 3.79  
 1.50

Gas 8.32  
 2.16  
 6.16

upper limit for drying  $\pm$  360°  
 specific heat of H<sub>2</sub>O = 2x air  
 equals moisture content is 1%  
 i. max moisture content in dryer

100 180°F perhaps temp large positive condense of hydrocarbons forming blackness

106 > 100°F No dryer  $\bar{z}$  exit velocity 72000 ft/min  
 Further evidence hydrocarbons cause soot condense about 100°F

109 Volatile Hydrocarbons <sup>dryer 09</sup> 5 MWTerpene hydrocarbons

115  $\alpha$  pinene <sup>75-90% of ?</sup> was major monoterpene <sup>call 19310</sup> (except for ponderosa pine) <sup>A<sup>o</sup> Carene</sup> < 55-65%  
 both potential reactives

analyser differences 1.48  $\pm$  .13  
 1.8  $\pm$  .2

TH Analyser didn't see difference between filtered & unfiltered gas sample.  
 responds to volatile, lower m.w. hydrocarbons  
 does not see higher MWT filterable organic aerosols which collect on glass filter  
 - volatile hydrocarbons not influenced by absence of filter

Weyco Temp reduction to 330-340 in last zone (from 460°F)  
 reduce hydrocarbons forming black to a level of ~50%



## ENVIRONMENTAL QUALITY COMMISSION

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

Robert W. Straub  
GOVERNOR

### MEMORANDUM

B. A. McPHILLIPS  
Chairman, McMinnville

GRACE S. PHINNEY  
Corvallis

JACKLYN L. HALLOCK  
Portland

MORRIS K. CROTHERS  
Salem

RONALD M. SOMERS  
The Dalles

KESSLER R. CANNON  
Director

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. F, January 24, 1975, EQC Meeting

Consideration for Adoption of Proposed Amendments to the  
Indirect Source Rules (OAR Chapter 340, Sections 20-100  
through 20-135) PUBLIC HEARING

### Background

The current Rules for Indirect Sources, OAR Chapter 340, Sections 20-100 through 20-135, were adopted by the Environmental Quality Commission at its November 22, 1974 meeting to replace the then existing Parking Facilities and Highways in Urban Areas regulation, OAR Chapter 340, Sections 20-050 through 20-070.

The current indirect source rule was developed to comply with the Environmental Protection Agency's requirements regarding indirect sources, to clarify the intent of the original regulation and to formalize a program that was being implemented through voluntary compliance from those parties affected.

Prior to adoption of the current rule, two public hearings were held, June 24, 1974 and October 29, 1974, to receive testimony on preliminary drafts of the rule. In addition many informal comments were received from interested persons and considered in drafting the current Rules for Indirect Sources.

At and following the public hearing, the Commission expressed concern relative to the staff time required to implement the rule. At the request of the Director, the staff reviewed the rule with intent to minimize manpower requirements with minimum effect upon the objectives of the rule. The rule was also reviewed to clarify that the rule required approval of local planning and zoning agencies.



Contains  
Recycled  
Materials

Discussion

The following approaches were considered prior to concluding the currently proposed amendment would accomplish the objective of the Department and Commission:

1. Eliminate the review of residential indirect sources outside of the CBD and inside of the five (5) mile limit with parking for less than 250 vehicles. This would have resulted in approximately a 20% reduction in applications reviewed by the Department through September 1974 under the old parking and highway rule.
2. Eliminate the review of residential indirect sources outside of the city limits and inside of the five (5) mile limit with parking for less than 250 vehicles. This would have resulted in approximately a 13% reduction in applications reviewed by the Department through September 1974 under the old parking and highway rule.
3. Raise the lower limit for review of indirect sources from 50 to 100 for the area within the five (5) mile limit. This modification would have resulted in approximately a 36.5% reduction in applications reviewed and approximately a 7.5% reduction in the number of parking spaces reviewed by the Department through September 1974 under the old parking and highway rule.
4. Adopt the EPA indirect source rule. This would have resulted in approximately a 94% reduction in applications reviewed by the Department through September 1974 under the old parking and highway rule and nearly a complete loss of control over indirect sources.
5. Exempt from review specific types of indirect sources such as residential developments, churches, real estate offices, physicians offices, fraternal organizations and banks. The effect on the number of applications and total spaces reviewed is not known at this time, however this approach is not defensible from a standpoint of applying regulations uniformly.
6. Raise the lower limit of review from 50 spaces to any higher number of spaces. The specific effects would, of course, vary with the new lower limit and can be approximately determined from the attached Table. The higher the minimum is raised the more staff time is saved and the greater the loss of control.

The effect of any of the above modifications would be to allow the construction of additional new indirect sources without the opportunity for the Department to impact on the use of the automobile or the viability of public transit. Conditions currently being imposed on new indirect sources include reduction of available parking, posting of current public transit route and schedule information, construction of bus shelters, and monetary reimbursement for the use of public transit.

The staff believes that many of the problems attacked under the indirect source rules could better be addressed through comprehensive land use planning with integrated air quality considerations. The newly adopted rule encourages the development of comprehensive regional parking and circulation plans by local planning agencies. The staff believes that these plans should be developed with technical input from the Department and upon adoption of these plans, the review of indirect source applications would, for the most part, only be necessary to confirm consistency of the indirect source with the plan.

However, until these plans are developed or until local planning agencies can develop comprehensive land use plans which adequately address air quality, the Department must retain this review responsibility.

### Conclusions

The staff concludes that increasing the minimum parking lot size reviewed from 50 to 100 parking spaces results in the maximum manpower savings with the minimum impact on the effectiveness of the program. Review of those individual facilities containing fewer than 100 parking spaces does not at this time appear to be critical based strictly on air quality considerations. The Department proposes to amend the rule to increase the minimum parking lot size requiring review from 50 to 100 parking spaces.

Current guidelines and procedures used by the Department require approval of the appropriate local planning and zoning agency; however, the Department concluded that it would be desirable to include such a requirement in the rule. It is proposed to amend the rule as follows (page 12, Section 20-130):

"(9) An Indirect Source Construction Permit Application shall not be considered complete until the applicant has provided to the Department evidence that the Indirect Source in question is not in violation of any land use ordinance or regulation enacted or promulgated by a constitutive local governmental agency having jurisdiction over the subject real property."



This language represents a modification to that originally proposed at the time of issuance of public notice. Under this proposed modification, an application shall not "be considered complete" rather than accepting an application but not approving it until local planning and zoning approval has been obtained.

The following list summarizes the proposed amendments to the Rules for Indirect Sources:

1. Page 4, Section 20-115(2)(a)(i), line 3.

To increase the minimum size parking lot requiring review from "50" to "100" spaces.

2. Page 8, Section 20-129(1)(b), line 3.

To increase the minimum size parking lot from "50" to "100" spaces.

3. Page 12, Section 20-030(9).

The addition of subsection (9) as follows:

"An Indirect Source Construction Permit Application shall not be considered complete until the applicant has provided to the Department evidence that the Indirect Source in question is not in violation of any land use ordinance or regulation enacted or promulgated by a constitutive local governmental agency having jurisdiction over the subject real property."

4. Additional minor changes and corrections proposed for the clarification of this rule include:

- a. Page 2, Section 20-110(10)(b), capitalize "Facilities";

- b. Page 3, Section 20-110(14), line 3, addition of the words "in designated Parking Spaces.";

- c. Page 5, Section 20-115(5), renumbered to 20-115(3);

- d. Page 5, Section 20-115(6), renumbered to 20-115(4);

- e. Page 6, Section 20-125(1)(a)(iv), line 1, the deletion of "of" and the insertion of "and quantity of Parking Spaces at the Indirect Source and";

- f. Page 7, Section 20-125(1)(a)(vii), line 2, the deletion of the word "spaces";
- g. Page 8, Section 20-129(1)(a)(vi), line 2, the insertion of "concurrent with or" and the insertion of a comma after "the result of".

The amended version of the indirect source rules is attached and is hereby submitted to the Commission for consideration.

No public comment concerning the proposed changes had been received by January 13, 1975.

Director's Recommendation

It is the recommendation of the Director that the Environmental Quality Commission, after considering any public testimony, amend the Rule for Indirect Sources, OAR Chapter 340, Sections 20-100 through 20-135, in accordance with the proposal or as appropriate after considering public testimony.



KESSLER R. CANNON  
Director

TABLE

Parking Lot Class Spaces	Total Lots Reviewed Per Class	Percent of Total Lots	Cumulative Total Parking Lots Reviewed	Cumulative Percent of Total Lots	Total Parking Spaces Per Class	Percent of Total Spaces	Cumulative Total Parking Spaces	Cumulative Percent of Total Spaces
* 0-49	6	3.1	6	3.1	196	0.3	196	0.3
50-99	70	36.5	76	39.6	5043	7.5	5239	7.8
100-149	25	13.0	101	52.6	2940	4.4	8179	12.2
150-199	24	12.5	125	65.1	4113	6.2	12292	18.4
200-249	15	7.8	140	72.9	3200	4.8	15492	23.2
250-299	6	3.1	146	76.0	1635	2.4	17127	25.6
300-349	9	4.7	155	80.7	2915	4.4	20042	30.0
350-399	5	2.6	160	83.3	1849	2.8	21891	32.7
400-449	4	2.1	164	85.4	1678	2.5	23569	35.2
450-499	4	2.1	168	87.5	1917	2.9	25486	38.1
500-549	1	0.5	169	88.0	501	0.7	25987	38.9
550-599	1	0.5	170	88.5	590	0.9	26577	39.7
600-649	1	0.5	171	89.0	625	0.9	27202	40.6
650-699	3	1.6	174	90.6	2025	3.0	29227	43.7
700-749	3	1.6	177	92.2	2161	3.2	31388	46.9
750-799	-	0.0	177	92.2	-	0.0	31388	46.9
800-849	1	0.5	178	92.7	825	1.2	32213	48.2
850-899	1	0.5	179	93.2	864	1.3	33077	49.5
900-949	1	0.5	180	93.8	919	1.4	33996	50.8
950-999	-	0.0	180	93.8	-	0.0	33996	50.8
1000-1049	1	0.5	181	94.3	1047	1.6	35043	52.4
1100-1149	1	0.5	182	94.8	1136	1.7	36179	54.1
1200-1249	1	0.5	183	95.3	1234	1.8	37414	55.9
1400-1449	2	1.0	185	96.4	2867	4.3	40281	60.2
1550-1599	2	1.0	187	97.4	3114	4.7	43395	64.9
2450-2499	1	0.5	188	97.9	2464	3.7	45859	68.6
2800-2849	1	0.5	189	98.4	2819	4.2	48678	72.8
5350-5399	1	0.5	190	99.0	5366	8.0	54044	80.8
6300-6349	1	0.5	191	99.5	6328	9.5	60372	90.3
6500-6549	1	0.5	192	100.0	6500	9.7	66872	100.00

\*Values for parking facilities less than 50 spaces represent only modifications to existing facilities.

DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY CONTROL DIVISION

Adopted November 22, 1974  
December 24, 1974 - Proposed Amended

RULES FOR INDIRECT SOURCES

OAR, Chapter 340, Sections 20-050 through 20-070 are repealed and Sections 20-100 through 20-135 are adopted in lieu thereof.

20-100 POLICY

The Commission finds and declares Indirect Sources to be air contamination sources as defined in ORS 468.275. The Commission further finds and declares that the regulation of Indirect Sources is necessary to control the concentration of air contaminants which result from Motor Vehicle Trips and/or Aircraft Operations associated with the use of Indirect Sources.

20-105 JURISDICTION AND DELEGATION

The Commission finds that the complexity or magnitude of Indirect Sources requires state-wide regulation and assumes or retains jurisdiction thereof. The Commission may, however, when any Regional Authority requests and provides evidence demonstrating its capability to carry out the provisions of these rules relating to Indirect Sources, authorize and confer jurisdiction upon such Regional Authority to perform all or any of such provisions within its boundary until such authority and jurisdiction shall be withdrawn for cause by the Commission.

20-110 DEFINITIONS

- (1) "Aircraft Operations" means any aircraft landing or takeoff.
- (2) "Airport" means any area of land or water which is used or intended for use for the landing and takeoff of aircraft, or any appurtenant areas, facilities, or rights-of-way such as terminal facilities, parking lots, roadways, and aircraft maintenance and repair facilities.
- (3) "Associated Parking" means a parking facility or facilities owned, operated and/or used in conjunction with an Indirect Source.
- (4) "Average Daily Traffic" means the total traffic volume during a given time period in whole days greater than one day and less than one year divided by the number of days in that time period, commonly abbreviated as ADT.

- (5) "Commence Construction" means to begin to engage in a continuous program of on-site construction or on-site modifications, including site clearance, grading, dredging, or landfilling in preparation for the fabrication, erection, installation or modification of an indirect source. Interruptions and delays resulting from acts of God, strikes, litigation or other matters beyond the control of the owner shall be disregarded in determining whether a construction or modification program is continuous.
- (6) "Commission" means the Environmental Quality Commission.
- (7) "Department" means the Department of Environmental Quality.
- (8) "Director" means director of the Department or Regional Authority and authorized deputies or officers.
- (9) "Highway Section" means a highway of substantial length between logical termini (major crossroads, population centers, major traffic generators, or similar major highway control elements) as normally included in a single location study or multi-year highway improvement program.
- (10) "Indirect Source" means a facility, building, structure, or installation, or any portion or combination thereof, which indirectly causes or may cause mobile source activity that results in emissions of an air contaminant for which there is a state standard. Such Indirect Sources shall include, but not be limited to:
  - (a) Highways and roads.
  - (b) Parking Facilities.
  - (c) Retail, commercial and industrial facilities.
  - (d) Recreation, amusement, sports and entertainment facilities.
  - (e) Airports.
  - (f) Office and Government buildings.
  - (g) Apartment, condominium developments and mobile home parks.
  - (h) Educational facilities.
- (11) "Indirect Source Construction Permit" means a written permit in letter form issued by the Department or the Regional Authority having jurisdiction, bearing the signature of the Director, which authorizes the permittee to Commence Construction of an Indirect Source under construction and operation conditions and schedules as specified in the permit.
- (12) "Mobile Source" means self-propelled vehicles, powered by internal combustion engines, including but not limited to automobiles, trucks, motorcycles and aircraft.

- (13) "Off-street Area or Space" means any area or space not located on a public road dedicated for public use.
- (14) "Parking Facility" means any building, structure, lot or portion thereof, designed and used primarily for the temporary storage of motor vehicles in designated Parking Spaces.
- (15) "Parking Space" means any Off-street Area or Space below, above or at ground level, open or enclosed, that is used for parking one motor vehicle at a time.
- (16) "Person" means individuals, corporations, associations, firms, partnerships, joint stock companies, public and municipal corporations, political subdivisions, the state and any agencies thereof, and the federal government and any agencies thereof.
- (17) "Population" means that population estimate most recently published by the Center for Population Research and Census, Portland State University, or any other population estimate approved by the Department.
- (18) "Regional Authority" means a regional air quality control authority established under the provisions of ORS 468.505.
- (19) "Regional Parking and Circulation Plan" means a plan developed by a city, county or regional planning agency, the implementation of which assures the maintenance of the state's ambient air quality standards.
- (20) "Regional Planning Agency" means any planning agency which has been recognized as a substate-clearinghouse for the purposes of conducting project review under the United States Office of Management and Budget Circular Number A-95, or other governmental agency having planning authority.
- (21) "Reasonable Receptor and Exposure Sites" means locations where people might reasonably be expected to be exposed to air contaminants generated in whole or in part by the Indirect Source in question. Location of ambient air sampling sites and methods of sample collection shall conform to criteria on file with the Department of Environmental Quality.
- (22) "Vehicle Trip" means a single movement by a motor vehicle which originates or terminates at or uses an Indirect Source.

20-115 INDIRECT SOURCES REQUIRED TO HAVE INDIRECT SOURCE CONSTRUCTION PERMITS

- (1) The owner, operator or developer of an Indirect Source identified in subsection 20-115(2) of this section shall not Commence Construction of such a source after December 31, 1974 without an approved Indirect Source Construction Permit issued by the Department or Regional Authority having jurisdiction.
- (2) All Indirect Sources meeting the criteria of this subsection relative to type, location, size and operation are required to apply for an Indirect Source Construction Permit:
  - (a) The following sources in or within five (5) miles of the municipal boundaries of a municipality with a Population of 50,000 or more, including but not limited to Portland, Salem and Eugene:
    - (i) Any Parking Facility or other Indirect Source with Associated Parking being constructed or modified to create new or additional parking (or Associated Parking) capacity of 100 or more Parking Spaces.
    - (ii) Any Highway Section being proposed for construction with an anticipated annual Average Daily Traffic volume of 20,000 or more motor vehicles per day within ten years after completion or being modified so that the annual Average Daily Traffic on that Highway Section will be increased to 20,000 or more motor vehicles per day or will be increased by 10,000 or more motor vehicles per day within ten years after completion.
  - (b) Except as otherwise provided in this section, the following sources within Clackamas, Lane, Marion, Multnomah or Washington counties:
    - (i) Any Parking Facility or other Indirect Source with Associated Parking being constructed or modified to create new or additional parking (or Associated Parking) capacity of 500 or more Parking Spaces.
    - (ii) Any Highway Section being proposed for construction with an anticipated annual Average Daily Traffic volume of 20,000 or more motor vehicles per day within ten years after completion, or being modified so that the annual Average Daily Traffic on that Highway Section will be 20,000 or more motor vehicles per day, or will be increased by 10,000 or more motor vehicles per day, within ten years after completion.

- (c) Except as otherwise provided in this section, the following sources in all areas of the state:
  - (i) Any Parking Facility or other Indirect Source with Associated Parking being constructed or modified to create new or additional parking (or Associated Parking) capacity of 1,000 or more Parking Spaces.
  - (ii) Any Highway Section being proposed for construction with an anticipated annual Average Daily Traffic volume of 50,000 or more motor vehicles per day within ten years after completion, or being modified so that the annual Average Daily Traffic on that Highway Section will be 50,000 or more motor vehicles per day, or will be increased by 25,000 or more motor vehicles per day, within ten years after completion.
- (d) Any Airport being proposed for construction with projected annual Aircraft Operations of 50,000 or more within ten years after completion, or being modified in any way so as to increase the projected number of annual Aircraft Operations by 25,000 or more within 10 years after completion.
- (3) Where an Indirect Source is constructed or modified in increments which individually are not subject to review under this section, and which are not part of a program of construction or modification in planned incremental phases approved by the Director, all such increments commenced after January 1, 1975 shall be added together for determining the applicability of this rule.
- (4) An Indirect Source Construction Permit may authorize more than one phase of construction, where commencement of construction or modification of successive phases will begin over acceptable periods of time referred to in the permit; and thereafter construction or modification of each phase may be begun without the necessity of obtaining another permit.

20-120 ESTABLISHMENT OF AN APPROVED REGIONAL PARKING AND CIRCULATION PLAN(S) BY A CITY, COUNTY OR REGIONAL PLANNING AGENCY

- (1) Any city, county or Regional Planning Agency may submit a Regional Parking and Circulation Plan to the Department or to the Regional Authority having jurisdiction for approval. Such a plan shall include, but not be limited to:
  - (a) Legally identifiable plan boundaries.



- (b) Reasonably uniform identifiable grids where applicable.
  - (c) Total parking space capacity allocated to the plan area.
  - (d) An emission density profile for each grid or plan.
  - (e) Other applicable information which would allow evaluation of the plan such as, but not limited to, scheduling of construction, emission factors, and criteria, guidelines or ordinances applicable to the plan area.
- (2) The Department or Regional Authority having jurisdiction shall hold a public hearing on each Regional Parking and Circulation Plan submitted, and on each proposed revocation or substantial modification thereof, allowing at least thirty (30) days for written comments from the public and from interested agencies.
  - (3) Upon approval of a submitted Regional Parking and Circulation Plan, the plan shall be identified as the approved Regional Parking and Circulation Plan, the appropriate agency shall be notified and the plan used for the purposes and implementation of this rule.
  - (4) The appropriate city, county or Regional Planning Agency shall annually review an approved Regional Parking and Circulation Plan to determine if the plan continues to be adequate for the maintenance of air quality in the plan area and shall report its conclusions to the Department or Regional Authority having jurisdiction.
  - (5) The Department or Regional Authority having jurisdiction shall initiate a review of an approved Regional Parking and Circulation Plan if it is determined that the Regional Parking and Circulation Plan is not adequately maintaining the air quality in the plan area.

20-125 INFORMATION AND REQUIREMENTS APPLICABLE TO INDIRECT SOURCE(S) CONSTRUCTION PERMIT APPLICATIONS WHERE AN APPROVED REGIONAL PARKING AND CIRCULATION PLAN IS ON FILE

- (1) Application Information Requirements:
  - (a) Parking Facilities and Indirect Sources Other Than Highway Sections:
    - (i) A completed application form;
    - (ii) A map showing the location of the site;
    - (iii) A description of the proposed and prior use of the site;
    - (iv) A site plan showing the location and quantity of Parking Spaces at the Indirect Source and Associated Parking areas, points of motor vehicle ingress and egress to and from the site and Associated Parking;

- (v) A ventilation plan for subsurface and enclosed parking;
- (vi) A written statement from the appropriate planning agency that the Indirect Source in question is consistent with an approved Regional Parking and Circulation Plan or any adopted transportation plan for the region.
- (vii) A reasonable estimate of the effect the project has on total parking approved for any specific grid area and Regional Parking and Circulation Plan area.

(b) Highway Section(s):

- (i) Items (i) through (iii) of subsection 20-125(1)(a).
  - (ii) A written statement from the appropriate planning agency that the Indirect Source in question is consistent with an approved Regional Parking and Circulation Plan and any adopted transportation plan for the region.
  - (iii) A reasonable estimate of the effect the project has on total vehicle miles travelled within the Regional Parking and Circulation Plan Area.
- (2) Within 15 days after the receipt of an application for a permit or additions thereto, the Department or Regional Authority having jurisdiction shall advise the owner or operator of the Indirect Source of any additional information required as a condition precedent to issuance of a permit. An application shall not be considered complete until the required information is received by the Department or Regional Authority having jurisdiction.

20-129 INFORMATION AND REQUIREMENTS APPLICABLE TO INDIRECT SOURCE(S) CONSTRUCTION PERMIT APPLICATION WHERE NO APPROVED REGIONAL PARKING AND CIRCULATION PLAN IS ON FILE

(1) Application information requirements:

- (a) For Parking Facilities and other Indirect Sources with Associated Parking, other than Highway Sections and Airports, with planned construction resulting in total parking capacity for 1000 or more vehicles, the following information shall be submitted:
  - (i) Items (i) through (v) of subsection 20-125(1)(a).
  - (ii) Subsection 20-125(2) shall be applicable.
  - (iii) Measured or estimated carbon monoxide and lead concentrations at Reasonable Receptor and Exposure Sites. Measurements shall be made prior to construction and estimates shall be made for the first, tenth and twentieth years after the Indirect Source and Associated Parking are completed or fully operational. Such estimates shall be made for average and peak operating conditions.

- (iv) Evidence of the compatibility of the Indirect Source with any adopted transportation plan for the area.
  - (v) An estimate of the effect of the operation of the Indirect Source on total vehicle miles traveled.
  - (vi) An estimate of the additional residential, commercial and industrial developments which may occur concurrent with or as the result of, the construction and use of the Indirect Source. This shall also include an air quality impact assessment of such developments.
  - (vii) Estimates of the effect of the operation and use of the Indirect Source on traffic patterns, volumes, and flow in, on or within one-fourth mile of the Indirect Source.
  - (viii) An estimate of the average daily Vehicle Trips, detailed in terms of the average daily peaking characteristics of such trips, and an estimate of the maximum Vehicle Trips, detailed in one hour and eight hour periods, generated by the movement of people to and from the Indirect Source in the first, tenth and twentieth years after completion.
  - (ix) A description of the availability and type of mass transit presently serving or projected to serve the proposed Indirect Source. This description shall only include mass transit operating within 1/4 mile of the boundary of the Indirect Source.
  - (x) A description of any emission control techniques which shall be used to minimize any adverse environmental effects resulting from the use of the Indirect Source.
- (b) For Parking Facilities and other Indirect Sources with Associated Parking, other than Highway Sections and Airports, with planned construction of parking capacity for 100 to 1000 vehicles; the following information shall be submitted:
- (i) Items (i) through (v) of subsection 20-125(1)(a).
  - (ii) Subsection 20-125(2) shall be applicable. Such additional information may include such items as (iii) through (x) of subsection 20-129(1)(a).
- (c) For Airports, the following information shall be submitted:
- (i) Items (i) through (v) of subsection 20-125(1)(a).
  - (ii) Subsection 20-125(2) shall be applicable.
  - (iii) A map showing the topography of the area surrounding and including the site.
  - (iv) Evidence of the compatibility of the Airport with any adopted transportation plan for the area.
  - (v) An estimate of the effect of the operation of the Airport on total vehicle miles traveled.

- (vi) Estimates of the effect of the operation and use of the Airport on traffic patterns, volumes, and flow in, on or within one-fourth mile of the Airport.
  - (vii) An estimate of the average and maximum number of Aircraft Operations per day by type of aircraft in the first, tenth and twentieth years after completion of the Airport.
  - (viii) Expected passenger loadings in the first, tenth and twentieth years after completion.
  - (ix) Measured or estimated carbon monoxide and lead concentrations at Reasonable Receptor and Exposure Sites. Measurements shall be made prior to construction and estimates shall be made for the first, tenth and twentieth years after the Airport and Associated Parking are completed or fully operational. Such estimates shall be made for average and peak operating conditions.
  - (x) Alternative designs of the Airport, ie. size, location, parking capacity, etc., which would minimize the adverse environmental impact of the Airport.
  - (xi) An estimate of the additional residential, commercial and industrial development which may occur within 3 miles of the boundary of the new or modified Airport as the result of the construction and use of the Airport.
  - (xii) An estimate of the area-wide air quality impact analysis for carbon monoxide, photochemical oxidants, nitrogen oxides and lead particulate. This analysis would be based on the emissions projected to be emitted from mobile and stationary sources within the Airport and from mobile and stationary source growth within 3 miles of the boundary of the Airport. Projections should be made for the first, tenth and twentieth years after completion.
  - (xiii) A description of the availability and type of mass transit presently serving or projected to serve the proposed Airport. This description shall only include mass transit operating within 1/4 mile of the boundary of the Airport.
- (d) For Highway Sections, the following information shall be submitted:
- (i) Items (i) through (iii) of Subsection 20-125(1)(a).
  - (ii) Subsection 20-125(2) shall be applicable.
  - (iii) A map showing the topography of the Highway Section and points of ingress and egress.
  - (iv) The existing average and maximum daily traffic on the Highway Section proposed to be modified.
  - (v) An estimate of the maximum traffic levels for one and eight hour periods in the first, tenth and twentieth years after completion.

- (vi) An estimate of vehicle speeds for average and maximum traffic volumes in the first, tenth and twentieth years after completion.
- (vii) A description of the general features of the Highway Section and associated right-of-way.
- (viii) An analysis of the impact of the Highway Section on the development of mass transit and other modes of transportation such as bicycling.
- (ix) Alternative designs of the Highway Section, ie. size, location, etc., which would minimize adverse environmental effects of the Highway Section.
- (x) The compatibility of the Highway Section with an adopted comprehensive transportation plan for the area.
- (xi) An estimate of the additional residential, commercial and industrial development which may occur as the result of the construction and use of the Highway Section, including an air quality assessment of such development.
- (xii) Estimates of the effect of the operation and use of the Indirect Source on major shifts in traffic patterns, volumes, and flow in, on or within one-fourth mile of the Highway Section.
- (xiii) An analysis of the area-wide air quality impact for carbon monoxide, photochemical oxidants, nitrogen oxides and lead particulates in the first, tenth and twentieth years after completion. This analysis would be based on the change in total vehicle miles traveled in the area selected for analysis.
- (xiv) The total air quality impact (carbon monoxide and lead) of maximum and average traffic volumes. This analysis would be based on the estimates of an appropriate diffusion model at Reasonable Receptor and Exposure Sites. Measurements shall be made prior to construction and estimates shall be made for the first, tenth and twentieth years after the Highway Section is completed or fully operational.
- (xv) Where applicable and requested by the Department, a Department approved surveillance plan for motor vehicle related air contaminants.

#### 20-130 ISSUANCE OR DENIAL OF INDIRECT SOURCE CONSTRUCTION PERMITS

- (1) Issuance of an Indirect Source Construction Permit shall not relieve the permittee from compliance with other applicable provisions of the Clean Air Act Implementation Plan for Oregon.
- (2) Within 20 days after receipt of a complete permit application, the Department or Regional Authority having jurisdiction shall:
  - (a) Issue 20 day notice and notify the Administrator of the Environmental Protection Agency, appropriate newspapers and any interested person(s) who has requested to receive such notices in each region

in which the proposed Indirect Source is to be constructed of the opportunity for written public comment on the information submitted by the applicant, the Department's evaluation of the proposed project, the Department's proposed decision, and the Department's proposed construction permit where applicable.

- (b) Make publicly available in at least one location in each region in which the proposed Indirect Source would be constructed, the information submitted by the applicant, the Department's evaluation of the proposed project, the Department's proposed decision, and the Department's proposed construction permit where applicable.
- (3) Within 60 days of the receipt of a complete permit application, the Department or Regional Authority having jurisdiction shall act to either disapprove a permit application or approve it with possible conditions.
- (4) Conditions of an Indirect Source Construction Permit may include, but are not limited to:
  - (a) Posting transit route and scheduling information.
  - (b) Construction and maintenance of bus shelters and turn-out lanes.
  - (c) Maintaining mass transit fare reimbursement programs.
  - (d) Making a car pool matching system available to employees, shoppers, students, residents, etc.
  - (e) Reserving parking spaces for car pools.
  - (f) Making parking spaces available for park-and-ride stations.
  - (g) Minimizing vehicle running time within parking lots through the use of sound parking lot design.
  - (h) Ensuring adequate gate capacity by providing for the proper number and location of entrances and exits and optimum signalization for such.
  - (i) Limiting traffic volume so as not to exceed the carrying capacity of roadways.
  - (j) Altering the level of service at controlled intersections.
  - (k) Obtaining a written statement of intent from the appropriate public agency(s) on the disposition of roadway improvements, modifications and/or additional transit facilities to serve the individual source.
  - (l) Construction and maintenance of exclusive transit ways.

- (m) Providing for the collection of air quality monitoring data at Reasonable Receptor and Exposure Sites.
  - (n) Limiting facility modifications which can take place without re-submission of a permit application.
  - (o) Completion and submission of a Notice of Completion form prior to operation of the facility.
- (5) An Indirect Source Construction Permit may be withheld if:
- (a) The Indirect Source will cause a violation of the Clean Air Act Implementation Plan for Oregon.
  - (b) The Indirect Source will delay the attainment of or cause a violation of any state ambient air quality standard.
  - (c) The Indirect Source causes any other Indirect Source or system of Indirect Sources to violate any state ambient air quality standard.
  - (d) The applicable requirements for an Indirect Source Construction Permit application are not met.
- (6) Any owner or operator of an Indirect Source operating without a permit required by this rule, or operating in violation of any of the conditions of an issued permit shall be subject to civil penalties and/or injunctions.
- (7) Nothing in this section shall preclude a Regional Authority authorized under Section 20-105 from setting the permit conditions for areas within its jurisdiction at levels more stringent than those detailed in Sections 20-100 through 20-135.
- (8) If the Department shall deny, revoke or modify any Indirect Source Construction Permit, it shall issue an order setting forth its reasons in essential detail.
- (9) An Indirect Source Construction Permit Application shall not be considered complete until the applicant has provided to the Department evidence that the Indirect Source in question is not in violation of any land use ordinance or regulation enacted or promulgated by a constitutive local governmental agency having jurisdiction over the subject real property.

20-135 PERMIT DURATION

- (1) An Indirect Source Construction Permit issued by the Department or a Regional Authority having jurisdiction shall remain in effect until modified or revoked by the Department or such Regional Authority.

- (2) The Department or Regional Authority having jurisdiction may revoke the permit of any Indirect Source operating in violation of the construction, modification or operation conditions set forth in its permit.
- (3) An approved permit may be revoked without a hearing if construction or modification is not commenced within 18 months after receipt of the approved permit; and, in the case of a permit granted covering construction or modification in approved, planned incremental phases, a permit may be revoked as to any such phase as to which construction or modification is not commenced within 18 months of the time period stated in the initial permit for the commencing of construction of that phase. The Director may extend such time period upon a satisfactory showing by the permittee that an extension is justified.





# ENVIRONMENTAL QUALITY COMMISSION

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

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KESSLER R. CANNON  
Director

## MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. G, January 24, 1975, EQC Meeting

Variance Request: Compliance Schedule for Particleboard Plant  
Permaneer Corporation, Dillard, Douglas County, Oregon  
Air Contaminant Discharge Permit No. 10-0013

### Background

The Permaneer Corporation operates particleboard plants in Oregon at Brownsville, Dillard and White City. The Dillard facility is of concern here.

The production of particleboard utilizes wood waste in the form of chips which is purchased from outside the Dillard plant. Some of the particleboard is sold and some is processed into finished panels and solid core doors at the Dillard site.

### Discussion

Oregon Administrative Rules, Chapter 340, Section 25-320-3 states that all particleboard plants shall be in compliance with Sections 25-320-1, Truck Dump and Storage Areas, and 25-320-2, Emission Limitations, by December 31, 1973. The Dillard plant has been operating under Air Contaminant Discharge Permit No. 10-0013, which was issued by the Department of Environmental Quality following a public hearing held on February 15, 1974.

Pursuant to the statutes relating to the granting of variances, ORS 468.345(1), Permaneer has requested a variance until December 31, 1975, from Condition No. 7 of Air Contaminant Discharge Permit No. 10-0013, which requires Permaneer to demonstrate that the particleboard plant is in compliance with OAR, Chapter 340, Section 25-320-2, particulate emissions limitation, by March 31, 1974. The company has specifically requested an extension of the compliance demonstration date for the cyclones, which have not previously been source tested, and for the rotary particle dryer. The bases for this request are:



Contains  
Recycled  
Materials

1. Severe and protracted unfavorable economic conditions in the wood products industries have resulted in Permaneer curtailing production schedules at all Oregon facilities, thereby reducing the ability of Permaneer to generate capital funds;
2. Without adequate capital funding, Permaneer has been unable to proceed with air pollution abatement programs; and
3. Even after the economic picture improves, anticipated equipment delivery delays will defer the effective dates for compliance with Air Quality Rules.

It is concluded that Permaneer has demonstrated good faith in attempting to meet the conditions of the permit. This company has conducted source tests on cyclones and on the steam generating boiler, and has submitted the test results and reports to the Department. The initial source test data resulted in process and equipment changes, and in requiring further source testing of two cyclones. Also, the testing indicated the rotary particle dryer requires modification or air pollution control equipment. Permaneer was engaged in studying equipment and process alternatives to rectify these problems.

The request for a variance along with the appropriate reasons for the request are contained in the attached letters which were submitted to the Department by Permaneer under date of November 11, 1974 and October 10, 1974, and in a staff memo dated January 9, 1975.

Conclusions:

It is concluded that the Commission has authority to grant a variance under ORS 468.345 and that there are sufficient and reasonable grounds to grant Permaneer Corporation a variance from OAR, Chapter 340, Section 25-320-2 and 25-320-3.

Director's Recommendation:

The Director recommends that the Permaneer Corporation be granted a variance from the requirements of OAR, Chapter 340, Sections 25-320-2 and 25-320-3, subject to the following conditions:

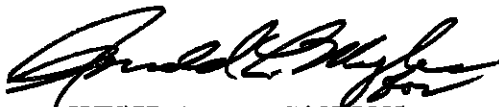
1. By no later than December 31, 1975, Permaneer Corporation shall demonstrate that the particleboard plant is capable of operating in continuous compliance with Conditions No. 1 and 2 of the Air Contaminant Discharge Permit No. 10-0013 by submitting for review all test data and results to the Department of Environmental Quality.

2. By no later than July 1, 1975, Permaneer Corporation shall submit to the Department of Environmental Quality a compliance schedule, which includes the five (5) increments of progress, for controlling the emissions from the rotary particle dryer.

The five increments of progress consist of the following:

- a. Date by which plans and specifications for all necessary construction and/or modification work will be submitted to the Department of Environmental Quality for review and approval;
- b. Date by which orders will be issued for the purchase of major components to accomplish emission control or process modification;
- c. Date of initiation of on-site construction or installation of emission control equipment or of process modification;
- d. Date by which on-site construction or installation of emission control equipment or process modifications will be completed;
- e. Date by which final compliance will be achieved.

By no later than seven (7) days after accomplishing each above item, b through e, notify the Department of Environmental Quality in writing that the respective item is accomplished.



KESSLER R. CANNON  
Director



State of Oregon

DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

To: AQCD File No. 10-0013

Date: January 9, 1975

From: Al Burkart

Subject: Variance Request from Permaneer File No. 10-0013

I called Mr. Larry Anderson of Permaneer, Dillard, to discuss his variance request, which was made in his letter dated November 11, 1974. He thought it infeasible to have the rotary particle dryer in compliance by July 1, 1975 because of poor economic conditions in the wood products industry and also because of extended equipment delivery schedules.

We agreed that an extension of the compliance demonstration date to December 31, 1975, was suitable with a July 1, 1975, limitation date for submitting a compliance demonstration schedule for the rotary particle dryer.

Mr. Anderson is sending a letter to this effect to the Department.

AFB:df

A handwritten signature in black ink, appearing to be "AFB", written in a cursive style.

# PERMANEER

BASIC MATERIALS DIVISION  
P.O. Box 178  
Dillard, Oregon 97432  
(503) 679-8781

November 11, 1974

Mr. Fredric A. Skirvin  
Department of Environmental Quality  
1234 Southwest Morrison Street  
Portland, OR 97205

Dear Mr. Skirvin:

This is to thank you for your reply and recommendations per your letter of October 21, 1974, which was in answer to our letter of October 10, 1974, by Mr. Myers.

Permaneer Corporation does, at this time, apply for an application of extension to all compliance dates that exist in the compliance schedule File No. 10-0013 till July 1, 1975.

We request this variance under O.R.S. 468-345, Paragraph (A).

As best we know, Paragraph (A) O.R.S. 468-345 was covered by Mr. Myers' letter of October 10, 1974. A copy of this letter is enclosed with Paragraphs 1 - 9 noted in the left hand margin and we make reference to Paragraph 2, as well as other paragraphs within the letter, to support our application of extension.

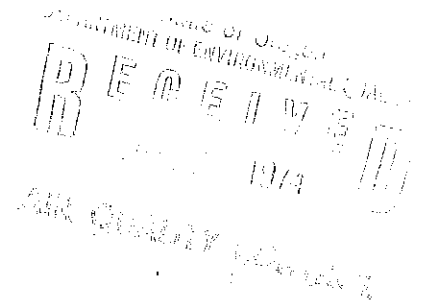
Sadly, the wood products industry market place continues to worsen. We are hopeful the July 1, 1975, date for compliance proves factual, but only time can validate our assumptions.

Sincerely yours,



Larry Anderson  
Chief Engineer  
Western Division

LA:des  
Enclosure



PERMANEER CORPORAT. 14

P. O. BOX 178  
DILLARD, OREGON 97432  
(503) 679.8781

October 10, 1974

Department of Environmental Quality  
1234 S. W. Morrison Boulevard  
Portland, OR 97205

ATTENTION MR. AL BURKART, ENGINEERING SERVICES SECTION

Dear Sir:

SUBJECT: FILE NUMBER 10-0013, PERMANEER CORPORATION, DILLARD, OREGON

(1) Your letter of August 16, 1974, requested several actions and reports by September 30, 1974. This letter is a report on our status for the items you requested.

(2) The recent sharp downturn in wood products has had a disasterous impact on our ability to generate capital funds. This impact has been severe enough to require a complete reordering of our plans for all projects, air pollution included. We regret the necessity of this action, but until market conditions change we have no alternative. As an example of the severity of the situation, we have been forced to shut down our Brownsville, Oregon, plant completely with no anticipated starting date. Permaneer's White City operation was shut down on July 24, 1974, with no foreseeable startup until market conditions improve. In addition, operations at our southern plants have been similarly curtailed. Permaneer's Black Mountain, North Carolina, plant, (like Brownsville, Oregon) is closed completely. Our Hope, Arkansas, plant has cut back production from 7 days to 5 days a week.

(3) The Dillard, Oregon, complex has run only spasmodically in the past few months and continuous 7 day operations are not projected. The particle-board complex is scheduled to shut down at 6 p.m., October 9, 1974. Restart is tentatively scheduled for October 21, 1974, providing that market conditions improve by that time.

(4) The process modifications proposed in our letter of April 1, 1974, have been sharply curtailed. Modifications to Systems 7 and 8 were substantially complete when market conditions changed and those systems are now finished. Modification of System 23 was accomplished by ducting the effluent air to the alternate trim saw cyclone, (Number 11) rather than installing an additional cyclone. The high pressure relay for System 4 and the baghouse for Systems 13 through 16 were ordered and delivered. Unfortunately, we were not able to pay for them when they were delivered and subsequently the baghouses were returned to our supplier. We will not be in a position to reorder until market conditions improve substantially.

*Sales Offices: St. Louis, Missouri / New York, New York / Minneapolis, Minnesota*

*Plants: St. Louis, Missouri / Wright City, Missouri / Union, Missouri / San Diego, California / Oroville, California / Dillard, Oregon  
White City, Oregon / Brownsville, Oregon*

(5) The Department requested a compliance schedule for the rotary dryer, source Number 3. Permaneer Corporation has examined several possible means of modifying rotary dryers to comply with D.E.Q. rules. The following is a brief outline of our findings.

1. The Baker Filter Company conducted extensive tests on a rotary dryer at our Brownsville plant over the period from November, 1973, to August, 1974. They have also tested their filter at several other plants, including Duraflake in Albany. These tests have been witnessed by personnel from D.E.Q. and M.W.V.A.P.A. In addition, filter efficiency has been evaluated by Kramer, Chin, and Mayo, Consulting Engineers of Seattle, Washington. The latest modification of the Baker filter appears capable of meeting D.E.Q. requirements for rotary dryers.

Based on the pilot plant testing done to date, a Baker filter installation for the Dillard rotary dryer would have an installed cost of approximately \$180,000.00 with an operating cost of \$25,000.00 to \$35,000.00 per year. These costs do not consider the associated water treatment equipment which would be necessary to satisfy D.E.Q. requirements. The system would require approximately 250 horsepower of electrical power and 500 to 1,000 gallons of water per hour. These projected utility demands deserve serious considerations in view of the existing energy shortage.

Delivery of a Baker filter would require 6 to 8 months after order. Installation in 60 days would place the equipment in operation 8 to 10 months after order. If we were in a position to order a Baker filter now, it could not be operational before May 30, 1975.

2. Considerable work has been done on closed loop incineration of effluents from rotary dryers. The Coen Company, in cooperation with Reid-Strutt, has submitted bids on an incinerating dryer heat source which would use sander dust as a principle fuel. They claim that their system will meet D.E.Q. requirements for rotary dryer emissions. It may not satisfy process weight limitations.

The total installed price for an incinerating system would be about \$270,000.00. Additional operating costs would approximately equal the cost savings attributable to a 90% shift from fossil fuels to sander dust.

Delivery and installation of a Coen/Reid-Strutt system would take approximately 9 months from placement of an order. This system could not be operational before May 30, 1975.

3. Mill Conversion Contractors, Inc. of Hillsboro, Oregon, also market incinerating heat sources. They have not installed a heat source on a rotary particle dryer per se, although rotary dryers are included in circuit on two of their installations. They claim that their equipment would meet D.E.Q. regulations for a rotary dryer, but we are not aware of any comparable to the Coen/Reid-Strutt system. We understand that they are currently in litigation with one customer over their performance guarantee on a system. In the absence of solid evidence of their ability to provide an installation which will comply with D.E.Q. regulations, we do not consider them a feasible alternate.

4. Several types of low energy scrubbers have been tried on rotary dryer emissions. We tested a Koch multi-venturi scrubber at the Brownsville plant. Our results were about average: Low energy scrubbers will remove significant percentages of the particulate loading from dryer effluents, without much effect on opacity. A low energy scrubber installation at the Dillard plant would cost approximately \$90,000.00 and carry an operating cost of \$15,000.00 to \$20,000.00 per year. With delivery and installation taking about 9 months, it could not be operating before May 30, 1975, and would not meet D.E.Q. regulations on opacity in any case.

(6) In summary, Permaneer Corporation is not aware of any feasible method for controlling rotary dryer emissions which could be installed and operating at the Dillard plant before May 30, 1975. In addition, Permaneer Corporation is not now in a position to place orders for equipment which could comply. This condition will last until market conditions for wood products show substantial improvement.

(7) Under these circumstances, Permaneer Corporation cannot submit an acceptable compliance schedule for rotary dryer emissions. Any dates which we would submit at this time would have to be dependant on an improvement in market conditions. We would appreciate any assistance the Department can offer in this problem.

(8) The sander dust fired boiler is not now being fired at steaming rates in excess of 10,000 pounds per hour, due to substantial cutbacks in production at the Dillard facility.

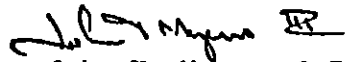


Department of Environmental Quality  
October 10, 1974  
Page Four

- (9) In the event that the demand changes to require steaming at rates above 10,000 pounds per hour, Permaneer Corporation will notify the Department. At that time a source test date will be set and results will be submitted to the Department, within 60 days, along with a request for modification of the air contaminant discharge permit.

Very sincerely yours,

PERMANEER CORPORATION

  
John T. Myers, C.E.  
Project Engineer


JTM:glS

cc Roger Damewood  
Bill Forrest  
Lew Kirkwood  
Hank Longton  
Orv Lervold

Department of Environmental Quality  
1000 S. E. Stephens Street  
Roseburg, Oregon 97470  
Attention Mr. Rich Reiter

# 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 449.727

<p>ISSUED TO:          PERMANEER CORPORATION          P. O. Box 178          Dillard, OR 97432</p> <p>PLANT SITE:            PERMANEER CORPORATION          Dillard Gardens Road          Dillard, OR 97432</p> <p>ISSUED BY DEPARTMENT OF ENVIRONMENTAL QUALITY</p> <p style="text-align: center;">           Diarmuid F. O'Seannlain          Director       </p> <p style="text-align: right;">         2-28-74          Date       </p>	<p>REFERENCE INFORMATION</p> <p>Application No. <u>0096</u></p> <p>Date Received <u>May 10, 1973</u></p> <p>Other Air Contaminant Sources at this Site:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 20%;">Source</th> <th style="width: 10%;">SIC</th> <th style="width: 10%;">Permit No.</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>(2)</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Source	SIC	Permit No.	(1)	_____	_____	_____	(2)	_____	_____	_____
	Source	SIC	Permit No.										
(1)	_____	_____	_____										
(2)	_____	_____	_____										

**SOURCE(S) PERMITTED TO DISCHARGE AIR CONTAMINANTS:**

Name of Air Contaminant Source	Standard Industry Code as Listed
PARTICLEBOARD MANUFACTURING	2492

Permitted Activities

Until such time as this permit expires or is modified or revoked, PERMANEER CORPORATION is herewith permitted to discharge treated exhaust gases containing air contaminants including emissions from those processes and activities directly related or associated thereto in conformation with the requirements, limitations, and conditions of this permit from its particleboard plant, modified wigwam waste burner, and steam generating facility located at Dillard, Oregon.

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.

PERMANEER CORPORATION (Dillard)

Performance Standards and Emission Limits

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

1. Particulate emissions from all sources on a plant site basis (including (19) cyclones, (1) baghouse filter and (1) particle dryer), other than the steam generating boiler and the wigwam waste burner, shall not exceed twenty-nine (29) pounds per hour based on a maximum hourly production rate of 9,600 square feet per hour on a 3/4 inch basis.

2. Particulate emissions from any single air contaminant source other than the wigwam waste burner and steam generating boiler shall not exceed the following:

- a. 0.2 grains per standard cubic foot for sources existing prior to June 1, 1970,
- b. 0.1 grains per standard cubic foot for sources installed, constructed, or modified after June 1, 1970, or,
- c. An opacity equal to or greater than twenty percent (20%) for a period or periods aggregating more than three (3) minutes in any one (1) hour.

3. Wigwam waste burner visible emissions shall not exceed an opacity equal to or greater than twenty percent (20%) for a period or periods aggregating more than three (3) minutes in any one (1) hour.

4. The permittee shall operate and control the steam generating boiler(s) in accordance with the following listing of boiler operating parameters and emission limitations:

Boiler Identification	Operating Parameters		Maximum Allowable Emission Limitations	
	Fuel to be used (1)	Max. Steaming Capacity (2)	Opacity (3)	Particulates (4)
1	S.D.	10,000	40%	0.2

(1) H. F. means wood residues commonly referred to as hog fuel; R.O. means residual oil; D.O. means distillate oil; S.D. means sanderdust; N.G. means natural gas; and LPG means liquefied petroleum gas.

(2) Steam production in pounds per hour.

(3) Maximum opacity that shall not be equalled or exceeded for a period or periods aggregating more than three minutes in any one hour, excluding uncombined water vapor.

(4) Emission limitation for particulates which shall not be exceeded and is stated in grains per standard cubic foot, corrected to 12% carbon dioxide (CO<sub>2</sub>) or at 50% excess air.

AIR CONTAMINANT DISCHARGE PERMITS PROVISIONS  
Issued by the  
Department of Environmental Quality for  
PERMANEER CORPORATION (Dillard)

Expiration Date: 6/1/78  
( Page 3 of 5 )  
Appi. No.: 0096  
File No.: 10-0013

5. The permittee shall not operate the boiler(s) with other fuels or at greater steam generating rates than those specified in Condition 4 without prior written approval from the Department.

6. All truck dump and storage areas holding raw materials for utilization in the particleboard manufacturing process are to be enclosed to prevent windblown particle emissions from these areas from being deposited upon property not under the ownership of the permittee.

Compliance Demonstration Schedule

7. The permittee shall demonstrate by no later than March 31, 1974, that the particleboard plant is capable of operating in continuous compliance with Conditions 1 and 2 by submitting all test data and results to the Department of Environmental Quality for review. All tests shall be conducted in accordance with testing procedures on file at the Department of Environmental Quality or in conformance with recognized applicable standard methods approved in advance by the Department.

Monitoring and Reporting

8. The permittee shall submit temperature charts recording the operation of the wigwam waste burner for the preceding month to the Department of Environmental Quality by no later than the fifth (5th) day of each month.

9. The permittee shall submit an annual statement giving the total plant production for the preceding year. This statement shall be submitted with the Annual Compliance Determination Fee.

General Conditions

- G1. A copy of this permit or at least a copy of the title page and an accurate and complete extraction of the operating and monitoring requirements and discharge limitations shall be posted at the facility and the contents thereof made known to operating personnel.
- G2. This 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.
- G3. The permittee is prohibited from conducting any open burning at the plant site or facility.
- G4. The permittee is prohibited from causing or allowing discharges of air contaminants from source(s) not covered by this permit so as to cause the plant site emissions to exceed the standards fixed by this permit or rules of the Department of Environmental Quality.
- G5. 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, Section 21-050.
- G6. (NOTICE CONDITION) The permittee shall dispose of all solid wastes or residues in manners and at locations approved by the Department of Environmental Quality.
- G7. The permittee shall allow Department of Environmental Quality representatives access to the plant site and record storage areas 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.
- G8. The permittee, without prior notice to and written approval from the Department of Environmental Quality, is prohibited from altering, modifying or expanding the subject production facilities so as to affect emissions to the atmosphere.
- G9. The permittee shall be required to make application for a new permit if a substantial modification, alteration, addition or enlargement is proposed which would have a significant impact on air contaminant emission increases or reductions at the plant site.

G10. This permit is subject to revocation for cause, as provided by law, including:

- a. Misrepresentation of any material fact or lack of full disclosure in the application including any exhibits thereto, or in any other additional information requested or supplied in conjunction therewith;
- b. Violation of any of the requirements, limitations or conditions contained herein; or
- c. Any material change in quantity or character of air contaminants emitted to the atmosphere.

G11. The permittee shall notify the Department by telephone or in person within one (1) hour of any scheduled maintenance, malfunction of pollution control equipment, upset or any other conditions that cause or may tend to cause a significant increase in emissions or violation of any conditions of this permit. Such notice shall include:

- a. The nature and quantity of increased emissions that have occurred or are likely to occur,
- b. The expected length of time that any pollution control equipment will be out of service or reduced in effectiveness,
- c. The corrective action that is proposed to be taken, and
- d. The precautions that are proposed to be taken to prevent a future recurrence of a similar condition.

G12. Application for a modified or renewal of this permit must be submitted not less than 60 days prior to permit expiration date. A filing fee and Application Investigation and Permit Issuing or Denying Fee must be submitted with the application.

G13. The permittee shall submit the Annual Compliance Determination Fee to the Department of Environmental Quality according to the following schedule:

<u>Amount Due</u>	<u>Date Due</u>
\$150.00	June 1, 1974
\$150.00	June 1, 1975
\$150.00	June 1, 1976
\$150.00	June 1, 1977
(See G12.)	April 1, 1978



## ENVIRONMENTAL QUALITY COMMISSION

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

Robert W. Straub  
GOVERNOR

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Chairman, McMinnville

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Portland

MORRIS K. CROTHERS  
Salem

RONALD M. SOMERS  
The Dalles

KESSLER R. CANNON  
Director

### MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. H, January 24, 1975 EQC Meeting

Proposed Rules Pertaining to Surety Bonds or Other  
Approved Equivalent Security for Sewerage Facilities

### BACKGROUND

On December 20, 1974 a public hearing was held by the Commission to consider the adoption of proposed rules pertaining to Surety Bonds or Other Approved Equivalent Security for Construction, Operation and Maintenance of Sewage Collection, Treatment or Disposal Facilities. At that hearing testimony was presented by Mr. Craig Starr, Technical Services Supervisor of the Lane County Water Pollution Control Division, recommending that the exemptions included in subsections 15-015(2)(a) and 15-015(2)(c) be broadened to exempt subsurface sewage disposal systems designed to serve any establishments (not just dwellings) having a projected sewage flow of not more than 1200 gallons per day and also to exempt any industrial plant (not just those with an NPDES waste discharge permit) having its own sewerage facilities which serve only plant employees and no permanent residences.

No other suggested changes or comments were received at the hearing.

### CONCLUSIONS

The recommendations submitted by Mr. Starr have been thoroughly reviewed by the DEQ staff and legal counsel.

ORS 454.425, subsection (2), limits the exemptions to the requirement of filing a surety bond or other approved equivalent security for sewerage facilities. It states that "a subsurface sewage disposal



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system designed for and used in not to exceed a four-family dwelling shall be exempt" and it authorizes the Commission to "adopt rules exempting other classes of dwellings or municipalities". The exemptions, therefore, are limited by statute to certain classes of dwellings and to municipalities.

Exempting "other establishments" and "industrial plants" as recommended by Mr. Starr would exceed the statutory authority of the Commission. Subsection 15-015(2)(c) as contained in the proposed rules considered at the December 20, 1974 public hearing would exempt certain industrial plants and therefore it too exceeds the authority granted by statute to the Commission.

Until such time as ORS 454.425(2) is amended by the Legislature to authorize other exemptions the rules of the Commission can exempt only certain classes of dwellings and municipalities. The attached proposed rules have been amended to include only such exemptions.

RECOMMENDATION

It is the Director's recommendation that the attached proposed rules as amended and titled SURETY BONDS OR OTHER APPROVED EQUIVALENT SECURITY FOR CONSTRUCTION, OPERATION AND MAINTENANCE OF SEWAGE COLLECTION, TREATMENT OR DISPOSAL FACILITIES be adopted by the Commission as permanent rules, that they be included as Subdivision 5 of Division 1, OAR Chapter 340, and that they be filed promptly with the Secretary of State to become effective 10 days after publication by that office.



KESSLER R. CANNON  
Director

KHS:vt  
1/6/75

Attachment: Amended Proposed Additions to Oregon Administrative Rules Chapter 340



(New material is underlined. Deleted material is shown in brackets.)

Amended Proposed Additions to  
Oregon Administrative Rules Chapter 340

DIVISION 1

RULES OF GENERAL APPLICABILITY AND ORGANIZATION

Subdivision 5

SURETY BONDS OR OTHER APPROVED EQUIVALENT SECURITY FOR CONSTRUCTION,  
OPERATION AND MAINTENANCE OF SEWAGE COLLECTION, TREATMENT OR DISPOSAL  
FACILITIES

15-005 STATEMENT OF PURPOSE. These rules, adopted pursuant to ORS 454.425, prescribe the requirements and procedures for the filing, maintenance and termination of surety bonds or other approved equivalent security for the construction, operation and maintenance of sewage collection, treatment or disposal facilities.

15-010 DEFINITIONS. As used in these rules, unless the context requires otherwise:

- (1) "Commission" means the Environmental Quality Commission.
- (2) "Construct" or "Construction" includes installation, repair and major modification or addition.
- (3) "Department" means the Department of Environmental Quality.
- [(4) "NPDES waste discharge permit" means a waste discharge permit issued in accordance with requirements and procedures of the National Pollutant Discharge Elimination System authorized by the Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500) and of OAR Chapter 340, Sections 45-005 through 45-065.]
- (4) "Dwelling" means any structure, building, or any portion thereof which is used, intended, or designed to be occupied for human living purposes including, but not limited to, houses, houseboats, boathouses, mobile homes, hotels, motels, and apartments.
- (5) "Person" means any person as defined in ORS 174.100 but does not include, unless the context specifies otherwise, any public officer acting in his official capacity or any political subdivision, as defined in ORS 237.410.

(6) "Subsurface sewage disposal system" has the same meaning as in ORS 454.605(13).

15-015 SURETY BOND REQUIRED. (1) Every person proposing to construct facilities for the collection, treatment or disposal of sewage shall file with the Department a surety bond, or other approved equivalent security, of a sum determined under Section 15-025 of these rules.

(2) The following shall be exempt from the provision of subsection (1) of this section:

(a) Any subsurface sewage disposal system or systems designed for and used in not to exceed a four-family dwelling [to serve not more than four families] or to serve any other dwelling or dwellings projected to have not more than 1200 gallons per day of sewage flow.

(b) Any sewage collection, treatment or disposal facility owned and operated by a state or federal agency, city, county, county service district, sanitary authority, sanitary district, or other public body, including, but not limited to, a school district or port district.

[(c) Any industrial plant having an NPDES waste discharge permit and its own sewage collection, treatment or disposal facilities, if the latter serve only plant employees and not permanent residences.]

15-020 TYPE OF SECURITY. The type of security to be furnished pursuant to ORS 454.425 may be:

(1) Perpetual surety bond executed in favor of the State of Oregon on a form approved by the Attorney General and provided by the Department, such bond to be issued by a Surety Company licensed by the Insurance Commissioner of Oregon,

(2) Insured savings account assigned to the Department with interest earned by such account made payable to the assignor, or

(3) Other security in such form and amount as specifically approved by the Commission.

15-025 AMOUNT OF BOND OR OTHER SECURITY. The amount of the surety bond or other approved equivalent security filed with the Department shall be

equal to \$1.00 per gallon per day of installed sewage treatment or disposal capacity with the minimum sum not to be less than \$2,000, or shall be of some other sum specifically approved by the Commission, except that in no case shall the maximum sum exceed \$25,000.

15-030 TRANSFER OF FACILITIES. The ownership of the sewage disposal facilities shall not be transferred without the prior written approval of the Department and the surety bond or other approved equivalent security filed pursuant to ORS 454.425 shall remain in full force and effect notwithstanding any subsequent ownership transfer without such prior written approval.

15-035 MAINTENANCE AND TERMINATION OF SECURITY. The surety bond or other approved equivalent security filed pursuant to ORS 454.425 shall remain in force and effect until such time as a state or federal agency, city, county, county service district, sanitary authority, sanitary district, or other public body acquires ownership or assumes full liability and responsibility for operation and maintenance of the sewage disposal facilities with the prior written approval of the Department pursuant to section 15-030.



# ENVIRONMENTAL QUALITY COMMISSION

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

Robert W. Straub  
GOVERNOR

## MEMORANDUM

B. A. McPHILLIPS  
Chairman, McMinnville

To: Environmental Quality Commission

GRACE S. PHINNEY  
Corvallis

From: Director

JACKLYN L. HALLOCK  
Portland

Subject: Agenda Item No. I, January 24, 1975, EQC Meeting

MORRIS K. CROTHERS  
Salem

Proposed Public Hearing to Consider Extension of Existing  
Moratoriums on Subsurface Sewage System Installations

RONALD M. SOMERS  
The Dalles

## BACKGROUND

KESSLER R. CANNON  
Director

There are existing in a number of cities and counties certain defined geographic areas in which the local governing body has declared moratoriums or embargoes on installation of new subsurface sewage disposal systems. The reason for these actions is that health hazards and/or water pollution problems have been created by failing subsurface systems. The installation of new systems would only aggravate the problem. Moratoriums on new installations were instituted to force action toward cleanup of such problems by construction of sewerage systems or other appropriate means.

The areas involved include three areas adjacent to the City of Medford in Jackson County, the Redwood area in Josephine County, the Glide-Idleyld area in Douglas County, the cities of Sublimity and Donald in Marion County, the Warren area in Columbia County, and the unsewered portion of Lafayette in Yamhill County.

Effective January 1, 1974, the Oregon Legislature provided that the Environmental Quality Commission and the Department of Environmental Quality should regulate subsurface sewage disposal. ORS 454.605 to 454.745. It was the intent of the Legislature to preempt this field of regulation to the Commission and the Department. Consequently, it is legal counsel's opinion that such moratoriums or embargoes by local governments are no longer effective.

## CONCLUSIONS

Many of the moratoriums are necessary to protect public health or prevent water pollution and therefore should be continued. ORS 454.685 authorized the Commission to prohibit construction of subsurface sewage disposal systems in an area provided it can be shown that such prohibition is indicated following a public hearing upon more than 30 days' notice.



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RECOMMENDATION

It is the Director's recommendation that authorization be granted to hold a public hearing at the earliest possible time to consider institution of a six months moratorium on all those areas now under moratorium by cities or counties. During this six month period the Department would propose to hold public hearings in each of the affected areas to consider permanent moratoriums where indicated.



KESSLER R. CANNON  
Director

TJO:vt  
1/9/75



## ENVIRONMENTAL QUALITY COMMISSION

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KESSLER R. CANNON  
Director

TO: Environmental Quality Commission

FROM: Director

SUBJECT: Agenda Item No. J , January 24, 1975, EQC Meeting

Public Hearing - Reduction in Maximum Sulfur Content  
of Residual Fuel Oils

### Background

The specific need to adopt a Clean Fuels Policy to allow construction of the proposed Columbia Independent Refinery, Inc. (CIRI) oil refinery within requirements of the Department's rule on Criteria for Approval of New Air Contaminant Sources in the Portland Metropolitan Special Air Quality Maintenance Area (PMSAQMA) was brought to the attention of the Environmental Quality Commission at its November 22, 1974 meeting.

Information presented in a status report at the November 22, 1974 EQC meeting (Agenda Item E) regarding permit application for three proposed oil refineries in the State of Oregon and a proposed companion Clean Fuels Policy indicated:

1. Although adoption of a 1% sulfur limit for residual fuel oil appeared to allow CIRI to meet the emission tradeoff criteria of the Department's Special Maintenance Area Rule, there appeared to be a potential problem of the CIRI 100,000 barrel per day facility meeting the ambient air impact criteria of the Department's Special Maintenance Area Rule.
2. There appeared to be no problem in meeting both the emission tradeoff criteria and the ambient air impact criteria of the Department's Special Maintenance Area Rule for the CIRI Phase I, 50,000 barrel per day facility.
3. Relatively large reductions (tradeoffs) in sulfur dioxide emissions could be achieved by requiring use of low sulfur residual fuel in the Portland Metropolitan Area, while substantially lesser reductions in particulate and NOx emissions could be achieved by requiring use of low sulfur residual fuel.



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4. A reduction in the maximum allowable sulfur content of residual fuel from 1.75% to .5% in the Portland Metro Area at some point in time as a new air emission reduction strategy seems feasible and necessary, with or without construction of the CIRI project, to maintain air quality standards, provide room for some future growth and enhance air quality.
5. Adoption of a Clean Fuels Policy concurrent with considering issuance of permits for three proposed oil refineries in the State is desirable and, in the case of the CIRI facility, mandatory.
6. Justification of a specific Clean Fuels Policy requires analysis of many interrelated items including:
  - a. Existing and future fuel oil usage,
  - b. Existing and future air quality, and
  - c. Capabilities of existing suppliers and proposed oil refineries to supply clean fuels.

#### General Information on Fuel Oils

The Department's state-wide fuel oil rules presently limit sulfur content of fuel oils to the levels indicated in Table 1. Also shown in Table 1 is the actual sulfur contents of these fuels as burned within the State.

TABLE 1

#### Existing DEQ State-Wide Fuel Oil Rules

<u>Fuel Oil type</u>	<u>Sulfur Content - % by Weight</u>	
	<u>Rule Max.</u>	<u>Actual 1973 Avg.</u>
Distillate		
ASTM Grade I (kerosene, stove oil)	0.3	0.05
ASTM Grade II (furnace, diesel oil)	0.5	0.26
Residual (Boiler fuel)	1.75	1.4

Oregon's sulfur content regulation for distillate oil is generally considered to require relatively clean distillate fuels, while Oregon's sulfur content regulation for residual fuel oil is considered fairly lenient as compared to existing clean fuels policies in such areas as Los Angeles, San Francisco and certain portions of Japan which require a maximum 0.5 sulfur content.

Residual fuel oils emit a relatively large amount of air contaminants in comparison to emissions from distillate fuel oils as shown in Table 2.

Table 2

## Estimated Air Contaminant Emissions from Combustion of Various Fuel Oils

Fuel Oil	Air Emission (lbs per Barrel of Oil Burned)		
	Particulate	SO <sub>2</sub>	NO <sub>x</sub>
Residual Oil (1.4% S)	0.77	9.48	2.87
Distillate (.26% S)	0.15	1.55	1.36
Distillate (.05% S)	0.05	0.30	1.36

The relatively large amount of air contaminants emitted from burning residual fuels oil is primarily attributed to concentration of impurities, notable ash and sulfur, in the residual fuel fraction during crude oil refining, which is primarily a distillation process.

The amount of impurities in residual fuel oils is directly a function of the impurities in the crude oil supply and the specific process scheme at the refinery. Refineries maximizing gasoline production by extracting gasoline and similar products from residual fuel oil (such as through use of catalytic cracking complex hydrocarbon molecules) will concentrate more impurities in the remaining residual fuel oil. The relatively large emission of particulates from burning residual fuel versus distillate fuel oil are also attributed to the fact that residual fuels contain more complex hydrocarbon molecules which are more difficult to completely combust than the less complex hydrocarbon molecules in distillate fuel oils.

The reduction in sulfur content, and to some degree ash and nitrogen, in residual fuel oil primarily through desulfurization is now a viable means of producing residual fuel oil which will have lower air contaminant emissions. Table 3 presents the potential emission rate reductions by use of desulfurized fuel oil based on use of Alaskan crude oil.

Table 3

## Air Contaminant Emission Rates for Residual Oil of Various Sulfur Content

	Pounds of Air Contaminant per Barrel Of Oil Burned		
	1.4% S	1% S*	1/2% S*
Particulate	0.77	0.55	0.42
SO <sub>2</sub>	9.48	6.59	3.30
NO <sub>x</sub>	2.87	1.92	1.92

\*Based on desulfurized Alaskan Crude Oil



Projected reductions in particulate and NOx emissions might be significantly different (most likely less) if other sources of crude oil are used or blending of distillate fuel oil with residual fuel oil is used to offset some desulfurization requirements to meet a specific sulfur content regulation. In general, the potential emission reductions from burning lower sulfur fuel oil as shown in table 3 are accurate for SO<sub>2</sub> but only approximate for particulate and NOx due to the many potential variations in production of such fuel oils and the very sparse emission test data on which the figures presented are based.

#### Residual Fuels Used in the Portland Metropolitan Area and Vicinity

Quantities of residual fuel oil used and projected to be used in the Portland Metropolitan Area and vicinity are shown in Table 4. Projecting fuel use much beyond 1979 is viewed as unrealistic at this time due to the unstable energy and economic situation.

Table 4

#### Residual Fuel Oil Use in Portland Metro Area and State of Oregon

	Average Residual Oil Consumption (bbls/day)		
	1973	1975**	1979**
Portland Metro AQMA (PMAQMA)	6093	7910	9276
Oregon Portion of PMAQMA (PM Special AQMA)	3956	5236	6173
Washington Portion of PMAQMA (Portion of Clark Co., Wash.)	2137	2674	3103
*Tri-County Area (Mult., Wash., Clack. Co.)	5275	6982	8231
Columbia County	919	1289	1543
SW Washington (Clark, Cowlitz County)	6800		
State of Oregon	17,641	22,750	26,628

\*Figures revised from those in 11/22/74 Report to EQC based on inventory of all fuel burning devices in area.

\*\*Projections based on average growth and increased use of residual oil to compensate for projected increased natural gas curtailment.

Residual fuel combustion represents a significant portion of the total Portland Metropolitan Special AQMA air contaminant emissions shown in Table 5. The year 1975 is presented to depict air emissions after completing implementation of the Oregon Clean Air Implementation Plan, that is when all sources are scheduled to be in compliance with existing emission regulations.

Table 5

Air Emissions in Portland Metro Special Air Quality Maintenance Area<sup>4</sup>  
All Sources Versus Residual Fuel Oil Combustion  
(tons/year)

	1973			1975 <sup>2,3</sup>			1979 <sup>2</sup>		
	All Sources	R.Oil <sup>1</sup>	%	All Sources	R.Oil <sup>1</sup>	%	All Sources	R.Oil <sup>1</sup>	%
Particulates	11,563	535	4.6	6,482	735	11.3	7,158	867	12.1
SO <sub>2</sub>	12,584	6,844	54.3	13,590	9,059	66.7	15,604	10,680	68.4
NO <sub>x</sub>	-	2,072		30,752	2,743	8.9	31,854	3,233	10.1

- 1) 1.4% sulfur residual fuel oil.
- 2) Projections based on average growth and increased use of residual oil to compensate for projected increased natural gas curtailment.
- 3) Clean Air Plan Completed
- 4) Emissions are approximately 75% of Three-County totals.

Emission Reductions (Tradeoffs) with Respect to CIRI and a Clean Fuels Policy

The Department's rule for approving new or expanded sources in the Portland Metropolitan Special Air Quality Maintenance Area (adopted as a temporary rule on October 25, 1974 and adopted as a permanent rule on December 20, 1974) allows no more than 107 tons per year of particulate and 357 tons per year of sulfur dioxide emissions from any one new or expanded facility in the area, in addition to not causing ambient air standards to be exceeded.

Projected emissions from the CIRI facility are shown in Table 6.

Table 6

Projected Air Contaminant Emissions from CIRI  
(tons/year)

<u>Air Contaminant</u>	<u>Phase I<sup>1)</sup> (1979)</u> <u>(50,000 bbl/day)</u>	<u>Phase II<sup>1)</sup> (1983)</u> <u>(50,000 bbl/day)</u>
Particulate	107	111
SO <sub>2</sub>	1,040	940

1) Completion dates proposed by CIRI

Since the Department's permit rule does not allow issuance of a permit to emit air contaminants beyond five years, consideration of issuance of a permit for Phase II of the CIRI project, which would not be completed until 1983, is precluded. Detailed analysis of tradeoffs for Phase II of the CIRI project has not, therefore, been made although some discussion of tradeoffs with respect to the Phase II project is included.

Consideration of Phase I of the CIRI project, which would be in operation in 1979, requires a guaranteed emission tradeoff of 683 tons per year of SO<sub>2</sub> in the PMSAQMA. Based on residual fuel oil use, emission factors and emission projections in 1979, (Tables 3, 4, and 5), a 1.3% sulfur limitation for residual fuel oil would give CIRI the necessary SO<sub>2</sub> emission tradeoffs for its Phase I facility. However, a more stringent sulfur content limitation is required to ensure that ambient air standards for particulates would not be exceeded as discussed in the following section.

Ambient Air Impact with Respect to CIRI and a Clean Fuels Policy

Since the Department's March 1974 AQMA report projects that the annual particulate ambient air standard will be exceeded as early as 1977 in Downtown Portland and vicinity and, since the Department's interim rule to prevent over-allocation of the air resources allows particulate emission increases up to but not to exceed the annual ambient air standard, it is mandatory that the effects of any clean fuel regulation be looked at in 1979 when Phase I of the CIRI project would be operational. This is mandatory before a rational Clean Fuels Policy is recommended to insure that a commitment is not made which would cause violation of ambient air standards.

Table 7 presents the projections of particulate emissions in 1975 and 1979 in the PMSAQMA and the net changes for various clean fuel oil policies.

Table 7

Net Change in Particulate Emissions in Portland Metro Special AQMA Due to Various Residual Fuel Oil Sulfur Content Limitations

	(tons/year)					
	1.4% S		1.0% S		0.5% S	
	R.O.C.*	All Sources	R.O.C.*	All Sources	R.O.C.*	All Sources
1975 (Clean Air Plan Completion)						
Total Emissions	735	6,482				
1979 - Total Emissions	867	7,158	619	6,910	473	6,764
Net change R.O.C.*(1975-79)	+132		-116		-262	
Net change all sources (75-79)		+676		+428		+282

\*Residual Oil Combustion

It can be seen that even with a stringent sulfur limit of 0.5% for residual fuel oil, there would be a net increase of 282 tons per year in particulate emissions from 1975 to 1979 from all emission sources despite a net reduction of 262 tons per year in residual fuel oil combustion particulate emissions in the PMSAQMA.

It has been estimated, based on areawide modeling methodology presented in the Department's March 1974 AQMA report, that the annual particulate ambient air quality standard would be exceeded if the particulate emission rate increases more than 870 tons per year above the 1975 estimated emission rate in the entire PMAQMA (includes PMSAQMA and portions of Clark County, Washington). Projected increases in particulate emission rates due to average growth in the Clark County portion of the PMAQMA would total 771 tons per year by 1979, assuming no Clean Fuels Policy in this area, and no other emission reduction plan other than that contained in the Washington State Clean Air Implementation Plan.

Table 8 presents net changes in particulate emissions by 1979 in the entire PMAQMA due to various alternative Clean Fuel Policies in the Oregon portion of the PMAQMA assuming:

- a. Restrictions in growth of industrial and commercial point sources emissions due to the Department's Special Maintenance Area Rule, and
- b. Other particulate emissions increasing at projected average growth rates.

Table 8

Projected Particulate Emission Rate Changes in Entire PMSAQMA 1975 - 1979 Due to Various Residual Fuel Sulfur Content Limitations in PMSAQMA

	Net Changes All Sources 1975-1979		
	(tons/year)		
	1.4% S***	1.0% S***	0.5% S***
Oregon Portion of PMSAQMA (PMSAQMA)	+676	+428	+282
Washington Portion of PMSAQMA	+771	+771	+771
Restriction to Average Growth in PMSAQMA by Special Rule	-246*	-246*	-246*
Total Net Change 75-79	+1231**	+983**	+837**

\* 676 tons/year projected average growth minus 430 tons/year allowed under DEO growth policy = 246 tons/year which is not presently allowed to be committed.

\*\* Maximum Allowable Increase to avoid violation of Annual Particulate Ambient Air Standard 870 tons/year.

\*\*\* Residual Fuel Oil Sulfur Content Limit in PMSAQMA.

It is apparent from data in Table 8 that a Clean Fuels Policy requiring 0.5% sulfur residual fuel oil in the PMSAQMA would barely provide the necessary particulate reductions to offset allowable area growth and maintain the annual particulate ambient air standard through 1979. Hereafter, further particulate emission reductions would be needed to offset growth and maintain air quality standards.

A much better estimate of the effects of the Clean Fuels Policy, particularly in the Downtown area, will be available within three months when the comprehensive regional diffusion model now under contract is fully developed for use in assessing various control alternatives for development of the ten-year AQMA plan which must be approved by July 1, 1975.

Reduction in SO<sub>2</sub> and NO<sub>x</sub> emissions due to Clean Fuels Policies in the PMSAQMA are shown in Table 9.

Table 9

Projected SO<sub>x</sub> and NO<sub>x</sub> Emissions Rate Changes in Portland Metro Special AQMA 1975-1979 Due to Various Residual Fuel Sulfur Content Limitation

	Net Changes All Sources 1975-1979					
	(tons/year)					
	1.4% S*		1.0% S*		0.5% S*	
	SO <sub>x</sub>	NO <sub>x</sub>	SO <sub>x</sub>	NO <sub>x</sub>	SO <sub>x</sub>	NO <sub>x</sub>
1975 (Clean Air Plan Completion)	13,590	30,752	-	-	-	-
1979	15,605	31,855	12,350	30,785	8,643	30,785
Net change all sources 75-79	+2,015	+1,103	-240	+ 33	-4,947	+ 33

\*Residual Fuel Oil Sulfur Content in PMSAQMA

The substantial reduction (over 35% of 1975 emission rates) in SO<sub>2</sub> emissions due to a 0.5% sulfur residual fuel oil limitation would appear to assure compliance with SO<sub>2</sub> ambient air standards for many years to come.

Side benefits of significant reductions in SO<sub>2</sub> emissions should include reduced acid rain and reduced chemically formed atmospheric particulates which impair visibility (sulfates) and are injurious to health.

The most significant conclusion that can be drawn from the above analysis is that, although a 1.3% sulfur content residual fuel rule would appear to provide Phase I of CIRI's facility with enough emission tradeoffs to meet the emission limit portion of the Department's interim growth control rule, a 1.3% sulfur limit would not be sufficient to meet the ambient air impact criteria of the interim rule which is designed to prevent violation of ambient particulate air quality standards. Considering growth through 1979, a 0.5% sulfur content residual fuel rule would be needed to allow maintenance of annual particulate ambient air standards through 1979, the year in which the CIRI's Phase I facility would be operational. Further control strategies would be needed thereafter to maintain standards such as application of a Clean Fuels Policy to portions of the State of Washington and further reductions in area source emissions, such as tightening restrictions in all types of open burning.

Without the full assessment of the ambient air effects of alternative control strategies and development and adoption of a ten-year air quality maintenance plan, based on a sound data base and air quality model, present information requires adoption of a 0.5% sulfur content residual rule for fuel oil in the PMSAQMA concurrent with approving the Phase I CIRI project to insure that such approval will not cause violation of the annual particulate ambient air standard in 1979. No long-range commitments for growth greater than allowed by the particulate limits of the Department's interim growth limitation rule could be justified at this time.

#### Columbia County Clean Fuels Policy

The Department has recently proposed guidelines for not allowing any significant air contaminant emission sources to locate within the Longview-Rainier-Portland Airshed, at least until effects of sources in this area on the critical Portland Area air quality can be fully assessed. This position was presented to Portland General Electric when they inquired about relocation of the Harborton turbines to sites in this area. This guideline has been proposed due to the following:

1. Particulate ambient air standards are being exceeded in the Portland Metro area now and control strategies, when fully implemented in 1975, will be barely adequate to achieve compliance with future growth threatening noncompliance with these standards by 1977.
2. On most poor ventilation, poor air quality days, winds from the northwest carry emissions from the Longview-Rainier-Portland corridor towards Downtown Portland.
3. Significant visibility restrictions occur with northwest winds and sources causing this visibility restriction have yet to be fully identified.

Since the Cascade and Charter Oil Companies propose oil refineries to be located in Columbia County, since these facilities are major air contaminant emission sources, and since these facilities have the capability to produce low-sulfur residual fuel oil, it is considered appropriate to maintain the Department's guideline policy by reducing the maximum sulfur content of residual fuels used in Columbia County concurrent with approval of one or both oil refineries in this County. Such action would significantly reduce the overall air quality emission impact of the two refineries in the County, as shown in Table 10.

Table 10

Effects of 0.5% Sulfur Content in  
Residual Fuel Oil Limitation in Columbia County on  
Air Contaminant Emissions  

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 (tons/year in 1979)

	Particulates	SO <sub>x</sub>	NO <sub>x</sub>
Increase from Charter & Cascade Oil Refineries	296	1175	2570
Reduction from all sources due to change in R.F.O. sulfur limit from 1.75% to 0.5%	-98	-1739	-268
Net change	+198	-564	+2302

### Economic Impact of Clean Fuels Policy

Actual cost of implementing a 0.5% sulfur content limitation for residual fuel oil is difficult to determine at this time. The best estimates are that it would increase costs of residual fuel \$1.00 per barrel compared to the present \$12 per barrel cost of such fuel. Considering that about 10,000 barrels per day of residual oil would be burned in the area affected by a Clean Fuels Policy in 1979, the overall costs of such a Clean Fuels Policy would be approximately 4.3 million dollars per year. Average cost to the community affected would be approximately \$3.00 per capita per year. This cost would not appear to be distributed uniformly since only residual fuel users would be affected directly. The distribution of residual fuel users is shown in Table 11.

Table 11

#### Residual Fuel Oil Users in PMSAQMA

	<u>% of Total Fuel Use</u>
Industry	24%
Schools	10%
Apartments	20%
Hospitals	2%
Other Commercial Establishments	44%

Considering that the additional costs for low-sulfur residual fuel oil will be passed on to the consumers or financial supporters of the facilities directly affected (those in Table 11) it is believed that such costs would actually be spread somewhat uniformly throughout the local community.

The cost of implementing the necessary Clean Fuels Policy is considered relatively minimal in relation to the emission reduction afforded. For instance, adequate air emission controls for a single aluminum reduction plant cost over 15 million dollars for initial installation, in addition to substantial annual operating costs.



## Feasibility of Implementing a Clean Fuels Policy

Proposed oil refineries can supply more than the necessary low-sulfur residual fuel that would be needed by sources affected by adoption of a four-county Clean Fuels Policy area. In addition, existing residual fuel oil suppliers have indicated that, given three to four years lead time, they probably could supply low sulfur fuel oil in order to compete with local refineries. This of course, assumes no major obstacles are encountered from Federal Energy Office allocation regulations, crude oil availability, or financing new production facilities. Enforcement of a Clean Fuel Oil Policy would be more practical on a four-county basis (Multnomah, Clackamas, Washington and Columbia) than on the irregular boundaries of the AQMA.

### Conclusions

1. A Clean Fuels Policy must be adopted concurrently with issuing a permit authorizing construction and discharge of air contaminants from the Columbia Independent Refinery, Inc. (CIRI) Phase I, 50,000 barrel per day oil refinery to assure necessary emission tradeoffs within requirements of the Department's rule, Criteria for Approval of New Air Contaminant Sources in the Portland Special Air Quality Maintenance Area (PMSAQMA).
2. A Clean Fuels Policy is best directed towards residual fuel oil since this is where the greatest reduction and tradeoffs in air contaminant emissions could be obtained from use of clean fuels produced by local refineries.
3. Significant reductions in air contaminant emissions of sulfur oxides and, to a lesser extent, particulates and oxide of nitrogen emissions are feasible by reduction of the present Department's maximum 1.75% sulfur content of residual fuels limitation to a practicable limit as low as 0.5% sulfur content. Specifically, a reduction in projected 1979 particulate, SO<sub>x</sub> and NO<sub>x</sub> emissions in the PMSAQMA of 394 tons per year, 6,962 tons per year and 1,070 tons per year respectively is possible with a 0.5% sulfur limit.
4. A Clean Fuels Policy would be more practicable to enforce on a county basis than in the irregular boundaries of the PMSAQMA.
5. A reduction in maximum allowable sulfur content of residual fuel oil from 1.75% to 0.5% in Multnomah, Clackamas and Washington Counties by January 1, 1979 would provide the following benefits:

- a. Provide the necessary air emission tradeoffs and reductions to allow the CIRI Phase I facility to meet both the emission limit criteria and ambient air impact criteria of the Department's special maintenance area rule, thereby allowing the Department to consider issuing an Air Contaminant Discharge Permit for this facility. (A 1% sulfur limitation would provide the necessary emission tradeoffs to allow construction of the Phase I facility, but a 0.5% sulfur limitation is necessary to meet the ambient air impact part of the rule.)
  - b. Provide substantial reductions in SO<sub>2</sub> emissions in the Portland Area which should:
    - (1) Insure continued compliance with SO<sub>2</sub> ambient air standards for some years to come, despite growth.
    - (2) Reduce acid rain and its associated damaging effects.
    - (3) Improve visibility by reducing the atmospheric formation of sulfate particulate, and
    - (4) Reduce adverse health effects associated with SO<sub>2</sub> and sulfate particulate.
6. Extention of a Clean Fuels Rule to Columbia County is justified:
- a. To partially offset emission increases from two proposed oil refineries in that county, and
  - b. To maintain the Department's general policy of not committing to significant increases in air contaminant emissions in the critical Longview-Portland airshed, at least until acceptable air quality is assured in the Portland Metropolitan area and impact of emissions in this corridor and the Portland Metropolitan area are defined on a technically sound basis.
7. A 0.5% sulfur content of residual fuel oil limitation by January 1, 1979 in the four-county area (Multnomah, Clackamas, Washington and Columbia Counties) is reasonable and attainable, since
- a. The proposed oil refineries in Oregon have indicated willingness to make low-sulfur residual fuel oil available in sufficient quantities to meet this requirement.
  - b. The proposed sulfur content limitation would be uniform, in fact identical, with existing West Coast Clean Fuels Policies in the Los Angeles and San Francisco areas.

- c. The January 1, 1979 Clean Fuels Policy implementation date would be compatible with projected local oil refinery production startups and would allow present Oregon residual fuel suppliers time to plan production changes to market clean fuels in Oregon to compete with Oregon refineries if they so desire.
  - d. The proposed sulfur content limitation rule would impose relatively minimal costs to the community compared to the substantial improvements in air quality that would result. An estimated \$1.00 per barrel increase in fuel costs would translate to about an average \$3.00 per capita per year cost increase for the area.
9. Steps must be taken to improve the area's fuel oil data base to provide a basis for assessing actual benefits of a Clean Fuels Policy and to provide a basis for revisions to the policy if necessary. This would include:
- a. Obtaining specific fuel distribution data from oil suppliers.
  - b. Monitoring of nitrogen and ash content of fuels sold in the area in addition to presently monitored sulfur content.
  - c. Measurement of emissions from numerous typical fuel burning facilities, before and after implementation of a Clean Fuels Policy.

#### Director's Recommendation

Considering that:

- 1. A reduction in the Department's sulfur content limitation rule for residual fuel oils from 1.75% to 0.5% is required for the Portland Metropolitan Special Air Quality Maintenance Area in order for the Department to consider approving the Phase I, 50,000 barrel per day, Columbia Independent Refinery, Inc. facility within the requirements of the Department's rule, Criteria for Approval of New or Expanded Air Contaminant Sources in the PMSAQMA,
- 2. The enforcement of such a rule could be best accomplished on a county-wide basis, and
- 3. Some offset in air emissions from oil refineries proposing to locate in Columbia County is feasible and desirable through application of a similar sulfur content limitation for residual fuel oils in this county.

It is the Director's recommendation that the attached proposed rule be adopted subject to Air Contaminant Discharge Permits being issued for Phase I of the CIRI facility and at least one of the proposed oil refineries in Columbia County. If Air Contaminant Discharge permits are not issued to at least one of the proposed refineries in Columbia County, then Columbia County should be deleted from the proposed rule. If an Air Contaminant Discharge Permit is not issued to CIRI, then Multnomah, Clackamas and Washington Counties should be deleted from the proposed rule.



KESSLER R. CANNON

JFK:cs  
Attachment  
1/13/75

PROPOSED RULE

Oregon Administrative Rules, Chapter 340  
Section 20-010, Residual Fuel Oils

- (3) After January 1, 1979, no person shall use or make available for use in Multnomah County, Clackamas County, Washington County or Columbia County any residual fuel oil containing more than 0.5 percent sulfur by weight.



# ENVIRONMENTAL QUALITY COMMISSION

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Corvallis

## MEMORANDUM

JACKLYN L. HALLOCK  
Portland

TO: Environmental Quality Commission

MORRIS K. CROTHERS  
Salem

From: Director

RONALD M. SOMERS  
The Dalles

Subject: Agenda Item No. E, November 22, 1974 EQC Meeting

KESSLER R. CANNON  
Director

Permit Applications for Columbia Independent Refinery  
(Rivergate), Charter Oil (Columbia County) and Cascade  
Energy (Rainier) Oil Refineries and Proposed Companion  
Fuels Use Policy - Status Report

### Background

Permit applications for three proposed oil refineries have been briefly discussed at previous EQC meetings, specifically in regard to the development and adoption at the October 25, 1974 EQC meeting of the rule establishing interim criteria for approval of new air contaminant sources in the Portland Metropolitan Special Air Quality Maintenance Area.

Comprehensive and voluminous Environmental Impact Assessments projecting environmental effects on air, water and land quality were submitted to the Department by the three oil refineries during the week of November 4, 1974, thus apparently completing submittal of all necessary information to complete processing of pending permit application. The oil refineries' consultants and the Department staff have worked intensively over at least a six month period developing and documenting among other items, air emission rates, realistic ambient air impact projections, present and future fuel usages in Oregon and Southwest Washington and calculation of potential air emission tradeoffs that might be realized by requiring use of cleaner fuels which could be produced by these facilities.

Even though the lengthy delay in developing information has undoubtedly caused great financial impact on project costs, it is believed that refinery representatives as well as Department staff are in agreement that this work was necessary to provide a sound basis upon which to make recommendations and decisions on these facilities which can have a very significant effect on Oregon's future environment and energy supply as well as economic base.

It appears beneficial from an overall environment management standpoint to process the three pending permit applications on the same time schedule concurrently with a new clean fuels rule, considering that:

1. All three refinery applicants have completed their information submittal nearly at the same time,
2. That a new clean fuels regulation would be needed in order to approve one of the refineries to assure tradeoffs needed to meet the criteria of the new rule for approval of new air contaminant sources in the Portland Metropolitan area,
3. That a new clean fuel regulation will undoubtedly be needed to maintain air quality standards in the Portland Metropolitan Area regardless if any oil refineries were built in the State, and
4. That a new fuels regulation would significantly affect the specific product mix and marketing of all three refineries.

The Department staff has, after preliminary evaluation of information submitted, considered the following time schedule the most rapid and realistic for acting on pending oil refinery applications:

November 29, 1974	Complete review and analysis of information submitted.
December 20, 1974	Complete drafting of Clean Fuels Regulation and issue thirty (30) day public notice for rule hearing.  Complete staff reports with recommendations for action on pending permit applications, including any draft permits that may be proposed, and issue thirty (30) day notice for public hearing on staff recommendation.
January 24, 1975	Hold hearing in Portland at scheduled EQC meeting on Clean Fuels Regulation and refinery permit applications.

In view of the anticipated significant public interest on the proposed oil refineries, not only from residents of areas near proposed plant sites, but from the general citizenry regarding environmental, economic and energy matters, the staff has prepared the following brief informational report, based on staff review to date, which is intended to:

1. Provide the EQC and public with a broad perspective of the energy picture in Oregon,
2. Identify potential major issues regarding each of the proposed refineries, and
3. Discuss the potential effects of a clean fuels policy.

Since there are no existing oil refineries in the State of Oregon nor in Southern Washington, this information should provide the foundation for comprehending technical information on these projects and formulating questions, and finally, for making decisions which could undoubtedly materially affect the public and industrial communities in Oregon and adjacent states.

General Information Regarding Fuel Oil Supply and Demand

Information regarding fuel oil supply and demand has been extremely difficult to obtain as evidenced by the scarcity of gasoline supply data during last year's energy crisis. Extreme efforts have been made to obtain fuel oil (and natural gas) supply and demands and the Department is of the opinion that it now has the most accurate information available. Table I presents a partial summary of this information.

TABLE I  
Oil Consumption  
(barrels per day)

	1973 Oregon	1973 Portland Metro Area(1)	1973 Southwest Washington(2)
Gasoline	82,000	27,300	10,100
Jet Fuel, Kerosene and Naptha	8,750		
Distillate Fuels	42,375		
Residual Fuels	19,115	8,669	6,800
LPG	4,200		
Other	9,560		
TOTAL	166,000		

(1) Multnomah, Clackamas and Washington Counties  
(2) Clark and Cowlitz Counties



Presently most petroleum products reach Oregon and Southwest Washington areas by pipeline from refineries in Northwest Washington and by ship from refineries in California.

Of significance is the fact that of the nearly 170,000 barrels per day of petroleum consumed in the State of Oregon, nearly half is motor gasoline. A forty percent (40%) increase in total oil consumption by 1985 has been recently forecasted for the State of Oregon.

The projected demands are at best a crude estimate with many potential factors causing possible deviations such as greater or lesser than average growth, and natural gas or alternative fuel (coal) availability.

Table II presents potential above-average demands for petroleum products.

TABLE II  
Potential Above-Average Petroleum Demands  
(barrels per day)

1.	Northwest Natural Gas Synthetic Natural Gas Plant	10,000(a)	Naptha
2.	Reichhold Chemical Fertilizer Plant Expansion	8,000(b)	Residual Oil
3.	PGE Combustion Turbines		
	Beaver	20,000(c)	Distillate Oil
	Harborton	10,000(c)	Distillate Oil
	Bethel	5,000(c)	Distillate Oil
4.	Replacement of gas by oil due to 67% curtailment of interruptable gas from 1973-1977	5,665(d)	Residual Oil
5.	Projected industrial growth assuming no increase in natural gas supply.	14,400(e)	Residual Oil

- (a) Depends on FEA approval and continued interest in the project by Northwest Natural Gas.
- (b) Preliminary information.
- (c) Yearly demand depends on needed operation of turbines. Beaver most likely to operate lengthy periods (six months per year or more).
- (d) Very likely.
- (e) Not very likely.

Availability of oil from the Alaskan Pipeline, the high transportation costs for supplying finished petroleum products to Oregon and Southwest Washington, deep water port access and adjacent vacant industrial land has undoubtedly spurred the interest of the three independent refineries to locate in Oregon. The Alaskan oil is scheduled for delivery in 1977 or 1978 at a rate of up to 1,200,000 barrels per day with potential increase to 2,000,000 barrels per day. Existing major company refineries on the West Coast are also expanding or planning on expansion to process some of this new oil supply for future growth. Of interest is the fact that present suppliers of oil to Oregon have not indicated a problem in supplying future demands in Oregon, including cleaner (low sulfur) fuels given adequate planning time of about three to five years and barring another major energy crisis. The advantages of refineries locating in Oregon may thus not include guaranteed oil supplies or lower sulfur content fuels or even lower prices as evidenced by past Federal regulation of production, distribution and price. Indeed, the only advantage may be economic benefit to the community by providing some additional jobs and ad valorem tax base. Oil refineries are typically more capital intensive than employment intensive industries and the total estimated installation cost of all three proposed facilities is almost one-half billion dollars with a total permanent employment of less than 300 persons.

General Information Regarding Oil Refinery Permit Applications

Table III presents general details of the three proposed oil refineries.

TABLE III  
General Facts Regarding Proposed Oil Refineries

<u>Name</u>	<u>Location</u>	<u>Capacity (bbl/day)</u>	<u>Comment</u>
Columbia Independent Refinery, Inc.	Rivergate (N. Portland)	100,000	1st phase-50,000 bbl/day 1978 2nd phase-50,000 bbl/day 1983
Charter Energy	St. Helens (Reichhold Chemical Site)	52,400	1978 - land potential to expand beyond 100,000 bbl/day
Cascade Energy	Rainier	30,000	1st phase-15,000 bbl/day 1976 2nd phase-15,000 bbl/day 1979

All three proposed refineries are basically similar in that they will not employ catalytic cracking, an old method which maximizes gasoline production and is the source of significant quantities of particulate sulfur oxide and carbon monoxide emissions. The three refineries will basically employ distillation and desulfurization (a relatively new practice in the United States) to produce gasoline or Naptha, distillate fuels and residual fuels.

Quantities of specific products manufactured by each refinery are quite flexible in the design state, depending on demand. Once refineries are built they retain some product manufacturing flexibility. Although specific product manufacturing will in part depend on fuel regulations adopted by the Department and actions taken on each specific refinery permit application, possible average product manufacturing rates for the three refineries are shown in Table IV.

TABLE IV  
Possible Refinery Product Distribution

	<u>CIRI</u>	<u>Charter</u> (barrels per day)	<u>Cascade</u>	<u>Totals</u>
High Sulfur Ship Fuel	29,400(1)			29,400
Low Sulfur Residual Fuels	13,200 (1/2%S)	25,500(2) (1%S)	8,400 (1/2%S)	46,600
Diesel and Distillate Fuels	33,000	16,500	8,000	57,500
Gasoline/Naptha	22,000	8,800	11,580	42,380
Other	3,200	1,600	-	4,800
Total Production	100,000	52,400	30,000	182,400

- (1) A considerable portion of this fuel could be processed into low sulfur residual oil.
- (2) Refinery could be designed to produce 0.5% sulfur fuel at a 20% increase in capital construction costs.

It is noteworthy that the two larger refineries, Columbia Independent Refinery, Inc. and Charter Energy are primarily fuel oil producers while the smallest refinery, Cascade Energy, is oriented towards gasoline production. It is apparent when comparing Oregon fuel demand with possible refinery production that the refineries would produce at most only thirty percent (30%) of Oregon's future motor gasoline needs. This percentage would be even less if some Naptha which can be converted to gasoline is used for SNG production or other use. Low sulfur residual fuel would be available in sufficient quantities to easily supply Oregon and Southwest Washington needs although some of this fuel might be diverted to other needs such as the Reichhold Chemical expansion fuel-conversion project. Distillate fuel supplies might totally fulfill Oregon's needs but much of this fuel could be used by PGE turbines which are now supplied by Hawaiian Independent Refinery, a parent company of Columbia Independent Refinery, Inc.

Air Emissions from the refineries would be almost solely from the fuel burned in process heaters or boilers. It is noteworthy that refineries burn a significant quantity of fuel, nearly six percent (6%) of their rated throughput capacity.

Table V presents expected air emissions from these facilities.

TABLE V  
Projected Air Emissions from Proposed Oil Refineries

Refinery	Fuel Burned	Emissions, Tons/Year		
		Particulate	SOx	NOx
CIRI	A combination of refinery gas distillate fuel & residual (0.5% S)	218	1980	2290
Charter	Distillate fuel (.05% S)	140	168	642
Cascade	Residual fuel (0.5% S)	397	1586	1369

Type of fuel, burner type, emission factors and size of facility account for the variation in emissions. CIRI proposes to employ special low emission burners while Charter proposes to burn lower emission distillate fuel. Cascade, in projecting its emissions, proposes to use its desulfurized residual oil, but has used EPA emission factors which tend to maximize particulate emissions and may be unrealistically high.

General Information Regarding Emission Tradeoffs and Effects of a New Clean Fuels Regulation

Columbia Independent Refinery, Inc., because it is proposed for location in Rivergate, is the only refinery subject to the Portland Metropolitan Special Air Quality Maintenance Area rule which limits net emissions after considering tradeoffs to 107 tons per year particulate and 357 tons per year SO<sub>2</sub> from any single source. This rule also limits ambient air impact from any one source to not more than twenty-five percent (25%) of the available margin between projected air quality and ambient air standards. Clearly, CIRI needs emission tradeoffs from use of cleaner fuels to meet both particulate and SO<sub>2</sub> criteria of the rule.

Considerable efforts have been expended to identify emission tradeoffs for particulates, SOx and NOx that might be realized, primarily by use of lower sulfur residual oil. Oregon has a 1.75% sulfur limit for residual oil which is a fairly liberal limit and has resulted in use of residual oil averaging about 1.4%. Table VI presents the potential air emissions from use of 1% and 1/2% desulfurized residual oil compared with presently utilized 1.4% sulfur residual oil.

TABLE VI  
Potential Air Emission Reduction by Substitution  
of Desulfurized Residual Oil  
(Pounds of Pollutant per Barrel of Oil Burned)

	1.4% S	1% S*	1/2%*
Particulate	0.77	0.55	0.42
SO <sub>2</sub>	9.48	6.59	3.30
NOx	2.87	1.92	1.92

\*Based on desulfurized Alaskan Oil.

Table VII presents air emission reductions in the Portland Metropolitan Special Air Quality Maintenance Area as a result of substituting 1% or 1/2% sulfur residual fuel oil for existing 1.4%S fuel.

TABLE VII  
Potential Air Emission Rates and Reductions  
in Portland Metropolitan Area (1977)

	Reductions, Tons per year		Projected Emission Rate All Sources (Using Present Fuels)
	<u>1%S</u>	<u>1/2%</u>	
Particulate	460	732	9,000
SO <sub>2</sub>	6049	12,936	25,000
NOx	1988	1,988	44,000

From Tables V and VII it would appear that adoption of a 1%S regulation would allow CIRI to meet the emission criteria of the Portland Metropolitan Special Air Quality Maintenance Area rule when considered on an area-wide basis. However, it is believed that a 1/2%S regulation can be justified on the basis of only slightly greater cost per barrel of fuel produced and the substantially increased benefits to air quality.

In addition to providing greater assurance of achieving projected particulate tradeoffs, 1/2%S fuel would provide significantly greater reductions in SOx and could have additional side benefits resulting in improved visibility and reducing potentials for formation of sulfate particulate and acid rain.

Adoption of a 1/2%S residual fuel regulation to become effective January 1, 1979 or thereabout, seems feasible and necessary, with or without establishment of one or more of the proposed refineries, to maintain air quality standards, enhance air quality and provide room for some future growth. Cost of the cleaner fuel is somewhat speculative at this time but a \$1 per barrel additional cost for 1/2%S residual and \$ .90 per barrel additional cost for 1%S residual appears realistic. This can be compared to present-day cost of residual oil of approximately \$12 per barrel. The prime users of residual fuel who would have to pay the increased costs would generally be industrial and commercial establishments, schools, hospitals and large apartment houses.

Due to the adverse location of CIRI with respect to air quality impact in Downtown Portland, there appears to be a potential problem in meeting the ambient air impact criteria of the special maintenance area rule with a 100,000 barrels per day facility, although no problem appears at the 50,000 barrels per day capacity. This matter will have to be analyzed further.

### Specific Issues Regarding Proposed Refineries

Water quality impacts appear to be negligible for the Charter and Cascade refineries which would discharge treated effluents to the Columbia River. Effluent from the CIRI refinery may create some problem with respect to phenols since discharge would be to the Willamette River. To meet phenol water quality standards at 100,000 barrels per day capacity would appear to require dilution with nearly 1/10 of the total low summer river flow. This matter needs further investigation.

Disposal of solid wastes from any or all of the proposed refineries should present no major problem. Large quantities of elemental sulfur derived from oil desulfurization would have to be disposed of, probably through sale or export. This material could be handled in a liquid state thereby eliminating dust problems associated with handling dry sulfur. Oily sludges may be incinerated, but emissions would be negligible compared to refinery emissions.

Noise impact appears to be insignificant for Columbia Independent Refinery and Charter Energy, but a potential problem exists for Cascade which would be located quite close to existing residences. Further evaluation is needed in terms of evaluating effectiveness of proposed noise control measures.

Air quality degradation might be a concern at the Charter location, however the clean fuel proposed to be used would appear to create a very small ambient air impact.

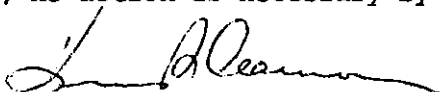
Other issues to consider including oil spill potential will be analyzed and reported with the full assessment of each project in staff reports regarding recommended action on permit applications.

### Summary

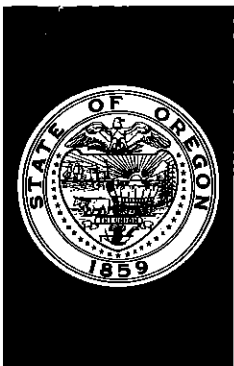
A clean fuels policy for reducing sulfur content in residual fuel oil to 1/2% by 1979 could have very beneficial effects on Portland Metropolitan air quality and possibly other areas of the State and Southwest Washington. It appears that proposed local refining capacity can insure a supply of such fuel without serious adverse environmental impact, although specific details of the three proposed refineries in Oregon need to be more thoroughly reviewed. The Department proposes to have recommendations for acting on pending refinery permit applications and a companion clean fuels rule prepared by December 20, 1974 for consideration at a public hearing before the Environmental Quality Commission on January 24, 1975.

### Recommendation

Since this report is intended to provide only information as to the status of pending permit applications for three new oil refineries and companion clean fuels rule, no action is necessary by the Commission at this time.



KESSLER R. CANNON  
Director



## ENVIRONMENTAL QUALITY COMMISSION

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KESSLER R. CANNON  
Director

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. K, January 24, 1975, EQC Meeting

Public Hearing - Proposed Air Contaminant Discharge Permit for  
Columbia Independent Refinery, Inc., Phase I, 50,000 BBL/day-Oil Refinery

### Background

In the Spring of 1973, Columbia Independent Refinery, Inc. (CIRI) made preliminary contacts with the Department and Columbia Willamette Air Pollution Authority to explore the feasibility of constructing a 50,000 barrel per day (BBL/day) refinery within the Port of Portland's Rivergate Industrial Park. Responses to CIRI discussed the restricted airshed capacity in the Portland Metropolitan Area and the Department's belief that only minimal emission increases could be tolerated in the area at this time.

Following considerable staff communication with CIRI, an Air Contaminant Discharge Permit application for a 100,000 BBL/day refinery was submitted to the Department on April 2, 1974. An amended application was received on October 22, 1974 changing the facility to a two-phase project with the Phase I, 50,000 BBL/day crude oil through put capacity projected to be operational in 1978 and the Phase 2 application for an additional 50,000 BBL/day capacity projected to be operational in 1983. A comprehensive environmental impact assessment for the project was received on November 4, 1974. An application for a National Pollution Discharge Elimination System (NPDES) wastewater discharge permit was submitted to the Department on nearly the same schedule as the air permit application.

Since initial submittal of the CIRI's permit applications, considerable time has been spent by CIRI and the Department to document air emission rates, realistic ambient air impact, present and future fuel oil usages and potential air emission tradeoffs that might be realized by use of cleaner fuels produced by the proposed facility. The Department considered CIRI's air permit application essentially complete for processing in mid-November 1974, and presented a status report to the EQC at its November 22, 1974 meeting (agenda Item E), covering CIRI and two other proposed oil refineries in Oregon. Also mentioned in this report was a Clean Fuels Policy which must be adopted if CIRI is approved, in order to assure emissions tradeoffs required by the Department's special air quality maintenance area rule.



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As the Department's permit rules do not allow authorization to discharge air contaminants for greater than a five-year period, and since the CIRI Phase II, 50,000 BBL/day facility would not be operational at least until 1983, eight years hence, consideration of issuing an Air Contaminant Discharge Permit for Phase II of the CIRI facility is precluded.

A proposed Air Contaminant Discharge Permit was prepared for the CIRI Phase I facility in late December, 1974. Public Notice was given on December 24, 1974 that the proposed Air Contaminant Discharge Permit had been prepared and that a public hearing on this proposed permit would be held at the January 24, 1974 EQC meeting. Public Notice was also given on December 18, 1974 for a hearing at the January 24, 1975 EQC meeting to consider reducing the Department's maximum sulfur content residual fuel oil limitation from 1.75% to 0.5% in the Portland Metro Area. This rule change was considered necessary to allow construction of the CIRI facility within the requirements of the Department's rule Criteria for Approval of New Air Contaminant Sources in the Portland Metropolitan Special Air Quality Maintenance Area.

#### Facility Description

The CIRI oil refinery is proposed to be located on a 225 acre site, approximately eight miles Northwest of downtown Portland. The site, leased from the Port of Portland, would be within the Rivergate Industrial Park. The design of both Phase I and Phase II of the proposed refinery is nearly identical and gives the ability to process medium-sulfur crude oil and produce low sulfur fuel oils. CIRI would be a primary fuel oil producer having the flexibility in the product mix to adjust to changes in crude oil input, governmental fuel regulations and market demand. Possible average product production rates are shown in Table I.

Table I

CIRI Phase I Possible Average Product Production Rate  
(barrels per day)

High Sulfur Ship Fuel	14,700
Low Sulfur Residual Fuels	6,600
Diesel and Distillate Fuels	16,500
Gasoline, Naphtha, Jet Fuel	11,000
Other	<u>1,200</u>
Total Production	50,000

Employment for the Phase I project would total approximately 140 people. Capital cost would be approximately \$150 million. The Phase II facility would not have increased employment but would require an additional \$50 million capital investment.

The proposed refinery would represent the latest technological advancement in design and engineering with regard to minimizing environmental impact. This latest technology centers around a) using smokeless flares which prevent large releases of waste gases (pollutants) to the atmosphere, b) several hydrodesulfurization units which remove sulfur and to some extent, nitrogen, ash and metallic impurities from the fuel products,



c) hydrocracking to upgrade heavy oil products in lieu of catalytic cracking which has been a significant source of particulate, sulfur dioxide and carbon monoxide emissions from existing oil refineries, d) hydrocarbon vapor recovery systems, e) by-product sulfur recovery and f) the burning of low sulfur fuel in newly designed process heaters which have relatively low particulate and oxides of nitrogen emission compared to older process heaters.

The crude oil would be brought to the proposed Rivergate oil refinery in up to 450,000 barrel (equivalent to 77,000 - dead weight tons) tankers. At full production the refinery would require approximately three tankers operating full-time with arrivals in Portland about every four and one-half days. Distribution of the finished products is expected to be primarily by pipeline under the Willamette River to the state-wide petroleum storage and distribution facilities in the Guild Lake area of Northwest Portland, and to Terminal 4 ship docks and certain other large customers in the local area. The remaining products would be transported via barge, rail and as little as possible by truck. Columbia Independent Refinery has indicated its intention to market its finished products within the State of Oregon, Southern Washington and Western Idaho.

Air Emissions

The major air contaminants emitted from the proposed oil refinery would be particulate, sulfur dioxide, nitrogen oxides, hydrocarbons and carbon monoxide. The primary sources of the emissions would be fuel burning devices (process heaters, steam boilers, incinerators), flares, and storage vessels. The fuel burning devices represent the largest source of air contaminants. The refinery would require 981 million BTU/hr. of heat input to process 50,000 barrels of crude oil per day. A combination of 1000 BBL/day of low sulfur residual fuel oil and 2700 BBL/day of distillate fuel oil and some refinery gas would be used to produce the necessary heat requirements.

Air pollutant emissions calculated for CIRI's Phase I, 50,000 BBL/day, are shown in Table 2.

Table 2  
Projected Atmospheric Emissions for CIRI Phase I, 50,000 BBL/day, Refinery  
(tons/year)

Particulate	107
Sulfur Dioxide	1,040
Hydrocarbons	690
Carbon Monoxide	100
Oxides of Nitrogen	1,255

Compliance with the Department's Special Maintenance Area Rule

Due to the proposed location of the CIRI facility, the most restrictive environmental rule that must be met by CIRI is the Department's special maintenance area rule Criteria for Approval of New Air Contaminant Sources in the Portland Metropolitan Special Air Quality Maintenance Area. Comprehensive analyses of the ability of the CIRI facility to

comply with the criteria of this rule is contained in the report presented at the January 24, 1975 EQC meeting regarding reduction in maximum sulfur content of residual fuels (Agenda Item J).

In summary, the above report concluded that the Department's sulfur content limitation of residual fuel rule would have to be reduced from 1.75% to 0.5% in the Portland Metropolitan Special Air Quality Maintenance Area by 1979 in order for both the emission and the ambient air impact criteria of the Department's Special Maintenance Area Rule to be met in 1979, the year when CIRI's Phase I facility would be operational. It was also pointed out in this report that tradeoffs afforded by the proposed clean fuels regulation would only maintain the annual particulate ambient air quality standard thru 1979, considering particulate emissions from CIRI Phase I, other allowed increase by the Department's Special Rule and uncontrollable growth. Further particulate emissions reductions would be needed thereafter to allow for future growth and maintenance of air quality standards. This fact would preclude consideration of CIRI's Phase II facility at this time regardless of the five-year permit limit imposed by the Department's rules. To assure necessary tradeoffs, CIRI would have to make 10,000 BBL/day of low sulfur residual fuel oil available for use in the Portland Metro Area. This requirement would not prevent competitors from supplying similar quality fuel oil.

The analyses used to reach the above conclusions utilized the best techniques available to the Department at this time. An expected superior method of analyzing air quality impact versus alternative control strategies will be available within three months. This method will be in the form of a very sophisticated atmospheric dispersion model and will be used to develop a ten-year air quality maintenance plan. It should provide more confident projections of air quality improvements afforded by alternative control strategies including clean fuels policies and may or may not show more benefits from a clean fuels policy than presently projected. The Department however is committed to act expeditiously on permit applications based on data and analysis available at this time.

Since the Department would, by issuance of the presently proposed permit, commit a portion of the growth allowed by the Special Maintenance Area Rule to CIRI, specifically 107 tons/year of particulates, it is considered justified to require periodic reports on the viability of the CIRI project so that if the project does not go forward the Department will be able to re-distribute emissions allocated to CIRI to other facilities and to consider changes to the clean fuels regulations as necessary.

#### Compliance with Emission Standards

The Department's air emission limits and EPA new source performance standards for petroleum refining, applicable to CIRI, are related to particulate and sulfur dioxide emissions, hydrocarbon evaporative losses, particulate size and plume opacity. The Department's evaluation of the emissions and emission controls included in the refinery design indicates that compliance with applicable regulations will be achieved with some margin of safety.

### Highest and Best Practicable Treatment and Control

The Department rules require highest and best practicable treatment and control for new facilities particularly those located in poor air quality areas. The CIRC facility will meet this requirement by:

- a. Utilizing best available burner design for minimizing particulate and NO<sub>x</sub> emission from process heaters which constitute the major source of emissions at the refinery.
- b. Providing the waste sludge incinerator with an electrostatic precipitator designed for high collection efficiency of particulate emissions.
- c. Controlling hydrocarbon evaporative losses from fuel storage tanks to comply with new EPA requirements thru application of floating roof and vapor recovery system controls. Emissions from storage vessels, relief valves and all loading facility connections are proposed to be vented to smokeless flares. The nuisance vapors collected from sources such as these would be burned in a flare pilot flame. Only abnormal conditions or emergency discharges would energize flares.
- d. Providing latest technological advancements to avoid emitting odors from the facility. Principle odor releasing sources from most oil refineries are catalytic crackers, process vessels, storage tanks, waste effluent handling equipment, process drains and conventional packing type seals on pump shafts that required drip pans. CIRC proposes to not use catalytic cracking, to utilize mechanical seals on pump shafts eliminating the need for drip pans and to cover and vent storage tanks, process drains and waste effluent equipment to vapor recovery systems.

### Air Quality Deterioration

Environmental Protection Agency regulations relating to the prevention of significant air quality deterioration due to particulate and SO<sub>2</sub> emissions became effective January 6, 1975. Although the application of the mandatory plan review portion of these regulations are not applicable to CIRC at this time, the deterioration in air quality that may result from CIRC emissions would be included as part of allowable deterioration. The Department has therefore reviewed particulate and sulfur dioxide emission impacts with respect to the EPA regulation with the following findings:

- a. Deterioration limits do not apply to the facilities in areas where air quality standards were exceeded in 1974. The two areas which would be most affected from CIRC emissions are Multnomah County, Oregon and Clark County, Washington - areas where particulate air quality standards were exceeded in 1974. Therefore particulate deterioration limits would not appear to be applicable to CIRC. Particulate impact and deterioration limits are shown in Table 3 for informational purposes only.

- b. SO<sub>2</sub> deterioration limits would appear to apply to the affected areas mentioned above since SO<sub>2</sub> air quality standards have not been exceeded in 1974. This would automatically subject the area to Class II (moderate growth) deterioration limits unless at some future date certain portions of the area, such as the Columbia Gorge, were changed through the public hearing to a Class I (clean air) area or such areas as the City of Portland were changed to a Class III area which would allow air quality to degrade to national ambient air standards. Projected ambient air concentrations of SO<sub>2</sub> from CIRI's phase I facility would comply with EPA criteria for Class II (moderate growth areas) as shown in Table 3.

Table 3  
CIRI Maximum Ground Level Impact (ug/m<sup>3</sup>)

	Air Quality Significant Deterioration Criteria			
	Phase I (50,000 BBL/day)	Class I (clean air)	Class II (moderate growth)	Class III National Air Quality Standards
Particulate matter				
annual geometric mean	0.44	5	10	60
maximum 24 hour average	4.0	10	30	150
Sulfur dioxide				
annual arithmetic mean	5.0 (33%)*	2	15	80
maximum 24 hour average	23 (23%)*	5	100	365
3 hour maximum	32 (4%)*	25	700	1300

\* indicates percent of Class II deterioration criteria used by CIRI.

The greatest impact with respect to Class II deterioration occurs in the Rivergate Industrial Park adjacent to the refinery where 33% of the SO<sub>2</sub> criteria would be used by phase I. This is a significant amount considering potential land available for other industrial growth but would be somewhat offset by tradeoffs from a clean fuels policy which are allowed to be considered in the EPA air quality deterioration regulation.

#### Water Quality Impact

The Phase I refinery would use about 428 gpm of water from the municipal water system about half of which would go to cooling tower makeup water. About 197 gpm would be used in the water conditioning plant for boiler feedwater makeup and other process units.

The primary sources of wastewaters from the proposed Phase I refinery would be the sanitary facilities for about 150 people, contaminated and uncontaminated storm water runoff, ship ballast water, the boiler plants, cooling towers and the sour water stripper. Table 4 shows the quantities of effluent components proposed to be discharged after treatment by the Phase I facility.

Table 4  
Phase I Waste Water Component Discharges  
(pounds per day)

<u>Parameter</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
BOD <sub>5</sub>	350	650
Suspended Solids	225	400
COD	2500	5000
Oil and Grease	100	200
Phenolics	1.0	2.2
Ammonia (nitrogen)	160	350
Sulfide	1.0	2.0
pH Range	6.0 - 9.0	

CIRI has proposed waste water treatment facilities designed to ensure that the effluent meets EPA requirements for new refinery sources. Domestic sewage would be treated by connection to the City of Portland municipal sewage plant but other waste waters from the sour water stripper, contaminated storm water and ballast water would be treated by oil water separators, dissolved air flotation system, activated sludge treatment plant and holding ponds. A carbon absorption treatment process would probably be required also to meet effluent guidelines on organic hydrocarbons (phenols) and insure against fish tainting problems in the Willamette River.

CIRI's main effluent discharge would be to the Willamette River with some discharge of uncontaminated storm water runoff to the Columbia Slough. The staff's review indicates that the impact of the Phase I waste water discharges would not have significant impact on the Willamette River or the Columbia Slough. A proposed NPDES effluent discharge permit has been drafted for the Phase I CIRI facility and will be made available to the public and CIRI for comments in the near future.

An oil spill contingency plan must be provided by CIRI to meet U.S. Coast Guard regulations and Department requirements. This plan must show in detail how oil spills would be controlled and/or cleaned up. In addition, CIRI has proposed to install and deploy floating oil booms around all ships, loading or unloading oil at CIRI's docks and install the latest technology in loading and unloading equipment.

#### Noise Impact

Evaluations of potential noise impact from the proposed refinery indicates compliance with Department noise rules can be achieved. The closest noise sensitive property is approximately one to two miles from the refinery site. The greatest degree of impact would occur during the construction phase of the refinery. Noise resulting during the construction phase would be exempt from the Department's noise rules, however, the Department would expect that CIRI and its contractors would cooperate to keep noise generally below nuisance limits.

#### Solid Wastes

No significant problem is anticipated in disposing of solid waste from the refinery. Disposal of about 70,000 cubic yards of dredged materials resulting from construction of the pipeline to Willbridge

would be accomplished by use of land fill within Rivergate. About 125 tons per day of sulfur would be handled in a liquid state to prevent dust entrainment of this material. About .05 ton per day of waste sludge would be incinerated with negligible emissions in comparison to refinery fuel combustion emissions.

### Conclusions

1. The CIRI Phase I, 50,000 BBL/day facility can meet all Department and Environmental Protection Agency requirements for air quality control, providing necessary emission tradeoffs to meet the criteria of the Department's Special Maintenance Area Rule are assured. This would require:
  - a. Adoption of a rule reducing the maximum sulfur content of residual fuel oil used in Multnomah, Clackamas and Washington Counties from 1.75% to 0.5%.
  - b. CIRI to make at least 10,000 BBL/day of 0.5% residual fuel oil available for use in the three-county area.
2. The Department cannot consider issuance of an Air Contaminant Discharge Permit for the CIRI Phase II, 50,000 BBL/day facility at this time since the Department's permit rule limits authorization to discharge air contaminants to no more than five years. The CIRI, Phase II facility is proposed to be operational in 1983, eight years from now. In addition, it appears that the Phase II facility would not meet ambient air impact criteria of the Department's Special Maintenance Area Rule and commitment to distant future increases in emissions at this time without a sound data base and ten-year Air Quality Maintenance Plan is considered inadvisable.
3. Viability of the CIRI project must be closely monitored so that if the project should not go forward, the emission allocation given to this facility can be made available for other proposed facilities.
4. The CIRI facility would, from an air quality standpoint, provide highest and best practicable treatment and control and would be a relatively low air emission facility when compared to existing oil refineries in this country. Clean fuel would be used in process heaters and odors should not be a problem considering the treatment proposed to be provided and the great distance to the nearest residence.
5. The CIRI facility would use some of the air quality benefits that might be derived from a clean fuels policy in the Portland Metro Area but would provide a source of clean fuels which may not be available from other sources in the future.
6. Water quality impact of the proposed CIRI facility is considered minor. Effective phenol control through activated carbon adsorption would probably be needed to ensure no impact on fisheries in the Willamette River.

7. Noise control should enable the facility to comply with Department noise regulations which are designed to protect against interference with speech and sleep at the nearest residence. Location of the CIRC facility in the large Rivergate Industrial Park should provide a good buffer zone between noise generating sources and residences.
8. Solid waste disposal problems would be adequately controlled. Large quantities of elemental sulfur derived from oil desulfurization processes could be handled, transferred and stored in the liquid state without causing dusting problems. Sludges could be incinerated with very minimal atmospheric emissions.

Recommendations

It is the Director's recommendation that:

1. The attached proposed Air Contaminant Discharge Permit for the CIRC Phase I facility be issued subject to consideration of testimony presented at this hearing and adoption of a 0.5% residual fuel oil sulfur content limit in Multnomah, Clackamas and Columbia Counties, effective January 1, 1979.
2. The Air Contaminant Discharge Permit application for the CIRC Phase II facility be denied at this time. A Phase II application could be reconsidered at a time closer to its proposed construction and after a technically sound data base is developed and a long range air quality maintenance plan is approved.



KESSLER R. CANNON

# 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

<p><b>ISSUED TO:</b></p> <p>Columbia Independent Refinery Inc.          P. O. Box 1689          Portland, Oregon 97207</p> <p><b>PLANT SITE:</b></p> <p>Rivergate Industrial Park          Portland, Oregon</p> <p style="text-align: center;"><b>ISSUED BY DEPARTMENT OF ENVIRONMENTAL QUALITY</b></p> <hr style="width: 100%;"/> <p style="display: flex; justify-content: space-between;"> <span>Kessler R. Cannon Director</span> <span>Date</span> </p>	<p><b>REFERENCE INFORMATION</b></p> <p>Application No. <u>275, 276, 277</u></p> <p>Date Received <u>April 3, 1974</u></p> <p>Other Air Contaminant Sources at this Site:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;"></th> <th style="width: 60%;">Source</th> <th style="width: 15%;">SIC</th> <th style="width: 20%;">Permit No.</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>_____</td> <td></td> <td></td> </tr> <tr> <td>(2)</td> <td>_____</td> <td></td> <td></td> </tr> </tbody> </table>		Source	SIC	Permit No.	(1)	_____			(2)	_____		
	Source	SIC	Permit No.										
(1)	_____												
(2)	_____												

**SOURCE(S) PERMITTED TO DISCHARGE AIR CONTAMINANTS:**

Name of Air Contaminant Source	Standard Industry Code as Listed
Petroleum Refining 50,000 BBL/day Maximum Capacity	2911
Fuel Burning Equipment - Residual and Distillate oil both exceeding 250 million BTU/hr. (heat input)	4961
Incinerators (40 lbs/hr to 2,000 lbs/hr capacity)	None

Permitted Activities

Until such time as this permit expires or is modified or revoked, Columbia Independent Refinery Inc. is herewith permitted in conformance with the requirements, limitations and conditions of this permit to discharge air contaminants from its petroleum refinery located in the Rivergate Industrial Park, Portland, Oregon.

Compliance with the specific requirements, limitations and conditions contained herein shall not relieve the permittee from complying with all rules and standards of the Department and the laws administered by the Department.

- Section A: Petroleum Refining
- Section B: Fuel Burning Equipment
- Section C: Incinerator



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Columbia Independent Refinery Inc.

SECTION A - PETROLEUM REFINING

Performance Standards and Emission Limits

1. The permittee shall at all times maintain and operate all air contaminant generating processes and all air contaminant control equipment at full efficiency and effectiveness such that the emissions of air contaminants are kept at the lowest practicable levels.
2. Emissions of air contaminants from petroleum refining and all associated air contaminant control equipment shall not exceed any of the following:
  - a. An opacity equal to or greater than twenty (20) percent opacity for a period or periods aggregating more than thirty (30) seconds in any one hour from any single non fuel burning source of emissions.
  - b. An emission of particulate matter which is larger than 250 microns in size provided such particulate matter does or will deposit upon the real property of another person.
3. The permittee shall not cause or permit the emissions of odorous matter in such a manner as to contribute to a condition of air pollution or exceed:
  - a. A scentometer No. 0 odor strength or equivalent dilution in residential and commercial areas.
  - b. A scentometer No. 2 odor strength or equivalent dilution in all other land use areas.

Scentometer Readings

Scentometer No.	Concentration Range No. of Thresholds
0	1 to 2
1	2 to 8
2	8 to 32
3	32 to 128

4. The permittee shall not sell, distribute or make available for use any distillate fuel oil, in the entire state of Oregon, containing more than the following percentages of sulfur:
  - a. ASTM Grade 1 fuel oil - 0.3 percent by weight
  - b. ASTM Grade 2 fuel oil - 0.5 percent by weight
5. The permittee shall not sell, distribute or make available for use in the entire state of Oregon any residual fuel oil (oil meeting the specifications of ASTM Grade 4, Grade 5, or Grade 6 fuel oil), containing more than 1.75 percent sulfur by weight. (OAR, Chapter 340, Sections 22-005, 22-010, 22-025).

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6. After January 1, 1979, if the Department so requires by rule, the permittee shall not sell or distribute for use in Multnomah, Washington, Clackamas and Columbia counties of Oregon any residual fuel oil (oil meeting the specifications of ASTM Grade 4, Grade 5 or Grade 6 fuel oil) containing more than 0.5 percent sulfur by weight.

Special Conditions

7. The permittee shall construct a petroleum refinery with processing capacity no greater than 50,000 BBL/day and shall submit detailed plans and specifications to the Department for review and approval, prior to construction, for at least the following: All petroleum storage and loading equipment, sulfox plant, by-product sulfur handling, storage and shipment facilities, cooling tower, vapor recovery system and the flaring system. Said refinery shall incorporate highest and best practicable treatment and control facilities and procedures throughout.
8. The permittee shall handle, transfer, store and subsequently load for shipment all by-product sulfur as a liquid. If because of process equipment breakdown it becomes necessary for the sulfur by-product to be stored in a solid form, it shall be stored in a completely enclosed area. All displaced air from this enclosed area must pass through an air pollution control system, approved by the Department before being discharged into the atmosphere.
9. The permittee shall be subject to the following provisions with regards to the unloading, transferring, storage and loading of all petroleum liquids.
  - a. Petroleum liquid having a true vapor pressure of 78 mm Hg or less shall be stored in vessels equipped with a conservation vent or equivalent.
  - b. Petroleum liquid having a true vapor pressure in excess of 78 mm Hg but not greater than 570 mm Hg shall be stored in vessels equipped with a floating roof or equivalent.
  - c. Petroleum liquid having a true vapor pressure in excess of 570 mm Hg shall be stored in vessels equipped or tied in with a vapor recovery system or its equivalent.
  - d. All hatch covers must be kept in good operating condition and must be closed at all times except during actual gauging operations.
  - e. When unloading and loading petroleum liquids having a true vapor pressure of 78 mm Hg or greater under actual handling conditions, necessary equipment must be provided so a vapor tight seal between the adapter and the compartment hatch will be maintained. All displaced vapor shall be discharged to vapor recovery or equivalent control system.
10. The permittee is prohibited from discharging any treated or untreated water to any public waterway unless such discharge is the subject of a valid Waste Discharge Permit issued by the Department of Environmental Quality.

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11. The permittee shall comply with all applicable Department noise control regulations and demonstrate compliance no later than 30 days after facility start-up.
12. The permittee shall cover all API gravity separators to control hydrocarbon emissions.
13. The permittee shall make available for sale after January 1, 1979 in Multnomah, Washington, and Clackamas counties within the State of Oregon at least 10,000 barrels per day of residual fuel oil with a maximum sulfur content of 0.5 percent by weight.
14. The permittee shall submit to the Department written documentation of the following increments of progress by no later than the dates indicated below, that the proposed oil refinery is a viable project and is proceeding towards completion. If at any time it is apparent that the project is not viable as determined by failure to adhere to the following schedule, the permit shall be subject to modification or revocation.
  - a. Complete engineering predesign; update construction estimates and amend feasibility studies October 1, 1975
  - b. Obtain crude supply, marketing and financial commitments January 1, 1976
  - c. Let engineering contract April 1, 1976
  - d. Issue purchase orders for major process equipment July 1, 1976
  - e. Begin site preparation January 1, 1977
  - f. Initiate construction April 1, 1977
  - g. Start up refinery January 1, 1979
15. The permittee shall submit for Department review and approval prior to start-up of the refinery, the analytic methods that will be used by the refinery to determine sulfur, ash and nitrogen content (percent by weight).
16. Operation of the flares shall be considered a breakdown condition and therefore subject to general condition number 11 of this permit.
17. Continuous monitoring of specific emissions and emission points may be required by the Department after review of final engineering plans and specifications.
18. The permittee shall provide within three months of commencing commercial operation, easily accessible sampling ports and platforms on all emission exhaust stacks. The location and design of these sampling ports and platforms must be reviewed and approved by the Department.

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Emission Reduction Plan

19. The permittee shall implement the emission reduction plan stated in Section B of this permit.

Compliance Schedule

20. None required.

Monitoring and Reporting

21. The permittee shall effectively monitor the operation and maintenance of the facility and associated air contaminant control equipment. 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. At least the following parameters shall be monitored and recorded at the indicated interval:

<u>Parameter</u>	<u>Minimum Monitoring Frequency</u>
a. Amount of sulfur by-product reclaimed and/or sold	Daily
b. Any observable increase in particulate, sulfur dioxide, or odorous emissions from the facility, suspected reason for such increased emission and projected date of any action to reduce the emission increase	Daily
c. Operating schedule (hours/day) of the sulfur by-product transferring and shipment facility	Monthly
d. The quantity, sulfur, ash and nitrogen content (percent by weight) of each shipment of residual and distillate fuel oil sold or distributed for use in Multnomah, Washington, Clackamas and Columbia counties as well as the remaining counties in the State of Oregon	As performed
e. The date of inspection and/or type of maintenance performed on the petroleum and sulfur by-product storage and handling facilities, cooling tower, flaring system and vapor recovery system	As performed

22. The permittee shall submit the following recorded information to the Department in writing at the indicated intervals:

<u>Parameter</u>	<u>Interval</u>
a. Tons of sulfur by-product reclaimed	Quarterly

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<u>Parameter</u>	<u>Interval</u>
b. Operating hours of the sulfur by-product handling, storage and shipment facility	Quarterly
c. Quantity, sulfur, ash and nitrogen content (percent by weight) of each shipment of residual and distillate fuel oil sold within the State of Oregon, by individual county	Quarterly

SECTION B - FUEL BURNING EQUIPMENT

Performance Standards and Emission Limits

1. The permittee shall at all times maintain and operate all fuel burning devices and related equipment at full efficiency such that the emissions of air contaminants are kept at the lowest practicable levels.
2. Emissions of air contaminants from fuel burning equipment shall not exceed any of the following:
  - a. Visible emissions shall not equal or exceed 20% opacity for a period or periods aggregating more than three (3) minutes in any one (1) hour.
  - b. Particulate emissions shall not exceed smoke spot numbers as measured by ASTM D 2156-65 "Standard Method to test for Smoke Density", as follows:

<u>Types of Fuel</u>	<u>Smoke Spot Number</u>
Residual	4
Distillate	2

- c. Emissions of particulate, sulfur dioxide and nitrogen oxides shall not exceed the following emission rates for the specific fuels listed:

<u>Types of Fuels</u>	<u>Emission Rate Limitation</u>		
	<u>lbs/mm BTU</u>		
	<u>Particulate</u>	<u>SO2</u>	<u>NOx</u>
Refinery gas	0.014	0.034	0.2
Distillate	0.017	0.10	0.3
Residual	0.042	0.55	0.3

- d. The maximum hourly emissions from all fuel burning equipment shall not exceed:

<u>Pollutant</u>	<u>Emission Rate lbs/hr</u>
Particulate	24.4
Sulfur dioxide	237.4
Nitrogen oxides	285

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- e. The maximum yearly emissions from all fuel burning equipment shall not exceed:

<u>Pollutant</u>	<u>Emissions-tons/year</u>
Particulate	107
Sulfur dioxide	1040
Nitrogen oxides	1248

- f. When a combination of fuels are used in any one fuel burning device then the applicable emission limits in 2b, 2d and 2e shall be determined by proration of the specific fuel emission rate limitations in proportion to the actual fuel mix.

3. Sulfur content of fuel oil burned shall be limited as follows:

- a. The permittee shall not use any residual fuel oil containing more than 0.5 percent sulfur by weight.
- b. The permittee shall not use any distillate fuel oil containing more than 0.3 percent sulfur by weight.

4. The permittee shall not cause or permit the emission of any particulate matter which is larger than 250 microns in size provided such particulate matter does or will deposit upon the real property of another person.

Special Conditions

5. The permittee shall submit detailed plans and specifications for all fuel burning equipment for Department review and approval prior to commencing construction. Said fuel burning equipment shall incorporate highest and best practicable emission control and technology.
6. The permittee shall not operate the fuel burning devices in such a manner as to exceed a total of 981,280,000 BTU's per hour of heat input.
7. The permittee shall have particulate, oxides of nitrogen and sulfur dioxide emission tests conducted for all fuel burning and associated air pollution control equipment conducted no sooner than three months but not later than six months after commencing commercial operation. The emission tests shall be conducted for refinery gas, distillate and/or residual fuel oil depending on whatever fuel or fuel mix will be burned in each fuel burning device. The tests must be performed in accordance with methods on file at the Department or in conformance with recognized applicable standard methods approved in writing in advance by the Department. The test results shall be submitted to the Department within sixty (60) days of completion of the tests.
8. The permittee shall provide within three months of commencing commercial operation, easily accessible sampling ports and platforms on all fuel burning exhaust stacks. The location and design of these sampling ports and platforms must be reviewed and approved by the Department.

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9. The permittee shall provide fuel sampling facilities on all feedlines to each fuel burning device (valve for taking a sample of fuel).
10. The permittee shall burn only refinery gas, distillate, residual or combination of the three fuels in the fuel burning equipment in a manner such that the emissions do not exceed the limitations set forth in this permit.
11. If the permittee desires to burn other fuels or combinations of fuels not approved within this permit, acceptable source test reports must be submitted to the Department for review and approval and a permit ammendment must be obtained prior to use of such other fuel.
12. The permittee is prohibited from discharging any treated or untreated water to any public waterway unless such discharge is the subject of a valid Waste Discharge Permit issued by the Department of Environmental Quality.
13. The permittee shall comply with all applicable Department noise control regulations and demonstrate compliance no later than 30 days after facility starts up.

Emission Reduction Plan

14. The permittee shall implement the following emission reduction plan during air pollution episodes when so notified by this Department:

<u>Notice Condition</u>	<u>Action to be Taken by Permittee</u>
a. Alert	1. Boiler and process heater lancing or soot blowing if required shall be performed only between the hours of 12 noon and 4:00 p.m.
b. Warning	1. Continue alert measures 2. Minimize emissions by reducing heat and steam demands to absolute necessities consistent with preventing equipment damage 3. Burn the cleanest available fuels possible 4. Prepare for immediate shutdown of the boilers and process heaters
c. Emergency	1. Upon notification from the Department, immediately cease operation of the boilers and process heaters until notified by the Department that the condition has passed

Compliance Schedule

15. None required.

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Monitoring and Reporting

16. The permittee shall effectively monitor the operation and maintenance of all fuel burning equipment 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 refinery site at all times for inspection by the authorized representatives of the Department. At least the following parameters shall be monitored and recorded at the indicated interval:

<u>Parameter</u>	<u>Minimum Monitoring Frequency</u>
a. Operating schedule (hours/day) of the steam boiler	Daily
b. Operating schedule (hours/month) of all other fuel burning equipment not previously mentioned in (a)	Daily
c. Any observable increase in particulate and/or sulfur dioxide emissions from the fuel burning equipment, suspected reason for such increased emission and projected date of any action to reduce the emission increase	Daily
d. Quantity of distillate and/or residual fuel oil and/or refinery gas burned for each process heater and boiler	Daily
e. The sulfur, ash, nitrogen (percent by weight) and BTU content of every fuel or fuel mix used in each process heater and boiler	After any change in fuel or fuel mix or significant change (as defined by the Department) in sulfur, ash, nitrogen or BTU content of each fuel
f. Particulate, sulfur dioxide and nitrogen oxide emission rates from each fuel burning equipment exhaust stack for each fuel or fuel mix used	Semi-annually
g. A description of any maintenance to the fuel burning equipment	As performed
h. Smoke spot for each fuel oil burning device	Monthly or after any change in fuel mix



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17. The permittee shall submit the following recorded information to the Department in writing at the indicated intervals:

<u>Parameter</u>	<u>Interval</u>
a. Operating hours of the fuel burning equipment	Quarterly
b. Quantities of distillate (diesel) fuel oil and/or refinery gas burned for each process heater and boiler	Quarterly
c. Arrange sulfur, ash, nitrogen (percent by weight) and BTU content of every fuel or fuel mix used in each process heater and boiler	Quarterly
d. Results of the particulate, sulfur dioxide and nitrogen oxide emission tests from each fuel burning exhaust stack	Semi-annually

SECTION C - INCINERATOR

Performance Standards and Emission Limits

1. The permittee shall at all times maintain and operate the waste sludge incinerator and associated air pollution control equipment at full efficiency and effectiveness such that the emissions of air contaminants are kept at the lowest practicable levels.
2. Emissions of air contaminants from the waste sludge incinerator and associated air pollution control equipment shall not exceed any of the following:
  - a. An opacity equal to or greater than twenty (20) percent opacity for a period or periods aggregating more than three (3) minutes in any one (1) hour from the incinerator or associated air pollution control device.
  - b. An emission of particulate matter which is larger than 250 microns in size provided such particulate matter does or will deposit upon the real property of another person.
  - c. An emission of particulate matter which does not exceed 0.43 lbs/hr.

Special Conditions

3. The permittee shall submit detailed plans and specifications for the waste sludge incinerator and associated air pollution control equipment for Department review and approval prior to commencing construction. Said incinerator shall incorporate highest and best practicable treatment and emission control and technology.

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4. The maximum capacity of the waste sludge incinerator shall not exceed 166 lbs/hr of wet sludge.
5. The permittee shall have emission tests of exhaust from the electrostatic precipitator conducted no sooner than three months but not later than six months after commencing commercial operations. The results must be submitted to this office within thirty (30) days of the source test. The tests must be performed in accordance with methods on file at the Department of Environmental Quality or in conformance with recognized applicable standard methods approved in writing in advance by the Department. Tests shall be performed while equipment is operating at maximum capacity or under such conditions that emissions to the atmosphere will tend to be maximized. The Department shall be notified of the date of the tests so that a staff member can be present to observe the testing.
6. The permittee shall provide within three months of commencing commercial operation, easily accessible sampling ports and platform on the exhaust stack of the electrostatic precipitator. The location and design of the sampling ports and platform must be reviewed and approved by the Department.
7. The permittee shall obtain written approval from the Department for each general type of waste sludge proposed to be incinerated.
8. The permittee shall burn as auxiliary fuel only refinery gas and/or distillate fuel oil in the waste sludge incinerator in a manner such that the emissions do not exceed the limitations set forth in this permit.
9. The permittee shall handle and store material collected by the electrostatic precipitator in a manner such that this material would not be subject to entrainment into the atmosphere. Disposal of the collected material must be conducted in a manner approved by the Department in writing.
10. The permittee shall comply with all applicable Department noise control regulations and demonstrate compliance no later than 30 days after refinery starts up.

Emission Reduction Plan

11. The permittee shall implement the following emission reduction plan during air pollution episodes when so notified by this Department.

Notice Condition

Action to be Taken by Permittee

- |            |   |
|------------|---|
| a. Alert   | 1. Immediately inspect all air pollution control equipment to insure that the systems are providing the best possible control |
| b. Warning | 1. Prepare for the immediate shutdown of the waste sludge incinerator<br>2. Burn the cleanest available fuels possible        |

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Notice Condition

Action to be Taken by Permittee

c. Emergency

Upon notification from the Department, immediately cease operation of the waste sludge incinerator until notified by the Department that the condition has passed

Compliance Schedule

12. None required

Monitoring and Reporting

13. The permittee shall effectively monitor the operation and maintenance of the water sludge incinerator 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 refinery site at all times for inspection by the authorized representatives of the Department. At least the following parameters shall be monitored and recorded at the indicated intervals:

Parameter

Minimum Monitoring Frequency

- |  |  |
|--|--|
| a. Operating schedule (hours/day) of the waste sludge incinerator  | Daily  |
| b. Any observable increase in particulate emissions from the waste sludge incinerator or electrostatic precipitator, suspected reason for such increased emission and projected date of any action to reduce the emission increase | Daily  |
| c. Quantity of waste sludge incinerated  | Daily  |
| d. Quantity of material collected by the electrostatic precipitator  | Weekly   |
| e. A description of any maintenance to the waste sludge incinerator and/or electrostatic precipitator  | As performed   |
| f. Quantity of distillate fuel oil and/or refinery gas burned  | Daily  |
| g. The sulfur, ash, nitrogen (percent by weight) and BTU content of every fuel used in the incinerator   | After any change in fuel mix or significant change (as defined by the Department) in sulfur, ash, nitrogen or BTU content of each fuel |
| h. Emission rates from the electrostatic precipitator  | Semi-annually  |

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Columbia Independent Refinery Inc.

<u>Parameter</u>	<u>Minimum Monitoring Frequency</u>
i. Smoke spot	Monthly or after any change in fuel mix

14. The permittee shall submit the following recorded information to the Department in writing at the indicated intervals:

<u>Parameter</u>	<u>Interval</u>
a. Operating hours of the waste sludge incinerator	Quarterly
b. Quantity of distillate fuel oil and/or refinery gas burned	Quarterly
c. Quantity of sludge incinerated	Quarterly
d. Average sulfur, ash, nitrogen (percent by weight) and BTU content of every fuel mix used in the incinerator	Quarterly
e. Results of emission tests on the electrostatic precipitator	Semi-annually
f. Quantity of collected electrostatic precipitator material	Annually

AIR CONTAMINANT DISCHARGE PERMIT PROVISIONS

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General Conditions

- G1. A copy of this permit or at least a copy of the title page and an accurate and complete extraction of the operating and monitoring requirements and discharge limitations shall be posted at the facility and the contents thereof made known to operating personnel.
- G2. This 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.
- G3. The permittee is prohibited from conducting any open burning at the plant site or facility.
- G4. The permittee is prohibited from causing or allowing discharges of air contaminants from source(s) not covered by this permit so as to cause the plant site emissions to exceed the standards fixed by this permit or rules of the Department of Environmental Quality.
- G5. 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, Section 21-050.
- G6. (NOTICE CONDITION) The permittee shall dispose of all solid wastes or residues in manners and at locations approved by the Department of Environmental Quality.
- G7. The permittee shall allow Department of Environmental Quality representatives access to the plant site and record storage areas 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.
- G8. The permittee, without prior notice to and written approval from the Department of Environmental Quality, is prohibited from altering, modifying or expanding the subject production facilities so as to affect emissions to the atmosphere.
- G9. The permittee shall be required to make application for a new permit if a substantial modification, alteration, addition or enlargement is proposed which would have a significant impact on air contaminant emission increases or reductions at the plant site.

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- G10. This permit is subject to revocation for cause, as provided by law, including:
- Misrepresentation of any material fact or lack of full disclosure in the application including any exhibits thereto, or in any other additional information requested or supplied in conjunction therewith;
  - Violation of any of the requirements, limitations or conditions contained herein; or
  - Any material change in quantity or character of air contaminants emitted to the atmosphere.
- G11. The permittee shall notify the Department by telephone or in person within one (1) hour of any scheduled maintenance, malfunction of pollution control equipment, upset or any other conditions that cause or may tend to cause a significant increase in emissions or violation of any conditions of this permit. Such notice shall include:
- The nature and quantity of increased emissions that have occurred or are likely to occur,
  - The expected length of time that any pollution control equipment will be out of service or reduced in effectiveness,
  - The corrective action that is proposed to be taken, and
  - The precautions that are proposed to be taken to prevent a future recurrence of a similar condition.
- G12. Application for a modified or renewal of this permit must be submitted not less than 60 days prior to permit expiration date. A filing fee and Application Investigation and Permit Issuing or Denying Fee must be submitted with the application.
- G13. The permittee shall submit the Annual Compliance Determination Fee to the Department of Environmental Quality according to the following schedule:

<u>Amount Due</u>	<u>Date Due</u>
\$ 615.00	December 31, 1975
615.00	1976
615.00	1977
615.00	1978
(see G12)	December 31, 1979



## ENVIRONMENTAL QUALITY COMMISSION

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

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The Dalles

KESSLER R. CANNON  
Director

TO: Environmental Quality Commission  
From: Director  
Subject: Agenda Item L, January 24, 1975, EQC Meeting

Public Hearing - Proposed Air Contaminant Discharge Permit  
for Charter Energy Co. 52,400 bbl/day Oil Refinery

### Background

On February 21, 1974, representatives of the Charter Energy Company (Charter) first met with the Department to discuss the possibilities of constructing an oil refinery. Initially, three sites were considered. The site selected is adjacent to the Reichhold Chemical complex 4 miles north of St. Helens, Oregon. Charter indicated existing poor air quality was a prime consideration for not selecting a site in the Rivergate Industrial Park in North Portland, Oregon.

An application for an Air Contaminant Discharge Permit for the proposed Charter refinery was received by the Department on September 11, 1974, followed on November 7, 1974, by a comprehensive Environmental Impact Assessment.

Charter subsequently amended its permit application on December 11, 1974, to commit to production of 0.5% sulfur content residual fuel oil should the EQC adopt a Clean Fuels Policy.

An application for a National Pollution Discharge Elimination System (NPDES) wastewater discharge permit was submitted to the Department on nearly the same schedule as the air permit application.

The Department considered Charter's air permit application essentially complete for processing in mid-November 1974, and presented a status report to the EQC at its November 22, 1974 meeting (Agenda Item E), covering Charter and two other proposed oil refineries in Oregon. Also mentioned in this report was a Clean Fuels Policy which must be adopted if the Columbia Independent Refinery, Inc. facility in North Portland is to be approved in order to assure emissions tradeoffs required by the Department's special rule Criteria for Approval of New Air Contaminant Sources in the Portland Metropolitan Special Air Quality Maintenance Area.



Contains  
Recycled  
Materials

A proposed Air Contaminant Discharge Permit was prepared for the Charter facility in late December 1974. Public Notice was given on December 24, 1974, that the proposed Air Contaminant Discharge Permit had been prepared and that a public hearing on this proposed permit would be held at the January 24, 1975, EQC meeting. Public Notice was also given on December 18, 1974, for a hearing at the January 24, 1975, EQC meeting to consider reducing the Department's maximum sulfur content residual fuel oil limitation from 1.75% to 0.5% in the Multnomah, Clackamas, Washington and Columbia County area. The rule change in Columbia County was considered feasible and desirable to offset air emissions from proposed oil refineries in Columbia County.

### Facility Description

The Charter Energy Oil refinery is proposed to be located on a 140-acre site adjacent to Reichhold Chemical Inc., near St. Helens, Oregon. The site could ultimately accommodate a refinery larger than 100,000 bbl/day capacity. The Charter Refinery would be extremely simple compared to typical refineries. It would be capable of processing some variations in crude oils and producing a somewhat limited variety of products. No cracking (even relatively pollution free hydrocracking) has been initially planned for the conversion of heavy oils into gasoline and jet fuel. Charter Energy's proposed design would basically give it the ability to produce unleaded motor gasoline, diesel fuel and low and high sulfur residual fuel oil. Possible average product production rates based on Alaska North Slope crude are shown in table 1.

Table 1  
Charter  
Possible Product Production Rate  
(Barrels per day)

Unleaded motor gasoline	8,800
Diesel fuel oil	16,500
Low sulfur residual fuel oil	16,900
High sulfur residual fuel oil	8,600
Liquid volume loss	<u>1,600</u>
Total Production	52,400

Charter has indicated that negotiations have been underway for some time for supplying considerable quantities of its residual fuel oil to Reichhold Chemical or to new electric power plants. These facilities could considerably upgrade this fuel to a low pollution gas essentially free of sulfur and ash through use of a partial oxidation process. If this happens, substantially less low-sulfur residual fuel oil might be available for existing users.

Employment for the Charter facility would total approximately 100 people. Capital cost of the facility would exceed 100 million dollars.



Charter's proposed refinery would incorporate the latest proven design and engineering technology with regard to minimizing environmental impact. This technology centers around using: a) smokeless flares which prevent large releases of waste gases (pollutants) to the atmosphere, b) hydrodesulfurization which removes sulfur and to some extent nitrogen, ash and metallic impurities from the fuel products, c) hydrocarbon vapor recovery systems, d) byproduct sulfur recovery, and e) Claus process tail gas treatment of hydrogen sulfide.

The crude oil would be brought to the proposed oil refinery in up to 250,000 barrels capacity tankers (38,000 dead weight tons). At full production the refinery would require approximately three tankers operating full time with arrivals about every five days. Distribution of the principal products as proposed is expected to be by barge, railway tank car and automotive truck-trailer combinations. Charter is hopeful that it would become feasible at a later date for pipelines to be constructed which would provide the primary means of transporting the finished products. Charter has indicated its intention to market its finished products primarily in Oregon and Southern Washington.

#### Air Emissions

The major air contaminants emitted from the proposed oil refinery would be particulates, sulfur dioxide, oxides of nitrogen, hydrocarbons and carbon monoxide. The primary sources of these pollutants would be fuel burning devices (process heaters, steam boiler, incinerator), flares and storage vessels. The fuel burning devices represent the largest source of air contaminants. The refinery would require 827 million Btu/hr of heat input (approximately 2,800 bbl/day of diesel fuel oil) to process 52,400 barrels of Alaskan North Slope crude oil per day. A combination of low ash, low sulfur diesel fuel oil and refinery gas would be used to produce the necessary heat requirements.

Air pollutant emissions calculated for Charter's 52,400 barrel per day refinery are listed in Table 2.

Table 2  
Projected Atmospheric Emissions for Charter 52,000 bbl/day Refinery  
(tons/year)

Particulate	146
Sulfur dioxide	460
Hydrocarbons	600
Oxides of Nitrogen	1200

### Air Quality Deterioration

Due to the location of the proposed Charter facility the most restrictive environmental rule that must be met by Charter is the Environmental Protection Agency regulations relating to the prevention of significant air quality deterioration due to particulate and SO<sub>2</sub> emissions which became effective January 6, 1975. Although the application of the mandatory plan review portion of this regulation is not applicable to Charter at this time, the deterioration in air quality that may result from Charter emissions would be included as part of the allowable deterioration. The Department has therefore reviewed particulate and sulfur dioxide emission impacts with respect to the EPA regulation with the following findings:

1. Since particulate and SO<sub>2</sub> National Ambient Air Quality Standards have not been exceeded in Columbia County in 1974, the deterioration regulation and criteria for Class II deterioration for both air contaminants would appear to apply in this county.
2. Projections of particulate and sulfur dioxide air quality impact from Charter's emission indicate no violation of the Class II (moderate growth) criteria as shown in Table 3. A significant portion of the Class II margin allowed for 24-hour particulate deterioration would be used by the proposed Charter facility. Charter could use up to 100% of the allowable particulate deterioration limit in an area of about 25 square miles around the plant site. The areas most heavily impacted would be those areas elevated with respect to the plant site such as the hills to the west and, to some degree, the City of St. Helens. Also in these areas, up to 94% of the Class II margin for sulfur dioxide impact would be used up by the proposed facility.

Table 3  
Charter Maximum Ground Level Impact (ug/m<sup>3</sup>)

	Charter Energy (52,400 BPD)	EPA Significant Deterioration Criteria		
		Class I (Clean Air)	Class II (Mod. Growth)	Class III NAAQS**
Particulate Matter				
Annual Geometric Mean	4.2(42%)*	5	10	60
Max. 24-hour average	30(100%)*	10	30	150
Sulfur Dioxide				
Annual Arith. Mean	13(87%)*	2	15	80
Max. 24-hour average	94(94%)*	5	100	365
Max. 3-hour average	520(74%)*	25	700	1300

\*Indicates percent of Class II deterioration criteria used by Charter.

Air quality impact tradeoffs from use of low sulfur residual fuel oil in Columbia County may offset some of the deterioration caused by Charter emissions. Also, significantly impacted areas could be rezoned to Class III after public hearing to accommodate other potential industrial growth in the vicinity.

Burning more costly diesel fuel, as is proposed by Charter, at this facility may impose an economic disadvantage to Charter but the absolute necessity for Charter to burn low emission diesel fuel is apparent in order to meet existing air quality deterioration regulations.

#### Compliance with Emission Standards

The Department air emission limits and EPA new source performance standards for petroleum refining, applicable to Charter, are related to particulate and sulfur dioxide emissions, hydrocarbon evaporative losses particulate size and plume opacity. The Department's evaluation of the emissions and emission controls included in the refinery design indicates that compliance with applicable regulations will be achieved with some margin of safety.

#### Highest and Best Practicable Treatment and Control

The Department's rules require highest and best practicable treatment and control for new facilities. Charter proposes to meet this requirement by:

- 1) Use of 0.1% S (maximum) diesel fuel in the refinery's process heaters, thereby significantly reducing sulfur dioxide and particulate emissions to meet air quality deterioration limits.
- 2) Installation and operation of two Claus plants (part of the sulfur recovery facilities) as a redundant system intended to minimize the possibility of release of hydrogen sulfide while keeping the plant operational in the event of failure of the on-line Claus plant.
- 3) Application of latest technology for control of hydrocarbon emissions utilizing vapor recovery systems.
- 4) Use of smokeless flaring which will be restricted to unusual or emergency situations.
- 5) Providing latest technological advancements to avoid emitting odors from the facility. Principal odor releasing sources from most oil refineries are catalytic crackers, process vessels, storage tanks, process drains, pumpshaft seals and waste effluent handling equipment. Charter Energy proposes not to use catalytic cracking, proposes to treat all refinery waste gas streams for the removal of H<sub>2</sub>S, and proposes to enclose storage tanks, API aqueous waste separators and refinery sewer systems and to vent all of these odor sources to vapor recovery systems.

Additionally, the Department would require use of latest design, low-emission type process burners.

### Charter Air Emissions and Relation to Clean Fuels Policy

The Department has recently proposed guidelines for not allowing any significant air contaminant emission sources to locate within the Longview-Rainier-Portland Airshed, at least until effects of sources in this area on the critical Portland Area air quality can be fully assessed.

Since the Charter Refinery would be a major source of air emissions and since it could produce low sulfur residual fuel oil which could offer some emission tradeoffs and lessen the impact of this facility on airshed air quality, it is both feasible and desirable to adopt a clean fuels policy for Columbia County. Details of tradeoffs from a 0.5% S limit for residual fuel oil in Columbia County are contained in the January 24, 1975 report to the EQC (Agenda Item J) on a clean fuels policy. Charter would have to make at least 2,000 bbl/day of 0.5% S residual oil available for use in Columbia County if air emission tradeoffs are to be assured.

Charter had initially proposed to produce 1% S residual fuel in quantities up to 25,500 bbl/day. Charter has recently committed to producing 0.5% S residual oil if State regulations so require. Charter has pointed out that up to 16,900 bbl/day of such oil could be produced without additional high capital cost process equipment. Requiring Charter to supply a minimal 2,000 bbl/day of low sulfur residual oil would not, therefore, appear to impair financial viability of the project.

### Water Quality Impact

The proposed Charter refinery would emit approximately 700 gpm of waste water after processing it through facilities which will be designed to ensure that the effluent meets the EPA effluent requirements for new sources and Department regulations relating to water quality control. Table 4 lists the anticipated refinery discharge.

Table 4  
Charter Waste Water Component Discharge

<u>Pollutant</u>	<u>Pounds Per day</u> (30 Day Average Maximum)
BOD <sub>5</sub>	83.7
Total Suspended Solids	57.1
COD	426.1
Phenols	0.6
Ammonia (as nitrogen)	17.1
Sulfides	0.4
Total Chromium	1.4
pH Range	7.0 to 8.5
Oil and Grease	26.6

The plant treatment facilities would handle process waste waters and process-area stormwater using oil-water separators and an activated sludge system. Carbon adsorption would probably be necessary to meet Department effluent limitations. Charter does not propose to receive or treat ship ballast water and would treat its domestic sewage through use of a package sewage treatment plant.

Charter plans to construct an outfall diffuser structure into the Columbia River. The staff's review of the impact of the Charter effluent indicates that water quality standards will be met and that the impact of discharge on the river will be negligible.

An NPDES effluent discharge permit has been drafted for Charter. The Public and Charter Energy will be given time to comment on specific details of the permit in the near future.

In the event of an oil spill during oil transfer operation, Charter proposes to use a 900 foot long containment boom which would be placed around the offloading ship on the downriver site. Charter proposes to meet all requirements of the Department, U. S. Coast Guard and the EPA with respect to oil spill control and prevention.

#### Noise Impact

The Department's review of the noise impact analysis prepared by Charter indicates that the refinery would comply with the Department's noise regulations for industrial sources. Intermittent significant noise levels would occur during emergency flaring releases expected to occur about once per year. Annual testing of pressure relief valves would be scheduled during weekday-daylight hour periods to minimize disturbance to the community. Both of these latter noise sources would be exempt from the Department's noise regulations.

Construction noise impact is expected to be the greatest during the ground clearing and foundation preparation of the construction phase. Noise increase of about 5 dBA are expected at the nearest noise sensitive property during this period.

#### Solid Waste

Solid wastes generated during the construction phase from land clearing would be converted to wood chips and used on the site for ground cover. No open burning would be allowed. Waste generated from refinery operation would consist of the following:

- 1) Spent catalysts (1,800 pounds/week) which would be returned to the supplier for reactivation.

8.

- 2) Non-oily sludges (20,000 pounds/week) from the water treatment basins which would be used for off-site landfill.
- 3) Combustible trash (4,000 pounds/week) which would be disposed of by off-site landfilling.
- 4) Oily sludges (9 tons/year) which would be incinerated on-site. The incinerator would be equipped with appropriate control systems yet to be specified by Charter but which would be designed to meet Department requirements.
- 5) Elemental sulfur (40 tons per day) which would be handled in a liquid state to prevent wind entrainment of dust.

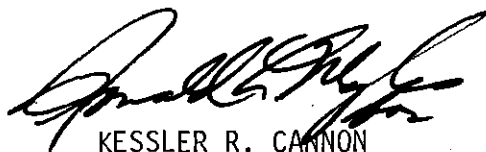
### Conclusions

1. The proposed Charter 52,400 bbl/day oil refinery would comply with all applicable air contaminant emission standards and would not cause violation of any applicable ambient air quality standards.
2. The Charter facility would, from an air quality standpoint, provide highest and best practicable and demonstrable treatment and control and would be a relatively low air emission facility when compared to existing oil refineries in this country. Clean fuels would be used for generation of process heat and odors should not be a problem considering treatment provided.
3. The proposed Charter refinery would not exceed EPA Class II air quality deterioration limits; however, Charter would use all of the allowable particulate and 92% of the allowable SO<sub>2</sub> Class II deterioration limits. Future emission reductions in the affected area, such as might result from tradeoffs, or a rezoning of the affected area to Class III air quality deterioration limits would be necessary to consider allowing future emission increase from such discussed projects as the Reichhold Chemical Company expansion or even expansion of the Charter refinery.
4. It is feasible and desirable to reduce the air quality impact and air quality deterioration that would be caused by the Charter facility in the critical Portland Metro Airshed by requiring use of low sulfur residual fuel oil in Columbia County. Requiring Charter to make available a minimal 2,000 bbl/day of residual fuel oil of 0.5% sulfur content could insure the feasibility of achieving this objective.
5. Considerable portions of the residual fuel oil produced by Charter could be used for industrial expansions and conversions which are being negotiated by Charter. This could reduce the potential supply of this fuel to existing facilities in the area.

6. Water quality impact of the Charter facility would be minute considering that the treated effluent discharge would be to the Columbia River which has a relatively high flow rate. Effective phenol control through activated carbon adsorption would probably be needed to meet effluent guidelines.
7. Noise control would enable the Charter to comply with Department noise regulations which are designed to protect against interference to speech and sleep at the nearest residence. Location of the Charter facility on the large Reichhold Chemical property would provide a good buffer zone between noise generating sources and residences. Emergency flaring and pressure relief valve checks would cause significant noise, but at infrequent intervals.
8. Solid waste disposal problems would be controlled by requiring large quantities of elemental sulfur derived from oil desulfurization processes to be handled, transferred and stored in the liquid state. Sludges would be incinerated with very minimal atmospheric emissions.
9. Viability of the Charter project must be closely monitored so that if the project should not go forward as expected, air quality deterioration impacts and clean fuels regulation can be revised as necessary.

Recommendation

It is the Director's recommendation that the attached proposed Air Contaminant Discharge Permit for the Charter Energy Co. 52,400 bbl/day oil refinery be issued subject to consideration of testimony presented at this hearing.



KESSLER R. CANNON  
Director

Attachments:

1/17/75  
JFK

# 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

<p><b>ISSUED TO:</b>          Charter Energy Company          666 Camino Aguajito          Monterey, California 93940</p> <p><b>PLANT SITE:</b>          North Columbia River Highway          St. Helens, Oregon 97051</p> <p style="text-align: center;"><b>ISSUED BY DEPARTMENT OF ENVIRONMENTAL QUALITY</b></p> <p style="text-align: center;">Kessler R. Cannon                      Date          Director</p>	<p><b>REFERENCE INFORMATION</b>          323, 341</p> <p>Application No. _____</p> <p>Date Received                      September 11, 1974</p> <p>Other Air Contaminant Sources at this Site:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"></th> <th style="width: 20%;">Source</th> <th style="width: 10%;">SIC</th> <th style="width: 20%;">Permit No.</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>_____</td> <td></td> <td></td> </tr> <tr> <td>(2)</td> <td>_____</td> <td></td> <td></td> </tr> </tbody> </table>		Source	SIC	Permit No.	(1)	_____			(2)	_____		
	Source	SIC	Permit No.										
(1)	_____												
(2)	_____												

**SOURCE(S) PERMITTED TO DISCHARGE AIR CONTAMINANTS:**

Name of Air Contaminant Source	Standard Industry Code as Listed
Petroleum Refining 52,400 BBL/Day maximum capacity	2911
Fuel Burning Equipment, Distillate oil exceeding 250 million BTU/hr. (heat input)	4961
Incinerator (greater than 2,000 lbs/hr capacity)	None

Permitted Activities

Until such time as this permit expires or is modified or revoked, Charter Energy Company is herewith permitted in conformance with the requirements, limitations and conditions of this permit to discharge air contaminants from its petroleum refinery located on the North Columbia River Highway, St. Helens, Oregon, 97051.

Compliance with the specific requirements, limitations and conditions contained herein shall not relieve the permittee from complying with all rules and standards of the Department and the laws administered by the Department.

- Section A: Petroleum Refining
- Section B: Fuel Burning Equipment
- Section C: Incinerator



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Charter Energy Company

SECTION A - PETROLEUM REFINING

Performance Standards and Emission Limits

1. The permittee shall at all times maintain and operate all air contaminant generating processes and all air contaminant control equipment at full efficiency and effectiveness such that the emissions of air contaminants are kept at the lowest practicable levels.
2. Emissions of air contaminants from petroleum refining and all associated air contaminant control equipment shall not exceed any of the following:
  - a. An opacity equal to or greater than twenty (20) percent opacity for a period or periods aggregating more than thirty (30) seconds in any one hour from any single non fuel burning source of emissions.
  - b. An emission of particulate matter which is larger than 250 microns in size provided such particulate matter does or will deposit upon the real property of another person.
3. The permittee shall not cause or permit the emissions of odorous matter in such a manner as to contribute to a condition of air pollution or exceed:
  - a. A scentometer No. 0 odor strength or equivalent dilution in residential and commercial areas.
  - b. A scentometer No. 2 odor strength or equivalent dilution in all other land use areas.

Scentometer Readings

Scentometer No.	Concentration Range No. of Thresholds
0	1 to 2
1	2 to 8
2	8 to 32
3	32 to 128

4. The permittee shall not sell, distribute or make available for use any distillate fuel oil, in the entire state of Oregon, containing more than the following percentages of sulfur:
  - a. ASTM Grade 1 fuel oil - 0.3 percent by weight
  - b. ASTM Grade 2 fuel oil - 0.5 percent by weight
5. The permittee shall not sell, distribute or make available for use in the entire state of Oregon any residual fuel oil (oil meeting the specifications of ASTM Grade 4, Grade 5, or Grade 6 fuel oil), containing more than 1.75 percent sulfur by weight.

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Charter Energy Company

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6. After January 1, 1979, if the Department so requires by rule, the permittee shall not sell or distribute for use in Multnomah, Washington, Clackamas and Columbia counties of Oregon any residual fuel oil (oil meeting the specifications of ASTM Grade 4, Grade 5 or Grade 6 fuel oil) containing more than 0.5 percent sulfur by weight.

Special Conditions

7. The permittee shall construct a petroleum refinery with processing capacity no greater than 52,400 BBL/day and shall submit detailed plans and specifications to the Department for review and approval, prior to construction, for at least the following: All petroleum storage and loading equipment, claus and tail gas plant, by-product sulfur handling, storage and shipment facilities, cooling tower, vapor recovery system and the flaring system. Said refinery shall incorporate highest and best practicable treatment and control facilities and procedures throughout.
8. The permittee shall handle, transfer, store and subsequently load for shipment all by-product sulfur as a liquid. If because of process equipment breakdown it becomes necessary for the sulfur by-product to be stored in a solid form, it shall be stored in a completely enclosed area. All displaced air from this enclosed area must pass through an air pollution control system, approved by the Department before being discharged into the atmosphere.
9. The permittee shall be subject to the following provisions with regards to the unloading, transferring, storage and loading of all petroleum liquids.
  - a. Petroleum liquid having a true vapor pressure of 78 mm Hg or less shall be stored in vessels equipped with a conservation vent or equivalent.
  - b. Petroleum liquid having a true vapor pressure in excess of 78 mm Hg but not greater than 570 mm Hg shall be stored in vessels equipped with a floating roof or equivalent.
  - c. Petroleum liquid having a true vapor pressure in excess of 570 mm Hg shall be stored in vessels equipped or tied in with a vapor recovery system or its equivalent.
  - d. All hatch covers must be kept in good operating condition and must be closed at all times except during actual gauging operations.
  - e. When unloading and loading petroleum liquids having a true vapor pressure of 78 mm Hg or greater under actual handling conditions, necessary equipment must be provided so a vapor tight seal between the adapter and the compartment hatch will be maintained. All displaced vapor shall be discharged to vapor recovery or equivalent control system.
10. The permittee is prohibited from discharging any treated or untreated water to any public waterway unless such discharge is the subject of a valid Waste Discharge Permit issued by the Department of Environmental Quality.

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11. The permittee shall comply with all applicable Department noise control regulations and demonstrate compliance no later than 30 days after facility start-up.
12. The permittee shall cover all API gravity separators to control hydrocarbon emissions.
13. The permittee shall submit to the Department written documentation of the following increments of progress by no later than the dates indicated below, that the proposed oil refinery is a viable project and is proceeding towards completion. If at any time it is apparent that the project is not viable as determined by failure to adhere to the following schedule, the permit shall be subject to modification or revocation.
  - a. Decision made to proceed with project September 1, 1975
  - b. Let engineering contract December 1, 1975
  - c. Complete site aquisition December 1, 1975
  - d. Issue purchase order for critical long lead time items July 1, 1976
  - e. Obtain crude supply, marketing and financial commitments March 1, 1977
  - f. Issue purchase orders for remaining equipment March 1, 1977
  - g. Initiate construction March 1, 1977
  - h. Start up refinery December 31, 1979
14. The permittee shall submit for Department review and approval prior to start-up of the refinery, the analytic methods that will be used by the refinery to determine sulfur, ash and nitrogen content (percent by weight).
15. Operation of the flares shall be considered a breakdown condition and therefore subject to general condition number 11 of this permit.
16. Continuous monitoring of specific emissions and emission points may be required by the Department after review of final engineering plans and specifications.
17. The permittee shall provide within three months of commencing commercial operation, easily accessible sampling ports and platforms on all emission exhaust stacks. The location and design of these sampling ports and platforms must be reviewed and approved by the Department.
18. The permittee shall when in commercial operation but no sooner than January 1, 1979 make available for use in Columbia county, at least 2,000 barrels per day of residual fuel oil with a maximum sulfur content of 0.5 percent by weight.

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Emission Reduction Plan

19. The permittee shall implement the emission reduction plan stated in Section B of this permit.

Compliance Schedule

20. None required.

Monitoring and Reporting

21. The permittee shall effectively monitor the operation and maintenance of the facility and associated air contaminant control equipment. 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. At least the following parameters shall be monitored and recorded at the indicated interval:

<u>Parameter</u>	<u>Minimum Monitoring Frequency</u>
a. Amount of sulfur by-product reclaimed and/or sold	Daily
b. Any observable increase in particulate, sulfur dioxide, or odorous emissions from the facility, suspected reason for such increased emission and projected date of any action to reduce the emission increase	Daily
c. Operating schedule (hours/day) of the sulfur by-product transferring and shipment facility	Monthly
d. The quantity, sulfur, ash and nitrogen content (percent by weight) of each shipment of residual and distillate fuel oil sold or distributed for use in Multnomah, Washington, Clackamas and Columbia counties as well as the remaining counties in the State of Oregon	As performed
e. The date of inspection and/or type of maintenance performed on the petroleum and sulfur by-product storage and handling facilities, cooling tower, flaring system and vapor recovery system	As performed

22. The permittee shall submit the following recorded information to the Department in writing at the indicated intervals:

<u>Parameter</u>	<u>Interval</u>
a. Tons of sulfur by-product reclaimed	Quarterly

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<u>Parameter</u>	<u>Interval</u>
b. Operating hours of the sulfur by-product handling, storage and shipment facility	Quarterly
c. Quantity, sulfur, ash and nitrogen content (percent by weight) of each shipment of residual and distillate fuel oil sold within the State of Oregon by individual county	Quarterly

SECTION B - FUEL BURNING EQUIPMENT

Performance Standards and Emission Limits

1. The permittee shall at all times maintain and operate all fuel burning devices and related equipment at full efficiency such that the emissions of air contaminants are kept at the lowest practicable levels.
2. Emissions of air contaminants from fuel burning equipment shall not exceed any of the following:
  - a. Visible emissions shall not equal or exceed 20% opacity for a period or periods aggregating more than three (3) minutes in any one (1) hour.
  - b. Particulate emissions shall not exceed smoke spot numbers as measured by ASTM D 2156-65 "Standard Method to test for Smoke Density", as follows:

<u>Types of fuel</u>	<u>Smoke Spot Number</u>
Distillate (Diesel)	2

- c. Emissions of particulate, sulfur dioxide and nitrogen oxides shall not exceed the following emission rates for the specific fuels listed:

<u>Types of Fuels</u>	<u>Emission Rate Limitations</u>		
	<u>lbs/mm BTU</u>		
	<u>Particulate</u>	<u>SO<sub>2</sub></u>	<u>NO<sub>x</sub></u>
Refinery gas	0.02	0.02	0.2
Distillate (Diesel)	0.08	0.11	0.28

- d. The maximum hourly emissions from all fuel burning equipment shall not exceed:

<u>Pollutant</u>	<u>Emission Rate lbs/hr</u>
Particulate	34.8
Sulfur dioxide	109.5
Nitrogen oxides	285.7

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- e. The maximum yearly emissions from all fuel burning equipment shall not exceed:

<u>Pollutant</u>	<u>Emissions-tons/year</u>
Particulate	146
Sulfur dioxide	460
Nitrogen oxides	1200

- f. When a combination of fuels are used in any one fuel burning device then the applicable emission limits in 2d and 2e shall be determined by proration of the specific fuel emission rate limitations in proportion to the actual fuel mix.
3. The permittee shall not burn any distillate (diesel) fuel oil containing more than 0.1 percent sulfur by weight.
4. The permittee shall not cause or permit the emission of any particulate matter which is larger than 250 microns in size provided such particulate matter does or will deposit upon the real property of another person.

Special Conditions

5. The permittee shall submit detailed plans and specifications for all fuel burning equipment for Department review and approval prior to commencing construction. Said fuel burning equipment shall incorporate highest and best practicable emission control and technology.
6. The permittee shall not operate the fuel burning devices in such a manner as to exceed a total of 827,000,000 BTU's per hour of heat input.
7. The permittee shall have particulate oxides of nitrogen and sulfur dioxide emission tests conducted for all fuel burning and associated air pollution control equipment conducted no sooner than three months but not later than six months after commencing commercial operation. The emission tests shall be conducted for refinery gas and/or distillate (diesel) fuel oil depending on whatever fuel or fuel mix will be burned in each fuel burning device. The tests must be performed in accordance with methods on file at the Department or in conformance with recognized applicable standard methods approved in writing in advance by the Department. The test results shall be submitted to the Department within thirty (30) days of completion of the tests.
8. The permittee shall provide within three months of commencing commercial operation, easily accessible sampling ports and platforms on all fuel burning exhaust stacks. The location and design of these sampling ports and platforms must be reviewed and approved by the Department.

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9. The permittee shall provide fuel sampling facilities on all feedlines to each fuel burning device (valve for taking a sample of fuel).
10. The permittee shall burn only refinery gas and/or distillate (diesel) or combination of the two fuels in the fuel burning equipment in a manner such that the emissions do not exceed the limitations set forth in this permit.
11. If the permittee desires to burn other fuels or combinations of fuels not approved within this permit, acceptable source test reports must be submitted to the Department for review and approval and a permit amendment must be obtained prior to use of such other fuel.
12. The permittee is prohibited from discharging any treated or untreated water to any public waterway unless such discharge is the subject of a valid Waste Discharge Permit issued by the Department of Environmental Quality.
13. The permittee shall comply with all applicable Department noise control regulations and demonstrate compliance no later than 30 days after facility starts up.

Emission Reduction Plan

14. The permittee shall implement the following emission reduction plan during air pollution episodes when so notified by this Department:

Notice Condition

Action to be Taken by Permittee

- |              |   |
|--------------|---|
| a. Alert     | 1. Boiler and process heater lancing or soot blowing if required shall be performed only between the hours of 12 noon and 4:00 p.m.   |
| b. Warning   | 1. Continue alert measures<br>2. Minimize emissions by reducing heat and steam demands to absolute necessities consistent with preventing equipment damage<br>3. Burn the cleanest available fuels possible<br>4. Prepare for immediate shutdown of the boilers and process heaters |
| c. Emergency | 1. Upon notification from the Department, immediately cease operation of the boilers and process heaters until notified by the Department that the condition has passed   |

Compliance Schedule

15. None required.

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Monitoring and Reporting

16. The permittee shall effectively monitor the operation and maintenance of all fuel burning equipment 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 refinery site at all times for inspection by the authorized representatives of the Department. At least the following parameters shall be monitored and recorded at the indicated interval:

<u>Parameter</u>	<u>Minimum Monitoring Frequency</u>
a. Operating schedule (hours/day) of the steam boiler	Daily
b. Operating schedule (hours/month) of all other fuel burning equipment not previously mentioned in (a)	Daily
c. Any observable increase in particulate and/or sulfur dioxide emissions from the fuel burning equipment, suspected reason for such increased emission and projected date of any action to reduce the emission increase	Daily
d. Quantity of distillate (diesel) fuel oil and/or refinery gas burned for each process heater and boiler	Daily
e. The sulfur, ash, nitrogen (percent by weight) and BTU content of every fuel or fuel mix used in each process heater and boiler	After any change in fuel or fuel mix or significant change (as defined by the Department) in sulfur, ash, nitrogen or BTU content of each fuel
f. Particulate, sulfur dioxide and nitrogen oxide emission rates from each fuel burning equipment exhaust stack for each fuel or fuel mix used	Semi-annually
g. A description of any maintenance to the fuel burning equipment	As performed
h. Smoke spot for each fuel oil burning device	Monthly or after any change in fuel mix



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17. The permittee shall submit the following recorded information to the Department in writing at the indicated intervals:

<u>Parameter</u>	<u>Interval</u>
a. Operating hours of the fuel burning equipment	Quarterly
b. Quantities of distillate (diesel) fuel oil and/or refinery gas burned for each process heater and boiler	Quarterly
c. Arrange sulfur, ash, nitrogen (percent by weight) and BTU content of every fuel or fuel mix used in each process heater and boiler	Quarterly
d. Results of the particulate, sulfur dioxide and nitrogen oxide emission tests from each fuel burning exhaust stack	Semi-annually

SECTION C - INCINERATOR

Performance Standards and Emission Limits

1. The permittee shall at all times maintain and operate the waste sludge incinerator and associated air pollution control equipment at full efficiency and effectiveness such that the emissions of air contaminants are kept at the lowest practicable levels.
2. Emissions of air contaminants from the waste sludge incinerator and associated air pollution control equipment shall not exceed any of the following:
  - a. An opacity equal to or greater than twenty (20) percent opacity for a period or periods aggregating more than three (3) minutes in any one (1) hour from the incinerator or associated air pollution control device.
  - b. An emission of particulate matter which is larger than 250 microns in size provided such particulate matter does or will deposit upon the real property of another person.
  - c. An emission of particulate matter which does not exceed 0.03 grains per dry standard cubic foot corrected to 12% CO<sub>2</sub>.

Special Conditions

3. The permittee shall submit detailed plans and specifications for the waste sludge incinerator and associated air pollution control equipment for Department review and approval prior to commencing construction. Said incinerator shall incorporate highest and best practicable treatment and emission control and technology.

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4. The maximum capacity of the waste sludge incinerator shall not exceed 2,300 lbs/hr of wet sludge.
5. The permittee shall have emission tests of exhaust from the air pollution control system conducted no sooner than three months but not later than six months after commencing commercial operations. The results must be submitted to this office within thirty (30) days of the source test. The tests must be performed in accordance with methods on file at the Department of Environmental Quality or in conformance with recognized applicable standard methods approved in writing in advance by the Department. Tests shall be performed while equipment is operating at maximum capacity or under such conditions that emissions to the atmosphere will tend to be maximized. The Department shall be notified of the date of the tests so that a staff member can be present to observe the testing.
6. The permittee shall provide within three months of commencing commercial operation, easily accessible sampling ports and platform on the exhaust stack of the electrostatic precipitator. The location and design of the sampling ports and platform must be reviewed and approved by the Department.
7. The permittee shall obtain written approval from the Department for each specific waste sludge proposed to be incinerated.
8. The permittee shall burn as auxiliary fuel only refinery gas and/or distillate fuel oil in the waste sludge incinerator in a manner such that the emissions do not exceed the limitations set forth in this permit.
9. The permittee shall handle and store material collected by the air pollution control equipment in a manner such that this material would not be subject to entrainment into the atmosphere. Disposal of the collected material must be conducted in a manner approved by the Department in writing.
10. The permittee shall comply with all applicable Department noise control regulations and demonstrate compliance no later than 30 days after refinery starts up.
11. The permittee is prohibited from discharging any treated or untreated water to any public waterway unless such discharge is the subject of a valid Waste Discharge Permit issued by the Department of Environmental Quality.

Emission Reduction Plan

12. The permittee shall implement the following emission reduction plan during air pollution episodes when so notified by this Department.

Notice Condition

Action to be Taken by Permittee

a. Alert

1. Immediately inspect all air pollution control equipment to insure that the systems are providing the best possible control

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Notice Condition

Action to be Taken by Permittee

- |              |  |
|--------------|--|
| b. Warning   | 1. Prepare for the immediate shutdown of the waste sludge incinerator  |
|              | 2. Burn the cleanest available fuels possible  |
| c. Emergency | 1. Upon notification from the Department, immediately cease operation of the waste sludge incinerator until notified by the Department that the condition has passed |

Compliance Schedule

13. None required

Monitoring and Reporting

14. The permittee shall effectively monitor the operation and maintenance of the water sludge incinerator 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 refinery site at all times for inspection by the authorized representatives of the Department. At least the following parameters shall be monitored and recorded at the indicated intervals:

<u>Parameter</u>	<u>Minimum Monitoring Frequency</u>
a. Operating schedule (hours/day) of the waste sludge incinerator	Daily
b. Any observable increase in particulate emissions from the waste sludge incinerator or air pollution control equipment, suspected reason for such increased emission and projected date of any action to reduce the emission increase	Daily
c. Quantity of waste sludge incinerated	Daily
d. Quantity of material collected by the air pollution control system	Weekly
e. A description of any maintenance to the waste sludge incinerator and/or air pollution control equipment	As performed
f. Quantity of distillate fuel oil and/or refinery gas burned	Daily
g. The sulfur, ash, nitrogen (percent by weight) and BTU content of every fuel used in the incinerator	After any change in fuel mix or significant change (as defined by the Department) in sulfur, ash, nitrogen or BTU content of each fuel

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<u>Parameter</u>	<u>Minimum Monitoring Frequency</u>
h. Emission rates from the air pollution control equipment	Semi-annually
i. Smoke spot	Monthly or after any change in fuel mix

15. The permittee shall submit the following recorded information to the Department in writing at the indicated intervals:

<u>Parameter</u>	<u>Interval</u>
a. Operating hours of the waste sludge incinerator	Quarterly
b. Quantity of distillate fuel oil and/or refinery gas burned	Quarterly
c. Quantity of sludge incinerated	Quarterly
d. Average sulfur, ash, nitrogen (percent by weight) and BTU content of every fuel mix used in the incinerator	Quarterly
e. Results of emission tests on the air pollution control system	Semi-annually
f. Quantity of collected material	Annually

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General Conditions

- G1. A copy of this permit or at least a copy of the title page and an accurate and complete extraction of the operating and monitoring requirements and discharge limitations shall be posted at the facility and the contents thereof made known to operating personnel.
- G2. This 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.
- G3. The permittee is prohibited from conducting any open burning at the plant site or facility.
- G4. The permittee is prohibited from causing or allowing discharges of air contaminants from source(s) not covered by this permit so as to cause the plant site emissions to exceed the standards fixed by this permit or rules of the Department of Environmental Quality.
- G5. 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, Section 21-050.
- G6. (NOTICE CONDITION) The permittee shall dispose of all solid wastes or residues in manners and at locations approved by the Department of Environmental Quality.
- G7. The permittee shall allow Department of Environmental Quality representatives access to the plant site and record storage areas 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.
- G8. The permittee, without prior notice to and written approval from the Department of Environmental Quality, is prohibited from altering, modifying or expanding the subject production facilities so as to affect emissions to the atmosphere.
- G9. The permittee shall be required to make application for a new permit if a substantial modification, alteration, addition or enlargement is proposed which would have a significant impact on air contaminant emission increases or reductions at the plant site.

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G10. This permit is subject to revocation for cause, as provided by law, including:

- a. Misrepresentation of any material fact or lack of full disclosure in the application including any exhibits thereto, or in any other additional information requested or supplied in conjunction therewith;
- b. Violation of any of the requirements, limitations or conditions contained herein; or
- c. Any material change in quantity or character of air contaminants emitted to the atmosphere.

G11. The permittee shall notify the Department by telephone or in person within one (1) hour of any scheduled maintenance, malfunction of pollution control equipment, upset or any other conditions that cause or may tend to cause a significant increase in emissions or violation of any conditions of this permit. Such notice shall include:

- a. The nature and quantity of increased emissions that have occurred or are likely to occur,
- b. The expected length of time that any pollution control equipment will be out of service or reduced in effectiveness,
- c. The corrective action that is proposed to be taken, and
- d. The precautions that are proposed to be taken to prevent a future recurrence of a similar condition.

G12. Application for a modified or renewal of this permit must be submitted not less than 60 days prior to permit expiration date. A filing fee and Application Investigation and Permit Issuing or Denying Fee must be submitted with the application.

G13. The permittee shall submit the Annual Compliance Determination Fee to the Department of Environmental Quality according to the following schedule:

<u>Amount Due</u>	<u>Date Due</u>
\$545.00	December 31, 1975
545.00	1976
545.00	1977
545.00	1978
(see G12)	December 31, 1979



## ENVIRONMENTAL QUALITY COMMISSION

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

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Director

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. M, January 24, 1975, EQC Meeting

Public Hearing - Proposed Air Contaminant Discharge Permit for  
Cascade Energy, Inc., 30,000 BBL/day Oil Refinery

### Background

In the Spring of 1968, the Caribou Four Corners Oil Company announced its intention to build a 5,000 BBL/day oil refinery Northwest of Rainier on land purchased from the Port of St. Helens. Subsequent to that date, Caribou, Inc., and the Columbia Willamette Air Pollution Authority corresponded on a number of occasions concerning the construction of this refinery.

Caribou joined with two other companies, Flying J and Gasomatic in the Fall of 1973 to form Cascade Energy Inc.. Cascade representatives met with the Department to reassert their continued interest in building a refinery at this time. During the period of the Fall of 1973 thru the Spring of 1974, Cascade proceeded with the preliminary facility design and filed air permit applications on May 29, 1974 for a 30,000 BBL/day refinery. Water discharge permit applications were filed April 9, 1974. Cascade's Environmental Impact Statement and supportive documentation was received by the Department on November 1, 1974. Some time has been spent with Cascade Energy representatives examining the ambient impact of the proposed facility.

The Department considered Cascade's air permit application essentially complete for processing in mid-November 1974, and presented a status report to the EQC meeting at its November 22, 1974 meeting (Agenda Item E), covering Cascade and two other proposed oil refineries in Oregon. Also mentioned in this report was a Clean Fuels Policy which must be adopted if the Columbia Independent Refinery, Inc. facility in North Portland is approved in order to assure emissions tradeoffs required by the Department's Special rule. Criteria for Approval of new Air Contaminant Sources in the Portland Metropolitan Special Air Quality Maintenance Area.



Contains  
Recycled  
Materials

Facility Description

The proposed Cascade Energy Refinery would be located on a ninety acre site immediately west of the Longview-Rainier bridge in Rainier, Oregon. As proposed the oil refinery would be built in a two phase program with the first phase (15,000 BBL/day) expected to be partially operational in 1976. Completion of the second phase of construction, bringing the final through-put capacity to 30,000 BBL/day is expected to occur by 1979. Cascade has however, indicated the possibility of moving its schedule ahead and constructing the entire 30,000 BBL/day capacity refinery at one time. The design of the proposed refinery gives it the ability to process medium sulfur crude oil and maximize production of automobile gasoline and low sulfur fuel oil. Possible average product production rates are shown in Table I.

Table I  
Cascade Energy  
Possible Average Product Production Rate  
(barrels per day)

Motor Gasoline	11,600
#1 Distillate Oil	4,950
#2 Distillate Oil	3,300
#6 Low Sulfur Residual Fuel Oil	8,400
Other	<u>1,700</u>
Total	30,000

Employment for the Cascade project would total approximately fifty people. Capital cost would be approximately \$50 million.

The proposed refinery would represent the latest technology in design and engineering with regards to minimizing environmental impact. This technology centers around a) using a smokeless flare which prevents large releases of waste gases pollutants to the atmosphere, b) several hydrodesulfurization units which remove sulfur, and to some extent, nitrogen, ash and metallic impurities from the fuel products, c) hydrocracking to upgrade heavy oil products in lieu of catalytic cracking which has been a significant source of particulate, sulfur dioxide and carbon monoxide emissions in existing refineries, d) hydrocarbon vapor recovery systems, and e) by-product sulfur recovery.

The crude oil would be brought to the proposed facility in 20,000 barrel capacity oil tankers. It is the intention of Cascade Energy to use Alaskan North Slope crude as the feed stock, however, the proposed refinery would have the design capabilities to process other crude supplies including Indonesian, Santa Barbara, Light Arabian, South American and Nigerian.

It is the intention of Cascade Energy to market the automobile gasoline in the Northwest - about 90% by truck to Western Oregon and Washington and Western Idaho and about 10% by barge to Eastern Oregon and Washington. The distillate fuel oil would be sold in the local area with 90% being shipped by truck. It is expected that 80% of the residual fuel oil would be shipped by barge to users along the Columbia River. The remaining 20% would be trucked to local industries.



Air Emissions

The major air contaminants from the proposed oil refinery would be particulate, sulfur dioxide, oxides of nitrogen, hydrocarbons and carbon monoxide. The primary sources of these emissions would be process heaters, steam boilers, flares and storage vessels. The fuel burning devices represent the largest source of air contaminants. The refinery would require approximately 780 million BTU/hr. of heat input to process 30,000 barrels of crude oil per day. A combination of 1300 BBL/day of low sulfur residual fuel oil and 1200 BBL/day of distillate fuel oil and some refinery gas would be used to produce the necessary heat requirements and meet environmental standards. Air pollutant emissions calculated for the Cascade facility are shown in Table 2.

Table 2  
Projected Atmospheric Emissions for the Proposed Cascade  
30,000 BBL/day Refinery (tons/year)

Particulate	150
Sulfur Dioxide	715
Nitrogen Oxides	1,370
Hydrocarbons	670

Air Quality Deterioration

Due to the location of the proposed Cascade facility the most restrictive environmental rule that must be met by Cascade is the Environmental Protection Agency regulations relation to the prevention of significant air quality deterioration due to particulate and SO<sub>2</sub> emissions which became effective January 6, 1974. Although the application of the mandatory plan review portion of this regulation is not applicable to Cascade at this time, the deterioration in air quality that may result from Cascade emissions would be included as part of the allowable deterioration. The Department has therefore reviewed particulate and sulfur dioxide emission impacts with respect to the EPA regulations with the following findings:

1. Since particulate and SO<sub>2</sub> National Ambient Air Quality Standards have not been exceeded in Columbia County in 1974, the deterioration regulation and criteria for Class II deterioration for both air contaminants would appear to apply in this county.
2. Projections of particulate and sulfur dioxide air quality impact from the Cascade refinery indicates that Class II deterioration criteria would be met as shown in Table 3.

Table 3  
 Cascade Energy Maximum Ground Level Impacts  
 (ug/m<sup>3</sup>)

	Cascade (30,000 BBL/day)	EPA Significant Deterioration Criteria		
		Class I (Clean Air)	Class II (Moderate growth)	Class III (National Air Quality Standards)
<b>Particulate Matter</b>				
Annual Geometric Mean	10 (100%)	5	10	60
Maximum 24 hour Average	30 (100%)	10	30	150
<b>Sulfur Dioxide</b>				
Annual Arithmetic Mean	15 (100%)	2	15	80
Maximum 24 hour Average	100 (100%)	5	100	365
Maximum 3 hour Average	300 ( 43%)	25	700	1300

\*Indicates percent of Class II deterioration criteria used by Cascade.

As can be seen from Table 3, Cascade would use up essentially all of the allowable Class II deterioration limits for particulate and SO<sub>2</sub> in the area between the plant site and the hills directly to the South.

Air Quality impact tradeoffs from use of low sulfur residual fuel oil in Columbia County could serve to reduce some of the air quality deterioration projected to be caused by Cascade emissions. Also, the affected portions of the area could be rezoned, after public hearings, to Class III if necessary and desirable to accommodate other potential industrial growth in the vicinity. Burning a more costly combination of diesel and residual fuel at this facility may impose an economic disadvantage to Cascade but the absolute necessity for Cascade to burn a combination of low emission diesel and residual fuel is apparent in order to meet existing air quality deterioration regulations.

Cascade adjusted its initial proposal to burn solely residual fuel to enable them to meet deterioration limits. The final fuel mix was calculated based on Cascade's initial ambient air impact modeling with adjustments made as required by the Department to provide more realistic estimates.

Compliance with Emission Standards

Department air emission limits and EPA new source performance standards for petroleum refining applicable to Cascade are related to particulate and sulfur dioxide emissions, hydrocarbon evaporative losses, and particulate size and plume opacity. The Department's evaluation of the emissions and emission controls included in the refinery design indicates that compliance with applicable regulations would be achieved with some margin of safety.

### Highest and Best Practicable Treatment and Control

The Department rules require highest and best practicable treatment and control for new facilities. The Cascade facility proposes to meet this requirement by:

1. Use of diesel and low-sulfur residual fuel in the refineries' process heaters thereby significantly reducing SO<sub>2</sub> and particulate emissions to meet air quality deterioration limits.
2. Application of latest technology for control of hydrocarbon emissions utilizing vapor recovery systems.
3. Use of smokeless flaring which will be restricted to unusual or emergency situations.
4. Controlling hydrocarbon evaporative losses from fuel storage tanks to comply with new EPA requirements thru application of floating roof and vapor recovery system controls. Evaporative emissions and odors from storage vessels, relief valves and all loading facility connections are proposed to be vented to vapor recovery systems and/or smokeless flares. The nuisance vapors collected from sources such as these would be burned in a flare pilot flame. Only abnormal conditions or emergency discharges would energize flares.

In addition, the Department would require use of low-emission burners for process heaters.

### Water Quality Impact

Upon completion of the 30,000 BBL/day refinery, Cascade would be using about 327 gpm of water in the refinery process compared to a design average influent flow to Cascade's wastewater treatment plant of 416 gpm. A common sewer system collecting oil contaminated storm water and the process discharges would deliver the wastewater to Cascade's treatment plant. The plant has been designed to ensure that the effluent meets new source performance guidelines established by the EPA for petroleum refineries.

The primary sources of wastewater are storm water contaminated with oil, and process discharges from cooling tower, boiler blowdown and fuel gas scrubber. Table 4 shows the quantities of effluent components to be discharged by Cascade.

Table 4  
Cascade 30,000 BBL/day Refinery Wastewater Component Discharge  
(pounds per day)

<u>Parameter</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
BOD <sub>5</sub>	300	575
Total Suspended Solids	200	350
COD	2200	4250
Oil and Grease	100	180
Phenolics	0.5	1
Ammonia (as nitrogen)	65	140
Sulfides	0.4	0.8

Cascade proposes to treat storm water collected within the process area in a large holding pond from which contaminated water can be directed to the treatment system consisting of an oil-water separator followed by biological treatment utilizing a trickling filter and an activated sludge system. Collected oils would be either recycled through the crude oil processing or would be blended with residual fuels. Domestic sewage would be directed to the municipal sewer system. A carbon adsorption treatment process would probably be required to meet effluent guidelines for organic hydrocarbons, specifically phenols.

There would be very little opportunity for an oil spill occurring within the plant area to reach the Columbia River due to proposed diking and curbing. Potential sources of spills do exist during oil transfer operations. Cascade has agreed to include all state and federal safety requirements into the design of the dock facilities and would be required to develop an oil spill contingency plan. The treated effluent would be discharged into the Columbia River through a diffuser and would have a negligible effect on the water quality of the river. An NPDES effluent discharge permit has been drafted and will be available for public review in the near future.

#### Noise Impact

The noise impact from the Cascade Refinery during its operational phase, would result from process equipment (pumps, fans, compressors, etc.) and from the operation of emergency flares. The plant site is located very near residential property. Cascade has committed itself to control of process noise sources through application of equipment enclosures, construction of barriers, use of storage tanks as noise barriers, etc. In the staff's opinion, proper application of these measures could allow Cascade to comply with the Department's Noise Standards.

The most significant noise impact would occur as a result of use of the smokeless flare under plant upset conditions during which time L50 noise levels of 85 dbA are projected to occur at adjacent residential properties. Cascade estimates that full release of the flare would occur about once per year. Since flares are considered to be safety devices, they are exempted by the Department noise regulations.

Cascade's operations would increase truck traffic and associated noise in the vicinity of the refinery but such increase is not predicted to cause a significant noise impact.

#### Solid Waste

About 110,000 cubic yards of dredging spoils would be removed during construction of dock facilities. This material would be placed above the high water level in an area already partially filled. Other solid waste materials would be disposed of at approved landfill sites. Wastes containing oils would be separately handled by landfilling. Specific quantities of other wastes have not been identified as yet. No sludge incineration is proposed at this facility due to its relative small size and the considerable amount of process equipment which would be used to upgrade residual fuel oil. Cascade would also be producing about 45 tons per day of sulfur which would be handled in a liquid state to prevent dust entrainment.

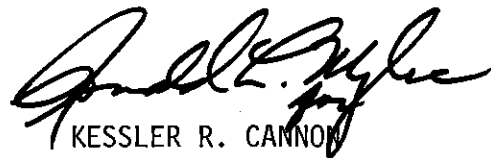
## Conclusions

1. The proposed Cascade 30,000 BBL/day oil refinery could comply with all applicable air contaminant emission standards and should not cause violation of any applicable ambient air quality standards.
2. The proposed Cascade facility would, from an air quality standpoint, provide highest and best practicable treatment and control and would be a relatively low air emission facility when compared to existing oil refineries in this country. Clean fuels would be used for generation of process heat and odors should not be a problem considering treatment provided. The relatively close distance to nearby residences would require an extremely good maintenance program to prevent process leaks which might cause neighborhood odor problems.
3. The proposed Cascade refinery would not exceed EPA Class II air quality deterioration limits; however, Cascade would use all of the Class II deterioration limits for both particulates and SO<sub>2</sub> in a relatively small area in the vicinity of the refinery. Future emission reductions in the affected area, such as may result from tradeoffs from using cleaner fuels in the area, or a rezoning of the affected area to Class III air quality deterioration limits would be necessary to consider allowing any additional future emission increases.
4. It is feasible and desirable to reduce the air quality impact and air quality deterioration that would be caused by the Cascade facility in the critical Portland Metro Airshed by requiring use of low sulfur residual fuel oil in Columbia County. Requiring Cascade to make a minimal 2,000 BBL/day of residual fuel oil of 0.5% sulfur content available to existing users could insure the feasibility of achieving this objective.
5. Since Cascade Energy Inc. is primarily composed of gasoline marketers, and considering design flexibility of the refinery, considerable portions of the residual fuel oil produced by Cascade could be upgraded to gasoline with residual asphalts as a by-product. This would reduce the potential supply of low sulfur residual fuel oil to existing facilities in the area.
6. Water quality impact of the Cascade facility would be minimal considering that discharge of the treated effluent would be to the Columbia River which has relatively high flow rate. Effective phenol control through activated carbon adsorption would probably be needed to meet effluent guidelines.
7. Noise control should enable the Charter to comply with Department noise regulations which are designed to protect against interference to speech and sleep at the nearest residence. However, location of the Cascade facility next to residential properties would cause increased noise levels at these properties.

8. Solid waste disposal problems would be controlled by landfilling and by requiring the large quantities of elemental sulfur derived from oil desulfurization processes to be handled, transferred and stored in the liquid state.
9. Viability of the Cascade project must be closely monitored so that if the project should not go forward as expected, Air Quality deterioration impacts and clean fuels regulation can be revised as necessary.

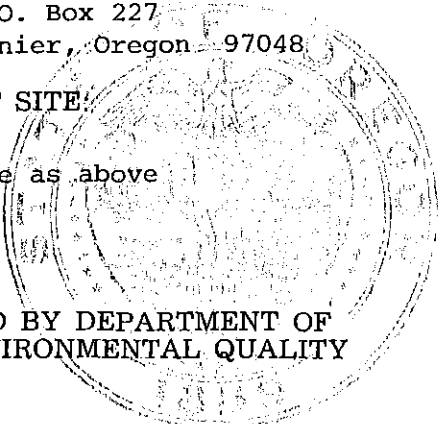
Recommendation

It is the Director's recommendation that the attached proposed Air Contaminant Discharge Permit for the Cascade Energy Inc. 30,000 BBL/day oil refinery be issued subject to consideration of testimony presented at this hearing.

  
KESSLER R. CANNON

# 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

<p><b>ISSUED TO:</b>          Cascade Energy Inc.          P. O. Box 227          Rainier, Oregon 97048</p> <p><b>PLANT SITE:</b>          Same as above</p> <p style="text-align: center;"><b>ISSUED BY DEPARTMENT OF ENVIRONMENTAL QUALITY</b></p> <div style="text-align: center; margin-top: 20px;">  </div> <hr style="width: 100%;"/> <p style="display: flex; justify-content: space-between;"> <span>Kessler R. Cannon Director</span> <span>Date</span> </p>	<p><b>REFERENCE INFORMATION</b></p> <p>Application No. <u>294</u></p> <p>Date Received <u>May 31, 1974</u></p> <p>Other Air Contaminant Sources at this Site:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"></th> <th style="width: 20%;">Source</th> <th style="width: 15%;">SIC</th> <th style="width: 15%;">Permit No.</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>(2)</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Source	SIC	Permit No.	(1)	_____	_____	_____	(2)	_____	_____	_____
	Source	SIC	Permit No.										
(1)	_____	_____	_____										
(2)	_____	_____	_____										

**SOURCE(S) PERMITTED TO DISCHARGE AIR CONTAMINANTS:**

Name of Air Contaminant Source	Standard Industry Code as Listed
Petroleum Refining	2911
Fuel Burning Equipment - Residual and Distillate oil both exceeding 250 million BTU/hr. (heat input)	4961

Permitted Activities

Until such time as this permit expires or is modified or revoked, Cascade Energy Inc. is herewith permitted in conformance with the requirements, limitations and conditions of this permit to discharge air contaminants from its petroleum refinery located in Rainier Oregon.

Compliance with the specific requirements, limitations and conditions contained herein shall not relieve the permittee from complying with all rules and standards of the Department and the laws administered by the Department.

- Section A: Petroleum Refining
- Section B: Fuel Burning Equipment

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Cascade Energy Inc.

SECTION A - PETROLEUM REFINING

Performance Standards and Emission Limits

1. The permittee shall at all times maintain and operate all air contaminant generating processes and all air contaminant control equipment at full efficiency and effectiveness such that the emissions of air contaminants are kept at the lowest practicable levels.
2. Emissions of air contaminants from petroleum refining and all associated air contaminant control equipment shall not exceed any of the following:
  - a. An opacity equal to or greater than twenty (20) percent opacity for a period or periods aggregating more than thirty (30) seconds in any one hour from any single non fuel burning source of emissions.
  - b. An emission of particulate matter which is larger than 250 microns in size provided such particulate matter does or will deposit upon the real property of another person.
3. The permittee shall not cause or permit the emissions of odorous matter in such a manner as to contribute to a condition of air pollution or exceed:
  - a. A scentometer No. 0 odor strength or equivalent dilution in residential and commercial areas.
  - b. A scentometer No. 2 odor strength or equivalent dilution in all other land use areas.

Scentometer Readings

Scentometer No.	Concentration Range No. of Thresholds
0	1 to 2
1	2 to 8
2	8 to 32
3	32 to 128

4. The permittee shall not sell, distribute or make available for use any distillate fuel oil, in the entire state of Oregon, containing more than the following percentages of sulfur:
  - a. ASTM Grade 1 fuel oil - 0.3 percent by weight
  - b. ASTM Grade 2 fuel oil - 0.5 percent by weight
5. The permittee shall not sell, distribute or make available for use in the entire state of Oregon any residual fuel oil (oil meeting the specifications of ASTM Grade 4, Grade 5, or Grade 6 fuel oil), containing more than 1.75 percent sulfur by weight.



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6. After January 1, 1979, if the Department so requires by rule, the permittee shall not sell or distribute for use in Multnomah, Washington, Clackamas and Columbia counties of Oregon any residual fuel oil (oil meeting the specifications of ASTM Grade 4, Grade 5 or Grade 6 fuel oil) containing more than 0.5 percent sulfur by weight.

Special Conditions

7. The permittee shall construct a petroleum refinery with processing capacity no greater than 30,000 BBL/day and shall submit detailed plans and specifications to the Department for review and approval, prior to construction, for at least the following: All petroleum storage and loading equipment, sulfox plant, by-product sulfur handling, storage and shipment facilities, cooling tower, vapor recovery system and the flaring system. Said refinery shall incorporate highest and best practicable treatment and control facilities and procedures throughout.
8. The permittee shall handle, transfer, store and subsequently load for shipment all by-product sulfur as a liquid. If because of process equipment breakdown it becomes necessary for the sulfur by-product to be stored in a solid form, it shall be stored in a completely enclosed area. All displaced air from this enclosed area must pass through an air pollution control system, approved by the Department before being discharged into the atmosphere.
9. The permittee shall be subject to the following provisions with regards to the unloading, transferring, storage and loading of all petroleum liquids.
- a. Petroleum liquid having a true vapor pressure of 78 mm Hg or less shall be stored in vessels equipped with a conservation vent or equivalent.
  - b. Petroleum liquid having a true vapor pressure in excess of 78 mm Hg but not greater than 570 mm Hg shall be stored in vessels equipped with a floating roof or equivalent.
  - c. Petroleum liquid having a true vapor pressure in excess of 570 mm Hg shall be stored in vessels equipped or tied in with a vapor recovery system or its equivalent.
  - d. All hatch covers must be kept in good operating condition and must be closed at all times except during actual gauging operations.
  - e. When unloading and loading petroleum liquids having a true vapor pressure of 78 mm Hg or greater under actual handling conditions, necessary equipment must be provided so a vapor tight seal between the adapter and the compartment hatch will be maintained. All displaced vapor shall be discharged to vapor recovery or equivalent control system.
10. The permittee is prohibited from discharging any treated or untreated water to any public waterway unless such discharge is the subject of a valid Waste Discharge Permit issued by the Department of Environmental Quality.

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11. The permittee shall comply with all applicable Department noise control regulations and demonstrate compliance no later than 30 days after facility start-up.
12. The permittee shall cover all API gravity separators to control hydrocarbon emissions.
13. The permittee shall submit to the Department written documentation of the following increments of progress by no later than the dates indicated below, that the proposed oil refinery is a viable project and is proceeding towards completion. If at any time it is apparent that the project is not viable as determined by failure to adhere to the following schedule, the permit shall be subject to modification or revocation.
  - a. Proceed with preliminary on site engineering March 1, 1975
  - b. Issue purchase orders for long lead time items May 1, 1975
  - c. Commence construction (preliminary site preparation, foundations for and erection of storage tanks May 1, 1975.
  - d. Obtain crude supply, marketing and financial commitments September 1, 1975
  - e. Commence operation of the storage and distribution section of the facility September 1, 1975
  - f. Final decision made to either build the refinery in two separate phases or in one phase September 1, 1975
  - g. Commence construction (preliminary site preparation and foundations for major process units October 1, 1975
  - h. Complete engineering contracts for major process equipment April 1, 1976
  - i. Issue purchase orders for major process equipment May 1, 1976
  - j. Start up 15,000 bpd refinery July 1, 1977
  - k. Start up of entire 30,000 bpd refinery December 31, 1979
14. The permittee shall submit for Department review and approval prior to start-up of the refinery, the analytic methods that will be used by the refinery to determine sulfur, ash and nitrogen content (percent by weight).
15. Operation of the flares shall be considered a breakdown condition and therefore subject to general condition number 11 of this permit.
16. Continuous monitoring of specific emissions and emission points may be required by the Department after review of final engineering plans and specifications.
17. The permittee shall provide within three months of commencing commercial operation, easily accessible sampling ports and platforms on all emission exhaust stacks. The location and design of these sampling ports and platforms must be reviewed and approved by the Department.
18. The permittee shall when in commercial operation but no sooner than January 1, 1979 make available for use in Columbia county, at least 2,000 barrels per day of residual fuel oil with a maximum sulfur content of 0.5 percent by weight.

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Emission Reduction Plan

19. The permittee shall implement the emission reduction plan stated in Section B of this permit.

Compliance Schedule

20. None required.

Monitoring and Reporting

21. The permittee shall effectively monitor the operation and maintenance of the facility and associated air contaminant control equipment. 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. At least the following parameters shall be monitored and recorded at the indicated interval:

<u>Parameter</u>	<u>Minimum Monitoring Frequency</u>
a. Amount of sulfur by-product reclaimed and/or sold	Daily
b. Any observable increase in particulate, sulfur dioxide, or odorous emissions from the facility, suspected reason for such increased emission and projected date of any action to reduce the emission increase	Daily
c. Operating schedule (hours/day) of the sulfur by-product transferring and shipment facility	Monthly
d. The quantity, sulfur, ash and nitrogen content (percent by weight) of each shipment of residual and distillate fuel oil sold or distributed for use in Multnomah, Washington, Clackamas and Columbia counties as well as the remaining counties in the State of Oregon	As performed
e. The date of inspection and/or type of maintenance performed on the petroleum and sulfur by-product storage and handling facilities, cooling tower, flaring system and vapor recovery system	As performed

22. The permittee shall submit the following recorded information to the Department in writing at the indicated intervals:

<u>Parameter</u>	<u>Interval</u>
a. Tons of sulfur by-product reclaimed	Quarterly

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<u>Parameter</u>	<u>Interval</u>
b. Operating hours of the sulfur by-product handling, storage and shipment facility	Quarterly
c. Quantity, sulfur, ash and nitrogen content (percent by weight) of each shipment of residual and distillate fuel oil sold within the State of Oregon, by individual county	Quarterly

SECTION B - FUEL BURNING EQUIPMENT

Performance Standards and Emission Limits

1. The permittee shall at all times maintain and operate all fuel burning devices and related equipment at full efficiency such that the emissions of air contaminants are kept at the lowest practicable levels.
2. Emissions of air contaminants from fuel burning equipment shall not exceed any of the following:
  - a. Visible emissions shall not equal or exceed 20% opacity for a period or periods aggregating more than three (3) minutes in any one (1) hour.
  - b. Particulate emissions shall not exceed smoke spot numbers as measured by ASTM D 2156-65 "Standard Method to test for Smoke Density", as follows:

<u>Types of Fuel</u>	<u>Smoke Spot Number</u>
Residual	4
Distillate	2

- c. Emissions of particulate, sulfur dioxide and nitrogen oxides shall not exceed the following emission rates for the specific fuels listed:

<u>Types of Fuels</u>	<u>Emission Rate Limitation</u>		
	<u>lbs/mm BTU</u>		
	<u>Particulate</u>	<u>SO2</u>	<u>NOx</u>
Refinery gas	0.02	0.05	0.2
Distillate	0.02	0.20	0.3
Residual	0.080	0.55	0.3

- d. The maximum hourly emissions from all fuel burning equipment shall not exceed:

<u>Pollutant</u>	<u>Emission Rate lbs/hr</u>
Particulate	34
Sulfur dioxide	163
Nitrogen oxides	313

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- e. The maximum yearly emissions from all fuel burning equipment shall not exceed:

<u>Pollutant</u>	<u>Emissions-tons/year</u>
Particulate	150
Sulfur dioxide	715
Nitrogen oxides	1370

- f. When a combination of fuels are used in any one fuel burning device then the applicable emission limits in 2b, 2d and 2e shall be determined by proration of the specific fuel emission rate limitations in proportion to the actual fuel mix.

3. Sulfur content of fuel oil burned shall be limited as follows:

- a. The permittee shall not use any residual fuel oil containing more than 0.5 percent sulfur by weight.
- b. The permittee shall not use any distillate fuel oil containing more than 0.1 percent sulfur by weight.

4. The permittee shall not cause or permit the emission of any particulate matter which is larger than 250 microns in size provided such particulate matter does or will deposit upon the real property of another person.

Special Conditions

5. The permittee shall submit detailed plans and specifications for all fuel burning equipment for Department review and approval prior to commencing construction. Said fuel burning equipment shall incorporate highest and best practicable emission control and technology.
6. The permittee shall not operate the fuel burning devices in such a manner as to exceed a total of 780,000,000 BTU's per hour of heat input.
7. The permittee shall have particulate oxides of nitrogen and sulfur dioxide emission tests conducted for all fuel burning and associated air pollution control equipment conducted no sooner than three months but not later than six months after commencing commercial operation. The emission tests shall be conducted for refinery gas, distillate and/or residual fuel oil depending on whatever fuel or fuel mix will be burned in each fuel burning device. The tests must be performed in accordance with methods on file at the Department or in conformance with recognized applicable standard methods approved in writing in advance by the Department. The test results shall be submitted to the Department within thirty (30) days of completion of the tests.
8. The permittee shall provide within three months of commencing commercial operation, easily accessible sampling ports and platforms on all fuel burning exhaust stacks. The location and design of these sampling ports and platforms must be reviewed and approved by the Department.

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9. The permittee shall provide fuel sampling facilities on all feedlines to each fuel burning device (valve for taking a sample of fuel).
10. The permittee shall burn only refinery gas, distillate, residual or combination of the three fuels in the fuel burning equipment in a manner such that the emissions do not exceed the limitations set forth in this permit.
11. If the permittee desires to burn other fuels or combinations of fuels not approved within this permit, acceptable source test reports must be submitted to the Department for review and approval and a permit ammendment must be obtained prior to use of such other fuel.
12. The permittee is prohibited from discharging any treated or untreated water to any public waterway unless such discharge is the subject of a valid Waste Discharge Permit issued by the Department of Environmental Quality.
13. The permittee shall comply with all applicable Department noise control regulations and demonstrate compliance no later than 30 days after facility starts up.

Emission Reduction Plan

14. The permittee shall implement the following emission reduction plan during air pollution episodes when so notified by this Department:

Notice Condition

Action to be Taken by Permittee

- |              |  |
|--------------|--|
| a. Alert     | Boiler and process heater lancing or soot blowing if required shall be performed only between the hours of 12 noon and 4:00 p.m.   |
| b. Warning   | <ol style="list-style-type: none"><li>1. Continue alert measures</li><li>2. Minimize emissions by reducing heat and steam demands to absolute necessities consistent with preventing equipment damage</li><li>3. Burn the cleanest available fuels possible</li><li>4. Prepare for immediate shutdown of the boilers and process heaters</li></ol> |
| c. Emergency | <ol style="list-style-type: none"><li>1. Upon notification from the Department, immediately cease operation of the boilers and process heaters until notified by the Department that the condition has passed</li></ol>  |

Compliance Schedule

15. None required.

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Monitoring and Reporting

16. The permittee shall effectively monitor the operation and maintenance of all fuel burning equipment 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 refinery site at all times for inspection by the authorized representatives of the Department. At least the following parameters shall be monitored and recorded at the indicated interval:

<u>Parameter</u>	<u>Minimum Monitoring Frequency</u>
a. Operating schedule (hours/day) of the steam boiler	Daily
b. Operating schedule (hours/month) of all other fuel burning equipment not previously mentioned in (a)	Daily
c. Any observable increase in particulate and/or sulfur dioxide emissions from the fuel burning equipment, suspected reason for such increased emission and projected date of any action to reduce the emission increase	Daily
d. Quantity of distillate and/or residual fuel oil and/or refinery gas burned for each process heater and boiler	Daily
e. The sulfur, ash, nitrogen (percent by weight) and BTU content of every fuel or fuel mix used in each process heater and boiler	After any change in fuel or fuel mix or significant change (as defined by the Department) in sulfur, ash, nitrogen or BTU content of each fuel
f. Particulate, sulfur dioxide and nitrogen oxide emission rates from each fuel burning equipment exhaust stack for each fuel or fuel mix used	Semi-annually
g. A description of any maintenance to the fuel burning equipment	As performed
h. Smoke spot for each fuel oil burning device	Monthly or after any change in fuel mix

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17. The permittee shall submit the following recorded information to the Department in writing at the indicated intervals:

<u>Parameter</u>	<u>Interval</u>
a. Operating hours of the fuel burning equipment	Quarterly
b. Quantities of distillate and/or residual fuel oil and/or refinery gas burned for each process heater and boiler	Quarterly
c. Arrange sulfur, ash, nitrogen (percent by weight) and BTU content of every fuel or fuel mix used in each process heater and boiler	Quarterly
d. Results of the particulate, sulfur dioxide and nitrogen oxide emission tests from each fuel burning exhaust stack	Semi-annually



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General Conditions

- G1. A copy of this permit or at least a copy of the title page and an accurate and complete extraction of the operating and monitoring requirements and discharge limitations shall be posted at the facility and the contents thereof made known to operating personnel.
- G2. This 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.
- G3. The permittee is prohibited from conducting any open burning at the plant site or facility.
- G4. The permittee is prohibited from causing or allowing discharges of air contaminants from source(s) not covered by this permit so as to cause the plant site emissions to exceed the standards fixed by this permit or rules of the Department of Environmental Quality.
- G5. 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, Section 21-050.
- G6. (NOTICE CONDITION) The permittee shall dispose of all solid wastes or residues in manners and at locations approved by the Department of Environmental Quality.
- G7. The permittee shall allow Department of Environmental Quality representatives access to the plant site and record storage areas 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.
- G8. The permittee, without prior notice to and written approval from the Department of Environmental Quality, is prohibited from altering, modifying or expanding the subject production facilities so as to affect emissions to the atmosphere.
- G9. The permittee shall be required to make application for a new permit if a substantial modification, alteration, addition or enlargement is proposed which would have a significant impact on air contaminant emission increases or reductions at the plant site.

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G10. This permit is subject to revocation for cause, as provided by law, including:

- a. Misrepresentation of any material fact or lack of full disclosure in the application including any exhibits thereto, or in any other additional information requested or supplied in conjunction therewith;
- b. Violation of any of the requirements, limitations or conditions contained herein; or
- c. Any material change in quantity or character of air contaminants emitted to the atmosphere.

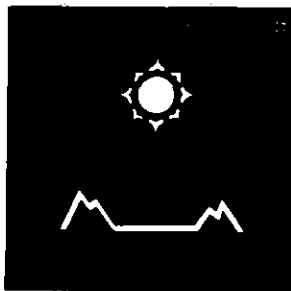
G11. The permittee shall notify the Department by telephone or in person within one (1) hour of any scheduled maintenance, malfunction of pollution control equipment, upset or any other conditions that cause or may tend to cause a significant increase in emissions or violation of any conditions of this permit. Such notice shall include:

- a. The nature and quantity of increased emissions that have occurred or are likely to occur,
- b. The expected length of time that any pollution control equipment will be out of service or reduced in effectiveness,
- c. The corrective action that is proposed to be taken, and
- d. The precautions that are proposed to be taken to prevent a future recurrence of a similar condition.

G12. Application for a modified or renewal of this permit must be submitted not less than 60 days prior to permit expiration date. A filing fee and Application Investigation and Permit Issuing or Denying Fee must be submitted with the application.

G13. The permittee shall submit the Annual Compliance Determination Fee to the Department of Environmental Quality according to the following schedule:

<u>Amount Due</u>	<u>Date Due</u>
\$565.00	December 31, 1975
565.00	1976
565.00	1977
565.00	1978
(see G 12)	December 31, 1979



# MID WILLAMETTE VALLEY AIR POLLUTION AUTHORITY

2585 STATE STREET / SALEM, OREGON 97301 / TELEPHONE AC 503 / 581-1715

To: Environmental Quality Commission  
From: Michael D. Roach, Director - Mid-Willamette Valley Air Pollution Authority  
Date: January 24, 1975  
Subj: Modification of Indirect Source Regulations

Commissioners, my name is Lynda Willis. I am here representing the Mid-Willamette Valley Air Pollution Authority in presenting testimony opposing the proposed modification of the recently adopted indirect source regulations.

The purpose of adopting indirect source regulations was to protect and maintain regional air quality at levels below national standards. It is a well known fact Willamette Valley growth rates are among the highest in the nation. Couple this with the valley's pollution potential and it is obvious great discretion and care must be exercised in programming for future growth. An important part of this programming is the review of indirect sources.

Much practical experience has been gained in the three years indirect sources have been reviewed in Oregon. During this time the 50 car review threshold has shown itself to be practical and desirable; especially in areas such as Salem where growth and development has not reached the level it has in Portland. Land values in special areas of concern, such as the Salem CBD or various urban renewal project areas, are still low enough to allow for the economic development for individual facility surface lots as opposed to the much more expensive and larger structures. Alone, these smaller lots may create few problems. However, together with their associated neighborhood street congestion, the problems become more evident. It is necessary to review indirect sources to the lowest practical number of spaces to aid in the prevention of problems in the future in smaller urban areas.

From an optimum standpoint all parking within five miles of the municipal boundaries of cities with 50,000 or greater population should be reviewed. This would help assure that environmental quality was a part of the planning and development equation. Obviously this is not a feasible course of action. Costs would exceed benefits in many cases. I believe at the 50 car threshold this balances.

Finally, raising the review threshold will also hinder efforts to encourage the development of mass transit use incentives. It is currently the procedure of Mid-Willamette to attach conditions for alternate-mode use incentives to parking approvals. Raising the review threshold will eliminate this program for the 50-100 space lots, many of which are employee oriented and are good prospects for transit use, and as we well know, future population growth in our urban areas will require higher levels of alternative mode use to protect air quality. For these reasons I urge the commission to reject the proposed modification.

Thank you.

TESTIMONY TO OREGON ENVIRONMENTAL QUALITY COMMISSION

RE: INDIRECT SOURCES ADMINISTRATIVE RULE  
January 24, 1975

Mr. Chairman, members of the Commission, my name is Jack R. Kalinoski. I am the Public Affairs Manager of the Oregon-Columbia Chapter of the Associated General Contractors. The AGC represents about 325 contractors in Oregon and Southwest Washington. Within that area we estimate our members perform about 70 percent of all commercial construction done by contract.

Our organization is very concerned about the impact of the EQC indirect sources rule. For a number of reasons we are here today to request and recommend that the EQC suspend implementation of its rule until July 1, 1975 and that during the period between now and that date, the Commission hold a hearing to determine whether or not the rule should be repealed in its entirety.

We feel there are a number of reasons why this action should be taken. We also feel there is a significant amount of information supporting our recommendation that would come to light at a hearing. Among these are the following:

1. Knowledge about the consequences of the rule may have been insufficient to warrant its implementation.
2. The rule may have been based more on supposition than factual information.
3. The rule may have the undesired effect of delaying, discouraging or halting necessary public and private improvements.
4. There may have been an insufficient data base about concentrations of pollutants, the source of their emission and the relationship between emissions and air quality.
5. There may be technical inadequacy of model assessment of the pollution impact by a single indirect source upon the air quality of an area as well as the thoroughness and methodology for the assessment.
6. The restrictions on the construction of a so-called "indirect source" may not guarantee that generation of auto-related pollution will cease.
7. The indirect source rule may be a significant economic detriment to Oregon and Oregonians.
8. A critical examination of the standards may demonstrate that the indirect source rule is a marginal control, and as such is not necessary, under the federal Clean Air Act.
9. There are some plausible possibilities that the indirect source rule may work perversely, increasing rather than reducing emissions.
10. The impact on air quality of so-called "indirect sources" may be virtually imperceptible.

11. The basis for Parking Management Regulations, that they will lead to control of carbon monoxide and oxidant emissions and that a reduction of total vehicle miles traveled will lead to cleaner air may be unsupportable.

12. A facility-by-facility review may be an ineffective and wasteful exercise having little likelihood for success minimizing the effect of vehicular emissions on air quality levels.

13. The additional cost to developers of so-called indirect sources could amount to sums in the terms of thousands of dollars.

14. Unemployment in the construction industry may sharply increase.

15. Three separate studies performed by The National Academy of Sciences, The National Science Foundation and Stanford Research Institute support the conclusion that Indirect Source Regulation will not accomplish what the proponents originally thought it would.

Mr. Chairman, we are not suggesting that Oregon take action that is not without precedent. The State of Alabama has postponed implementation of indirect source regulations. South Carolina is delaying implementation of its regulations. The San Francisco Bay Area Air Pollution Control Board rescinded their indirect source regulation. On December 23, 1974 the Environmental Protection Agency announced a six-month delay in implementation of their indirect source regulations.

Recognizing some of the problems involved, even the Congress of the United States has acted. On October 9, 1974 by a vote of 366 to 24 the House of Representatives in Congress passed HR 16901 which is the Appropriations Act for Agricultural-Environmental and Consumer Protection Programs. Section 511 of that Act states: "No part of any funds appropriated under this Act may be used by the Environmental Protection Agency to administer any program to tax, limit, or otherwise regulate parking facilities."

On December 17, this measure passed the United States Senate with a voice vote (a vote count was not sought).

Mr. Chairman, members of the Commission, it is for these reasons, all of which we firmly believe are in the public interest, consideration should be given to suspension and ultimate repeal of the indirect sources administrative rule.



KESS CANNON  
Director

Pete: The issue was agenda items --  
as I recall we discussed. Commissioners  
wanted such information to be on file  
on their library -

*Get back to Kess on this  
after the talk to Tom Moore.  
Area*



KESS CANNON  
Director

Pete: Did we send items to Medford for Jackson  
county court as they requested? I've heard  
that nothing went to them.

Kess

*✓ see  
attached*



State of Oregon

DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

To: Kess

Date:

From: Pete

Subject: Jackson County Notice of Hearings

The receptionist in the Roseburg Office tells me that the Jackson County Board of Commissioners, as well as the Health, Planning, and Assessor's officials were mailed notices of the NPDES Hearing and, to the best of her knowledge, a copy of the proposed permit.

You will recall that the Board of Commissioners expressed concern about the hearings on moratoriums. Attached is my last correspondence on that issue along with their reply.

Mr Spies reports that staff has not yet established a time for the moratorium hearings.





COUNTY COMMISSIONERS  
TAM MOORE, Chairman  
ISABEL SICKELS, Commissioner  
JON DEASON, Commissioner  
Administrative Assistant  
EDWARD S. BRESNAHAN

# Jackson County Oregon

BOARD OF COUNTY COMMISSIONERS

(503) 773-6211, EXT. 311 • COUNTY COURTHOUSE • MEDFORD, OREGON • 97501

January 31, 1975

Mr. Peter W. McSwain  
Hearings Officer  
Department of Environmental Quality  
1234 Morrison Street  
Portland, Oregon 97205

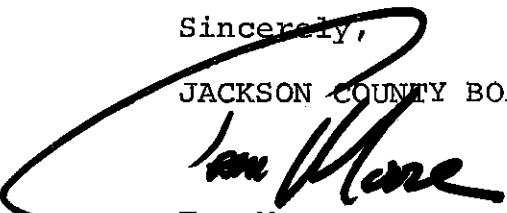
Dear Mr. McSwain:                      Re: Septic Moratoriums

Thanks for your letter indicating hearings. Please send me the notice of some, the proposed rules and any other pertinent documents.

As I noted in my telegram, we are without any adequate notice. If that situation continues, and unless it is corrected, I shall consider it a defect in this entire proceeding.

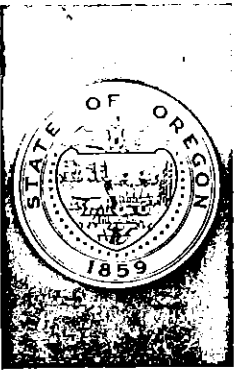
Sincerely,

JACKSON COUNTY BOARD OF COMMISSIONERS



Tam Moore  
Chairman

TM:rjr



## DEPARTMENT OF ENVIRONMENTAL QUALITY

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-

January 29, 1975

ROBERT W. STRAUB  
Governor

KESSLER R. CANNON  
Director

Mr. Tam Moore  
Chairman, Jackson County Commissioners  
Jackson County Courthouse  
Medford, Oregon 97501

Dear Mr. Moore:

Your telegram to Chairman McPhillips has been referred to me.

On January 24th the Commission took no action with regard to any moratoriums. It merely gave authorization to announce and conduct public hearings on the question of continuing certain moratoriums on new sewerage system in certain areas. Since three of the areas involved are adjacent to Medford in Jackson County, we are placing your address on the mailing lists for the notice of hearing. As soon as the hearing is scheduled, you will be informed by mail and given opportunity to contribute to the record by way of written or oral presentation.

Thank you for your attention in this matter.

Sincerely,

KESSLER R. CANNON  
Director

Peter W. McSwain  
Hearings Officer

PWM:gb



## ENVIRONMENTAL QUALITY COMMISSION

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

Robert W. Straub  
GOVERNOR

### MEMORANDUM

B. A. McPHILLIPS  
Chairman, McMinnville

To: Environmental Quality Commission

GRACE S. PHINNEY  
Corvallis

From: Director

JACKLYN L. HALLOCK  
Portland

Subject: Agenda Item No. I, January 24, 1975, EQC Meeting

MORRIS K. CROTHERS  
Salem

Proposed Public Hearing to Consider Extension of Existing  
Moratoriums on Subsurface Sewage System Installations

RONALD M. SOMERS  
The Dalles

### BACKGROUND

KESSLER R. CANNON  
Director

There are existing in a number of cities and counties certain defined geographic areas in which the local governing body has declared moratoriums or embargoes on installation of new subsurface sewage disposal systems. The reason for these actions is that health hazards and/or water pollution problems have been created by failing subsurface systems. The installation of new systems would only aggravate the problem. Moratoriums on new installations were instituted to force action toward cleanup of such problems by construction of sewerage systems or other appropriate means.

The areas involved include three areas adjacent to the City of Medford in Jackson County, the Redwood area in Josephine County, the Glide-Idleyld area in Douglas County, the cities of Sublimity and Donald in Marion County, the Warren area in Columbia County, and the unsewered portion of Lafayette in Yamhill County.

Effective January 1, 1974, the Oregon Legislature provided that the Environmental Quality Commission and the Department of Environmental Quality should regulate subsurface sewage disposal. ORS 454.605 to 454.745. It was the intent of the Legislature to preempt this field of regulation to the Commission and the Department. Consequently, it is legal counsel's opinion that such moratoriums or embargoes by local governments are no longer effective.

### CONCLUSIONS

Many of the moratoriums are necessary to protect public health or prevent water pollution and therefore should be continued. ORS 454.685 authorized the Commission to prohibit construction of subsurface sewage disposal systems in an area provided it can be shown that such prohibition is indicated following a public hearing upon more than 30 days' notice.



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RECOMMENDATION

It is the Director's recommendation that authorization be granted to hold a public hearing at the earliest possible time to consider institution of a six months moratorium on all those areas now under moratorium by cities or counties. During this six month period the Department would propose to hold public hearings in each of the affected areas to consider permanent moratoriums where indicated.



KESSLER R. CANNON  
Director

TJO:vt  
1/9/75



# Telegram

PRA160(1617)(1-029252C023)PD 01/23/75 1616

1975 JAN 23 PM 1:22

ICS IPMPRUC PTL

03088 MEDFORD OR 53 01-23 1150A PST

PMS B A MCPHILLIPS

1234 SOUTHWEST MORRISON

PORTLAND OR 97205

REQUEST YOU DELAY FOR 30 DAYS ANY CONSIDERATION OF HEALTH  
 DEPARTMENT MORATORIUMS IN JACKSON COUNTY. DUE TO LACK OF NOTICE  
 WE ARE UNABLE TO RESPOND TO EITHER YOUR DIRECTORS  
 MEMO OR ATTORNEY'S OPINION. WE WILL BE ABLE TO RESPOND  
 AT EQC. REB MEETING OR AT A LOCAL HEARING IN SOUTHERN OREGON  
 REGARDS

TAM MOORE CHAIRMAN JACKSON COUNTY BOARD OF COMMISSIONERS

NNNN

SF-1201 (RS-69)

229-6264

A	238-8471	To	J.N.
S	By GL	At 3:30P	To MAIL
E			

DUPLICATE OF TELEPHONED TELEGRAM *MAIL*

RECEIVED  
 JAN 23 1975  
 TELETYPE UNIT  
 COMMUNICATIONS SECTION

Morton Spence  
229-5326 or 229-5327

Department of Environmental Quality  
1234 S.W. Morrison  
Portland, Oregon 97205

January 28, 1975: For Immediate Release

David Mayers, president of Amax Pacific Aluminum Corp., and B. A. McPhillips, chairman of the State Environmental Quality Commission (EQC), Tuesday announced they were in agreement that the hearing scheduled for Feb. 7 in Portland on the designation of the Youngs Bay-Youngs River estuary as a "special problem area" should be re-scheduled.

McPhillips said he and Mayers agreed that results of an Oregon State University study should be available before the EQC takes action on the designation of the special problem area.

The study, which will provide a baseline for evaluation of the effects of flourides on the estuary near Warrenton where Amax has proposed building a large aluminum reduction plant, will be available sometime in April.

A majority of the other members of the EQC, reached individually by the telephone for their response to the Mayers-McPhillips suggestion, gave their approval, according to Kessler R. Cannon, director of the Department of Environmental Quality (DEQ).

Basis for the change of date in the hearing, Cannon said, was to provide the EQC with the results of the OSU study commissioned by Amax. The study will estimate the concentrations of fluorides in the air of the proposed special problem area as a result of the Amax plant's operation, and OSU scientists' evaluations of the effects of such fluoride emissions on the aquatic life in the estuary.

Dr. Larry S. Slotta, director of OSU's ocean engineering pro-

gram, who is in charge of the study, told DEQ Tuesday that the study report will be delivered to Amax and DEQ "at least by April 30, and sooner if possible."

# # # #

# House Bill 2213

Sponsored by Representatives GRANNELL, BONEBRAKE, DAVIS, GILMOUR, GROENER, HANNEMAN, KINSEY, KULONGOSKI, LINDQUIST, STARR, STEVENSON, STULTS, WILHELMS, Senator RIPPER

## 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 as introduced.

Requires members of Environmental Quality Commission to be appointed from congressional districts with one member appointed at large.

**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

1

2 Relating to Environmental Quality Commission; amending ORS 468.010.

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

4

Section 1. ORS 468.010 is amended to read:

5

468.010. (1) There is created an Environmental Quality Commission.

6

The commission shall consist of five members, appointed by the Governor,

7

subject to confirmation by the Senate as provided in ORS 171.560 and

8

171.570. In making appointments under this section, the Governor shall

9

select from residents of this state one member from each congressional

10

district and, until a fifth congressional district is formed, the remaining

11

member from the state at large.

12

(2) The term of office of a member shall be four years, but the mem-

13

bers of the commission may be removed by the Governor. Before the

14

expiration of the term of a member, the Governor shall appoint his suc-

15

cessor to assume his duties on July 1 next following. A member shall be

16

eligible for reappointment, but no member shall serve more than two

17

consecutive terms. In case of a vacancy for any cause, the Governor shall

18

make an appointment to become immediately effective for the unexpired

19

term.

20

(3) A member of the commission is entitled to compensation and

21

expenses as provided in ORS 292.495.



STATEMENT OF MULTNOMAH COUNTY

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

Portland, Oregon

January 24, 1975

Multnomah County feels very strongly about maintaining a healthy balance in the "environment-energy-economy triangle". We fully support the concept of bringing new industry to the region, to the extent that it creates new jobs and a more sound economy. We also support the environmental and energy "legs" of the "triangle", by supporting industry which is as pollution free and energy efficient as possible.

The purpose of today's hearing is to discuss a proposed rule change which would reduce the maximum sulphur content of residual fuel oils. The proposed rule change should be evaluated exclusively on its merits, and any proposed development should not weigh on the decision by the Environmental Quality Commission to enact, revise, or withdraw the proposed rule change. The rule change should not be viewed as a "trade off device" to permit the construction of one, two, or three oil refineries in Oregon. In fact, it is most unfortunate that this state agency should have to view the promulgation of such an administrative rule under pressure of the notion that such a rule might serve as an "enabling device" for industrial development.

There is ample reason to believe that the case made by the Department of Environmental Quality for the rule change is based entirely upon a consideration for the desire to maintain the air quality of this region. The proposed rule change would aid the achievement and maintenance of higher air quality standards in the four county area, a goal which Multnomah County supports. It is apparent to us that DEQ would probably propose this rule anyway, regardless of any proposed project, because of air quality deterioration, and because it appears that the present regulations for sulphur content for residual fuel in Oregon are fairly lenient when compared to regulations in other large metropolitan regions, such as Los Angeles or San Francisco. From a comparative standpoint, the proposed rule change certainly seems to be in accord with a long range program aimed at checking the deterioration of air quality and keeping Oregon in the forefront of the fifty states in environmental protection. Correspondence from the DEQ indicates that the difference between the two regulator levels, the present and the proposed, represents a significant difference in potential air emissions and thus in potential quality of the total airshed of the region. We do feel, however, that these facts should be further documented.

For these reasons, we wish to go on record as supporting a reduction in the sulphur content of residual fuels. The rule change should be allowed to stand on its own feet; any proposed development should be prepared to meet these new standards.

As mentioned earlier, Multnomah County seeks to maintain that delicate balance among preserving the quality of life, expanding and diversifying our economic base, and slowing the proliferation of excessive, energy consumptive industries, commerce, or transportation modes. So let us now discuss the question of proposed oil refineries.

Kessler Cannon in a November 20, 1974 memo to the EQC states: "Of interest is the fact that present suppliers of oil to Oregon have not indicated a problem in supplying future demands in Oregon, including cleaner (low sulphur) fuels given adequate planning time of about three to five years and barring another energy crisis. The advantages of refineries locating in Oregon may thus not include guaranteed oil supplies or lower sulphur content fuels or even lower prices as evidenced by past federal regulation of production, distribution and price. Indeed, the only advantage may be economic benefit to the community by providing some additional jobs and ad valorem tax base."

This raises the question of the cost/benefit ratio of environment to economy, and this question needs careful attention. Unfortunately, it is difficult to find a proper forum in which to objectively hash out these critical issues. What we face with the proposed Rivergate oil refinery in particular are a host of questions regarding the direction of future development of the metropolitan area, and especially of the Rivergate industrial area. A vital question is, is this project, while it may meet all pollution standards, a good use of the limited industrial land, and limited airshed, of the Rivergate area? This question, in turn, is part of the larger issue of capital intensive versus labor intensive development for Rivergate. While this question has been kicking around for some time, there has not been a decision made at the regional level about which approach has the greatest regional benefit.

Of course, this question of siting the Columbia Independent Refinery, Inc. development is properly addressed at the level of the Columbia Region Association of Governments, if not at the Land Conservation and Development Commission level. Unfortunately, neither agency is ready to tackle such siting questions. Only last night the CRAG Board of Directors adopted procedures for the designation of areas and activities of critical regional concern. The actual designation of activities (such as major industrial development siting), and then the implementation procedures, are a long ways off.

However, it may be very valuable for the Environmental Quality Commission to ask the staff of CRAG for a staff-level report on how the proposed CIRI refinery relates to currently valid regional policies, plans and planning processes, understanding that all of these are undergoing evolution at this time. If EQC action is the only key step remaining before approval is assured for construction of the refinery, then it would only be wise to understand all relevant aspects of the development and its affects. As Governor Robert Straub has indicated so strongly, it is essential that

more jobs be provided in Oregon in coming weeks, months, years and decades. The available industrial land in the metropolitan region is a precious regional resource in this regard and it is essential that we get the most value (i.e. jobs) per acre.

In addition to requesting input from the staff of CRAG, it might be wise to ask the L.C.D.C. staff to evaluate the refinery proposals in light of L.C.D.C. Goals and Guidelines, so recently adopted.

Also of great concern to the County is the fact that the crude oil from Alaska, to run the proposed refinery, would be brought to the Rivergate area in tankers of a size relatively uncommon to these waters. These tankers would have the capacity of up to 450,000 barrels. It is anticipated that the proposed CIRI refinery would require approximately three tankers operating full time with arrivals scheduled in Portland of about one every 4½ days. Due to the failure of the federal government to require double hulls on new large tankers, the risks from major spills have been significantly increased. This should not be discounted.

In summary, Multnomah County favors EQC approval of the proposed rule change but without regard to the question of a final decision on any particular refinery proposal.

SHARON ROSSO:

11-24-75

I testified before you <sup>against</sup> ~~the~~ the Policy of trade offs. I believe the worst aspects of the tradeoff policy are implicit in the

Clean Fuels Policy. Your models about dispersion effects of air emissions from the Rivergate area. <sup>Impacts</sup> ~~Impacts~~ are heaviest in the immediate North Portland area and on downtown Portland. The benefits of a Clean Fuels Policy are going to be spread out over a three county area while the impact of CIRT will remain in MP ~~&~~ Dntn

A clean fuels policy - while it does not greatly affect the major air quality problem, that of particulates, might make sense if it were not dependent on

a refinery in this Air Quality maintenance area. Your staff report states that existing residual oil supplies can supply less sulfur fuel on the same time line CIRI will be on.

I would like to call attention to the fact that the figures presented in Part D3Q reports apply to 73-75-85 & figures for the C7P & CIRI apply to 73-75-79 - allowing no comparisons further the figures do not allow comparison of 79 without C7P, with C7P & with C7P & CIRI

Regarding CIRI itself - the results of the questionnaire answered by 1298 people in the NP area showed

1078 responding "I do not oppose  
properly cited ind. dev. in the area  
if it meets all environmental standards.  
By your own reports it clearly does  
not, without implementation of a 3 cent  
wide cleanup."

Since the Dept permit rule does  
not allow variance of a permit to  
emit air contaminants beyond fire pro,  
variance of the permit would in fact  
be a permit only to build and to operate  
one year. I am fearful of the same  
type of situation we faced with the  
Northton plant. ~~variance of a permit  
to build, and in this case a no action order  
untenable facility based on the company~~

~~features~~ ~~Of which if they cannot comply~~  
~~will be changed so they can~~

The original permit based on the  
comparative features could not be  
complied with and the new permit  
was radically changed to allow operation  
of a facility you allowed to be built.

In this case there is no thought  
of ever moving a 100 million dollar  
facility. If it can't comply with the  
original permit a new one will have  
to be given - further if the C7F doesn't  
have the effect your study projects the  
air will be in much worse condition  
than without it.



I request this ~~is~~ CTP not be  
and the C1 R1 permit denied  
adopted for these reasons)

1. It does not address the major  
problem - particulates

2. There is not enough information  
available to justify for the ~~the~~ - P area  
the CTP trade off

3. The direct effect on NP & Dstr can  
not justified in the CTP <sup>with C1 R1</sup> the benefits  
will be ~~essentially~~ and the effects local

RAY STEWARD  
PRESIDENT  
ART LIVENGOOD  
VICE-PRESIDENT  
C DAHLGREN  
2ND VICE-PRESIDENT  
LEW WINKLER  
SECRETARY  
LEONARD FRANK  
TREASURER  
WALLACE GAINER, JR.  
PORT MANAGER

## PORT OF ST. HELENS

P. O. BOX 598  
ST. HELENS, OREGON 97051

OFFICE LOCATION:  
ROOM 318  
COLUMBIA COUNTY COURTHOUSE  
ST. HELENS, OREGON 97051  
PHONE 397-2888

January 17, 1975

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
**RECEIVED**  
JAN 20 1975

**OFFICE OF THE DIRECTOR**

Mr. Kessler R. Cannon, Director  
Environmental Quality Commission  
State of Oregon  
1234 Morrison Street  
Portland, Oregon 97205

Dear Mr. Cannon:

The Port of St. Helens would appreciate taking this opportunity of advising you, your commission and staff that we support the issuance of permits for both the Charter Energy Refinery near the St. Helens area and for the Cascade Energy Refinery near Rainier. Both of these are within our district.

We have dealt with Cascade (formerly Caribou Four Corners) for several years and have packaged and sold the property to them upon which their facility will be constructed. Our contacts with Charter have been more recent but we feel that both companies are entirely reputable and you can rely upon the fact that they are acting in good faith.

Mr. Frank Van Horn, director of the St. Helens office of the Oregon Employment Division has just released their current figures on unemployment figure was at 14.9%, one of the highest in the State of Oregon. Our area is basically dependent upon timber oriented industries and we would like very much to diversify. The refineries have reasonably high employment coupled with high investment and the payroll is substantial. It therefor would be beneficial both from the employment standpoint and from the taxation picture as well. We would expect employment to be about 150 persons, most of whom would be from our existing labor market and at the current rate of taxes we could expect about \$1,500,000.00 annual tax revenue. Employment figures during the construction periods would be much greater and would hopefully be taking place shortly after the finishing of the Trojan Nuclear Plant.

In his State of the Union message to congress, President Ford indicated the need for additional refineries to be constructed in the United States. Oregon is without a refinery at the present time and this would be a step forward to meeting the needs of the nation. It also would be, in our opinion, a very large step forward in supplying Oregon consumers with some of their energy requirements and would hopefully eliminate, or at least alleviate, the long gasoline lines we experienced last fall, should such a condition again fall upon us. Under the direction of State Representative Dick Magruder, we had an energy committee formed here in Columbia County during that dismal period in which the long gas

lines were in existence. We learned that Oregon was somewhat on the tail end of the supply line and that if we had had local refineries we would have been in a far more advantageous position to supply Oregon people with the product they needed.

It is not our intent to get into the technical aspect of the refineries. We do feel that our airshed is favorable for the establishment of these two industries and with the low polluting types of product they will manufacture we could expect considerable improvement from some pollution sources that now exist within the area. This basically being accomplished by their using a lower sulphur content fuel which these refineries will produce.

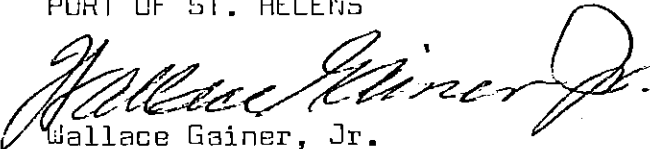
The first phase of the Charter production is expected to be 52,400 bbls. per day and Cascade is expected to be 15,000 bbls. per day. We would respectfully ask that you permit them some tolerance in their production -- if their equipment is capable of producing more, and they are still within your pollution standards, we ask that they be granted the right to increase their production over the figures above indicated.

Our port officials have had the opportunity of meeting with both Mr. D. Keaton, President of Charter and Mr. Reuel Call, President of Cascade and we are confident that both companies would start construction as soon as possible after the permits are granted.

We thank you for the opportunity of submitting this information for your consideration and look forward to your granting them the permits they have requested.

Sincerely,

PORT OF ST. HELENS

  
Wallace Gainer, Jr.  
Port Manager

WGjr/rw

cc - Herbert Bowerman - Charter Energy  
Lawrence Schrieber - Cascade Energy

STATEMENT OF WALDEMAR SETON BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

January 24, 1975

Subject: Cascade Energy Proposed Air Contaminant Discharge Permit For 30,000 Bbls. per Day Oil Refinery

Mr. Chairman, members of the Commission:

My name is Waldemar Seton. I am a professional engineer representing Cascade Energy as their Project Manager. We received a draft of a proposed Air Contaminant Discharge Permit from the Department of Environmental Quality in late December and would like to confirm some comments and suggestions.

The proposed permit is a result of an application filed last May and an environmental impact statement submitted in early November to the Department of Environmental Quality. We have issued letters of further clarification and comment on December 13, December 27, and January 14. In addition, Environmental Disciplines, Incorporated will make some technical comments after I have concluded my statement.

There are a few conditions of the proposed permit which deserve comment since they are of considerable concern to us. The permit does not allow the production of No. 6 oil of sulfur content greater than 1.75%, which could be legally sold in the State of Oregon for bunkering ships. In order for us to properly serve the vessels which will call at our dock facility, we should be able to produce a competitively priced fuel for their consumption. The sulfur content of this fuel is exempted from sulfur limitations in the Department regulations at this time.

The proposed permit has a provision requiring Department of Environmental Quality review of plans and specifications. We believe that the final permit should include a time limitation for review by the staff. If we do not have a clause which will permit us to commence or continue construction within, say a 30 day review period, we will be unable to obtain competitive construction contracts and build an economical refinery.

We have completely revised the dates for the various sections of the construction sequence and have reviewed these with the staff and we do not believe this creates any particular problems. However, we should point out that these dates are based on approval of permits before the 1st of February, 1975 and if there is a delay beyond this time, these dates may be delayed also. These delays may not be directly in proportion to a delay in permits since scheduling is dependent upon the variations in delivery schedules for equipment, effect of time of year, weather, river level, etc. , on construction as well as the availability of engineering and construction contractors.

Sampling as proposed by the staff should be limited to establish our compliance and performance with regard to the rules of the Department and limits of our permit, but should not be for the purposes of research into items where we do not even know if problems exist. We are quite willing to work with the staff on problems of this type but do not feel that these items should be part of the day to day cost of operating our refinery or part of our permit. When we do burn No. 2 distillate fuel, our permit requests a limit of

1/10th of 1% sulfur. We believe that the fuel that we use in our own refinery should not have any special treatment other than what we have for our own customers. The oil that we burn in our refinery will be the same as is burned by our industrial customers.

Referring back again to the dates involved, the proposed permit requests the authority to either revoke or modify our permit should we be unable to meet any one of these dates. We will, of course, make every effort to build our refinery within these date restrictions; however, if there are any difficulties we feel the threat of revocation too severe. Financial advisors have already told us that this wording in a permit would seriously affect the terms of our financial commitments.

One of the requirements of the proposed permit would be to keep records of the final destination of each shipment of fuel sold by the refinery. For the most part, this information is readily available but a typical refinery sells from its rack to independent distributors. These distributors are in many cases in competition with our own marketing organization and these people are not going to readily indicate where the product is going to be sold. We could place ourselves at a serious competitive disadvantage if we require this information.

Thank you for this opportunity to comment, and if you have any questions, I will be happy to attempt to answer any I can.

PUBLIC HEARING  
Cascade Energy, Inc.

January 24, 1975

Mr. Chairman and members of the Commission:

I am Larry Schreiber of Clatskanie, Oregon. As a principal and officer of Cascade Energy, Inc., it is my pleasure to address you this afternoon. I would like to briefly tell you a little about Cascade Energy, Inc. We are a joint venture company incorporated within the State of Oregon. Cascade Energy, Inc. is composed of three strong, independent companies: Caribou Four Corners, Inc., Flying J Oil Co., and Gasamatic Systems, Inc.

We are in the business of refining, trucking, and marketing petroleum products throughout the twelve western states. Caribou Four Corners, Inc. operates refineries in Utah, New Mexico, and Wyoming. This past year the combined partners had sales in excess of one-hundred million dollars (\$100,000,000). This was from sales of about twenty-five million (25,000,000) gallons of petroleum products per month. Of this, about nine-million gallons per month was through company owned, retail gasoline outlets. The remaining sixteen million gallons per month were wholesale gasoline, distillate, and residual sales.

Cascade Energy, Inc. plans to finance this project by obtaining two-thirds of its needed capital from bank loans and one-third from the owners. Before completing these financial arrangements, it is necessary to have the permits and to have economic feasibility studies completed.

Since the initial interest in 1968, we have been most pleased with the support given to us by the State of Oregon and by the Port of St. Helens. As an independent refiner and marketer of petroleum products, Cascade Energy, Inc. feels that this project will be beneficial to the people of Oregon. It offers the opportunity to strengthen Oregon's petroleum supplies and it assures Oregon consumers continued independent dealers and a competitive marketplace.

We will cooperate in every way with the Department of Environmental Quality to see that our plant meets all your standards and objectives, including increasing the supply of clean low-sulfur fuels in Oregon and the Northwest. Specifically, we have agreed to make available low-sulfur fuels for use in Columbia County.

I do have some concerns on certain provisions of the draft air quality permit as it now stands. However, I will ask our project manager, Mr. Mar Seton, and our environmental consultants, Environmental Disciplines Inc., to address the Commission on those points.

Thank you for your consideration.



BINGHAM CONSTRUCTION, INC.  
3939 N.W. ST. HELENS ROAD  
PORTLAND, OREGON 97210  
January 21, 1975

Whereas energy is necessary to maintain our current way of life,  
and whereas we are facing the most energy short decade in our  
nations' history, we hereby support the efforts of Columbia  
Energy Refining to provide energy in form of petroleum products  
to the people of this area.

Selwyn Bingham Jr.

*PORTLAND INDUSTRIAL ROTARY CLUB.*

# **PROPERTIES**

January 23, 1975

Mr. Barney McPhillips, Chairman  
Environmental Quality Commission  
Department of Environmental Quality  
1200 S.W. Morrison  
Portland, Oregon 97205


Dear Mr. McPhillips:

Since I am unable to attend the EQC hearing January 24, please consider this letter as part of the public testimony regarding Columbia Refinery.

As a businessman concerned with preservation of Oregon's clean air, I find disturbing the lack of concrete economic impact data in the DEQ staff report. It is obvious that boiler users are expected to subsidize additional costs of low sulphur oil production.

Such endorsement of airshed pollution would establish an unfortunate precedent. Furthermore, the addition by Columbia Refinery of 107 tons of particulates to the airshed leaves little allowance for possibly more labor intensive industry in the area in the future.

It is my request that specific economic information be supplied by DEQ staff before a decision is made on the permit request and that the decision retain as its priority preservation of the quality of our environment.

  
George Sabin

Administrative Services Division  
Dept. of Environmental Quality

**RECEIVED**  
JAN 24 1975



# PORTLAND CHAMBER OF COMMERCE

824 S. W. FIFTH AVENUE ■ PORTLAND, OREGON 97204  
AREA CODE 503 228-9411

January 24, 1975

The Industries Committee of the Portland Chamber of Commerce supports the proposed issue of a permit for the construction of the Columbia Independent Refinery, Inc.. It would be repetitious to again recite the reasons for this position. It does appear worthwhile to call attention to the Editorial in the Tuesday Oregonian which is very well constructed and intelligible. It is suggested that a copy be included in the record; for convenience a copy is attached.

W. E. Kuhn, Representative  
Industries Committee  
Portland Chamber of Commerce

## Editorials

A 16

**Refinery supported**

The idea that a new refinery in Portland would improve the quality of the airshed in the metropolitan area sounds like a mind-shaking contradiction thought up by a corporate smart-alec. But this is the argument that Columbia Independent Refinery, Inc., hopes to prove when it seeks a clean air permit Jan. 24 in a hearing before the state's Environmental Quality Commission.

The Honolulu-based company would produce 50,000 barrels of refined products daily by Jan. 1, 1979. These products would be low-sulfur residual fuel oils — gasoline, diesel fuel, home heating oil and maritime (Bunker C) fuel.

The consumer-use of these low-sulfur and low-ash residual fuels would, the company believes, reduce particulate in the area by 4 per cent and cut back sulfur dioxide by 33 per cent.

The standards the company is being required to meet are those set by Oregon last October and are tougher than those required by the federal government. Also, when these low-sulfur fuels become more widely available in the state, the Department of Environmental Quality would be able to require higher regional standards, resulting in the net contamination decrease the company sees by the year 1979 in the Portland area, if it is allowed to operate in Rivergate.

Since Oregon has no refinery, it must burn whatever fuels are shipped in from California or Washington. If the EQC is satisfied that the company can meet the trade-off standards DEQ set in October, it should grant a certificate to CIRI.

There is a question about prices. Low-sulfur fuels, whether shipped in or refined in Oregon, cost more. Just how much is uncertain. The company has argued that prices would be lower for a plant located at Rivergate than at one of the sites in the lower Columbia being considered by two other refinery companies for development.

The Rivergate site, the company has stated, would offer superior protection against tanker oil spills in addition to having lower transportation costs that must be passed through to the consumer.

A modern refinery offers the best of two worlds to the taxpayer. It pays high property taxes and has relatively low employment, so that heavy demands are not made on schools and services. CIRI estimates it would pay \$3.6 million in annual property taxes by 1978 and when the plant is further enlarged by 1983 would be paying \$5.5 million. If the site were annexed to the City of Portland, the city would get more than \$1 million in additional revenues.

Payrolls during the initial construction period will amount to \$49 million and involve 2,800 workers at the peak of Phase I of plant development. Thus, the economic impact on Portland would be considerable and the construction employment welcome.

## Commission:

I would like to address myself to a number of problems which come to mind. Most of these problems were addressed and spoken to in the environmental impact study. However, most of what I consider important (as a resident of No. Portland), was brushed over very lightly.

## I. RIVERGATE N. PORTLAND PENINSULA PLAN, USED BY THE PORT

This plan was to be in effect only until 1972. To this date, the new plan, a plan for the N. Portland Peninsula has only partially been adopted. Thus, the door stands wide open to whatever is the pleasure of the commission which, to date, does not include a single person from N. Portland, where this greatest impact is felt.

Many of the people of the peninsula area feel the Port is representative of financial interest only. I will assure you these people, for the most part, don't live in the area. It would seem that the thinking of Port officials would be to condemn all of No. Portland residential area, move out the people, and then we can do as we damn please. As a resident of this area, I feel the Port has not done their homework as to proper protection of the area and its people. When and only when a plan has been accepted by the Port and the people of No. Portland peninsula area should a planned industry such as C.I.R.I. be considered.

- II. To date, there has not been public hearings by the county and city to accept any concrete plan for the area. Until this is done and a solid acceptable plan by all parties concerned, C.I.R.I. permit request should be set over until a later date.
- III. CRAG has suggested a greenway along the Columbia Slough. A greenway suggests a thing of beauty and a place where people can go for pleasure. C.I.R.I. plans show a chain link fence and dikes within 50 feet. What the hell good is 50' of greenway? I would suggest a minimum of 250 feet to allow for proper dikes along the slough (a point which I will adhere to later).
- IV. We are here today to talk about a permit for a financial venture and not a need of the area. We have only to look to the trend of our nation to see the dependence on oil which is going to have to decrease. Today, as well as in the gas shortage period of '74, the lack of refinery capacity was not the problem. During this time the refineries of the Northwest were only operating at about 60% of capacity. A shortage of crude oil was the only reason. I've talked with the people who now supply the area. They have stated: "if a market is there we will expand as needed to provide an adequate supply of products. C.I.R.I. has stated that "we haven't a supply of products from within the state." Oil companies have built refineries to cover an area and not

just a state. Distribution of these products is regulated by the Federal Government and an in-state supplier doesn't mean a thing.

To conclude my statement, I have a few suggestions for your consideration before granting or denying this permit.

Since this venture is purely financial in nature, perhaps a trade-off is in order. The following is suggested:

- #1. Work with all government bodies in sharing part of the cost to open, clean-up and dike the Columbia Slough to make it usable for recreation, fishing, and a pleasure to look at. Make it usable also for commercial use. This can be done by proper diking and cleaning, something that is already long over due.
- #2. Work with all government bodies and help to share cost for improvement of roadways in the area, such as Swift Blvd. and an improved route to the St. Johns Bridge.
- #3. I also suggest that under Sec. A., Para. 13 of the proposed permit -- it should be expanded a great deal. I would suggest to add (permittee shall make available for sale in Multnomah, Clackamas and Washington County at least 20,000 barrels of #2 dist. and gasoline.)

Also add 13.A (the permittee shall not make available any fuel, above residual fuel level, to any user that converts petro. products to other forms of energy, with an energy loss factor greater than 60%).

The intent of this report is to allow C.I.R.I. to build and expand, but to do so in a manner that allows them to become an asset to the area. The peninsula area of North Portland cannot stand to have any more industry that is a high polluter and it should have just trade-offs for even a low source of pollution. C.I.R.I. can and must meet these standards if they are allowed to build in this area.

**environmental disciplines inc**

planning · environmental engineering · architecture · urban design · economic analysis

520 s.w. sixth avenue  
portland, oregon 97204  
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SUPPLEMENTARY AIR QUALITY ANALYSIS

CASCADE ENERGY PETROLEUM REFINERY

January 23, 1975

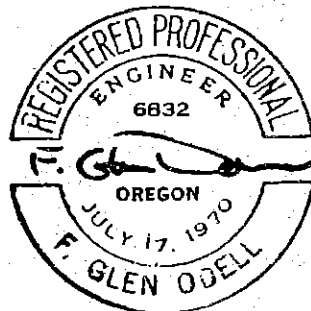
An Addendum to the  
Environmental Impact Analysis  
dated October, 1974

Prepared for

Cascade Energy, Inc.  
P.O. Box 227  
Rainier, Oregon

By

Environmental Disciplines Inc.  
F. Glen Odell, Principal, Air Quality Consultant



## 1. INTRODUCTION

Cascade Energy, at the request of the Department of Environmental Quality staff, conducted further impact analysis on their proposed 30,000 barrel per day oil refinery to be located west of Rainier, Oregon. This additional analysis was done for the following reasons:

- A) Previous modeling used very conservative assumptions and modeling techniques but showed compliance with DEQ standards.
- B) On December 5, 1974, EPA promulgated regulations covering significant deterioration of air quality. The DEQ staff indicated that they would be applied to Cascade Energy. The previous analysis showed non-compliance with these regulations.
- C) In order to attain compliance given the previous analysis, the DEQ staff reduced the allowable emission rates of particulate and SO<sub>2</sub> by restricting the amount of residual fuel that could be utilized by the proposed facility.
- D) Given the economic impact of the reduced emissions, Cascade Energy authorized Environmental Disciplines Inc. to do additional studies using more realistic assumptions.
- E) At the same time, a reassessment of the plant design indicated that some of the stacks should be combined and made higher to further enhance plume rise and reduce ground level concentrations. Also, changed particulate emission factors were used to reflect the DEQ staff recommendations.



## 2. SUMMARY OF CONCLUSIONS

- A. All standards including Class II non-degradation will be met at all populated or level terrain receptors with the refinery burning 75% low residual oil, 25% refinery gas.
- B. The only potential problem was suggested by 3 hours of observed winds at Longview (out of total of 7,116 hours of data obtained for 1973). In this case the measured wind blows the plume right at a nearby hill, creating a condition for which conventional dispersion modeling techniques do not apply; if applied they give dramatically high numbers. Current studies being completed by AEC are showing that dispersion of plumes under such conditions greatly exceeds that predicted by conventional means, such that our dramatically high numbers are also unrealistic.
- C. In order to protect present and future residents of the hillside community from possible adverse effects without imposing the significant economic burden on Cascade Energy of having to continuously burn large amounts of distillate oil, EDI recommends that:
  1. Cascade be allowed to burn 75% residual fuel oil and 25% refinery gas, with allowable emission limits in the permit being changed accordingly.
  2. As a permit condition, Cascade be required to install a high level wind monitoring instrument and switch the major sources (boilers and crude furnace) to distillate whenever conditions likely to cause plume impaction on the hill occur.

### 3. METHODOLOGY

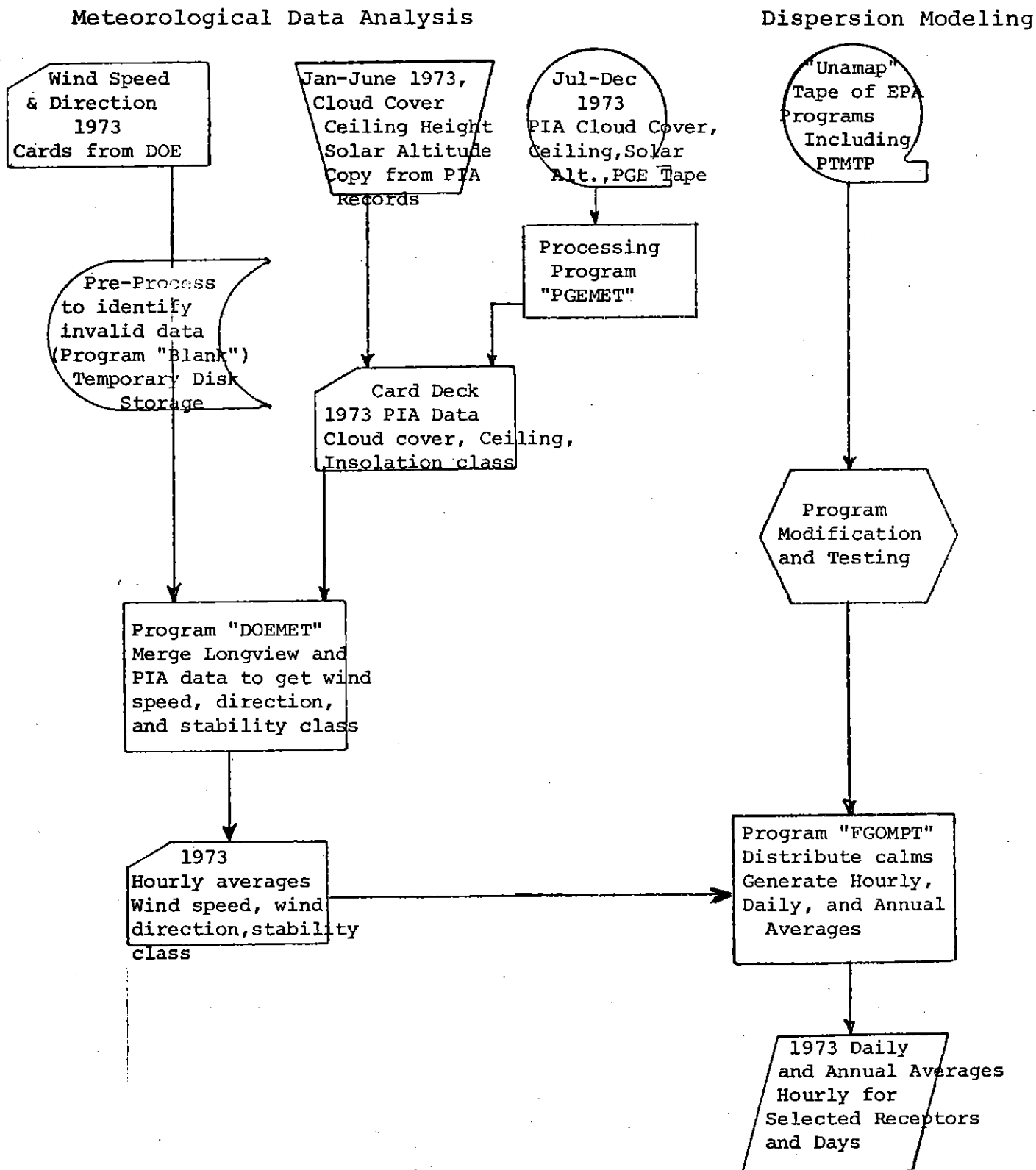
The impact of Cascade Energy's proposed facility in relation to the EPA's significant deterioration regulations for particulate and sulfur dioxide was evaluated using the EPA Gaussian dispersion model PTMTP. In order to obtain realistic maximum short term concentrations of these pollutants, actual wind speed and direction data for 1973 were obtained from a Washington Department of Ecology meteorological station located directly across the Columbia River from the proposed Cascade site. Although this station would not be expected to exactly duplicate the wind patterns at the Cascade site, it should be more suitable than the previously used Trojan met data. This data was then merged with Pasquill atmospheric stability class information obtained from Portland International Airport cloud cover, ceiling height and solar altitude data for the same time period. Using this data as hourly inputs to the PTMTP computer analysis along with Cascade Energy stack parameters, some 7,116 hourly averages at each of 25 receptors were computed for 1973 and converted into daily averages for every day of good met data available. Annual averages at each receptor were also computed.

A variety of data sources and extensive computer programming were required to accomplish this analysis. Figure 1 is a flow diagram of the work steps showing the data sources and various programs required.

Figure 1

## FLOW DIAGRAM

## CASCADE ENERGY MODELING PROJECT



It should be noted that irregularities in the met data were handled in the following manner:

- A) Any hour with either missing wind speed or direction data eliminated the use of that hour in this analysis. Approximately 81% of the total hourly observations for 1973 were used in this analysis.
- B) Calms were distributed along the wind directions in the direction of the river adjacent to the site. Calms occurring during even-numbered hours were directed upriver and those occurring in odd-numbered hours were distributed down river.
- C) Daily averages computed at each receptor represent the arithmetic average of the number of hours of valid met data available for each given day and are reported as 24-hour averages. In most cases, 24 hours of data were available for analysis.

#### 4. STACK PARAMETER CHANGES

It should be noted that prior to the above analysis several stack parameters were changed relative to the original analysis as reported in the impact statement of October, 1974.

- A) Identical process equipment of phases I and II will be vented through the same stack. This change will increase the plume rise from each set of process heaters or boilers and thereby reduce downwind concentrations of pollutants.
- B) Low sulfur refinery gas, up to 25% of the refinery's heat input requirement, was substituted for low sulfur residual fuel in three sets of process heaters.
- C) Heights of two stacks were changed. One of the stacks in which refinery gas will be used was dropped from 150 to 100 feet, while one stack in which residual oil will be used was raised from 100 to 150 feet.
- D) New EPA emission factors relative to particulate emissions from combustion of low sulfur residual oil were also used in this analysis. This new data developed by EPA indicates particulate emission rates of 12 lb. per 1,000 gallons of fuel burned compared to the previously used EPA factor of 23 lbs. per 1,000 gallons of fuel burned.

Detailed stack parameters and emission rates are found in the Appendix of this report.

## 5. RESULTS

The results of the computer analysis of ground level receptors are shown in Table 1. Comparisons of the three analyses conducted to date on the Cascade refinery impacts are shown in Table 2.

## 6. DISCUSSION

Evaluation of Cascade Energy's particulate and SO<sub>2</sub> impacts relative to the EPA significant deterioration regulation were quantitatively analyzed for ground level receptors and for hillside receptors south of the plant site. The results of these analyses are discussed in the following paragraphs.

### 6.1 Ground Level Receptors

The results shown in Table 1 show that the predicted ground level impacts for both SO<sub>2</sub> and particulate comply with the EPA Class II significant deterioration regulations. The maximum impact from the facility occurs approximately 2 kilometers NW of the Cascade Energy process area. The indicated maximum short term concentrations of SO<sub>2</sub> are well within the DEQ and EPA limitations. The highest Cascade ground level impacts contribute approximately 42% of the allowable SO<sub>2</sub> 24-hour degradation and 23% of the allowable particulate 24-hour degradation. Maximum annual impacts represent 7% of the allowable particulate degradation and 14% of the allowable SO<sub>2</sub> degradation.

Comparison of these impacts with those estimated in the previous analysis as shown in Table 2 indicates that by improving the stack parameters and using a more

Table 1

## SUMMARY OF CASCADE ENERGY GROUND LEVEL IMPACTS\*

Receptor	Location	Particulate, $\mu\text{g}/\text{m}^3$		$\text{SO}_2$ , $\mu\text{g}/\text{m}^3$		
		Max 24hr	Annual	Max 3hr	Max 24hr	Annual
1	Rainier Grade Sch.	2	.4		13	2.4
2	West Rainier (elevated)	3	.5		21	3.4
3	Longview Trailer	1	<.1		5	.2
4	Mt. Solo Wash. (elevated)	2	.1		13	.8
6	West Rainier (ground level)	3	.5		20	3.3
7	Adjacent Property	3	.4		21	2.3
9	Adjacent Property	2	.1		14	.7
10	Adjacent Property	0	0		1	<.1
11	Adjacent Property	1	<.1		4	.1
12	Adjacent Property	3	.3		18	1.8
13	Longview Bridge (elevated)	5	.5		30	3.1
21	Maximum ground level receptor 2KM NW of site	7	.7	72	42	4.2
	DEQ Standard	150	60	1300	260	60
	EPA Non-Degradation Standard (Class II)	30	10	700	100	30

\*Assuming use of 75% Residual oil and 25% Refinery gas

Table 2  
COMPARISON OF THREE IMPACT ANALYSES  
FOR CASCADE ENERGY

		<u>Permit Application/EIS</u>		<u>Draft Permit</u>		<u>Current Study</u>	
		<u>Partic.</u>	<u>SO<sub>2</sub></u>	<u>Partic.</u>	<u>SO<sub>2</sub></u>	<u>Partic.</u>	<u>SO<sub>2</sub></u>
Emission Rate, tons/yr		397	1587	150	715	194	1114
Estimated Ambient Air Concentrations, $\mu\text{g}/\text{m}^3$ :							
<u>Recep.</u>	<u>Location</u>						
1	Rainier Grade Sch.						
	3hr	---	149			---	---
	24hr	6	14			2	13
	Annual	1.4	5			.4	2.4
9	Adjacent Property						
	3hr	---	285			---	---
	24hr	17	54			2	14
	Annual	4.4	19			.1	.7
24	Maximum Impact Point at ground level						
	3hr	---	300	---	300	---	---
	24hr	20	216	30	100	---	---
	Annual	5	21	10	15	---	---
21	Maximum Impact at 2KM NW of site						
	3hr	---	---			---	72
	24hr	---	---			7	42
	Annual	---	---			.7	4.2
Fuel Use (%)							
	Residual		100		37		75
	Distillate		---		38		--
	Refinery Gas		---		25		25



realistic approach, the maximum ground level concentration is significantly reduced. Also, these changes show that impacts on the residential property adjacent to the refinery will be minimized to clearly acceptable levels.

## 6.2 Elevated Receptors

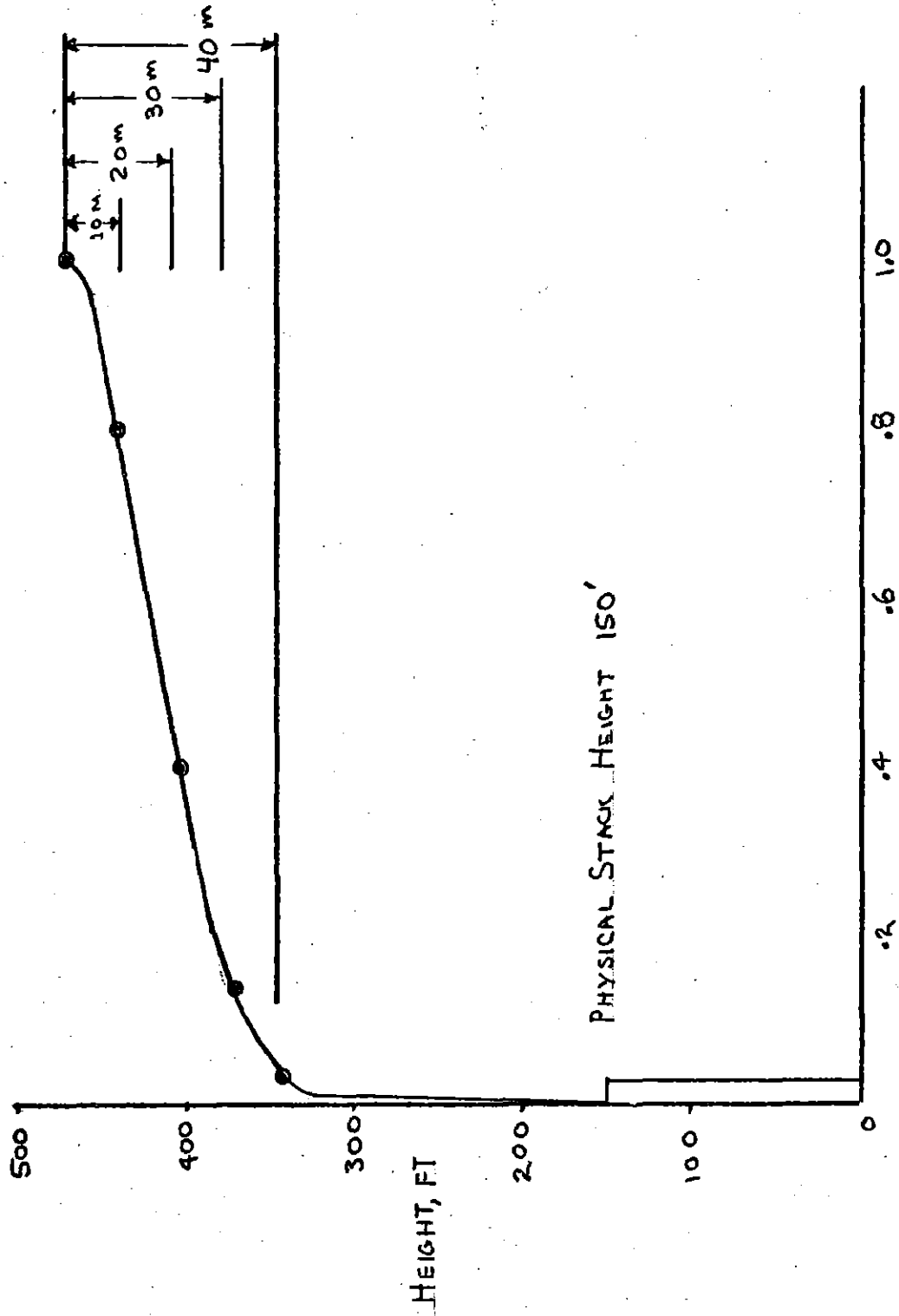
At the request of DEQ staff, the advanced modeling effort included prediction of concentrations at receptors corresponding to locations on top of the hills due south of the site. This was done, in spite of the fact that the Gaussian air quality model used does not account for the presence of the hill, by entering among the computer inputs the x, y, and z coordinates of the desired points. The results are estimated concentrations for receptors which might be termed imaginary "flag pole sitters" at heights of 220 to 470 feet above level ground, being impacted by plumes in wind flows unaffected by terrain. Clearly, this is a questionable type of analysis, and has validity only in establishing the upper bounds of potential impacts.

As anticipated, the analysis of elevated receptors by this technique resulted in some dramatically high numbers. The most dramatic of these occurred on 3 out of the 7,116 hours of data analyzed, at which times the Longview meteorological station recorded winds from due north at 1 mph, under Class F stability (very stable). Under these conditions, one of the flag pole sitter receptors at a point due south of the refinery was directly in

the centerline of two of the largest of ten plumes from the plant (several other plumes were found to be below the imaginary receptors).

If the results of this analysis of imaginary receptors were used without judgment or qualification, they would suggest an unacceptable impact of the refinery on the adjacent hillside. To do so, however, would be to totally ignore the physical reality of the situation.

In evaluating the elevated receptor problem two additional analyses or sources of information were examined. First, an assessment of concentration fall-off from the plume centerline was made. Stack parameters were adjusted such that all plumes had equal plume rise, and the model run with imaginary receptors corresponding to centerline and to points 10, 20, 30, 40, and 50 meters below centerline. Figure 2 plots the resulting concentrations, as a fraction of centerline, with height. It shows a moderate drop in the first 10 meters, and much greater decreases at 20 and 30 meters, with the concentration 30 meters (roughly 100 feet) below being 14% of centerline value. This is a useful exercise in pointing out the sensitivity of the analysis to the assumed height of the flag pole sitter, but doesn't really bring us much closer to a valid estimate of what happens on the Columbia River bluff south of the proposed refinery site.



CONCENTRATION FRACTION OF CENTERLINE CONCENTRATIONS  
WIND SPEED 1 MPH, CLASS F STABILITY

FIGURE 2

A second, and more useful, exercise was careful study of two reports of advanced plume dispersion studies in mountainous terrain, conducted jointly by the Atomic Energy Commission and the National Oceanic and Atmospheric Administration.<sup>1,2</sup> These reports, one of which was obtained in draft form, are somewhat difficult to interpret in relation to the current problem, but nevertheless point up what seem to be valid general conclusions with respect to plume dispersion over uneven terrain:

- A) Plume centerline concentrations are considerably lower over rough terrain, and greater for stable conditions than neutral conditions. In extremely rough terrain, measured centerline concentrations averaged about 5 times more dilute than predicted for flat terrain under neutral stability, and 15 times more dilute under very stable conditions. In less mountainous terrain, centerline concentrations under neutral stability were about 4 times more dilute than normal.
- B) Ground level concentrations in rough terrain, relative to centerline concentrations, may vary widely depending upon the height of the mixing layer compared to terrain height. If the stable layer is actually lower than the terrain level, plume impaction and centerline-level concentrations can occur at ground level. On the other hand, if the mixing height exceeds the terrain height, the NOAA researchers indicate that plumes tend

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<sup>1</sup> Start, Wendell, and Dickson, "Diffusion in a Canyon Within Rough Mountainous Terrain," NOAA Air Resources Laboratories, Idaho Falls, Idaho, August, 1973.

<sup>2</sup> Start, Wendell, and Dickson, "Effluent Diffusion Over Mountainous Terrain," NOAA Air Resources Laboratories, Idaho Falls, Idaho, December, 1974 (Draft).

"to flow along an undulating path similar to the shape of the underlying topography,"<sup>3</sup> and that ground level concentrations appear to be even less than those predicted for a (non-elevated) ground level source.

These general conclusions from the NOAA studies would appear to confirm the intuitive feeling that "flagpole sitter" analysis performed at the request of the DEQ staff is of doubtful validity in assessing the impact of Cascade Energy on hilltop receptors. It must be accepted that only a very detailed meteorological and monitoring study of plume behavior in the specific locality can determine with any reliability what effect of the plant may be on the rare occasions (3 hours out of 7,116) when the wind blows from due north at 1 mile per hour during the night time (F stability).

## 7. CONCLUSIONS AND RECOMMENDATIONS

Two overall conclusions can be drawn from this impact analysis:

1. The impact of the refinery plumes on the hillside south of the proposed site cannot be determined at this time because of the proven inadequacy of the Gaussian dispersion models in rough terrain and the uncertainty in the direct application of Longview wind data to the actual Cascade site.
2. Evaluation of ground level receptors on the relatively flat terrain of the Columbia River valley indicate that

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<sup>3</sup> Ref. 2, pg.63.

compliance with the most stringent EPA significant deterioration limitations for both particulate and SO<sub>2</sub> can be achieved while utilizing 75% low sulfur residual oil and 25% refinery gas in the refinery's process equipment.

Therefore, it thus seems reasonable to recommend that the particulate and SO<sub>2</sub> limitations in the proposed DEQ permit be changed to reflect use of 75% residual oil and 25% refinery gas. That is, limit the annual emissions to 1,114 tons per year for SO<sub>2</sub> and 194 tons per year for particulate.

On the other hand, it may not be prudent to totally ignore the possibility of significant adverse impacts on the hillside to the south, which is currently the site of several residences. EDI suggests that the major contributors to the potential problem--the boilers and crude furnaces--be equipped with dual fuel capability and that fuel switching from residual to distillate be done on a short term basis whenever the rare combination of meteorological occurrences occur which might cause the plumes to impact on the hillside.

This change can be accomplished by installing a sensitive wind instrument on top of one of the elevated pieces of refinery equipment (for example, the crude tower which will have an elevation on the order of 150 feet), with data telemetered to the refinery control room. With an appropriate set of criteria, an alarm system can be designed to alert operational staff to accomplish the fuel switching,

which can be done essentially instantaneously and continued for as many hours as necessary to assure the condition has ended.

The program suggested above will accomplish all the objectives of the draft permit, but with a more sophisticated degree of resolution and at drastically smaller economic cost. It will provide every reasonable assurance that DEQ and EPA standards, including the Class II non-degradation standard, will be complied with not only on the valley floor but also on the hillside adjacent to the plant.

With the monitoring and fuel switching program as a condition, EDI believes that the public interest would be adequately served by a permit allowing annual emissions of 1,120 tons per year of SO<sub>2</sub> and 200 tons per year of particulate, with corresponding changes in the allowable hourly emission rate reflecting usage of 75% desulfurized residual fuel oil and 25% refinery gas to supply the plant's energy requirements.

## Appendix

Stack Parameters	A-1
Receptor Locations	A-1
Meteorological Inputs	A-2
24 Hour Impacts	A-17
Annual Impacts	A-22



\* \* MULTIPLE POINT - MULTIPLE RECEPTOR DISPERSION ANALYSIS \* \*

CASCADE ENERGY -- 10 STACKS -- YEAR 1973

\* \* INPUT DATA \* \*

GENERAL DATA

NUMBER OF SOURCES = 10  
 NUMBER OF RECEPTORS = 25  
 NUMBER OF HOURS AVERAGED = 24  
 AVERAGE MIXING HEIGHT(M) = 1200.  
 AVERAGE AMP. TEMP.(DEG K) = 284.  
 PREVAILING WIND AXIS(DEG) = 120.

STACK DATA

STACK	XCOORD	YCOORD	HEIGHT(FT)	EMISSION(LB/HR)	TEMP(DEG F)	FLOW(ACFM)	VEL(FPM)	DIA(FT)
1	502.320	5105.289	150.	80.20	500.	54900.	0.	0.
2	502.330	5105.219	100.	0.90	500.	18060.	0.	0.
3	502.310	5105.207	100.	1.70	500.	34660.	0.	0.
4	502.370	5105.250	100.	0.30	500.	5400.	0.	0.
5	502.380	5105.258	100.	13.70	500.	9380.	0.	0.
6	502.360	5105.180	150.	20.00	500.	13740.	0.	0.
7	502.360	5105.270	150.	35.80	500.	24520.	0.	0.
8	502.340	5105.277	150.	35.80	500.	24520.	0.	0.
9	502.310	5105.238	100.	11.10	500.	7600.	0.	0.
10	502.370	5105.289	150.	64.90	500.	44400.	0.	0.

R E C E P T O R S

NO.	XCOORD	YCOORD	HEIGHT(FT)	LOCATION
1	504.800	5103.598	0.	RAINIER GRADE SCHOOL
2	503.900	5104.199	70.	WEST RAINIER (ELEVATED RECEPTOR)
3	503.100	5108.578	0.	LONGVIEW TRAILER
4	500.100	5110.898	470.	MT SOLD (ELEV. RECEPTOR)
5	502.350	5104.098	470.	HILLSIDE S OF SITE (ELEV. RECEPTOR)
6	503.900	5104.199	0.	WEST RAINIER GND LEVEL
7	503.000	5104.699	0.	ADJACENT PROPERTY
8	501.900	5104.297	570.	HILLSIDE SW OF SITE (ELEV. RECEPTOR)
9	502.550	5104.898	0.	ADJACENT PROPERTY
10	502.250	5105.098	0.	ADJACENT PROPERTY
11	502.000	5105.250	0.	ADJACENT PROPERTY
12	501.500	5105.598	0.	ADJACENT PROPERTY
13	502.730	5105.000	75.	LONGVIEW BRIDGE (ELEV. RECEPTOR)
14	503.750	5103.898	370.	ELEV. RECEPTOR 2KM AT 135 DEG
15	503.200	5103.750	220.	ELEV. RECEPTOR 1.75KM AT 150 DEG
16	503.500	5104.348	0.	1.5KM AT 130 DEG
17	503.100	5104.000	0.	1.5KM AT 150 DEG
18	502.850	5104.398	0.	1.0KM AT 150 DEG
19	501.600	5105.898	0.	1.0KM AT 310 DEG
20	501.200	5106.297	0.	1.5KM AT 310 DEG
21	500.800	5106.598	0.	2.0KM AT 310 DEG
22	500.950	5105.848	0.	1.5KM AT 290 DEG
23	500.500	5106.000	0.	2.0KM AT 290 DEG
24	501.350	5105.348	0.	1.0KM AT 270 DEG
25	500.900	5105.297	0.	1.5KM AT 270 DEG

\* \* INPUT METEOROLOGICAL DATA \* \*

I	2		3		4		5		6		7		8		9		10		11		12				
	WD	WS	K	WD	WS	K	WD	WS	K	WD	WS	K	WD	WS	K	WD	WS	K	WD	WS	K	WD	WS	K	
73010100	12.	3.	610.	3.	611.	4.	611.	3.	611.	4.	610.	3.	610.	3.	611.	3.	315.	5.	416.	5.	417.	8.	415.	9.	4
73010112	15.	8.	414.	10.	412.	10.	412.	9.	415.	12.	415.	10.	414.	6.	417.	5.	428.	6.	429.	4.	425.	3.	4 9.	2.	4
73010200	99.	2.	6 7.	3.	412.	2.	499.	2.	6 9.	3.	4 8.	2.	6 6.	2.	410.	2.	412.	3.	412.	3.	412.	6.	410.	6.	4
73010212	12.	8.	412.	7.	413.	8.	414.	4.	414.	4.	413.	4.	412.	4.	414.	4.	410.	3.	4 9.	3.	4 9.	3.	410.	4.	4
73010300	10.	6.	410.	5.	411.	3.	4 7.	3.	412.	3.	4 4.	2.	4 1.	3.	4 1.	4.	4 3.	4.	436.	4.	4 1.	6.	435.	6.	3
73010312	35.	8.	3 1.	8.	335.	9.	434.	7.	435.	8.	5 3.	3.	6 1.	5.	6 1.	4.	6 3.	5.	6 2.	4.	6 3.	4.	6 2.	5.	6
73010400	1.	4.	636.	3.	6 1.	3.	6 1.	3.	6 2.	3.	6 3.	4.	6 3.	2.	699.	2.	399.	2.	310.	2.	336.	2.	3 8.	3.	2
73010412	9.	5.	312.	7.	312.	7.	411.	6.	414.	5.	615.	4.	615.	5.	412.	7.	413.	9.	413.	7.	413.	10.	414.	8.	4
73010500	14.	5.	414.	7.	410.	3.	414.	2.	499.	2.	499.	2.	4 6.	2.	4 4.	3.	4 3.	3.	418.	2.	433.	3.	436.	4.	4
73010512	35.	6.	436.	6.	435.	6.	434.	6.	433.	4.	435.	5.	433.	4.	433.	3.	4 4.	3.	4 9.	3.	6 2.	3.	6 4.	3.	6
73010600	5.	4.	6 5.	4.	6 3.	2.	6 4.	3.	636.	2.	6 6.	4.	6 6.	2.	612.	2.	3 9.	2.	3 6.	3.	2 3.	3.	2 9.	2.	2
73010612	12.	2.	2 8.	2.	2 6.	2.	3 9.	2.	3 2.	2.	633.	2.	624.	2.	613.	3.	6 9.	3.	6 8.	2.	610.	3.	610.	3.	6
73010700	8.	2.	699.	2.	699.	2.	699.	2.	699.	2.	699.	2.	699.	2.	699.	2.	333.	2.	3 2.	2.	218.	2.	2 9.	6.	3
73010712	11.	11.	412.	11.	412.	12.	412.	11.	412.	10.	412.	9.	412.	10.	412.	8.	512.	8.	512.	8.	512.	8.	510.	6.	5
73010800	99.	2.	699.	2.	699.	2.	699.	2.	699.	2.	699.	2.	699.	2.	699.	2.	399.	2.	399.	2.	2 6.	3.	211.	9.	3
73010812	11.	14.	411.	14.	411.	16.	412.	14.	412.	13.	413.	12.	512.	11.	511.	11.	511.	10.	511.	8.	534.	3.	634.	3.	6
73010900	34.	2.	6 5.	2.	6 5.	3.	6 4.	3.	699.	2.	699.	2.	699.	2.	699.	2.	399.	2.	3 7.	2.	3 5.	4.	3 6.	5.	4
73010912	7.	5.	4 9.	5.	411.	11.	412.	12.	412.	9.	413.	7.	613.	7.	613.	7.	616.	6.	617.	5.	612.	3.	634.	2.	6
73011000	34.	3.	435.	3.	436.	3.	431.	3.	427.	3.	415.	4.	413.	6.	414.	5.	416.	6.	413.	6.	413.	8.	412.	11.	4
73011012	13.	7.	413.	7.	413.	6.	413.	12.	414.	7.	417.	6.	419.	3.	430.	3.	434.	3.	433.	3.	421.	2.	414.	6.	4
73011100	13.	6.	413.	7.	412.	5.	412.	4.	411.	4.	411.	7.	411.	7.	410.	9.	410.	7.	4 9.	7.	4 9.	6.	4 9.	6.	4
73011112	9.	6.	410.	6.	410.	7.	411.	7.	411.	8.	410.	8.	411.	9.	411.	9.	410.	8.	4 9.	6.	4 9.	6.	4 8.	7.	4
73011200	8.	8.	4 6.	7.	4 8.	8.	411.	12.	411.	7.	511.	8.	411.	7.	511.	6.	411.	7.	411.	8.	410.	5.	412.	3.	4
73011212	8.	2.	412.	7.	412.	7.	412.	6.	4 9.	5.	4 9.	4.	4 9.	5.	412.	5.	412.	6.	413.	5.	4 9.	8.	4 9.	7.	4
73011300	15.	9.	415.	14.	415.	13.	414.	13.	414.	12.	416.	8.	415.	3.	4 8.	5.	4 7.	4.	411.	6.	412.	3.	410.	5.	4
73011312	15.	3.	413.	7.	413.	9.	415.	8.	415.	7.	413.	5.	414.	6.	412.	9.	412.	9.	411.	8.	413.	5.	414.	8.	4
73011400	12.	5.	413.	7.	513.	5.	513.	6.	413.	7.	413.	9.	413.	8.	412.	10.	412.	9.	411.	7.	413.	10.	414.	10.	4
73011412	14.	10.	413.	12.	415.	12.	415.	13.	415.	11.	413.	6.	514.	3.	6 9.	2.	610.	3.	610.	6.	5 8.	6.	5 6.	7.	5
73011500	9.	7.	510.	4.	6 9.	4.	611.	4.	610.	4.	610.	4.	610.	6.	511.	7.	414.	8.	412.	7.	415.	4.	315.	4.	3
73011512	9.	6.	413.	9.	414.	10.	415.	11.	415.	11.	414.	8.	412.	9.	413.	9.	413.	11.	412.	10.	411.	8.	411.	7.	5
73011600	12.	8.	413.	9.	412.	12.	413.	13.	412.	11.	412.	10.	413.	8.	412.	8.	412.	9.	412.	8.	412.	8.	412.	8.	4
73011612	13.	13.	413.	12.	413.	8.	413.	11.	413.	12.	413.	13.	414.	12.	414.	6.	414.	8.	413.	8.	412.	8.	411.	10.	4
73011700	12.	8.	418.	4.	614.	3.	414.	4.	412.	5.	5 8.	4.	4 9.	3.	417.	2.	412.	6.	412.	7.	312.	8.	414.	8.	3
73011712	14.	6.	414.	5.	412.	6.	413.	6.	4 6.	4.	699.	2.	699.	0.	699.	0.	699.	0.	699.	0.	699.	2.	499.	3.	4
73011800	99.	3.	6 7.	3.	6 9.	3.	612.	3.	6 8.	3.	636.	2.	6 0.	2.	6 9.	3.	312.	3.	411.	11.	412.	11.	410.	9.	4
73011812	13.	7.	414.	12.	415.	11.	420.	12.	420.	11.	418.	7.	520.	8.	410.	6.	518.	8.	418.	7.	434.	4.	610.	7.	5
73011900	13.	4.	411.	4.	612.	4.	612.	3.	616.	4.	6 8.	3.	615.	4.	612.	4.	312.	5.	412.	5.	314.	6.	314.	7.	3
73011912	14.	4.	211.	4.	313.	5.	415.	8.	413.	7.	513.	4.	4 6.	4.	612.	6.	514.	7.	512.	10.	413.	4.	614.	8.	4
73012000	14.	10.	413.	12.	413.	12.	413.	11.	413.	13.	412.	15.	412.	14.	413.	14.	412.	15.	413.	16.	414.	16.	415.	17.	4
73012012	14.	14.	416.	13.	413.	11.	412.	5.	414.	7.	418.	5.	412.	5.	522.	3.	612.	3.	618.	3.	612.	4.	612.	5.	5
73012100	8.	4.	612.	3.	611.	4.	6 8.	3.	4 9.	2.	410.	3.	411.	5.	411.	3.	412.	4.	412.	4.	412.	4.	412.	6.	4
73012112	15.	7.	420.	4.	419.	4.	420.	3.	421.	0.	499.	0.	499.	0.	410.	3.	415.	3.	414.	4.	416.	5.	412.	3.	4

73012200	12.	4. 4 5.	3. 4 1.	4. 4 12.	5. 4 14.	6. 5 14.	7. 4 15.	8. 4 15.	8. 4 14.	6. 4 15.	7. 4 15.	7. 3 11.	6. 3
73012212	12.	5. 4 11.	6. 4 12.	7. 4 15.	4. 3 15.	4. 6 3.	2. 6 13.	3. 6 8.	4. 6 8.	3. 6 13.	3. 6 12.	2. 6 10.	4. 6
73012300	10.	5. 5 10.	4. 6 12.	6. 5 2.	5. 5 8.	3. 6 8.	4. 6 9.	6. 5 12.	5. 4 12.	3. 3 12.	4. 3 12.	8. 4 12.	10. 4
73012312	10.	12. 4 13.	12. 4 13.	12. 4 14.	10. 4 14.	6. 5 13.	8. 4 12.	7. 5 12.	5. 5 10.	7. 5 11.	6. 5 12.	7. 4 14.	8. 4
73012400	13.	12. 4 13.	12. 4 13.	13. 4 12.	15. 4 12.	14. 4 13.	12. 4 13.	12. 4 12.	12. 4 13.	11. 4 15.	14. 4 15.	16. 4 14.	13. 4
73012412	13.	8. 4 12.	8. 4 12.	11. 4 12.	10. 4 11.	10. 4 11.	11. 4 12.	10. 4 17.	6. 5 27.	7. 4 24.	5. 5 24.	3. 6 99.	2. 4
73012600	99.	99. 4 3.	2. 6 9.	2. 6 9.	5. 4 5.	2. 6 7.	3. 4 10.	3. 4 9.	4. 4 6.	3. 4 9.	3. 4 15.	3. 4 16.	3. 4
73012612	17.	4. 4 24.	3. 2 10.	3. 3 6.	4. 3 9.	3. 6 9.	4. 6 8.	4. 6 6.	3. 6 6.	2. 6 9.	3. 6 9.	4. 6 12.	7. 5
73012700	13.	7. 5 13.	7. 5 14.	7. 5 15.	5. 5 12.	7. 5 12.	6. 5 13.	6. 5 2.	2. 3 9.	2. 3 34.	3. 3 6.	3. 2 13.	9. 3
73012712	11.	14. 4 12.	12. 4 13.	8. 4 15.	7. 4 18.	4. 6 16.	6. 5 14.	6. 5 12.	4. 6 12.	3. 6 2.	2. 6 2.	2. 6 35.	3. 6
73012800	33.	2. 6 36.	2. 6 99.	2. 6 33.	2. 6 24.	2. 6 35.	2. 6 3.	2. 6 99.	2. 3 99.	2. 3 99.	2. 3 99.	2. 2 27.	2. 2
73012812	32.	3. 2 30.	4. 2 31.	4. 3 3.	3. 3 2.	2. 6 99.	2. 6 99.	2. 6 36.	3. 6 34.	3. 6 8.	3. 6 8.	3. 6 99.	2. 6
73013000	15.	7. 4 14.	6. 4 12.	6. 4 12.	10. 4 12.	12. 4 13.	8. 4 12.	12. 4 13.	7. 4 13.	12. 4 13.	12. 4 13.	13. 4 13.	14. 4
73013012	13.	13. 4 13.	13. 4 13.	12. 4 15.	10. 4 24.	8. 4 24.	5. 4 99.	3. 4 99.	2. 6 23.	3. 4 12.	3. 6 99.	2. 4 99.	2. 6
73013100	99.	3. 4 11.	3. 4 11.	3. 4 99.	2. 4 99.	2. 4 8.	3. 4 99.	4. 4 12.	4. 4 12.	4. 4 12.	3. 3 13.	3. 3 13.	8. 4
73013112	13.	7. 4 12.	7. 4 12.	8. 4 13.	8. 4 13.	7. 5 12.	4. 4 10.	5. 6 99.	2. 6 99.	2. 6 99.	2. 6 99.	2. 6 2.	3. 6
73020100	9.	3. 6 99.	1. 6 9.	1. 6 9.	3. 6 6.	3. 6 99.	1. 6 10.	3. 6 8.	3. 3 12.	4. 3 10.	4. 3 99.	1. 3 8.	3. 3
73020112	99.	1. 3 6.	3. 3 9.	5. 4 9.	4. 3 9.	4. 6 10.	3. 6 11.	3. 6 99.	1. 6 99.	1. 6 99.	1. 6 99.	1. 6 99.	1. 6
73020200	99.	1. 6 99.	1. 6 99.	1. 6 99.	1. 6 99.	1. 6 99.	1. 6 99.	1. 6 99.	1. 3 99.	1. 3 11.	5. 4 11.	5. 4 10.	4. 3
73020212	13.	3. 3 10.	6. 4 9.	4. 3 10.	4. 3 9.	5. 5 9.	5. 5 11.	4. 6 12.	3. 6 12.	3. 4 11.	3. 6 9.	4. 4 9.	1. 4
73020300	99.	1. 6 99.	1. 6 99.	1. 6 99.	1. 6 99.	1. 6 99.	1. 4 99.	1. 4 99.	1. 4 34.	5. 4 36.	5. 4 36.	5. 4 1.	6. 4
73020312	3.	5. 4 4.	4. 4 6.	4. 4 5.	3. 4 3.	3. 4 35.	3. 4 31.	3. 4 29.	3. 4 99.	1. 4 99.	1. 4 99.	1. 6 99.	1. 6
73020400	99.	1. 6 99.	1. 6 34.	3. 6 36.	2. 6 99.	1. 6 99.	1. 6 10.	2. 6 7.	3. 3 8.	1. 2 9.	3. 4 99.	1. 4 99.	1. 3
73020412	27.	3. 2 21.	3. 2 21.	3. 2 35.	7. 4 35.	6. 4 99.	1. 6 2.	4. 6 3.	4. 6 3.	7. 6 5.	6. 6 4.	5. 5 5.	3. 6
73020500	6.	3. 4 3.	4. 4 99.	1. 4 99.	1. 4 5.	4. 6 3.	4. 4 4.	4. 4 4.	4. 4 4.	4. 4 4.	6. 4 3.	7. 4 4.	7. 4
73020512	3.	6. 3 3.	6. 3 3.	7. 4 2.	6. 4 36.	6. 4 1.	6. 4 36.	3. 4 99.	1. 4 2.	3. 6 3.	4. 4 3.	5. 4 2.	6. 5
73020600	1.	5. 4 36.	4. 4 1.	4. 4 26.	3. 6 35.	3. 6 35.	3. 6 34.	3. 6 99.	1. 3 36.	3. 2 1.	5. 3 36.	5. 3 3.	5. 3
73020612	6.	5. 3 12.	13. 4 12.	12. 4 11.	13. 4 11.	12. 4 11.	8. 5 11.	6. 6 12.	7. 6 13.	6. 5 14.	5. 5 4.	3. 6 36.	3. 6
73020700	35.	3. 6 99.	1. 6 99.	1. 6 99.	1. 6 99.	1. 6 99.	1. 6 99.	1. 6 99.	1. 3 99.	1. 3 99.	1. 3 99.	1. 3 33.	2. 2
73020712	25.	3. 2 13.	10. 3 13.	10. 4 13.	8. 4 13.	8. 4 13.	7. 5 15.	4. 6 18.	1. 6 34.	4. 6 34.	4. 6 34.	3. 6 34.	1. 6
73021000	36.	1. 6 36.	6. 5 3.	5. 4 3.	4. 4 1.	1. 4 10.	3. 4 10.	3. 4 11.	6. 4 11.	5. 4 10.	4. 4 9.	4. 4 11.	4. 4
73021012	11.	6. 4 11.	8. 4 11.	6. 4 9.	1. 3 13.	4. 4 99.	1. 4 7.	3. 4 6.	1. 4 6.	3. 4 7.	3. 4 10.	1. 4 14.	1. 4
73021100	11.	4. 4 12.	3. 4 12.	3. 6 9.	4. 4 10.	4. 6 9.	4. 6 10.	5. 6 10.	4. 4 10.	3. 4 10.	3. 4 10.	4. 4 9.	4. 4
73021112	6.	3. 4 9.	3. 4 99.	1. 2 25.	1. 3 10.	3. 3 99.	3. 6 99.	1. 6 99.	1. 4 99.	1. 4 99.	1. 4 99.	1. 4 14.	2. 4
73021200	99.	1. 4 99.	1. 4 99.	1. 4 99.	1. 4 99.	1. 4 12.	4. 4 8.	4. 4 9.	5. 4 9.	6. 4 9.	5. 4 10.	4. 4 8.	6. 4
73021212	10.	6. 4 11.	7. 4 12.	8. 3 12.	8. 4 12.	7. 4 15.	4. 6 6.	1. 6 99.	1. 6 9.	3. 6 8.	3. 6 99.	1. 6 99.	1. 6
73021300	9.	3. 6 6.	3. 6 6.	4. 6 7.	4. 6 9.	3. 6 99.	1. 6 3.	3. 3 3.	1. 3 99.	1. 2 99.	1. 2 99.	1. 2 9.	2. 2
73021312	21.	2. 2 9.	3. 2 99.	1. 2 7.	3. 3 9.	3. 3 11.	3. 6 99.	1. 6 14.	1. 6 9.	4. 6 99.	1. 6 99.	1. 6 99.	1. 6
73021400	99.	1. 6 99.	1. 6 99.	1. 6 99.	1. 6 99.	1. 6 99.	1. 6 99.	1. 3 28.	3. 3 99.	1. 3 99.	1. 4 36.	1. 4 34.	3. 4
73021412	34.	3. 4 18.	6. 4 18.	8. 4 16.	6. 4 16.	5. 4 10.	6. 4 10.	5. 5 10.	4. 4 7.	1. 4 9.	4. 4 10.	3. 4 99.	1. 4
73021500	11.	4. 4 7.	3. 4 10.	4. 4 10.	4. 4 10.	3. 4 8.	3. 4 6.	2. 3 9.	3. 3 12.	4. 3 11.	5. 4 12.	7. 4 12.	8. 4
73021512	12.	10. 4 12.	9. 4 12.	6. 4 13.	6. 4 14.	7. 4 12.	6. 4 11.	5. 4 11.	3. 4 6.	2. 4 99.	1. 6 99.	1. 4 99.	1. 4
73021600	7.	3. 4 10.	3. 4 99.	1. 4 99.	1. 4 8.	2. 6 9.	3. 6 9.	3. 3 9.	4. 3 7.	3. 2 11.	4. 2 99.	3. 3 9.	3. 3
73021612	10.	5. 4 11.	5. 4 10.	4. 3 12.	4. 3 11.	5. 4 13.	7. 4 13.	10. 4 18.	3. 4 10.	5. 4 12.	6. 4 13.	5. 4 20.	3. 6

73101100	0.	1. 6 0.	1. 6 0.	1. 4 0.	1. 4 7.	2. 4 8.	3. 4 8.	3. 413.	3. 312.	4. 313.	5. 413.	8. 313.	8. 3
73101112	14.	8. 415.	9. 416.	8. 417.	8. 416.	7. 414.	7. 415.	7. 417.	2. 418.	2. 415.	4. 427.	3. 433.	2. 4
73101200	0.	1. 612.	3. 4 8.	3. 410.	3. 411.	3. 4 0.	3. 412.	3. 410.	3. 411.	6. 411.	7. 413.	7. 412.	8. 3
73101212	13.	8. 415.	7. 415.	7. 416.	6. 416.	7. 417.	5. 416.	7. 515.	6. 515.	6. 515.	7. 515.	8. 414.	9. 4
73101300	15.	10. 414.	12. 415.	8. 413.	11. 413.	14. 413.	14. 412.	12. 412.	11. 412.	10. 413.	11. 413.	10. 414.	14. 4
73101312	14.	13. 414.	8. 418.	4. 415.	5. 428.	7. 430.	3. 429.	3. 432.	3. 434.	3. 432.	3. 433.	3. 4 0.	1. 4
73101400	0.	1. 6 0.	1. 6 0.	1. 632.	2. 633.	2. 6 0.	1. 4 0.	1. 4 0.	1. 4 0.	1. 4 3.	2. 4 4.	6. 4 4.	6. 4
73101412	2.	7. 3 3.	7. 3 3.	8. 3 1.	7. 436.	5. 436.	3. 3 5.	4. 6 5.	5. 6 3.	5. 6 4.	5. 6 4.	6. 6 4.	7. 6
73101500	4.	6. 6 5.	5. 5 4.	4. 6 2.	3. 6 4.	3. 6 9.	4. 6 9.	3. 3 7.	3. 3 9.	3. 3 0.	1. 3 0.	1. 2 0.	1. 2
73101512	15.	6. 314.	10. 421.	5. 421.	3. 332.	5. 4 0.	1. 4 0.	3. 4 0.	1. 4 0.	1. 4 0.	3. 415.	4. 4 0.	1. 4
73101600	0.	1. 4 0.	1. 4 0.	1. 4 0.	1. 6 0.	1. 6 0.	3. 6 0.	1. 4 0.	1. 4 0.	1. 429.	1. 4 0.	3. 426.	4. 2
73101612	28.	4. 2 4.	5. 3 3.	7. 3 2.	7. 4 1.	6. 4 1.	6. 4 2.	5. 6 3.	5. 6 3.	5. 6 5.	1. 6 0.	1. 6 0.	1. 6
73101800	99.	1. 699.	1. 699.	3. 699.	3. 699.	1. 699.	1. 6 9.	3. 3 8.	4. 2 9.	3. 3 9.	4. 412.	4. 213.	4. 3
73101812	12.	4. 312.	4. 311.	6. 410.	6. 410.	4. 3 0.	3. 3 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6
73101900	0.	1. 6 0.	1. 626.	1. 626.	1. 6 0.	3. 6 9.	1. 412.	3. 499.	3. 414.	5. 414.	8. 413.	10. 413.	9. 4
73101912	17.	8. 415.	7. 415.	6. 416.	7. 416.	7. 415.	5. 412.	5. 4 0.	3. 4 0.	1. 4 0.	1. 617.	3. 614.	5. 4
73102000	12.	6. 413.	5. 412.	4. 412.	5. 413.	7. 412.	8. 412.	7. 413.	9. 414.	11. 414.	13. 414.	14. 414.	14. 4
73102012	15.	13. 424.	8. 430.	9. 430.	8. 431.	7. 431.	5. 4 0.	3. 420.	3. 433.	3. 414.	3. 4 0.	1. 4 0.	1. 4
73102100	0.	1. 4 0.	1. 4 0.	1. 4 0.	1. 4 0.	1. 4 0.	1. 4 0.	1. 411.	7. 415.	5. 416.	7. 415.	10. 414.	11. 4
73102112	13.	11. 414.	11. 414.	10. 315.	8. 414.	7. 413.	7. 411.	5. 4 9.	4. 4 5.	4. 412.	4. 415.	4. 4 0.	3. 6
73102200	0.	4. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 3 0.	1. 3 0.	1. 3 0.	1. 3 0.	1. 2 6.	3. 3
73102212	31.	3. 3 0.	3. 2 0.	3. 311.	4. 313.	6. 412.	5. 5 0.	5. 5 0.	1. 6 0.	1. 636.	3. 6 0.	1. 6 5.	5. 5
73102300	3.	3. 610.	4. 636.	3. 629.	2. 436.	3. 613.	3. 612.	3. 311.	8. 414.	5. 414.	8. 413.	9. 413.	10. 4
73102312	13.	7. 412.	7. 412.	10. 412.	8. 424.	4. 4 0.	3. 427.	5. 418.	4. 412.	4. 412.	6. 511.	5. 513.	12. 4
73102400	13.	15. 414.	15. 414.	14. 414.	18. 414.	17. 415.	16. 415.	13. 415.	11. 413.	12. 415.	13. 415.	10. 415.	8. 4
73102412	17.	8. 421.	8. 423.	7. 420.	8. 420.	8. 417.	7. 513.	5. 416.	4. 417.	3. 4 0.	1. 411.	4. 615.	4. 4
73102500	14.	4. 4 9.	4. 413.	3. 412.	3. 4 8.	5. 413.	4. 411.	4. 412.	4. 413.	4. 313.	4. 412.	6. 413.	6. 3
73102512	13.	4. 219.	3. 219.	3. 218.	3. 318.	3. 3 0.	1. 612.	3. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	3. 6
73102600	8.	3. 610.	4. 6 9.	4. 4 8.	3. 6 6.	3. 6 9.	5. 636.	2. 3 9.	3. 3 9.	5. 410.	6. 411.	6. 412.	6. 4
73102612	12.	7. 412.	7. 411.	7. 411.	6. 411.	5. 410.	5. 511.	4. 410.	4. 414.	5. 5 9.	4. 610.	4. 410.	4. 4
73102700	9.	4. 4 9.	5. 410.	4. 611.	6. 510.	4. 610.	6. 611.	6. 411.	5. 411.	7. 312.	8. 312.	6. 311.	7. 3
73102712	10.	6. 310.	8. 312.	7. 312.	6. 412.	6. 419.	3. 6 9.	4. 6 0.	1. 628.	3. 612.	7. 515.	5. 515.	7. 4
73102800	13.	9. 414.	9. 414.	9. 415.	7. 414.	7. 412.	7. 427.	11. 428.	12. 429.	10. 428.	8. 430.	7. 428.	8. 4
73102812	28.	10. 424.	10. 431.	8. 427.	12. 430.	8. 429.	5. 5 9.	4. 425.	4. 6 7.	4. 611.	4. 6 0.	3. 6 0.	4. 6
73102900	13.	3. 6 8.	3. 611.	3. 6 8.	3. 611.	3. 612.	4. 6 9.	3. 3 9.	4. 311.	3. 212.	5. 311.	8. 411.	8. 4
73102912	11.	7. 312.	6. 413.	5. 413.	5. 413.	4. 313.	3. 616.	3. 6 0.	1. 611.	3. 6 0.	1. 6 0.	1. 412.	5. 4
73103000	14.	3. 415.	5. 415.	5. 414.	6. 414.	8. 414.	7. 414.	5. 414.	7. 414.	6. 415.	5. 412.	4. 416.	4. 4
73103012	9.	2. 4 0.	3. 3 3.	7. 431.	8. 4 4.	6. 433.	3. 633.	2. 4 0.	3. 4 0.	3. 4 0.	2. 4 0.	2. 4 0.	2. 4
73103100	14.	3. 4 9.	4. 411.	5. 411.	5. 413.	5. 414.	7. 412.	6. 415.	6. 414.	7. 413.	5. 4 5.	6. 4 4.	9. 4
73103112	1.	6. 436.	7. 436.	7. 4 1.	5. 431.	6. 431.	7. 431.	8. 4 3.	5. 6 0.	2. 6 0.	2. 6 0.	2. 629.	5. 4
73110100	28.	6. 530.	5. 5 8.	5. 4 9.	3. 633.	3. 6 3.	3. 610.	2. 312.	2. 3 9.	3. 2 7.	3. 210.	2. 299.	2. 2
73110112	30.	3. 232.	3. 233.	4. 3 3.	3. 399.	4. 333.	2. 699.	4. 6 9.	3. 699.	2. 615.	2. 613.	3. 611.	2. 6
73110200	8.	3. 6 8.	2. 6 8.	2. 6 6.	1. 6 9.	3. 6 9.	3. 611.	3. 399.	3. 3 0.	3. 2 0.	1. 228.	1. 223.	1. 2
73110212	0.	2. 299.	3. 499.	3. 499.	8. 499.	13. 4 6.	10. 5 8.	3. 6 0.	3. 6 0.	1. 6 0.	3. 6 0.	1. 6 0.	1. 6

73021700	18.	4. 699.	1. 618.	3. 6 8.	3. 6 9.	3. 411.	4. 4 9.	4. 412.	3. 421.	1. 425.	3. 419.	3. 411.	5. 4
73021712	12.	7. 413.	6. 412.	6. 412.	5. 4 3.	5. 4 9.	3. 499.	1. 499.	1. 499.	1. 699.	1. 699.	1. 499.	1. 6
73021800	99.	1. 699.	1. 699.	1. 424.	3. 630.	3. 427.	3. 499.	3. 499.	1. 428.	1. 424.	3. 422.	1. 419.	3. 4
73021812	28.	3. 499.	3. 2 2.	5. 3 2.	7. 4 2.	7. 436.	5. 5 2.	4. 6 2.	5. 6 1.	7. 6 3.	7. 6 3.	6. 6 2.	3. 6
73021900	3.	4. 612.	3. 635.	2. 634.	2. 699.	1. 699.	1. 699.	1. 399.	1. 3 9.	3. 2 9.	2. 233.	2. 2 9.	2. 2
73021912	25.	3. 2 9.	2. 227.	4. 333.	3. 329.	4. 329.	6. 529.	4. 629.	4. 633.	2. 634.	3. 634.	2. 699.	1. 6
73022000	99.	1. 699.	1. 699.	1. 699.	1. 699.	1. 699.	1. 6 2.	6. 4 1.	5. 4 3.	6. 3 3.	6. 4 3.	4. 2 2.	7. 3
73022012	4.	8. 3 3.	7. 3 3.	7. 3 2.	8. 435.	7. 4 2.	6. 6 3.	5. 630.	4. 6 2.	3. 6 2.	3. 699.	3. 699.	3. 6
73022200	3.	2. 635.	3. 635.	3. 634.	3. 634.	3. 634.	2. 699.	1. 399.	1. 399.	1. 299.	1. 299.	1. 2 6.	1. 3
73022212	8.	4. 3 8.	3. 322.	4. 223.	5. 427.	9. 427.	5. 627.	4. 626.	4. 699.	1. 699.	1. 699.	1. 699.	1. 6
73022500	11.	6. 413.	6. 412.	6. 412.	8. 412.	9. 414.	7. 412.	8. 412.	7. 413.	10. 413.	12. 413.	12. 413.	12. 4
73022512	13.	13. 413.	12. 412.	8. 412.	7. 411.	5. 4 9.	4. 6 6.	3. 611.	4. 699.	1. 610.	4. 610.	4. 610.	4. 6
73022600	10.	4. 6 9.	4. 620.	3. 636.	3. 612.	3. 6 6.	3. 612.	4. 430.	3. 410.	5. 411.	4. 411.	7. 410.	6. 4
73022612	10.	4. 4 9.	4. 411.	7. 412.	8. 413.	8. 413.	9. 412.	10. 412.	3. 499.	1. 614.	3. 613.	5. 512.	7. 5
73022700	7.	6. 5 8.	6. 511.	7. 511.	8. 413.	3. 613.	1. 699.	1. 3 8.	1. 399.	1. 399.	1. 3 9.	3. 399.	1. 3
73022712	99.	1. 3 9.	3. 311.	3. 313.	5. 413.	4. 3 9.	5. 599.	3. 699.	1. 699.	1. 699.	1. 699.	1. 699.	1. 6
73022800	99.	1. 636.	3. 699.	1. 631.	3. 699.	1. 699.	1. 631.	3. 399.	1. 499.	1. 499.	1. 311.	4. 415.	6. 4
73022812	12.	6. 413.	7. 412.	9. 413.	7. 413.	7. 413.	4. 613.	4. 612.	5. 414.	10. 415.	5. 427.	7. 4 6.	3. 4
73030100	14.	6. 413.	11. 414.	12. 412.	12. 413.	15. 413.	15. 414.	13. 415.	12. 414.	14. 415.	13. 415.	10. 414.	9. 4
73030200	11.	3. 612.	3. 699.	2. 699.	2. 610.	3. 411.	4. 4 9.	3. 413.	6. 412.	5. 412.	9. 413.	9. 415.	6. 4
IMPROPER MATCH BETWEEN ID NUMBERS 73030100 AND 73030200													
73030200	11.	3. 612.	3. 699.	2. 699.	2. 610.	3. 411.	4. 4 9.	3. 413.	6. 412.	5. 412.	9. 413.	9. 415.	6. 4
73030212	14.	8. 412.	8. 312.	8. 312.	8. 313.	4. 314.	2. 699.	2. 699.	2. 610.	2. 699.	2. 699.	2. 699.	2. 6
73030300	99.	2. 699.	2. 699.	2. 6 2.	3. 612.	4. 413.	8. 413.	8. 412.	11. 412.	11. 412.	8. 412.	8. 413.	10. 4
73030312	13.	12. 413.	12. 412.	10. 413.	8. 415.	8. 415.	5. 515.	5. 510.	5. 511.	6. 511.	4. 410.	3. 611.	3. 4
73030400	10.	2. 411.	3. 412.	4. 414.	3. 414.	4. 413.	5. 413.	6. 412.	7. 412.	5. 413.	4. 412.	6. 411.	8. 4
73030412	11.	8. 412.	5. 413.	4. 4 7.	3. 499.	2. 331.	3. 630.	3. 699.	3. 499.	2. 699.	2. 634.	2. 699.	2. 4
73030500	12.	3. 413.	3. 414.	3. 611.	3. 499.	3. 410.	3. 6 5.	3. 312.	3. 412.	9. 413.	8. 412.	8. 412.	9. 3
73030512	12.	8. 311.	10. 412.	11. 413.	11. 413.	8. 412.	6. 512.	4. 411.	4. 410.	5. 4 8.	4. 4 9.	2. 433.	2. 4
73030600	34.	2. 699.	2. 699.	2. 699.	2. 699.	2. 699.	3. 699.	3. 3 4.	4. 3 5.	5. 3 5.	4. 224.	3. 226.	4. 2
73030612	20.	3. 221.	3. 299.	3. 228.	6. 328.	5. 429.	5. 528.	6. 528.	4. 628.	4. 699.	2. 612.	2. 6 4.	2. 4
73030700	12.	3. 499.	2. 411.	2. 499.	2. 699.	2. 614.	2. 412.	7. 410.	8. 411.	7. 411.	8. 412.	9. 413.	10. 4
73030712	12.	8. 411.	7. 4 9.	6. 4 8.	5. 436.	4. 332.	3. 628.	7. 629.	6. 631.	3. 699.	2. 699.	2. 699.	2. 6
73030800	34.	4. 699.	2. 636.	3. 699.	2. 699.	2. 632.	3. 636.	3. 330.	4. 430.	4. 230.	2. 228.	4. 210.	3. 2
73030812	27.	3. 228.	4. 228.	8. 328.	10. 428.	8. 428.	9. 428.	9. 428.	7. 430.	4. 432.	4. 430.	2. 628.	2. 4
73030900	36.	2. 699.	2. 433.	3. 426.	3. 499.	2. 499.	2. 411.	3. 412.	3. 413.	4. 412.	5. 412.	8. 412.	10. 4
73030912	12.	10. 414.	10. 413.	10. 412.	10. 413.	10. 427.	4. 415.	4. 614.	4. 414.	5. 414.	8. 413.	11. 413.	8. 4
73031000	13.	10. 414.	10. 415.	7. 416.	7. 427.	12. 426.	5. 526.	12. 426.	5. 426.	9. 321.	7. 424.	7. 431.	6. 4
73031012	30.	5. 425.	6. 424.	6. 3 9.	3. 3 6.	3. 327.	4. 399.	3. 613.	3. 613.	8. 414.	7. 513.	7. 513.	5. 4
73031100	13.	7. 4 9.	3. 499.	2. 410.	3. 4 9.	3. 410.	2. 4 3.	3. 412.	3. 430.	3. 228.	3. 222.	4. 422.	5. 4
73031112	26.	7. 429.	7. 322.	7. 330.	7. 328.	7. 429.	7. 432.	4. 633.	3. 635.	3. 631.	3. 699.	2. 699.	3. 6
73031200	9.	3. 611.	3. 4 9.	3. 411.	3. 412.	3. 411.	4. 411.	4. 412.	6. 412.	8. 413.	7. 413.	8. 413.	8. 4
73031212	12.	8. 413.	8. 413.	5. 428.	10. 428.	12. 422.	11. 428.	8. 433.	4. 431.	5. 430.	6. 427.	4. 629.	5. 5
73031300	29.	4. 428.	3. 4 9.	3. 412.	4. 412.	3. 413.	3. 699.	2. 312.	3. 412.	4. 412.	3. 2 9.	3. 328.	5. 4

73031312	99.	1. 699.	1. 699.	1. 499.	1. 499.	1. 499.	1. 499.	1. 399.	2. 310.	3. 312.	7. 412.	8. 414.	8. 4
73031400	13.	8. 416.	7. 416.	6. 415.	7. 413.	8. 413.	6. 412.	3. 414.	4. 418.	4. 422.	3. 499.	2. 499.	2. 4
73031500	99.	1. 499.	1. 414.	3. 616.	3. 4 9.	3. 415.	4. 614.	2. 311.	2. 315.	4. 317.	3. 316.	7. 312.	11. 4
73031512	14.	11. 413.	11. 415.	10. 413.	8. 414.	8. 416.	4. 322.	3. 699.	1. 636.	3. 631.	4. 632.	4. 630.	4. 6
73031600	27.	3. 699.	1. 6 9.	2. 412.	3. 414.	11. 414.	12. 414.	13. 413.	14. 414.	14. 421.	8. 427.	12. 427.	10. 4
73031612	28.	10. 428.	9. 426.	10. 427.	6. 426.	6. 424.	5. 429.	5. 519.	4. 699.	2. 499.	1. 618.	3. 419.	4. 4
73031700	21.	3. 499.	1. 424.	3. 499.	1. 499.	1. 436.	3. 412.	3. 312.	5. 412.	8. 412.	10. 413.	11. 412.	12. 4
73031712	13.	12. 413.	13. 413.	13. 415.	11. 415.	12. 413.	9. 413.	9. 413.	12. 413.	13. 414.	14. 414.	14. 414.	15. 4
73031800	14.	14. 414.	12. 413.	12. 413.	10. 413.	8. 414.	9. 414.	10. 413.	11. 413.	12. 413.	13. 413.	13. 414.	13. 4
73031812	13.	14. 413.	13. 413.	15. 414.	16. 414.	16. 415.	17. 416.	12. 427.	13. 427.	7. 4 6.	5. 4 9.	3. 412.	5. 4
73031900	11.	11. 412.	10. 412.	13. 412.	12. 413.	10. 415.	10. 414.	7. 413.	8. 413.	7. 413.	6. 416.	7. 416.	7. 4
73031912	17.	6. 418.	5. 413.	5. 415.	5. 418.	4. 415.	3. 428.	5. 428.	5. 430.	4. 430.	4. 428.	4. 436.	3. 4
73032000	31.	3. 433.	3. 432.	3. 433.	2. 499.	1. 499.	1. 436.	3. 431.	3. 427.	3. 427.	4. 431.	4. 426.	7. 4
73032012	24.	7. 429.	7. 416.	7. 414.	7. 413.	7. 412.	6. 418.	5. 426.	6. 427.	4. 412.	3. 411.	2. 499.	1. 6
73032100	34.	2. 699.	1. 499.	1. 699.	1. 629.	5. 5 9.	3. 6 8.	3. 399.	1. 2 6.	3. 299.	3. 299.	3. 210.	4. 3
73032112	22.	4. 322.	4. 328.	4. 329.	6. 429.	9. 428.	8. 428.	7. 429.	6. 431.	3. 430.	3. 429.	5. 430.	7. 4
73032200	32.	4. 430.	5. 430.	5. 432.	3. 632.	4. 636.	3. 6 9.	2. 312.	2. 235.	3. 227.	4. 227.	5. 229.	7. 2
73032212	29.	8. 228.	9. 331.	7. 333.	8. 329.	7. 427.	11. 428.	7. 631.	6. 631.	6. 630.	6. 633.	8. 599.	2. 6
73032300	34.	3. 633.	3. 632.	3. 627.	3. 630.	3. 6 3.	2. 6 3.	3. 3 3.	2. 2 1.	2. 221.	3. 221.	4. 221.	3. 2
73032312	33.	4. 212.	4. 230.	3. 228.	4. 236.	5. 4 2.	6. 435.	3. 6 3.	2. 6 3.	5. 6 3.	3. 699.	1. 699.	1. 6
73032400	12.	2. 699.	1. 699.	1. 699.	1. 699.	1. 699.	1. 399.	1. 399.	1. 399.	1. 318.	3. 224.	3. 212.	3. 2
73032412	15.	3. 215.	6. 315.	7. 416.	6. 421.	8. 429.	13. 428.	9. 428.	8. 429.	6. 529.	8. 430.	7. 529.	6. 5
73032500	29.	8. 429.	7. 530.	8. 430.	8. 430.	4. 630.	3. 399.	1. 3 8.	3. 318.	2. 426.	3. 426.	8. 426.	12. 4
73032512	27.	14. 427.	14. 427.	15. 427.	17. 427.	15. 426.	13. 427.	10. 527.	10. 529.	6. 633.	3. 6 3.	3. 699.	1. 6
73032600	34.	3. 499.	1. 411.	3. 499.	1. 4 9.	3. 410.	3. 410.	3. 412.	3. 415.	3. 499.	1. 326.	6. 426.	8. 4
73032612	27.	9. 322.	10. 427.	11. 428.	11. 429.	10. 426.	11. 427.	9. 427.	8. 429.	7. 529.	4. 699.	1. 699.	1. 6
73032700	99.	1. 6 9.	3. 412.	2. 411.	3. 412.	5. 413.	6. 413.	7. 412.	8. 412.	7. 413.	6. 417.	5. 428.	3. 4
73032712	6.	3. 4 6.	3. 2 6.	5. 426.	7. 426.	7. 432.	7. 428.	4. 432.	3. 4 1.	3. 499.	1. 499.	1. 499.	1. 4
73032800	34.	3. 499.	1. 499.	1. 499.	1. 499.	1. 499.	1. 434.	3. 4 1.	3. 320.	2. 299.	99. 4 3.	3. 334.	3. 3
73032812	26.	4. 329.	6. 429.	7. 430.	7. 433.	7. 428.	7. 429.	7. 629.	4. 629.	4. 627.	4. 627.	3. 612.	3. 6
73032900	99.	1. 699.	1. 699.	1. 699.	1. 499.	1. 499.	1. 499.	1. 4 9.	3. 412.	4. 412.	8. 412.	12. 412.	11. 4
73032912	12.	10. 415.	8. 414.	8. 412.	8. 411.	7. 413.	6. 411.	4. 412.	7. 412.	8. 413.	10. 413.	11. 414.	7. 5
73033000	16.	4. 612.	4. 412.	5. 415.	3. 413.	4. 412.	6. 414.	3. 412.	7. 412.	7. 412.	8. 412.	7. 312.	6. 4
73033012	10.	7. 311.	6. 331.	5. 433.	3. 430.	4. 432.	9. 430.	6. 429.	1. 499.	3. 499.	3. 499.	3. 614.	3. 4
73033100	11.	3. 410.	1. 411.	3. 411.	5. 411.	6. 413.	5. 415.	6. 415.	4. 413.	5. 415.	5. 413.	8. 410.	11. 4
73033112	12.	9. 412.	3. 412.	3. 313.	3. 330.	7. 4 9.	3. 320.	3. 427.	1. 430.	1. 430.	1. 499.	1. 499.	3. 4
73040200	99.	1. 699.	1. 699.	1. 699.	1. 699.	1. 699.	1. 399.	1. 399.	1. 299.	1. 299.	1. 212.	3. 224.	4. 2
73040212	23.	4. 221.	4. 224.	3. 225.	3. 224.	4. 229.	6. 429.	6. 631.	6. 630.	7. 630.	3. 6 3.	3. 699.	1. 6
73040300	99.	1. 699.	1. 699.	1. 699.	1. 699.	1. 699.	1. 399.	1. 399.	1. 299.	1. 229.	3. 226.	3. 222.	3. 2
73040312	20.	4. 231.	4. 2 6.	3. 2 4.	6. 3 2.	6. 336.	6. 433.	5. 529.	4. 628.	4. 699.	1. 699.	1. 699.	1. 6
73040400	99.	1. 699.	1. 699.	1. 699.	1. 699.	1. 634.	3. 334.	2. 399.	1. 399.	1. 322.	3. 222.	3. 225.	3. 2
73040412	26.	4. 222.	5. 325.	5. 330.	5. 328.	8. 328.	7. 428.	4. 630.	6. 530.	5. 528.	6. 528.	7. 530.	6. 5
73040500	28.	6. 529.	6. 530.	6. 630.	7. 625.	8. 525.	5. 425.	6. 427.	6. 429.	5. 427.	7. 327.	5. 324.	3. 2

73040512	4.	6.	27.	426.	42.	0.	4.	9.	10.	0.	34.	635.	63.	3. 6
73040600	34.	3. 699.	1. 610.	3. 6 9.	3. 6 6.	3. 499.	1. 399.	1. 3 7.	3. 312.	3. 323.	3. 3 6.	4. 2 4.	8. 2	
73040612	29.	6. 236.	9. 3 1.	9. 336.	10. 336.	10. 335.	10. 435.	5. 632.	3. 6 3.	4. 6 5.	3. 615.	3. 6 6.	4. 6	
73040700	2.	4. 612.	3. 611.	4. 614.	5. 6 9.	4. 612.	3. 399.	1. 313.	3. 213.	1. 214.	3. 2 6.	7. 212.	12. 3	
73040712	12.	12. 312.	10. 311.	10. 310.	10. 310.	9. 312.	8. 412.	7. 512.	4. 615.	4. 612.	1. 699.	1. 699.	1. 6	
73040800	99.	1. 699.	3. 699.	3. 636.	3. 699.	1. 699.	1. 399.	1. 399.	1. 399.	1. 299.	1. 212.	3. 230.	4. 2	
73040812	9.	3. 2 9.	3. 2 6.	4. 2 6.	4. 3 9.	4. 312.	3. 3 9.	1. 6 9.	8. 430.	7. 529.	4. 629.	1. 699.	1. 6	
73040900	99.	3. 699.	1. 699.	1. 699.	1. 699.	1. 699.	1. 399.	1. 312.	3. 399.	1. 230.	5. 318.	3. 2 8.	3. 2	
73040912	21.	3. 230.	7. 330.	6. 327.	7. 427.	7. 427.	6. 428.	5. 430.	6. 528.	7. 528.	7. 530.	3. 631.	3. 6	
73041000	36.	3. 699.	1. 699.	1. 699.	1. 699.	1. 699.	1. 399.	1. 399.	1. 299.	1. 224.	3. 212.	3. 227.	4. 2	
73041012	24.	4. 225.	4. 227.	6. 226.	9. 327.	11. 428.	11. 428.	8. 430.	7. 531.	5. 599.	1. 699.	1. 699.	1. 6	
73041100	99.	1. 699.	1. 699.	1. 699.	1. 699.	1. 699.	1. 399.	1. 399.	1. 399.	1. 299.	1. 227.	3. 225.	3. 2	
73041112	28.	6. 230.	8. 228.	9. 327.	11. 426.	11. 427.	9. 427.	6. 428.	6. 529.	6. 529.	6. 629.	6. 630.	6. 6	
73041200	34.	3. 633.	3. 632.	4. 633.	3. 634.	3. 633.	3. 335.	3. 234.	3. 225.	3. 224.	3. 219.	4. 221.	4. 2	
73041212	30.	4. 227.	7. 327.	14. 428.	13. 428.	13. 428.	12. 429.	12. 428.	11. 427.	10. 426.	9. 426.	8. 426.	7. 5	
73041300	28.	6. 528.	4. 631.	5. 531.	5. 531.	5. 431.	3. 434.	3. 432.	4. 436.	5. 4 1.	5. 4 6.	4. 421.	3. 2	
73041312	14.	4. 225.	8. 227.	9. 328.	12. 428.	13. 428.	12. 429.	9. 429.	9. 528.	9. 528.	8. 527.	7. 625.	7. 5	
73041400	25.	6. 428.	4. 419.	5. 419.	5. 419.	3. 499.	3. 417.	3. 412.	3. 412.	4. 412.	7. 412.	8. 412.	9. 4	
73041412	12.	10. 412.	10. 413.	8. 429.	7. 432.	4. 430.	4. 429.	3. 430.	5. 530.	4. 430.	2. 429.	99. 436.	99. 4	
73041600	13.	99. 413.	99. 413.	99. 413.	99. 415.	99. 423.	99. 4 4.	99. 415.	7. 413.	8. 413.	13. 413.	13. 415.	7. 4	
73041612	19.	9. 424.	8. 324.	6. 421.	7. 422.	7. 422.	8. 423.	7. 420.	8. 420.	7. 520.	6. 621.	5. 621.	6. 6	
73041700	21.	6. 620.	6. 517.	6. 520.	7. 515.	6. 419.	5. 411.	6. 4 9.	4. 333.	4. 418.	5. 426.	6. 425.	6. 3	
73041712	27.	10. 427.	12. 429.	12. 427.	11. 432.	11. 422.	12. 422.	11. 424.	5. 515.	3. 615.	4. 621.	4. 415.	6. 4	
73041800	18.	5. 618.	4. 416.	4. 413.	5. 413.	6. 414.	6. 413.	9. 413.	8. 413.	12. 414.	11. 416.	10. 414.	9. 4	
73041812	15.	8. 413.	6. 433.	5. 428.	6. 429.	6. 430.	8. 429.	8. 430.	3. 6 4.	2. 411.	3. 4 8.	3. 433.	2. 4	
73041900	3.	2. 433.	2. 4 1.	2. 434.	2. 432.	3. 432.	4. 435.	2. 433.	2. 331.	3. 427.	3. 435.	3. 418.	4. 3	
73041912	25.	5. 432.	7. 434.	8. 431.	8. 428.	8. 429.	9. 430.	6. 429.	8. 529.	8. 428.	7. 531.	5. 629.	5. 4	
73042000	32.	4. 632.	3. 433.	4. 433.	4. 633.	3. 633.	2. 335.	3. 3 3.	4. 236.	3. 330.	8. 436.	10. 4 1.	9. 4	
73042012	36.	9. 433.	5. 230.	5. 228.	6. 328.	8. 327.	12. 428.	10. 429.	8. 430.	7. 530.	7. 630.	7. 630.	6. 6	
73042100	30.	7. 630.	6. 6 3.	3. 630.	2. 631.	3. 636.	2. 3 1.	3. 215.	3. 312.	3. 223.	4. 229.	6. 230.	9. 3	
73042112	29.	8. 228.	9. 327.	10. 329.	13. 429.	13. 428.	12. 429.	8. 428.	9. 428.	9. 431.	7. 431.	4. 631.	4. 6	
73042200	33.	3. 629.	2. 429.	2. 427.	2. 432.	2. 430.	4. 428.	6. 429.	9. 428.	12. 427.	11. 429.	12. 428.	9. 4	
73042212	29.	13. 329.	10. 327.	9. 329.	9. 328.	12. 429.	10. 428.	8. 426.	9. 427.	8. 427.	8. 427.	7. 428.	5. 5	
73042300	29.	4. 428.	6. 530.	3. 431.	3. 431.	4. 434.	4. 429.	3. 429.	7. 426.	10. 426.	11. 427.	10. 426.	11. 4	
73042312	26.	11. 428.	12. 428.	12. 428.	12. 428.	12. 428.	12. 427.	11. 426.	11. 426.	8. 426.	8. 425.	8. 525.	6. 6	
73042400	31.	3. 632.	3. 632.	1. 699.	1. 499.	1. 434.	1. 433.	1. 499.	1. 499.	1. 415.	3. 415.	3. 426.	3. 4	
73042412	24.	3. 426.	5. 433.	5. 430.	6. 430.	5. 429.	6. 429.	6. 430.	5. 530.	6. 532.	4. 633.	3. 699.	1. 6	
73042500	99.	1. 699.	1. 699.	1. 699.	1. 499.	1. 699.	1. 499.	1. 4 6.	3. 2 7.	3. 226.	3. 225.	3. 230.	3. 2	
73042512	28.	3. 228.	3. 231.	4. 232.	4. 228.	7. 327.	8. 428.	7. 428.	8. 528.	8. 528.	8. 528.	4. 630.	4. 6	
73042600	28.	4. 629.	4. 629.	3. 627.	4. 628.	3. 631.	4. 332.	4. 230.	7. 330.	7. 231.	8. 225.	8. 326.	10. 3	
73042612	26.	12. 326.	13. 327.	13. 427.	15. 426.	14. 427.	13. 427.	12. 427.	10. 428.	9. 428.	8. 428.	8. 429.	6. 4	
73042700	29.	5. 428.	8. 428.	7. 429.	5. 529.	4. 632.	3. 330.	5. 429.	7. 429.	9. 428.	9. 428.	13. 427.	11. 4	
73042712	27.	13. 427.	14. 427.	14. 427.	15. 427.	14. 427.	14. 428.	13. 429.	8. 530.	7. 630.	7. 632.	5. 636.	3. 6	
73042800	99.	1. 610.	3. 6 9.	4. 610.	4. 6 9.	3. 6 3.	3. 335.	2. 299.	2. 233.	3. 324.	4. 225.	4. 228.	8. 3	

73042812	27.	12.	428.	11.	329.	12.	328.	13.	429.	12.	428.	12.	428.	10.	529.	11.	529.	8.	529.	6.	630.	4.	6		
73042900	36.	4.	632.	4.	632.	1.	63.	1.	611.	1.	699.	1.	399.	1.	29.	4.	215.	4.	228.	5.	230.	6.	2		
73042912	27.	7.	228.	8.	228.	10.	329.	13.	429.	13.	428.	13.	428.	11.	429.	9.	530.	7.	631.	5.	631.	5.	629.	6.	6
73043000	30.	3.	631.	3.	60.	1.	60.	1.	60.	1.	60.	1.	40.	1.	40.	3.	436.	4.	40.	3.	221.	3.	225.	4.	2
73043012	26.	4.	224.	4.	226.	5.	225.	8.	328.	13.	428.	12.	427.	10.	428.	8.	430.	5.	629.	5.	629.	6.	632.	4.	6
73050100	36.	3.	632.	3.	633.	3.	631.	4.	636.	4.	634.	4.	336.	3.	22.	3.	29.	2.	224.	3.	234.	3.	225.	3.	2
73050112	12.	4.	211.	11.	312.	8.	228.	11.	428.	14.	428.	12.	428.	8.	426.	9.	427.	9.	526.	9.	525.	7.	525.	5.	5
73050200	29.	3.	627.	4.	625.	6.	525.	5.	525.	6.	524.	4.	315.	2.	427.	2.	427.	2.	227.	3.	227.	4.	230.	7.	3
73050212	35.	5.	430.	8.	330.	9.	328.	9.	326.	8.	428.	9.	426.	7.	425.	3.	425.	3.	40.	1.	40.	1.	40.	1.	4
73050300	0.	1.	49.	2.	410.	4.	612.	7.	414.	5.	415.	3.	418.	3.	422.	3.	415.	3.	328.	6.	427.	6.	429.	7.	4
73050312	29.	7.	428.	9.	428.	9.	428.	11.	428.	11.	428.	9.	427.	9.	428.	10.	429.	6.	428.	6.	428.	6.	40.	1.	6
73050400	3.	2.	43.	2.	632.	2.	636.	3.	625.	3.	630.	5.	431.	6.	430.	6.	428.	6.	428.	7.	432.	6.	431.	8.	4
73050412	35.	9.	428.	9.	427.	8.	426.	12.	327.	11.	428.	10.	427.	9.	427.	8.	528.	9.	529.	8.	530.	6.	632.	3.	6
73050500	28.	4.	636.	3.	60.	1.	636.	3.	635.	1.	633.	2.	42.	3.	40.	1.	40.	1.	40.	1.	425.	4.	426.	5.	4
73050512	27.	6.	430.	6.	428.	7.	228.	7.	329.	8.	428.	8.	427.	7.	425.	6.	529.	4.	428.	4.	428.	4.	431.	3.	4
73050600	33.	2.	40.	1.	426.	5.	424.	4.	413.	3.	412.	3.	412.	7.	413.	11.	412.	10.	412.	12.	412.	14.	412.	13.	4
73050612	14.	10.	417.	7.	413.	6.	412.	6.	428.	8.	429.	7.	427.	2.	430.	2.	40.	1.	628.	2.	40.	1.	40.	1.	4
73050700	4.	2.	46.	2.	40.	1.	410.	3.	611.	3.	30.	1.	312.	3.	39.	3.	412.	2.	410.	3.	410.	6.	312.	7.	4
73050712	16.	6.	218.	5.	312.	6.	312.	7.	433.	4.	431.	5.	425.	3.	49.	3.	64.	2.	413.	6.	413.	8.	413.	8.	4
73050800	14.	11.	413.	11.	413.	12.	413.	16.	422.	4.	327.	4.	317.	4.	226.	8.	321.	6.	423.	9.	424.	11.	424.	10.	4
73050812	23.	10.	424.	10.	425.	12.	424.	13.	424.	11.	424.	10.	425.	11.	424.	7.	521.	6.	519.	5.	519.	4.	613.	3.	4
73050900	6.	3.	49.	4.	43.	2.	411.	3.	414.	4.	313.	3.	313.	4.	413.	5.	423.	5.	421.	5.	424.	4.	230.	7.	4
73050912	24.	6.	424.	7.	424.	9.	329.	10.	328.	10.	328.	8.	428.	8.	429.	11.	428.	5.	426.	3.	411.	2.	49.	3.	6
73051000	9.	3.	69.	4.	610.	3.	69.	3.	611.	4.	39.	3.	311.	3.	311.	3.	312.	2.	324.	2.	318.	4.	218.	5.	1
73051012	20.	4.	121.	5.	234.	5.	233.	5.	234.	6.	334.	7.	434.	6.	435.	7.	61.	7.	62.	4.	623.	3.	616.	3.	6
73051100	4.	6.	64.	7.	64.	7.	64.	8.	52.	7.	42.	6.	42.	8.	32.	8.	32.	4.	225.	4.	229.	3.	224.	4.	1
73051112	6.	3.	113.	7.	215.	8.	215.	8.	215.	8.	31.	5.	43.	7.	43.	7.	534.	3.	61.	3.	60.	1.	60.	1.	6
73051200	0.	1.	60.	1.	60.	1.	60.	1.	60.	1.	30.	1.	30.	1.	20.	1.	224.	2.	224.	3.	224.	3.	235.	4.	1
73051212	34.	4.	133.	6.	26.	5.	230.	5.	228.	6.	329.	7.	428.	7.	429.	6.	632.	5.	633.	4.	60.	1.	60.	1.	6
73051300	0.	1.	60.	1.	60.	1.	60.	1.	60.	1.	30.	1.	30.	1.	230.	3.	225.	3.	234.	3.	233.	3.	227.	3.	1
73051312	31.	3.	12.	4.	236.	5.	22.	6.	22.	8.	31.	8.	41.	6.	420.	3.	63.	3.	60.	1.	60.	1.	60.	1.	6
73051400	0.	2.	60.	2.	60.	2.	60.	2.	60.	2.	30.	2.	333.	3.	230.	4.	230.	6.	227.	7.	226.	11.	327.	12.	3
73051412	28.	13.	328.	12.	329.	11.	328.	11.	326.	10.	329.	10.	430.	10.	429.	9.	429.	7.	528.	7.	528.	6.	529.	7.	5
73051500	34.	5.	632.	3.	634.	2.	634.	3.	633.	3.	333.	2.	334.	3.	334.	3.	330.	3.	226.	3.	228.	4.	226.	5.	2
73051700	30.	5.	634.	3.	634.	3.	634.	3.	634.	3.	335.	3.	335.	3.	231.	5.	328.	6.	229.	5.	228.	7.	228.	8.	2
IMPROPER MATCH BETWEEN ID NUMBERS 73051500 AND 73051700																									
73051700	30.	5.	634.	3.	634.	3.	634.	3.	634.	3.	335.	3.	335.	3.	231.	5.	328.	6.	229.	5.	228.	7.	228.	8.	2
73051712	27.	9.	227.	9.	327.	10.	328.	12.	328.	13.	428.	10.	428.	12.	428.	11.	528.	10.	528.	7.	628.	7.	627.	9.	5
73051800	28.	8.	530.	6.	630.	8.	531.	7.	633.	5.	428.	5.	430.	5.	328.	5.	427.	5.	428.	5.	429.	8.	426.	8.	3
73051812	26.	10.	225.	10.	327.	12.	327.	13.	327.	12.	426.	13.	427.	12.	427.	9.	527.	8.	528.	7.	629.	5.	630.	6.	6
73051900	30.	6.	629.	6.	631.	5.	633.	4.	634.	3.	336.	3.	330.	4.	230.	7.	330.	7.	230.	5.	230.	6.	128.	7.	2
73051912	28.	7.	228.	8.	428.	7.	427.	12.	427.	12.	427.	10.	427.	9.	427.	8.	425.	5.	530.	3.	624.	5.	627.	3.	6
73052000	0.	3.	624.	4.	40.	1.	60.	1.	60.	1.	315.	2.	30.	3.	30.	3.	325.	3.	427.	3.	426.	7.	428.	8.	3
73052012	27.	7.	328.	10.	333.	10.	330.	11.	428.	8.	328.	8.	329.	10.	432.	8.	535.	6.	633.	4.	636.	3.	60.	1.	6



73052100	0.	2. 636.	3. 6 9.	2. 6 8.	3. 699.	2. 399.	2. 336.	3. 2 8.	3. 230.	3. 224.	3. 224.	3. 133.	4. 1
73052112	21.	4. 1 3.	3. 234.	5. 233.	5. 227.	6. 328.	7. 328.	10. 422.	12. 528.	8. 529.	4. 628.	6. 628.	4. 6
73052200	26.	4. 629.	3. 626.	2. 617.	3. 612.	3. 311.	3. 311.	2. 329.	3. 412.	3. 410.	6. 312.	3. 212.	6. 2
73052212	12.	8. 212.	6. 320.	5. 331.	3. 231.	4. 328.	5. 430.	3. 429.	2. 631.	2. 631.	2. 6 0.	1. 4 0.	1. 4
73052300	34.	2. 4 2.	3. 4 9.	2. 613.	6. 513.	8. 412.	9. 412.	9. 412.	9. 412.	13. 411.	13. 412.	13. 413.	13. 4
73052312	13.	12. 413.	10. 413.	12. 413.	12. 413.	12. 413.	12. 413.	12. 413.	11. 413.	13. 413.	12. 413.	12. 413.	12. 4
73052400	13.	10. 414.	8. 415.	8. 429.	10. 429.	7. 4 9.	3. 4 9.	4. 4 4.	3. 4 9.	4. 413.	6. 423.	7. 427.	6. 4
73052412	27.	8. 427.	9. 428.	12. 426.	11. 429.	12. 427.	13. 427.	12. 428.	8. 429.	4. 625.	3. 6 8.	3. 614.	3. 6
73052500	6.	3. 6 9.	3. 610.	3. 611.	3. 6 9.	3. 333.	3. 311.	3. 2 6.	3. 232.	3. 319.	4. 325.	6. 327.	6. 3
73052512	21.	7. 324.	7. 326.	7. 327.	8. 424.	12. 429.	11. 427.	8. 428.	7. 528.	5. 530.	4. 427.	3. 6 0.	1. 6
73052600	0.	1. 6 0.	1. 6 0.	1. 6 9.	1. 6 0.	1. 3 7.	3. 3 7.	3. 236.	2. 214.	2. 2 5.	3. 233.	3. 133.	4. 1
73052612	25.	6. 134.	6. 2 8.	5. 229.	5. 235.	6. 335.	6. 334.	6. 434.	3. 632.	3. 6 0.	1. 6 0.	1. 6 0.	1. 6
73052700	0.	3. 6 9.	3. 611.	3. 6 6.	1. 610.	1. 3 0.	3. 3 9.	3. 3 7.	3. 331.	1. 2 0.	2. 221.	4. 415.	4. 4
73052712	12.	4. 2 9.	3. 216.	4. 414.	3. 430.	5. 424.	7. 429.	6. 427.	5. 427.	4. 431.	3. 430.	4. 432.	3. 6
73052800	28.	2. 435.	2. 628.	3. 6 0.	1. 631.	3. 3 1.	3. 335.	2. 2 1.	6. 3 3.	8. 235.	8. 236.	8. 236.	9. 2
73052812	35.	8. 235.	8. 2 2.	8. 235.	8. 234.	8. 3 2.	8. 336.	8. 435.	6. 6 5.	4. 6 4.	5. 6 3.	5. 6 1.	6. 6
73052900	1.	7. 6 1.	6. 636.	4. 636.	7. 6 1.	7. 436.	7. 432.	3. 225.	2. 299.	5. 225.	99. 420.	99. 319.	99. 3
73052912	25.	99. 329.	99. 425.	99. 432.	99. 427.	99. 427.	99. 428.	99. 428.	99. 428.	99. 429.	99. 429.	99. 429.	99. 4
73053000	29.	99. 430.	99. 430.	99. 430.	99. 431.	99. 433.	99. 431.	99. 428.	99. 426.	99. 426.	10. 326.	12. 326.	13. 3
73053012	26.	14. 326.	16. 427.	16. 427.	16. 427.	18. 427.	17. 422.	14. 422.	13. 427.	12. 428.	10. 428.	8. 530.	6. 6
73053100	30.	8. 531.	7. 533.	5. 4 5.	3. 412.	2. 4 8.	4. 4 8.	3. 428.	4. 426.	8. 426.	10. 426.	11. 326.	13. 3
73053112	26.	14. 327.	14. 427.	15. 427.	17. 427.	17. 427.	16. 428.	13. 428.	10. 527.	9. 528.	8. 530.	6. 630.	6. 6
73060100	2.	3. 636.	4. 612.	3. 4 9.	2. 4 9.	3. 4 9.	3. 410.	3. 414.	4. 421.	4. 326.	5. 426.	7. 327.	9. 4
73060112	28.	11. 428.	12. 428.	10. 429.	10. 427.	9. 429.	8. 427.	8. 426.	7. 425.	7. 432.	3. 636.	3. 435.	3. 4
73060200	35.	3. 4 9.	3. 4 0.	1. 430.	2. 4 0.	2. 411.	2. 4 8.	3. 4 0.	2. 3 9.	3. 3 8.	3. 3 9.	5. 236.	3. 2
73060212	27.	9. 327.	10. 328.	12. 428.	13. 427.	13. 428.	10. 430.	6. 429.	6. 429.	4. 631.	5. 530.	4. 432.	4. 4
73060300	31.	5. 431.	5. 431.	5. 431.	5. 431.	4. 432.	4. 430.	4. 4 2.	3. 4 1.	4. 436.	4. 426.	6. 428.	5. 4
73060312	28.	5. 329.	7. 426.	11. 326.	11. 328.	12. 428.	12. 427.	10. 426.	8. 422.	7. 630.	5. 630.	6. 633.	4. 6
73060400	34.	3. 634.	3. 636.	3. 633.	3. 630.	4. 3 3.	3. 4 2.	5. 4 3.	6. 4 2.	3. 228.	4. 233.	3. 121.	3. 1
73060412	23.	4. 112.	4. 223.	4. 224.	5. 227.	5. 329.	6. 328.	8. 428.	8. 430.	7. 630.	6. 633.	4. 633.	4. 6
73060500	34.	3. 634.	2. 6 0.	1. 6 0.	0. 6 0.	1. 333.	2. 3 0.	1. 224.	2. 228.	3. 222.	4. 222.	3. 125.	3. 1
73060512	28.	4. 128.	10. 328.	10. 328.	12. 324.	12. 428.	13. 429.	13. 428.	8. 426.	8. 431.	6. 528.	8. 430.	7. 6
73060600	30.	3. 630.	3. 628.	3. 6 0.	1. 6 0.	1. 3 0.	1. 333.	3. 2 0.	1. 234.	3. 227.	2. 226.	3. 232.	6. 4
73060612	30.	7. 428.	8. 426.	4. 427.	3. 427.	3. 328.	4. 331.	3. 330.	3. 429.	3. 629.	3. 6 0.	1. 6 0.	1. 6
73060700	31.	2. 4 0.	1. 4 0.	1. 4 0.	1. 4 0.	1. 310.	3. 410.	3. 310.	5. 411.	6. 412.	8. 412.	10. 428.	8. 2
73060712	28.	8. 229.	9. 329.	8. 329.	9. 328.	5. 429.	5. 425.	4. 328.	4. 429.	5. 433.	6. 430.	3. 614.	3. 4
73060800	14.	2. 427.	3. 424.	2. 414.	3. 426.	4. 430.	7. 430.	4. 429.	6. 331.	5. 432.	5. 433.	5. 430.	7. 4
73060812	29.	7. 428.	8. 328.	11. 428.	12. 428.	12. 428.	12. 427.	9. 428.	9. 429.	6. 428.	8. 430.	7. 431.	6. 4
73060900	31.	5. 431.	4. 435.	3. 435.	3. 4 1.	2. 436.	2. 310.	3. 312.	3. 224.	4. 230.	5. 331.	6. 231.	9. 3
73060912	34.	9. 332.	11. 435.	8. 327.	13. 426.	14. 427.	14. 427.	14. 429.	11. 429.	8. 528.	7. 633.	4. 633.	3. 6
73061000	34.	3. 636.	3. 633.	2. 636.	2. 6 4.	2. 3 3.	2. 3 3.	3. 232.	6. 235.	6. 236.	8. 235.	7. 233.	8. 2
73061012	33.	8. 235.	8. 235.	8. 235.	10. 336.	9. 336.	10. 334.	8. 432.	7. 430.	5. 528.	3. 6 3.	4. 632.	3. 6
73061100	0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 3 0.	1. 3 7.	3. 3 9.	3. 227.	3. 2 9.	3. 2 9.	3. 1 1.	4. 1
73061112	12.	7. 213.	7. 312.	10. 328.	10. 328.	10. 428.	10. 422.	8. 425.	7. 428.	4. 622.	3. 6 7.	2. 6 9.	5. 4

73061200	11.	7. 4 9.	5. 412.	11. 412.	11. 412.	10. 414.	7. 415.	7. 418.	5. 412.	5. 415.	6. 414.	8. 413.	11. 4
73061212	13.	12. 414.	8. 415.	8. 428.	10. 428.	12. 424.	11. 424.	10. 430.	3. 327.	5. 521.	3. 6 0.	1. 6 0.	1. 4
73061300	11.	3. 410.	3. 411.	2. 412.	3. 612.	4. 312.	3. 312.	3. 310.	3. 3 6.	3. 311.	5. 3 9.	5. 315.	4. 2
73061312	24.	5. 232.	6. 331.	7. 320.	3. 228.	6. 427.	8. 428.	6. 428.	8. 429.	6. 529.	5. 5 0.	1. 6 0.	1. 6
73061400	0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 9.	4. 312.	4. 311.	5. 412.	5. 415.	6. 416.	5. 415.	3. 410.	7. 4
73061412	31.	4. 230.	7. 426.	5. 428.	9. 430.	8. 428.	8. 428.	11. 428.	9. 430.	6. 5 0.	1. 621.	3. 421.	3. 6
73061500	21.	2. 422.	3. 4 0.	1. 6 0.	1. 6 0.	1. 3 9.	3. 3 9.	4. 315.	5. 421.	5. 411.	7. 415.	8. 417.	7. 4
73061512	12.	8. 213.	7. 415.	7. 315.	4. 416.	4. 311.	7. 416.	6. 413.	5. 411.	6. 412.	8. 412.	10. 420.	6. 4
73061600	21.	3. 415.	3. 415.	7. 414.	8. 412.	8. 412.	10. 413.	12. 415.	10. 418.	8. 422.	10. 422.	7. 325.	11. 4
73061612	25.	10. 426.	11. 424.	10. 424.	8. 423.	8. 423.	8. 421.	8. 421.	6. 416.	3. 616.	5. 517.	6. 418.	6. 4
73061700	17.	6. 415.	4. 414.	4. 410.	4. 410.	3. 415.	4. 412.	4. 413.	5. 410.	4. 431.	4. 418.	3. 411.	3. 4
73061712	9.	3. 425.	9. 426.	7. 427.	13. 428.	13. 427.	12. 428.	8. 429.	7. 430.	3. 628.	3. 4 0.	1. 4 0.	1. 6
73062800	32.	99. 432.	99. 434.	99. 435.	99. 433.	99. 433.	99. 432.	7. 330.	8. 428.	8. 228.	9. 329.	8. 228.	7. 2
73062812	28.	9. 227.	10. 328.	13. 327.	14. 428.	15. 428.	15. 429.	13. 429.	12. 430.	9. 532.	8. 530.	7. 631.	7. 6
73062900	34.	4. 634.	2. 632.	2. 436.	3. 499.	99. 436.	2. 436.	2. 434.	2. 432.	3. 433.	5. 4 5.	4. 430.	6. 4
73062912	28.	8. 427.	8. 430.	9. 428.	9. 428.	12. 428.	12. 428.	11. 428.	11. 429.	7. 530.	6. 5 4.	2. 6 3.	2. 6
73063000	4.	2. 6 4.	2. 611.	2. 410.	2. 4 9.	3. 410.	2. 433.	2. 428.	3. 426.	5. 428.	8. 428.	8. 428.	11. 4
73063012	30.	9. 430.	11. 428.	11. 428.	9. 430.	11. 432.	7. 431.	7. 429.	6. 426.	8. 426.	4. 433.	3. 433.	2. 4
73070100	23.	2. 424.	3. 432.	3. 433.	2. 434.	3. 432.	4. 332.	3. 325.	2. 236.	3. 327.	4. 236.	5. 133.	6. 1
73070112	27.	6. 130.	7. 228.	6. 231.	6. 233.	6. 333.	6. 332.	6. 430.	5. 432.	5. 635.	4. 634.	3. 635.	3. 6
73070200	35.	3. 6 0.	0. 633.	2. 635.	2. 636.	2. 3 4.	2. 310.	3. 333.	3. 230.	4. 230.	4. 2 2.	4. 2 2.	4. 2
73070212	30.	6. 130.	9. 330.	10. 329.	13. 429.	13. 430.	11. 431.	10. 429.	9. 429.	9. 530.	7. 630.	7. 632.	7. 6
73070300	32.	5. 634.	4. 635.	3. 6 2.	2. 636.	2. 3 2.	2. 336.	3. 230.	2. 227.	3. 233.	4. 233.	4. 129.	5. 1
73070312	31.	6. 130.	6. 231.	7. 229.	10. 331.	11. 430.	11. 430.	9. 430.	11. 432.	8. 533.	6. 632.	4. 631.	2. 6
73070400	33.	2. 618.	3. 612.	3. 4 9.	3. 4 6.	2. 410.	2. 412.	2. 412.	4. 3 8.	2. 233.	3. 230.	3. 220.	4. 2
73070412	30.	8. 230.	9. 330.	11. 330.	13. 429.	12. 429.	12. 431.	11. 432.	8. 432.	7. 631.	6. 529.	8. 427.	9. 4
73070500	28.	8. 427.	5. 425.	4. 426.	5. 433.	3. 434.	3. 433.	3. 433.	3. 4 3.	3. 428.	4. 429.	5. 333.	5. 3
73070512	32.	6. 128.	6. 330.	8. 329.	9. 330.	10. 431.	9. 428.	8. 429.	8. 430.	7. 429.	6. 431.	4. 433.	3. 4
73070600	30.	2. 433.	2. 423.	2. 412.	3. 413.	3. 414.	4. 414.	7. 414.	7. 313.	9. 413.	11. 413.	12. 414.	12. 4
73070612	15.	9. 418.	6. 414.	7. 429.	7. 333.	5. 430.	8. 430.	7. 431.	4. 332.	3. 634.	3. 634.	2. 6 0.	0. 4
73070700	0.	0. 635.	2. 6 5.	2. 6 2.	2. 6 2.	2. 3 9.	2. 433.	2. 4 9.	2. 412.	4. 211.	4. 413.	6. 213.	5. 2
73070712	13.	5. 216.	3. 231.	4. 227.	11. 429.	11. 429.	12. 430.	9. 429.	7. 430.	6. 530.	6. 529.	4. 630.	3. 4
73070800	33.	2. 4 1.	2. 6 4.	2. 610.	3. 611.	3. 3 2.	2. 315.	5. 412.	8. 416.	8. 415.	4. 313.	6. 214.	7. 3
73070812	31.	7. 230.	4. 228.	9. 329.	11. 329.	11. 428.	11. 430.	10. 428.	9. 430.	8. 529.	6. 629.	5. 629.	4. 6
73070900	33.	3. 6 3.	3. 634.	3. 636.	3. 635.	2. 333.	2. 336.	3. 234.	3. 227.	4. 229.	4. 227.	5. 127.	6. 1
73070912	30.	5. 128.	6. 228.	6. 229.	6. 230.	6. 330.	6. 330.	6. 431.	5. 433.	4. 636.	4. 635.	4. 635.	4. 6
73071000	33.	3. 633.	3. 630.	3. 630.	5. 628.	6. 427.	8. 428.	8. 330.	8. 432.	8. 431.	8. 431.	10. 431.	9. 3
73071012	30.	11. 430.	14. 430.	13. 430.	14. 429.	11. 428.	11. 428.	11. 430.	10. 532.	6. 635.	4. 630.	5. 636.	4. 6
73071100	32.	3. 6 3.	3. 699.	99. 499.	99. 4 3.	2. 332.	2. 333.	3. 236.	5. 336.	6. 235.	9. 3 2.	11. 3 2.	11. 3
73071112	2.	11. 336.	10. 3 2.	11. 3 1.	10. 336.	10. 336.	9. 334.	9. 433.	5. 632.	6. 633.	4. 632.	6. 636.	3. 6
73071200	15.	3. 699.	99. 4 3.	3. 633.	3. 636.	3. 3 4.	3. 3 5.	4. 2 8.	4. 233.	4. 235.	9. 336.	10. 2 1.	10. 2
73071212	35.	11. 335.	12. 335.	12. 334.	11. 334.	13. 434.	12. 433.	11. 433.	10. 531.	8. 532.	4. 633.	3. 699.	99. 4
73071300	12.	2. 624.	3. 612.	2. 633.	3. 627.	2. 324.	2. 399.	99. 433.	3. 2 1.	8. 2 3.	9. 3 2.	9. 2 1.	8. 2
73071312	34.	9. 236.	9. 334.	8. 235.	8. 236.	7. 333.	8. 332.	7. 434.	7. 635.	5. 6 1.	3. 636.	3. 633.	2. 6

73071412	35.	4. 234.	4. 236.	3. 230.	4. 329.	34. 429.	634. 430.	33. 431.	2. 430.	4. 530.	3. 530.	2. 530.	2. 530.	2. 530.	2. 530.	8. 530.	9. 530.	5									
73071500	30.	8. 530.	7. 630.	7. 631.	5. 632.	6. 432.	6. 432.	8. 331.	7. 328.	8. 228.	7. 231.	7. 232.	7. 2	73071512	32.	8. 232.	10. 330.	12. 330.	10. 330.	10. 330.	11. 430.	9. 430.	10. 530.	8. 530.	8. 530.	8. 530.	6. 6
73071600	28.	7. 627.	8. 527.	8. 527.	7. 630.	5. 431.	5. 430.	5. 330.	4. 232.	4. 232.	4. 231.	4. 128.	4. 1	73071612	29.	5. 131.	6. 230.	8. 229.	10. 329.	10. 329.	8. 328.	10. 429.	9. 529.	8. 528.	8. 530.	6. 630.	6. 6
73071700	29.	6. 628.	6. 628.	6. 628.	7. 629.	5. 429.	4. 324.	3. 232.	4. 225.	3. 228.	4. 227.	4. 125.	4. 1	73071712	26.	4. 130.	6. 231.	8. 230.	10. 329.	10. 330.	10. 330.	8. 430.	8. 531.	8. 531.	8. 532.	7. 632.	6. 6
73071800	29.	5. 628.	7. 628.	6. 627.	7. 626.	6. 426.	5. 427.	5. 327.	4. 228.	4. 231.	4. 231.	4. 133.	4. 1	73071812	30.	7. 230.	8. 230.	11. 330.	11. 330.	11. 430.	10. 330.	10. 429.	11. 528.	9. 527.	8. 528.	8. 527.	8. 5
73071900	28.	8. 528.	8. 529.	6. 631.	5. 530.	4. 431.	3. 432.	3. 427.	4. 428.	5. 428.	5. 428.	6. 429.	6. 4	73071912	31.	6. 130.	7. 230.	8. 330.	9. 330.	10. 430.	8. 428.	8. 430.	7. 531.	6. 531.	7. 531.	7. 531.	7. 5
73072000	31.	7. 531.	7. 432.	7. 430.	8. 430.	7. 430.	6. 432.	3. 433.	3. 429.	4. 431.	3. 415.	1. 422.	3. 4	73072012	23.	3. 431.	6. 430.	8. 430.	11. 428.	11. 428.	11. 428.	8. 428.	8. 427.	10. 528.	10. 527.	8. 528.	3. 6
73072100	32.	2. 629.	2. 428.	1. 434.	2. 433.	1. 431.	1. 431.	2. 431.	7. 431.	7. 429.	6. 428.	6. 328.	5. 3	73072112	29.	8. 328.	9. 428.	9. 430.	11. 428.	11. 427.	11. 427.	11. 428.	12. 427.	8. 429.	5. 534.	3. 633.	3. 4
73072200	34.	3. 436.	3. 4 0.	1. 4 0.	1. 434.	1. 4 0.	1. 436.	1. 432.	1. 434.	3. 428.	5. 431.	4. 430.	4. 4	73072212	27.	6. 429.	10. 427.	6. 427.	6. 427.	8. 430.	8. 431.	8. 430.	7. 530.	5. 527.	6. 529.	5. 531.	4. 6
73072300	34.	4. 635.	3. 634.	2. 633.	2. 634.	3. 3 2.	2. 3 3.	2. 334.	3. 4 1.	3. 430.	4. 433.	4. 232.	5. 4	73072312	32.	7. 333.	5. 433.	5. 233.	7. 232.	7. 330.	8. 331.	6. 430.	8. 532.	5. 632.	3. 634.	3. 635.	2. 6
73072400	5.	2. 636.	2. 6 0.	0. 6 0.	0. 610.	2. 312.	2. 3 1.	2. 330.	2. 232.	2. 224.	3. 228.	3. 127.	4. 1	73072412	27.	5. 232.	4. 230.	5. 330.	5. 330.	7. 330.	7. 330.	7. 432.	7. 533.	6. 530.	4. 636.	2. 636.	3. 6
73072500	34.	2. 635.	2. 6 0.	1. 636.	2. 634.	1. 335.	2. 3 0.	1. 234.	2. 229.	3. 226.	4. 231.	5. 128.	5. 1	73072512	28.	4. 134.	5. 234.	6. 233.	8. 230.	9. 329.	9. 329.	8. 430.	8. 530.	9. 532.	6. 633.	3. 6 0.	2. 6
73072600	35.	3. 634.	3. 635.	3. 6 0.	1. 6 0.	1. 3 1.	1. 3 0.	1. 2 0.	1. 234.	3. 233.	7. 233.	8. 233.	8. 2	73072612	33.	12. 333.	13. 333.	13. 336.	11. 336.	9. 336.	8. 334.	9. 429.	8. 530.	8. 531.	5. 633.	3. 6 0.	1. 6
73072700	0.	0. 6 2.	2. 634.	2. 634.	2. 6 0.	0. 334.	2. 235.	2. 2 0.	0. 228.	3. 233.	8. 2 1.	9. 234.	8. 2	73072712	33.	8. 234.	9. 336.	11. 335.	9. 334.	9. 334.	11. 429.	10. 431.	10. 531.	8. 531.	7. 631.	7. 632.	4. 6
73072800	33.	3. 634.	5. 634.	2. 635.	3. 634.	4. 335.	3. 234.	4. 2 0.	3. 230.	6. 228.	6. 228.	6. 129.	6. 1	73072812	29.	7. 229.	7. 229.	10. 329.	10. 329.	9. 329.	10. 431.	8. 430.	7. 530.	7. 631.	7. 631.	8. 531.	7. 6
73072900	31.	7. 631.	6. 631.	4. 633.	4. 632.	5. 432.	5. 331.	7. 431.	9. 431.	8. 230.	8. 227.	8. 227.	8. 2	73072912	28.	8. 228.	10. 329.	12. 330.	11. 430.	13. 430.	10. 429.	10. 429.	8. 529.	7. 630.	6. 631.	7. 631.	7. 6
73073100	31.	7. 631.	8. 532.	6. 632.	6. 633.	6. 434.	5. 436.	5. 4 1.	4. 336.	4. 236.	3. 227.	3. 128.	5. 1	73073112	29.	7. 229.	8. 229.	9. 328.	10. 328.	11. 429.	10. 429.	10. 430.	7. 630.	6. 630.	6. 631.	6. 631.	6. 6
73080112	99.	7. 299.	8. 299.	5. 399.	11. 499.	13. 499.	12. 499.	11. 499.	10. 599.	10. 599.	8. 599.	6. 699.	6. 4	73080200	99.	6. 699.	5. 699.	5. 699.	5. 699.	3. 399.	3. 299.	3. 230.	6. 228.	7. 228.	6. 230.	4. 128.	7. 2
IMPROPER MATCH BETWEEN ID NUMBERS 73080112 AND 73080200																											
73080200	99.	6. 699.	5. 699.	5. 699.	5. 699.	3. 399.	3. 299.	3. 230.	6. 228.	7. 228.	6. 230.	4. 128.	7. 2	73080212	29.	8. 228.	11. 328.	12. 329.	13. 428.	15. 430.	12. 431.	11. 431.	6. 631.	7. 633.	6. 631.	7. 630.	7. 6
73080300	30.	7. 631.	8. 532.	6. 632.	7. 632.	7. 434.	6. 435.	5. 4 4.	4. 4 3.	4. 436.	4. 229.	7. 230.	8. 2	73080312	30.	11. 330.	12. 330.	12. 330.	13. 429.	13. 429.	12. 429.	11. 429.	10. 530.	6. 631.	6. 631.	6. 634.	5. 6
73080400	35.	3. 635.	3. 634.	4. 4 4.	3. 4 0.	1. 4 0.	1. 4 0.	1. 411.	3. 412.	3. 4 0.	2. 430.	7. 431.	7. 3	73080412	30.	8. 228.	8. 229.	10. 329.	10. 329.	12. 429.	11. 429.	9. 430.	8. 430.	9. 430.	9. 430.	8. 431.	7. 5
73080500	32.	5. 632.	3. 6 0.	1. 634.	3. 628.	6. 432.	5. 327.	3. 4 0.	3. 415.	1. 4 0.	6. 410.	6. 410.	4. 4	73080512	11.	4. 4 0.	1. 422.	3. 427.	5. 430.	7. 430.	8. 431.	8. 430.	8. 430.	8. 431.	5. 432.	3. 433.	3. 6

73080600	35.	3. 433.	4. 432.	4. 431.	5. 431.	5. 431.	4. 432.	5. 430.	4. 430.	3. 4 0.	0. 4 0.	3. 233.	4. 2
73080612	31.	4. 332.	6. 228.	6. 229.	6. 328.	6. 329.	7. 429.	8. 430.	9. 530.	8. 528.	11. 527.	8. 527.	7. 6
73080700	27.	7. 627.	5. 633.	3. 632.	5. 432.	5. 433.	4. 433.	4. 432.	4. 430.	3. 428.	3. 427.	3. 2 0.	3. 2
73080712	25.	3. 2 0.	4. 227.	5. 230.	8. 328.	10. 329.	11. 429.	8. 430.	7. 630.	7. 630.	6. 629.	7. 630.	7. 6
73080800	31.	5. 632.	3. 632.	4. 633.	4. 633.	4. 431.	3. 431.	5. 432.	5. 431.	4. 430.	2. 427.	5. 227.	4. 2
73080812	25.	5. 226.	5. 229.	6. 229.	9. 328.	10. 328.	10. 429.	8. 431.	7. 631.	8. 531.	7. 631.	7. 631.	7. 6
73080900	30.	7. 630.	7. 630.	7. 630.	6. 630.	5. 429.	6. 430.	7. 428.	7. 330.	7. 228.	7. 229.	6. 230.	8. 2
73080912	30.	11. 329.	13. 427.	12. 427.	12. 428.	12. 429.	12. 429.	13. 427.	11. 428.	10. 430.	8. 430.	8. 431.	8. 4
73081000	32.	7. 532.	7. 430.	7. 432.	7. 433.	5. 433.	4. 433.	4. 432.	5. 432.	3. 430.	3. 425.	4. 432.	6. 2
73081012	31.	7. 231.	7. 231.	8. 230.	8. 330.	8. 330.	10. 430.	9. 431.	8. 531.	7. 631.	6. 630.	6. 631.	4. 6
73081100	35.	3. 635.	3. 634.	3. 634.	4. 634.	3. 434.	1. 434.	3. 4 2.	5. 4 6.	5. 4 5.	7. 4 6.	5. 422.	3. 2
73081112	30.	6. 2 9.	8. 2 1.	8. 2 4.	8. 3 4.	8. 3 2.	7. 4 1.	7. 435.	3. 630.	4. 634.	3. 635.	3. 635.	3. 6
73081200	35.	3. 633.	3. 632.	3. 631.	4. 630.	4. 330.	4. 330.	4. 230.	5. 225.	3. 227.	3. 228.	3. 236.	7. 2
73081212	36.	6. 227.	8. 229.	9. 329.	13. 430.	12. 430.	11. 430.	10. 424.	9. 432.	7. 4 0.	8. 433.	7. 528.	8. 5
73081300	24.	3. 626.	5. 627.	5. 625.	4. 626.	4. 322.	3. 324.	4. 327.	5. 328.	6. 329.	6. 329.	6. 330.	5. 2
73081312	30.	7. 230.	11. 330.	11. 330.	13. 429.	13. 429.	12. 428.	9. 428.	8. 529.	8. 530.	7. 631.	7. 631.	7. 6
73081400	31.	7. 632.	7. 631.	7. 632.	7. 432.	7. 432.	4. 4 1.	4. 433.	4. 432.	3. 4 2.	5. 4 1.	5. 234.	5. 2
73081412	31.	5. 228.	9. 329.	9. 328.	11. 429.	13. 429.	11. 430.	11. 431.	8. 432.	7. 531.	6. 532.	5. 531.	5. 5
73081500	32.	5. 632.	5. 634.	4. 632.	4. 634.	5. 435.	6. 435.	5. 436.	5. 435.	5. 436.	4. 336.	4. 233.	6. 2
73081512	32.	7. 228.	5. 230.	8. 230.	10. 328.	12. 428.	11. 429.	10. 431.	8. 531.	6. 531.	6. 531.	6. 631.	6. 6
73081600	36.	5. 634.	3. 635.	3. 6 3.	2. 499.	1. 415.	3. 413.	3. 412.	5. 412.	7. 413.	8. 416.	9. 416.	9. 4
73081612	15.	6. 416.	5. 415.	6. 4 6.	3. 412.	3. 427.	5. 429.	7. 433.	6. 532.	5. 530.	4. 636.	3. 436.	2. 6
73081700	0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 4.	3. 410.	2. 3 5.	2. 4 3.	2. 2 2.	3. 2 1.	3. 227.	4. 224.	3. 2
73081712	29.	4. 227.	2. 230.	8. 228.	11. 428.	10. 329.	11. 429.	11. 429.	7. 631.	4. 632.	3. 633.	3. 636.	1. 6
73081800	34.	2. 634.	2. 636.	2. 6 0.	1. 6 0.	1. 6 0.	1. 3 0.	1. 2 4.	5. 330.	3. 2 3.	4. 236.	7. 236.	8. 2
73081812	36.	8. 2 3.	8. 236.	9. 336.	9. 3 1.	9. 335.	8. 434.	6. 430.	5. 631.	5. 6 0.	3. 6 0.	2. 6 0.	1. 6
73081900	0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 3 0.	1. 2 0.	1. 2 0.	1. 2 0.	2. 228.	2. 230.	7. 2
73081912	31.	8. 231.	10. 329.	10. 329.	12. 429.	12. 429.	11. 428.	11. 428.	8. 529.	7. 632.	4. 634.	3. 633.	3. 6
73082000	35.	3. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 3 0.	1. 224.	1. 2 0.	1. 229.	3. 227.	5. 227.	5. 2
73082012	28.	6. 227.	8. 299.	8. 299.	9. 399.	11. 499.	11. 499.	9. 499.	7. 699.	6. 699.	5. 699.	3. 699.	3. 6
73082100	99.	3. 699.	3. 699.	2. 699.	3. 699.	1. 699.	1. 399.	1. 231.	2. 232.	6. 230.	3. 227.	5. 228.	7. 2
73082112	31.	10. 330.	10. 330.	11. 330.	11. 429.	13. 428.	12. 429.	8. 429.	7. 630.	5. 632.	3. 636.	3. 6 0.	1. 6
73082200	0.	2. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 310.	1. 310.	3. 210.	2. 2 0.	1. 227.	3. 227.	3. 228.	3. 2
73082212	29.	5. 230.	6. 230.	7. 228.	9. 329.	12. 430.	11. 431.	8. 432.	5. 535.	4. 630.	4. 631.	3. 6 0.	1. 6
73082300	30.	2. 4 2.	1. 6 0.	1. 6 0.	1. 6 0.	1. 3 2.	3. 311.	2. 210.	3. 210.	3. 2 2.	3. 2 0.	1. 2 0.	1. 2
73082312	12.	3. 214.	4. 232.	6. 426.	5. 433.	2. 4 4.	2. 4 5.	3. 413.	3. 428.	1. 4 0.	1. 4 0.	1. 4 0.	1. 4
73082400	0.	1. 4 0.	1. 410.	2. 412.	2. 410.	3. 4 9.	4. 413.	5. 412.	6. 412.	5. 4 9.	5. 413.	6. 413.	8. 4
73082412	13.	8. 413.	6. 412.	5. 411.	3. 4 6.	5. 4 5.	3. 4 4.	3. 4 1.	3. 4 0.	1. 436.	2. 432.	4. 431.	5. 4
73082500	0.	3. 436.	2. 4 0.	1. 4 1.	3. 4 0.	2. 436.	2. 3 0.	1. 2 5.	2. 3 3.	1. 312.	2. 333.	3. 328.	5. 2
73082512	28.	6. 228.	7. 227.	9. 327.	10. 329.	11. 427.	10. 431.	6. 431.	7. 631.	6. 631.	6. 630.	6. 631.	4. 6
73082600	31.	2. 631.	3. 633.	3. 636.	2. 6 5.	1. 6 0.	1. 3 0.	1. 2 0.	1. 2 0.	1. 236.	3. 2 0.	2. 2 0.	4. 2
73082612	29.	5. 329.	5. 330.	5. 427.	5. 430.	8. 429.	8. 430.	7. 432.	6. 630.	5. 529.	5. 628.	7. 528.	8. 4
73082700	29.	8. 425.	7. 532.	3. 433.	2. 4 2.	1. 4 0.	1. 335.	1. 4 0.	1. 4 0.	1. 432.	5. 428.	7. 424.	7. 4
73082712	24.	3. 430.	7. 429.	8. 428.	8. 430.	10. 430.	7. 429.	8. 435.	3. 636.	2. 6 0.	1. 6 6.	3. 6 9.	3. 6

73082800	0.	1. 6 0.	1. 6 9.	3. 611.	3. 611.	4. 611.	3. 411.	5. 414.	5. 413.	5. 212.	6. 212.	6. 211.	5. 2
73082812	24.	3. 231.	4. 230.	8. 330.	8. 330.	9. 430.	9. 429.	8. 429.	7. 631.	4. 632.	6. 632.	6. 632.	4. 6
73082900	32.	4. 633.	3. 431.	3. 430.	2. 433.	2. 431.	3. 436.	3. 432.	4. 436.	4. 436.	3. 432.	4. 433.	3. 4
73082912	34.	4. 2 0.	3. 227.	3. 234.	3. 230.	8. 430.	9. 430.	7. 431.	8. 530.	5. 630.	4. 629.	4. 631.	3. 6
73083000	33.	4. 632.	5. 533.	4. 631.	3. 432.	3. 431.	4. 430.	3. 430.	5. 430.	6. 428.	5. 429.	5. 428.	6. 4
73083012	31.	7. 432.	7. 430.	7. 427.	4. 429.	6. 430.	7. 431.	7. 432.	7. 432.	5. 432.	4. 436.	3. 6 0.	1. 6
73083100	12.	2. 612.	2. 6 8.	2. 421.	2. 4 2.	2. 6 9.	2. 3 9.	3. 333.	2. 312.	2. 3 9.	3. 327.	7. 429.	8. 4
73083112	28.	12. 429.	13. 428.	13. 428.	14. 428.	14. 428.	14. 429.	12. 432.	7. 632.	5. 632.	4. 634.	4. 6 6.	3. 6
73090100	33.	2. 6 3.	3. 6 2.	4. 6 2.	3. 628.	3. 636.	3. 335.	2. 232.	3. 227.	3. 230.	3. 225.	3. 2 2.	6. 2
73090112	1.	7. 236.	7. 2 1.	7. 3 3.	8. 333.	8. 434.	7. 432.	5. 430.	4. 632.	3. 627.	3. 636.	3. 6 0.	1. 6
73090200	0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 3 0.	1. 2 0.	1. 225.	2. 224.	3. 226.	3. 230.	3. 2
73090212	33.	4. 233.	3. 227.	5. 332.	6. 330.	7. 428.	8. 431.	7. 430.	6. 628.	8. 530.	5. 630.	6. 632.	5. 6
73090300	33.	4. 6 2.	2. 6 0.	1. 6 0.	1. 612.	2. 6 0.	1. 3 0.	1. 2 2.	2. 227.	2. 230.	3. 225.	4. 227.	6. 2
73090312	29.	5. 222.	7. 228.	8. 330.	10. 330.	9. 432.	9. 431.	8. 430.	6. 630.	4. 632.	5. 630.	3. 630.	3. 6
73090400	4.	3. 6 0.	1. 6 6.	5. 6 8.	6. 6 6.	6. 6 2.	7. 4 6.	7. 3 6.	7. 3 5.	7. 2 5.	7. 2 4.	8. 2 3.	10. 3
73090412	3.	9. 3 1.	9. 3 2.	10. 4 1.	9. 4 2.	8. 435.	5. 4 2.	5. 4 4.	5. 5 4.	6. 5 2.	6. 5 5.	8. 4 4.	6. 6
73090500	3.	6. 6 4.	6. 625.	3. 634.	2. 6 0.	1. 6 0.	1. 3 0.	1. 231.	3. 231.	5. 234.	5. 231.	7. 231.	7. 2
73090512	28.	10. 328.	8. 229.	9. 328.	11. 429.	11. 429.	10. 429.	11. 428.	7. 631.	4. 627.	1. 6 0.	3. 613.	3. 4
73090600	14.	6. 414.	8. 413.	7. 412.	6. 414.	7. 414.	4. 417.	4. 417.	5. 417.	5. 414.	6. 414.	4. 412.	5. 4
73090612	12.	4. 412.	5. 412.	5. 424.	4. 4 0.	1. 428.	7. 427.	5. 428.	3. 428.	5. 427.	4. 429.	4. 428.	3. 6
73090700	32.	3. 6 0.	1. 6 0.	2. 635.	2. 4 0.	1. 428.	3. 428.	3. 4 6.	2. 330.	6. 428.	7. 329.	8. 428.	9. 3
73090712	29.	11. 429.	12. 428.	13. 428.	14. 428.	13. 428.	12. 428.	12. 429.	7. 632.	5. 632.	4. 632.	4. 635.	3. 6
73090800	0.	2. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 3 0.	1. 3 0.	1. 232.	2. 228.	2. 226.	3. 226.	4. 2
73090812	26.	7. 232.	5. 229.	6. 331.	7. 331.	7. 429.	8. 430.	8. 432.	6. 632.	6. 634.	4. 636.	3. 6 2.	3. 6
73090900	35.	3. 635.	3. 6 0.	1. 633.	2. 634.	2. 6 3.	5. 4 4.	7. 336.	3. 2 1.	4. 2 1.	3. 2 3.	6. 2 4.	8. 2
73090912	2.	9. 3 1.	9. 336.	10. 335.	10. 3 1.	9. 435.	7. 433.	5. 4 3.	4. 6 3.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6
73091000	14.	2. 6 7.	7. 6 6.	7. 6 9.	4. 6 6.	8. 5 5.	5. 4 6.	5. 3 5.	6. 3 5.	8. 2 5.	8. 2 2.	8. 2 1.	8. 2
73091012	3.	8. 2 1.	8. 2 1.	8. 3 1.	6. 3 1.	6. 436.	5. 427.	3. 331.	9. 530.	9. 530.	8. 529.	9. 528.	8. 5
73091100	28.	7. 627.	4. 626.	4. 627.	7. 627.	5. 627.	4. 328.	5. 427.	6. 427.	5. 427.	6. 228.	6. 229.	7. 2
73091112	27.	8. 231.	8. 231.	8. 330.	9. 328.	10. 429.	8. 429.	9. 529.	8. 528.	8. 528.	7. 630.	6. 631.	6. 6
73091200	31.	7. 630.	6. 631.	6. 431.	6. 432.	5. 434.	4. 436.	3. 433.	3. 431.	5. 436.	5. 4 3.	5. 4 1.	3. 2
73091212	0.	3. 236.	4. 234.	4. 2 8.	3. 228.	4. 331.	6. 431.	4. 632.	3. 635.	2. 6 0.	1. 6 0.	1. 6 0.	1. 6
73091300	0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 311.	2. 312.	2. 229.	3. 2 2.	3. 225.	3. 224.	3. 2
73091312	30.	6. 230.	9. 329.	11. 430.	13. 430.	14. 429.	13. 428.	12. 428.	10. 427.	8. 423.	4. 418.	3. 414.	3. 6
73091400	14.	2. 4 0.	1. 415.	2. 4 3.	2. 4 8.	2. 6 8.	2. 310.	2. 4 0.	1. 425.	2. 434.	3. 436.	3. 430.	2. 4
73091412	27.	2. 4 2.	2. 4 6.	3. 4 6.	2. 2 6.	3. 3 4.	3. 3 3.	2. 6 0.	1. 636.	2. 6 0.	1. 6 0.	1. 633.	2. 6
73091500	9.	2. 6 4.	3. 6 6.	2. 6 3.	3. 6 0.	1. 610.	3. 311.	3. 3 7.	5. 3 4.	3. 224.	2. 226.	3. 227.	3. 2
73091512	16.	5. 215.	12. 315.	11. 413.	10. 313.	9. 412.	7. 414.	5. 6 9.	3. 635.	2. 635.	3. 635.	3. 6 0.	1. 6
73091600	0.	1. 6 2.	2. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 3 0.	1. 3 0.	1. 3 0.	1. 3 0.	1. 213.	2. 215.	3. 2
73091612	13.	3. 213.	8. 215.	7. 318.	6. 330.	8. 429.	11. 429.	11. 428.	7. 527.	2. 6 0.	1. 6 0.	1. 635.	2. 6
73091700	0.	1. 6 9.	2. 6 9.	2. 6 0.	2. 6 0.	1. 4 9.	2. 3 0.	1. 3 9.	3. 3 0.	1. 318.	2. 213.	7. 312.	9. 3
73091712	13.	9. 314.	8. 314.	7. 414.	4. 3 0.	1. 413.	8. 412.	7. 411.	6. 412.	7. 412.	7. 413.	4. 499.	99. 4
73091800	99.	99. 420.	2. 413.	2. 418.	1. 412.	1. 410.	1. 413.	1. 419.	2. 417.	4. 317.	3. 412.	3. 214.	6. 3
73091812	15.	7. 316.	5. 313.	4. 316.	2. 312.	2. 3 7.	1. 329.	1. 6 3.	2. 6 7.	1. 6 9.	2. 611.	4. 611.	4. 4

73091900	9.	3. 6 9.	4. 4 9.	5. 4 8.	2. 4 4.	3. 4 6.	2. 4 9.	2. 4 9.	5. 413.	7. 413.	8. 414.	14. 415.	13. 4
73091912	15.	11. 415.	8. 415.	7. 415.	9. 415.	7. 422.	7. 418.	3. 415.	5. 514.	6. 513.	8. 414.	10. 414.	10. 4
73092000	13.	12. 414.	14. 414.	12. 414.	15. 414.	15. 414.	14. 415.	13. 415.	8. 415.	7. 415.	7. 415.	11. 415.	12. 4
73092012	16.	12. 417.	12. 414.	8. 418.	6. 421.	7. 419.	7. 417.	5. 417.	5. 417.	4. 413.	3. 615.	4. 413.	4. 4
73092100	13.	7. 413.	6. 413.	5. 413.	5. 414.	4. 412.	4. 415.	5. 412.	3. 413.	5. 415.	5. 413.	8. 213.	8. 4
73092112	13.	6. 3 9.	7. 4 8.	6. 432.	5. 436.	3. 3 0.	1. 3 0.	1. 6 3.	1. 6 0.	1. 618.	3. 6 0.	1. 6 0.	1. 6
73092200	7.	3. 6 6.	2. 6 4.	3. 4 8.	3. 6 0.	2. 4 0.	1. 4 9.	3. 412.	3. 410.	4. 411.	5. 412.	5. 413.	4. 4
73092212	9.	4. 411.	5. 413.	6. 414.	6. 413.	4. 413.	3. 413.	4. 413.	3. 4 8.	1. 411.	2. 4 8.	2. 4 0.	1. 4
73092300	11.	1. 4 0.	1. 4 0.	1. 4 0.	1. 4 0.	1. 4 0.	1. 4 0.	1. 4 0.	1. 4 0.	1. 430.	3. 430.	3. 4 0.	2. 4
73092312	10.	3. 4 0.	1. 4 0.	2. 311.	4. 419.	3. 324.	3. 313.	4. 619.	5. 414.	5. 510.	6. 412.	5. 410.	5. 4
73092400	13.	10. 414.	12. 413.	11. 413.	9. 412.	8. 414.	8. 413.	7. 413.	5. 412.	3. 413.	5. 413.	6. 414.	6. 4
73092412	13.	7. 413.	7. 413.	7. 413.	2. 431.	4. 427.	6. 428.	10. 428.	9. 428.	7. 429.	7. 627.	4. 4 0.	1. 6
73092500	28.	2. 6 0.	1. 6 0.	1. 6 0.	1. 6 9.	3. 6 9.	3. 3 9.	3. 311.	4. 211.	5. 310.	5. 2 0.	2. 232.	4. 2
73092512	27.	5. 232.	4. 231.	6. 331.	7. 330.	8. 430.	7. 432.	4. 630.	3. 6 0.	1. 6 0.	1. 6 7.	3. 6 0.	1. 6
73092600	15.	2. 6 9.	2. 6 4.	3. 6 0.	1. 6 0.	1. 6 0.	1. 3 9.	3. 3 9.	2. 2 0.	1. 2 0.	1. 228.	3. 232.	3. 2
73092612	24.	3. 222.	3. 224.	3. 231.	5. 3 1.	6. 4 1.	5. 433.	3. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6
73092700	36.	3. 6 0.	1. 6 2.	3. 636.	2. 636.	3. 636.	3. 3 0.	1. 3 1.	3. 2 0.	1. 2 0.	1. 2 0.	1. 227.	3. 2
73092712	22.	2. 222.	2. 222.	3. 236.	6. 4 1.	5. 4 2.	5. 4 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6
73092800	0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 3 0.	1. 3 0.	1. 2 0.	1. 2 0.	1. 227.	3. 231.	3. 2
73092812	27.	3. 230.	3. 229.	6. 329.	6. 429.	8. 431.	7. 431.	7. 631.	7. 631.	7. 630.	5. 632.	7. 632.	6. 6
73092900	32.	6. 630.	6. 631.	5. 531.	3. 435.	3. 433.	3. 434.	3. 433.	3. 431.	6. 428.	7. 431.	6. 431.	6. 4
73092912	28.	7. 232.	7. 326.	12. 427.	13. 427.	9. 427.	9. 427.	8. 430.	7. 533.	4. 635.	4. 634.	3. 635.	3. 6
73093000	35.	3. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 3 0.	1. 3 0.	1. 2 0.	1. 2 0.	1. 221.	3. 233.	4. 2
73093012	31.	8. 229.	8. 331.	7. 430.	10. 428.	10. 429.	5. 429.	3. 635.	3. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6
73100100	0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 312.	3. 3 8.	3. 3 8.	3. 2 0.	1. 234.	1. 233.	4. 2
73100112	30.	4. 236.	3. 232.	5. 330.	6. 430.	4. 331.	6. 429.	4. 629.	4. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6
73100200	0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 9.	3. 4 9.	3. 4 0.	1. 412.	3. 412.	5. 4 9.	3. 2 0.	1. 2
73100212	31.	4. 229.	4. 230.	4. 232.	5. 434.	4. 330.	7. 430.	4. 634.	3. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6
73100300	0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 9.	2. 6 5.	2. 3 9.	3. 4 0.	1. 4 9.	3. 3 0.	1. 2 0.	1. 231.	3. 2
73100312	0.	4. 2 3.	4. 236.	7. 336.	8. 436.	7. 434.	5. 432.	3. 632.	3. 6 7.	2. 6 0.	1. 6 0.	1. 6 3.	4. 6
73100400	0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 635.	2. 336.	2. 3 3.	3. 2 4.	5. 3 4.	6. 2 5.	6. 4 5.	8. 4
73100412	4.	7. 4 4.	6. 3 4.	7. 3 3.	7. 4 3.	6. 429.	6. 429.	4. 634.	3. 634.	3. 6 0.	1. 6 0.	1. 6 0.	1. 6
73100500	8.	3. 6 9.	3. 6 8.	3. 6 9.	4. 611.	5. 411.	8. 415.	8. 415.	7. 414.	11. 413.	12. 413.	5. 414.	6. 4
73100512	15.	3. 4 1.	3. 434.	3. 4 9.	1. 4 0.	1. 433.	3. 432.	3. 4 0.	1. 4 0.	1. 4 0.	1. 4 0.	1. 4 0.	1. 4
73100600	0.	1. 4 0.	1. 432.	1. 4 1.	1. 436.	3. 436.	3. 4 0.	1. 436.	3. 435.	3. 436.	3. 435.	4. 435.	5. 4
73100612	36.	5. 432.	5. 431.	4. 428.	13. 428.	14. 424.	6. 411.	4. 412.	5. 512.	5. 619.	5. 511.	3. 612.	4. 6
73100700	14.	4. 611.	3. 613.	6. 612.	3. 612.	3. 411.	4. 6 0.	3. 3 0.	1. 212.	3. 314.	6. 414.	8. 413.	8. 4
73100712	13.	7. 414.	7. 318.	7. 318.	7. 413.	5. 413.	4. 311.	3. 6 0.	3. 610.	3. 6 7.	3. 6 9.	4. 6 9.	5. 5
73100800	10.	6. 511.	6. 5 9.	5. 5 9.	6. 5 9.	7. 6 9.	6. 5 9.	4. 3 9.	4. 2 8.	4. 2 8.	5. 3 9.	3. 2 2.	3. 2
73100812	30.	3. 328.	3. 326.	3. 327.	3. 328.	4. 335.	3. 333.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6
73100900	0.	1. 634.	3. 6 0.	1. 634.	3. 6 0.	1. 4 0.	1. 6 0.	1. 3 0.	1. 3 4.	3. 4 3.	4. 4 2.	4. 2 3.	5. 2
73100912	5.	8. 3 0.	4. 2 6.	5. 3 3.	5. 4 3.	5. 4 2.	3. 336.	3. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6
73101000	3.	2. 611.	4. 4 8.	3. 610.	2. 6 0.	1. 612.	3. 6 2.	3. 3 0.	1. 214.	4. 214.	6. 312.	6. 212.	5. 3
73101012	13.	7. 413.	8. 414.	8. 420.	7. 420.	3. 415.	3. 421.	3. 427.	7. 427.	8. 436.	3. 4 3.	2. 6 0.	1. 6

73110300	0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 3.	2. 6 0.	2. 6 9.	1. 3 9.	1. 3 8.	2. 230.	2. 299.	2. 315.	2. 2
73110312	15.	12. 415.	13. 415.	13. 414.	13. 414.	15. 413.	12. 414.	8. 499.	8. 412.	10. 499.	11. 413.	11. 413.	9. 4
73110400	13.	10. 412.	8. 499.	8. 499.	11. 499.	7. 499.	8. 499.	4. 499.	7. 499.	8. 499.	8. 499.	9. 499.	8. 4
73110412	99.	8. 499.	5. 499.	4. 399.	8. 418.	6. 413.	4. 615.	3. 415.	6. 515.	7. 615.	6. 516.	6. 515.	6. 6
73110500	12.	6. 511.	4. 6 0.	2. 4 0.	1. 4 0.	1. 436.	1. 6 1.	1. 436.	5. 4 2.	6. 4 1.	7. 4 3.	5. 4 4.	7. 4
73110512	3.	6. 4 2.	4. 4 3.	3. 4 0.	1. 4 0.	1. 416.	6. 420.	4. 416.	6. 413.	7. 413.	10. 413.	11. 413.	10. 4
73110600	13.	5. 514.	5. 413.	10. 416.	5. 415.	7. 412.	8. 413.	10. 415.	5. 416.	13. 417.	7. 415.	10. 414.	13. 4
73110612	14.	7. 314.	8. 413.	8. 415.	7. 417.	8. 4 0.	1. 617.	1. 414.	6. 414.	7. 414.	7. 4 9.	7. 410.	8. 4
73110700	0.	1. 4 2.	3. 4 0.	1. 4 0.	1. 418.	3. 411.	3. 4 9.	3. 315.	4. 413.	3. 413.	5. 414.	7. 415.	5. 4
73110712	21.	5. 420.	4. 419.	4. 411.	3. 411.	3. 4 0.	1. 499.	1. 499.	1. 499.	1. 499.	1. 499.	1. 499.	1. 4
73110800	0.	1. 410.	1. 499.	3. 499.	1. 4 5.	1. 4 5.	4. 4 5.	3. 4 5.	3. 4 3.	5. 4 4.	5. 499.	5. 499.	5. 4
73110812	99.	4. 499.	4. 499.	1. 4 2.	5. 4 3.	7. 4 4.	6. 4 3.	8. 436.	5. 499.	3. 499.	5. 499.	4. 4 0.	1. 4
73110900	0.	1. 499.	4. 412.	7. 411.	6. 4 8.	8. 4 8.	6. 411.	5. 415.	8. 4 8.	5. 414.	6. 412.	11. 4 9.	7. 4
73110912	14.	9. 414.	8. 414.	8. 414.	8. 415.	7. 414.	8. 415.	8. 416.	5. 515.	10. 516.	10. 517.	8. 516.	7. 6
73111000	15.	7. 514.	6. 413.	6. 511.	4. 612.	4. 6 0.	1. 4 0.	1. 4 0.	1. 411.	3. 413.	3. 411.	4. 312.	6. 4
73111012	12.	6. 412.	6. 4 9.	3. 310.	5. 411.	4. 411.	4. 411.	6. 4 9.	7. 414.	6. 416.	9. 416.	8. 415.	7. 4
73111100	0.	1. 4 0.	1. 411.	5. 414.	9. 415.	11. 415.	13. 415.	12. 415.	12. 414.	11. 414.	11. 413.	11. 413.	10. 4
73111112	14.	11. 414.	11. 413.	9. 413.	10. 413.	11. 4 0.	5. 423.	10. 413.	5. 411.	5. 411.	8. 413.	7. 417.	5. 4
73111200	5.	3. 4 8.	4. 4 0.	1. 4 0.	1. 4 0.	1. 4 0.	1. 4 0.	1. 4 0.	1. 421.	4. 418.	3. 424.	8. 426.	5. 4
73111212	25.	9. 422.	8. 423.	10. 422.	7. 413.	6. 415.	7. 415.	9. 414.	11. 413.	13. 413.	15. 414.	13. 415.	16. 4
73111300	16.	16. 418.	13. 413.	8. 415.	4. 415.	12. 418.	6. 414.	6. 413.	8. 417.	8. 421.	8. 419.	8. 412.	9. 4
73111312	13.	9. 414.	10. 414.	11. 414.	14. 414.	13. 414.	12. 414.	11. 417.	13. 417.	11. 417.	8. 416.	8. 414.	11. 4
73111400	14.	11. 415.	11. 416.	10. 415.	12. 416.	12. 416.	9. 416.	8. 419.	10. 420.	9. 416.	7. 416.	9. 416.	9. 4
73111412	16.	10. 416.	11. 414.	9. 415.	9. 416.	10. 414.	10. 413.	11. 413.	10. 413.	8. 414.	12. 414.	16. 414.	16. 4
73111500	15.	18. 414.	18. 414.	17. 414.	17. 415.	15. 412.	4. 414.	7. 414.	8. 414.	11. 414.	12. 414.	15. 414.	13. 4
73111512	13.	13. 412.	11. 411.	9. 411.	7. 412.	5. 434.	3. 4 0.	1. 4 0.	1. 4 0.	1. 4 0.	1. 414.	8. 4 0.	4. 4
73111600	26.	2. 419.	11. 423.	4. 618.	5. 616.	7. 615.	5. 615.	7. 415.	7. 424.	6. 327.	10. 427.	13. 427.	16. 4
73111612	28.	13. 428.	14. 428.	8. 427.	8. 4 0.	1. 3 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6
73111700	0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 4 0.	1. 4 0.	1. 4 0.	1. 3 0.	1. 4 0.	1. 4 7.	4. 4 6.	3. 4 0.	1. 2
73111712	0.	1. 2 0.	3. 2 0.	1. 3 0.	1. 3 0.	1. 3 0.	1. 6 0.	3. 6 0.	1. 610.	3. 6 0.	1. 6 0.	3. 6 8.	3. 6
73111800	0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 3 0.	1. 3 0.	1. 3 0.	1. 3 0.	1. 333.	3. 3
73111812	30.	5. 424.	4. 327.	7. 4 4.	7. 4 4.	5. 4 0.	1. 6 0.	1. 4 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6 0.	1. 6
73111900	12.	3. 6 0.	1. 611.	3. 6 9.	3. 410.	4. 411.	4. 411.	6. 511.	5. 414.	8. 413.	8. 413.	13. 413.	9. 4
73111912	14.	10. 415.	10. 415.	13. 414.	14. 414.	15. 414.	13. 414.	16. 413.	17. 414.	22. 415.	23. 415.	20. 416.	15. 4
73112000	15.	14. 417.	7. 411.	5. 413.	6. 412.	7. 415.	10. 515.	9. 415.	13. 414.	10. 413.	12. 414.	13. 415.	12. 4
73112012	14.	14. 414.	16. 414.	14. 414.	15. 414.	14. 415.	13. 415.	12. 416.	11. 415.	10. 414.	9. 415.	8. 415.	10. 4
73112100	18.	6. 430.	7. 428.	5. 428.	5. 429.	8. 430.	6. 428.	12. 427.	9. 427.	6. 425.	6. 421.	6. 416.	6. 4
73112112	15.	6. 426.	9. 425.	8. 424.	4. 414.	5. 415.	4. 415.	3. 417.	3. 412.	3. 412.	4. 412.	3. 412.	2. 4
73112200	14.	3. 435.	3. 415.	3. 436.	2. 432.	2. 4 1.	2. 4 1.	2. 4 2.	2. 4 3.	2. 413.	3. 417.	7. 416.	6. 4
73112212	17.	6. 418.	7. 417.	6. 417.	6. 420.	4. 425.	3. 621.	2. 615.	2. 6 0.	1. 622.	2. 415.	2. 412.	2. 6
73112300	17.	2. 4 0.	2. 612.	2. 412.	4. 415.	6. 415.	8. 414.	10. 414.	8. 414.	9. 414.	12. 414.	15. 414.	17. 4
73112312	14.	17. 414.	17. 415.	10. 427.	8. 427.	5. 430.	7. 528.	11. 428.	8. 425.	9. 427.	10. 427.	13. 428.	8. 4
73112400	27.	10. 427.	10. 429.	7. 528.	10. 4 9.	3. 4 9.	4. 6 0.	1. 4 0.	3. 4 0.	1. 311.	6. 411.	6. 412.	5. 4
73112412	13.	4. 312.	4. 413.	5. 411.	5. 414.	5. 416.	5. 514.	6. 414.	7. 414.	8. 415.	10. 415.	12. 415.	13. 4

73112500	14.	14.	414.	12.	416.	10.	422.	5.	431.	6.	428.	7.	428.	10.	427.	4.	40.	1.	412.	4.	415.	5.	423.	5.	4		
73112512	24.	5.	416.	4.	48.	4.	412.	3.	428.	3.	40.	1.	40.	1.	40.	1.	422.	3.	49.	3.	60.	1.	40.	1.	4		
73112600	14.	3.	414.	3.	413.	99.	413.	99.	415.	99.	413.	99.	414.	99.	413.	5.	415.	4.	416.	6.	415.	6.	413.	6.	4		
73112612	13.	5.	412.	8.	413.	6.	413.	7.	413.	8.	415.	8.	415.	9.	414.	10.	414.	11.	413.	13.	413.	13.	414.	15.	4		
73112700	14.	13.	414.	15.	414.	17.	413.	10.	414.	10.	414.	9.	415.	9.	414.	9.	414.	13.	414.	12.	414.	13.	413.	13.	4		
73112712	13.	10.	415.	10.	415.	9.	415.	10.	414.	8.	415.	8.	416.	10.	416.	10.	414.	14.	414.	16.	414.	16.	414.	16.	4		
73120400	15.	3.	412.	3.	411.	3.	411.	2.	48.	4.	410.	3.	435.	3.	40.	1.	40.	1.	410.	3.	45.	3.	416.	1.	4		
73120412	0.	1.	40.	1.	30.	1.	30.	1.	615.	2.	611.	3.	612.	3.	69.	4.	68.	3.	65.	2.	610.	4.	60.	3.	6		
73120500	0.	1.	60.	1.	65.	3.	60.	1.	69.	4.	411.	3.	611.	3.	412.	3.	412.	3.	40.	1.	333.	3.	434.	3.	4		
73120512	15.	8.	415.	10.	416.	9.	415.	8.	414.	12.	413.	8.	414.	11.	414.	10.	411.	7.	414.	11.	416.	7.	413.	9.	4		
73120600	14.	7.	415.	4.	613.	8.	414.	8.	412.	9.	411.	10.	413.	8.	413.	5.	412.	6.	410.	5.	411.	5.	411.	5.	4		
73120612	11.	9.	411.	6.	416.	7.	415.	10.	415.	7.	415.	8.	415.	7.	414.	9.	413.	10.	412.	12.	412.	13.	413.	12.	4		
73120700	13.	13.	414.	10.	414.	8.	415.	4.	416.	6.	415.	4.	40.	1.	40.	1.	427.	11.	427.	13.	428.	8.	428.	11.	4		
73120712	3.	10.	43.	9.	428.	9.	428.	5.	630.	3.	60.	1.	60.	1.	60.	1.	60.	1.	60.	1.	60.	1.	60.	1.	6		
73120800	0.	1.	66.	3.	60.	1.	67.	4.	49.	3.	44.	1.	46.	1.	40.	1.	30.	1.	40.	1.	45.	7.	45.	5.	4		
73120812	3.	6.	43.	7.	45.	5.	42.	5.	64.	5.	60.	1.	60.	1.	66.	3.	60.	3.	60.	3.	611.	4.	65.	4.	6		
73120900	0.	1.	68.	3.	60.	1.	60.	1.	60.	1.	62.	1.	60.	1.	60.	1.	30.	1.	30.	1.	20.	1.	20.	1.	2		
73120912	0.	2.	20.	1.	30.	1.	30.	1.	60.	1.	60.	1.	60.	1.	60.	1.	612.	4.	60.	1.	611.	5.	512.	5.	5		
73121000	12.	7.	612.	6.	512.	5.	512.	4.	69.	5.	611.	5.	50.	1.	613.	5.	410.	7.	40.	0.	310.	6.	411.	8.	4		
73121012	12.	7.	412.	6.	411.	8.	413.	8.	412.	7.	512.	8.	49.	6.	56.	5.	56.	8.	411.	7.	512.	6.	515.	5.	5		
73121100	15.	5.	50.	4.	611.	5.	413.	8.	413.	5.	411.	5.	411.	5.	412.	8.	412.	9.	415.	11.	416.	13.	415.	16.	4		
73121112	16.	16.	416.	17.	415.	17.	416.	16.	416.	15.	416.	13.	415.	11.	415.	7.	514.	10.	415.	13.	415.	11.	415.	12.	4		
73121200	14.	13.	414.	13.	414.	12.	414.	12.	415.	13.	415.	14.	415.	16.	414.	13.	414.	13.	414.	13.	414.	16.	414.	17.	414.	19.	4
73121212	15.	18.	415.	18.	415.	15.	414.	9.	413.	6.	413.	7.	414.	10.	413.	11.	413.	13.	414.	13.	414.	13.	414.	8.	413.	11.	4
73121300	16.	11.	414.	9.	416.	12.	416.	8.	415.	13.	417.	7.	415.	14.	414.	13.	414.	13.	414.	13.	413.	12.	415.	13.	416.	14.	4
73121312	15.	13.	416.	11.	414.	7.	415.	9.	414.	12.	415.	13.	415.	8.	419.	8.	418.	10.	412.	7.	515.	4.	614.	7.	5		
73121400	15.	3.	614.	8.	427.	6.	416.	6.	413.	8.	414.	8.	415.	9.	410.	7.	414.	8.	414.	11.	413.	10.	413.	10.	4		
73121412	14.	8.	415.	8.	414.	8.	413.	10.	413.	11.	414.	12.	414.	10.	414.	13.	414.	12.	415.	12.	414.	14.	415.	16.	4		
73121500	14.	17.	415.	18.	415.	18.	415.	16.	415.	15.	414.	12.	413.	12.	413.	13.	414.	13.	415.	16.	416.	13.	416.	12.	4		
73121512	16.	11.	417.	10.	415.	10.	414.	9.	417.	9.	413.	8.	419.	7.	517.	7.	414.	12.	415.	12.	416.	15.	416.	14.	4		
73121600	15.	13.	415.	11.	415.	11.	414.	12.	414.	12.	414.	10.	413.	10.	414.	9.	414.	9.	414.	8.	413.	8.	414.	8.	4		
73121612	14.	8.	414.	7.	413.	6.	413.	7.	415.	8.	416.	7.	59.	5.	513.	3.	627.	2.	62.	3.	430.	3.	435.	3.	4		













73111900	24	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.	9.	12.	12.	2.	4.	0.	1.	
73112000	24	0.	0.	0.	2.	0.	C.	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.	5.	7.	6.	2.	2.	C.	0.	
73112100	24	3.	3.	0.	2.	0.	3.	0.	0.	0.	0.	0.	0.	2.	0.	0.	1.	0.	0.	0.	0.	1.	1.	0.	0.	
73112200	24	0.	0.	0.	2.	13.	0.	0.	14.	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.	1.	1.	0.	0.	0.	0.	
73112300	24	1.	1.	0.	0.	0.	C.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2.	3.	1.	0.	0.	C.	0.	
73112400	24	1.	1.	0.	4.	0.	1.	0.	0.	0.	0.	0.	3.	0.	0.	0.	0.	0.	4.	6.	6.	5.	6.	0.	1.	
73112500	24	1.	1.	0.	4.	0.	1.	1.	0.	0.	0.	0.	0.	0.	5.	0.	2.	0.	0.	0.	1.	0.	0.	C.	0.	
73112600	19	0.	0.	0.	3.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	15.	20.	25.	1.	0.	0.	0.	
73112700	24	0.	0.	0.	3.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	9.	12.	11.	C.	0.	0.	0.	
73120400	24	1.	1.	0.	1.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	2.	0.	0.	
73120500	24	1.	1.	0.	3.	0.	1.	0.	0.	0.	0.	0.	1.	0.	0.	4.	0.	1.	0.	4.	6.	6.	2.	3.	0.	1.
73120600	24	0.	0.	0.	2.	0.	0.	0.	0.	0.	0.	0.	7.	0.	0.	0.	0.	0.	9.	11.	13.	9.	11.	1.	0.	
73120700	24	0.	0.	0.	2.	0.	C.	0.	2.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2.	3.	3.	0.	0.	C.	0.	
73120800	24	1.	1.	0.	0.	0.	1.	0.	9.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	
73120900	24	6.	5.	C.	0.	0.	5.	1.	12.	0.	0.	0.	3.	0.	1.	0.	3.	0.	2.	2.	2.	5.	5.	0.	0.	
73121000	24	1.	1.	0.	0.	0.	1.	C.	C.	0.	0.	0.	3.	0.	0.	0.	0.	0.	3.	3.	5.	6.	7.	2.	1.	
73121100	24	0.	0.	0.	5.	0.	0.	0.	0.	0.	0.	0.	3.	0.	0.	0.	0.	0.	3.	4.	5.	4.	5.	0.	0.	
73121200	24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	11.	15.	15.	0.	0.	0.	0.	
73121300	24	0.	0.	2.	6.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	4.	0.	0.	0.	0.	
73121400	24	0.	0.	0.	2.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	11.	15.	16.	0.	0.	1.	0.	
73121500	24	0.	0.	1.	5.	0.	0.	C.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	7.	9.	9.	0.	0.	C.	0.	
73121600	24	1.	1.	0.	3.	1.	1.	0.	10.	0.	0.	0.	0.	0.	0.	0.	0.	0.	8.	11.	11.	0.	0.	0.	0.	

ANNUAL AVERAGES

7116 2.4 3.4 0.2 0.8 15.4 3.0 2.3 3.7 0.7 0.0 0.1 1.8 3.1 5.2 9.7 2.5 1.3 1.4 3.1 3.7 4.2 2.4 2.3 1.0 1.4

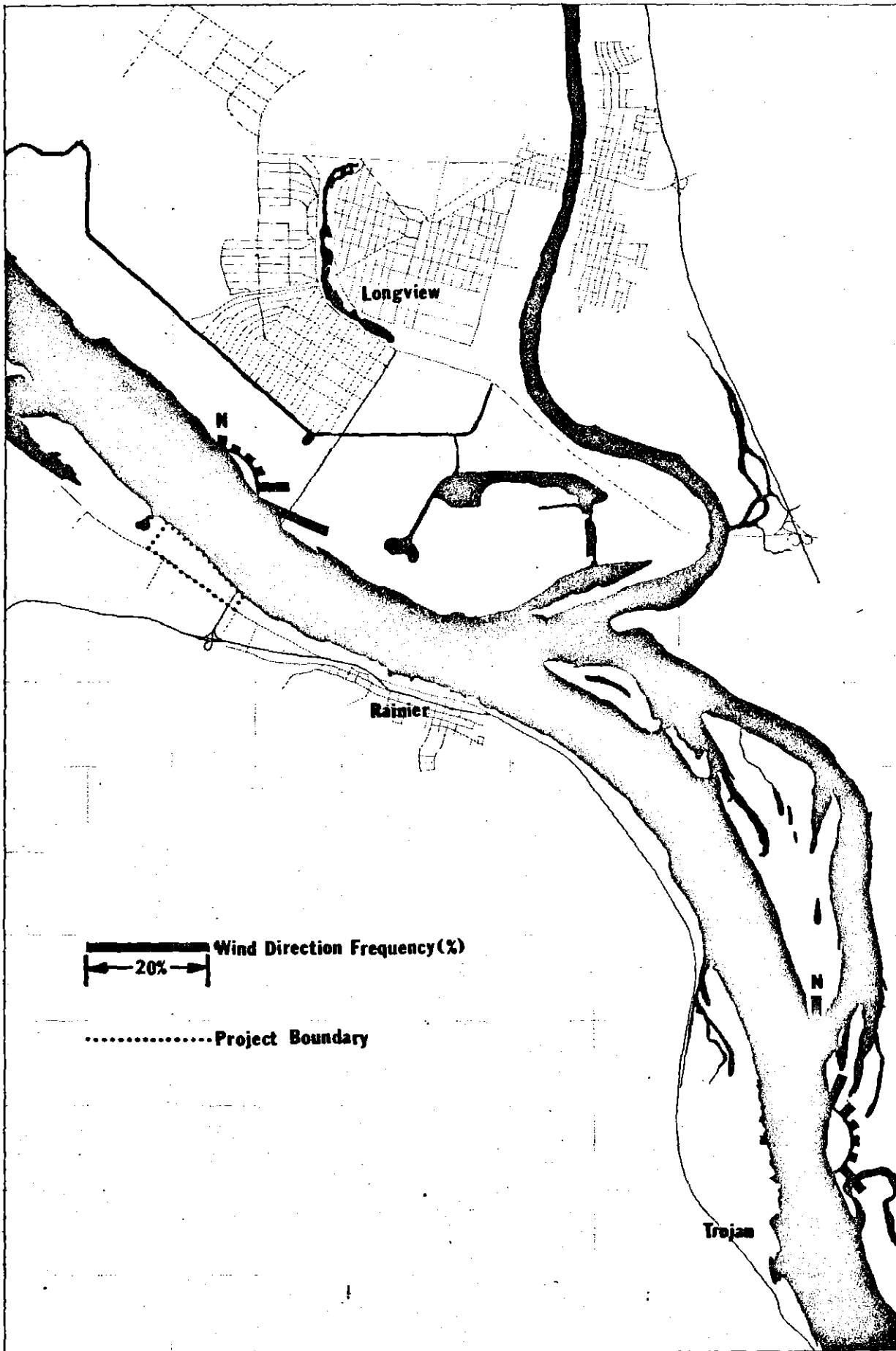


Figure 1. Wind Roses for Cascade Energy Project and Trojan Project

INFORMATION PERTINENT TO THE PROPOSED  
CHARTER ENERGY PETROLEUM REFINERY  
PLANNED FOR A SITE NEAR ST. HELENS, OREGON

For Submission to the Members  
Of the Oregon Environmental Quality Commission;  
Portland, Oregon; January 24, 1975

Prepared by  
Robert Brown Associates,  
Carson, California  
January, 1975



## SUMMARY

<u>SECTION</u>	<u>TITLE</u>
A.	INFORMATION ON PEOPLE  The people who have worked on this job have diverse experience in oil and the environment.
B.	PURPOSE OF THIS SUBMISSION  The purpose is to briefly highlight key points for the members of the Commission.
C.	CHARTER'S BASIS  Charter hopes for regulatory approval and enthusiastic acceptance by the people of Oregon
D.	THE CHARTER COMPANY  Charter is a large company and has the capabilities needed for this project.
E.	THE NATIONAL ENERGY SITUATION  The situation is deteriorating; significant steps are needed soon.
F.	THE REFINERY  The refinery is as simple as practical and appears to be in accord with Federal Energy Administration goals.
G.	CRUDE OIL AVAILABILITY AND PRODUCT MARKETING  No problems are anticipated.
H.	EMISSIONS  The choice of diesel as the refinery fuel insures very low emissions.

SECTION

TITLE

I. PROPOSED THROUGHPUT AND FUEL USAGE LIMITATIONS

Since these limits inhibit flexibility, Charter seeks either elimination or relaxation.

J. EMISSION FACTOR LIMITATIONS

Emission factor limits may not be needed, since other overriding limits are imposed.

K. PARTICULATE LIMITATIONS

While these are unusually low, they are attainable; if circumstances change, future relaxation may be sought.

L. RESTRICTIVENESS OF PERMIT

Charter hopes restrictions will be held to a reasonable level commensurate with protecting the environment.

M. SULFUR CONTENT OF RESIDUAL FUEL OIL

Consideration of a two-step reduction is urged.

N. SUBSTITUTE NATURAL GAS

If Northwest Natural Gas reactivates their project, the possibility of incorporating the SNG plant within the Charter refinery exists.

Letter to Federal Energy Administration

Letter from Federal Energy Administration

SECTION A

INFORMATION ON PEOPLE

My name is Herbert F. Bowerman and I work for Robert Brown Associates (RBA) of Carson, California. We have been retained since August, 1973, to prepare economic and environmental studies and to obtain--if possible--environmental permits for an Oregon oil refinery. We report directly to Mr. D. N. Keaton, President of both Charter Trading and Charter Energy Companies and Chairman of the Board of Charter Oil Company.

RBA is a small consulting firm, most of whose members have had at least 25 years experience in the oil industry. Since its founding in 1971, RBA has been engaged by numerous companies in the oil and utility industries, including Northern Illinois Gas Company, Tucson Gas & Electric Company, Southern California Edison Company, Northwest Natural Gas Company, as well as Charter.

My personal background includes graduation from Stanford with an AB in chemistry in 1943, commissioning at the U. S. Naval Academy at Annapolis, Maryland, and two years' service in the Navy in the Pacific, followed by twenty-five years with Union Oil Company in line and staff assignments in research, refining, economics and long-range planning, and finally more than three years of diverse jobs with RBA.

In addition, Messrs. Robert Brown and Donald Gammell of RBA have participated extensively in the Charter project.

In the work for Charter, we have been ably assisted by the Environmental Studies Group of John Graham and Company of Seattle, Washington. This firm has made numerous environmental studies for clients such as the U. S. Department of Defense, the U. S. Corps of Engineers, Pacific Northwest Bell, the State of Washington, and

Washington Square of Portland, Oregon. The principal John Graham participants on the Charter project are Ms. Robin Calhoun, Mr. Cliff Moon and Ms. Donna Lamb, each of whom has a masters degree and whose respective specialties are noise, water and air. Ms. Calhoun is project director for John Graham.

SECTION B

PURPOSE OF THIS SUBMISSION

The proposed Charter Refinery has been analyzed in great detail in (1) an Environmental Impact Assessment (EIA) dated October, 1974, (2) Amendment One to the EIA, dated December, 1974, (3) air and water permit applications and (4) written and oral communications with the Department of Environmental Quality.

The information herein briefly (1) highlights certain key points and (2) discusses certain aspects of the preliminary draft of the air contaminant discharge permit in convenient form for use by the members of the Environmental Quality Commission.

## SECTION C

### CHARTER'S BASIS

As the project has developed, efforts have been made to work with concerned governmental agencies to avoid conflicts with laws and regulations. Many alternates have been considered, with the goal of selecting the best alternates available. Table XIII-1 in Section XIII of the EIA lists twenty-three alternates that were considered. Both positive and negative features of the project have been highlighted; Section XI of the EIA is devoted to Unavoidable Adverse Environmental Impacts.

On balance, the pluses appear to substantially outweigh the minuses. The project is believed to be economically sound and environmentally acceptable. It is Charter's expectation that the concerned regulatory agencies will concur and that all necessary approvals will be issued. Finally, Charter hopes that the citizens of Oregon will accept and whole-heartedly support the project.

## SECTION D

### THE CHARTER COMPANY

The Charter Company is headquartered in Jacksonville, Florida. Through subsidiaries, Charter is engaged in the land, money and oil industries in the United States and overseas. The company is listed in Fortune Magazine's 1974 directory of the 500 largest industrial concerns in the United States.

Charter has extensive refining and marketing operations in the southeastern United States, crude oil production in Venezuela and Iran and unusual expertise in buying and selling crude oil and petroleum products. Clearly, Charter has both the financial and technical capabilities required for the St. Helens refinery project.

Additional information on the Charter company is contained in Section II and Appendix A of the EIA.

An outline of the massive effort required to build, start up and operate a grassroots oil refinery is presented in Appendix B of the EIA.

## SECTION E

### THE NATIONAL ENERGY SITUATION

At a time when about one-third of the nation's petroleum is being imported, domestic crude oil and natural gas production continues to decline. Energy conservation measures are not succeeding as well as desired, although there is evidence that this situation will change both dramatically and soon. And, although there are exceptions, many projects which will decrease the nation's reliance on imported oil are being postponed or cancelled because of expensive or unavailable capital, uncertainties on government energy policies, changes in product demand, unprecedented cost increases or environmental difficulties. Included in this category are off-shore oil drilling, coal mining and conversion, oil shale mining and conversion, nuclear power plants and domestic refinery projects.

At this point in time in early 1975, the situation is continuing to deteriorate. If significant steps to both conserve and produce more energy in the United States are not undertaken in the immediate future, the U. S. may well be facing the most serious economic crisis in its history.

The proposed Charter refinery is one of many such steps needed to improve the situation.



## SECTION F

### THE REFINERY

All oil refineries are complex, but Charter's will be less complex than many of comparable size. No facilities to chemically convert distillate or residual fractions to gasoline or jet fuel are planned. This approach is unique among the three refinery projects being proposed for Oregon.

We believe that current efforts to inhibit gasoline usage will be greatly intensified and that they ultimately will be successful. As a result, total gasoline demand on the West Coast and the U. S. as a whole appears likely to stay steady rather than continuing to increase. It may even decline.

On the other hand, the need for unleaded gasoline will increase as the percentage of 1975 and later cars increases.

The 8,800 barrels per calendar day of gasoline from Charter's refinery will be unleaded. The quantity is equivalent to the amount of gasoline which occurs naturally in the crude oil.

The consumption of other products produced by the refinery, diesel and residual fuel oil, is expected to increase somewhat, especially if natural gas supplies continue to decline.

Ninety-six percent of Oregon's residual fuel oil comes by tank ship from California. Charter's local production should tend to improve the reliability of Oregon's supply of this commodity.

The final configuration of the refinery will depend in part on Oregon's time table for reducing the sulfur content of residual fuel used in the state.

Charter's approach appears to be in accord with Federal Energy Administration goals. A letter from the Federal Energy Administration in response to our letter confirms this. Both are attached.

SECTION G

CRUDE OIL AVAILABILITY AND PRODUCT MARKETING

Charter is confident of its ability both to obtain crude oil and to market the refinery's products. It is planned to use North Slope crude oil from Alaska. Every effort will be made to market the products in Oregon and southern Washington.

Major efforts by Charter in these fields have been held in abeyance until the necessary environmental permits are received.

## SECTION H

### EMISSIONS

At present, many proposals are being made in Washington D. C. and elsewhere to temporarily relax emission standards until the nationwide energy situation improves.

It should be emphasized that the Charter Refinery does not reflect this trend. The emissions from this plant will be unusually low.

There have been many discussions on differences between relatively small numbers with respect to air pollutants. Undoubtedly these will continue. In the broader sense, though, it should be pointed out that the selection of diesel as the prime refinery fuel insures that emissions of sulfur dioxide, nitrogen oxides and particulates will indeed be very low. As a matter of fact, all of these emissions will be well below EPA standards for large, new boilers associated with electric power generation.

Dual sulfur recovery plants will insure a very high degree of reliability for this operation. Facilities to contain and recover waste gas will be incorporated to minimize releases to the flare.

This subject is discussed in detail in Sections IV and VI of the EIA.

## SECTION I

### PROPOSED THROUGHPUT AND FUEL USAGE LIMITATIONS

The preliminary draft of the Air Contaminant Discharge Permit contains limits on crude oil throughput and fuel usage. As now stated, these limits are so severe that Charter's flexibility to use ingenuity and creativity will be drastically curtailed.

We believe these limits should be eliminated. If, after a review, the concerned regulatory bodies still feel such limits are necessary, they should be set sufficiently above the design basis to enable refinery operations to be optimized to maximize profitability. We suggest maximum limits at least 25% above the design basis. We should emphasize that there are numerous other limits which will effectively control emissions to the atmosphere.

We did not raise this question prior to our review of the draft permit simply because we did not expect any such restrictions. We expected emission limits, but not throughput limits.

Even a relatively simple and relatively non-flexible refinery such as Charter's needs degrees of freedom to best utilize the many variables inherent in any refinery. Among these variables are: crude oil quality, timing of receipts of crude oil, inventory control, product demands, product quality requirements, variations in equipment capacities, internal condition of processing equipment, etc. The variables and restrictions are so numerous and diverse that many refineries use complex computerized mathematical models to aid in seeking the most profitable operation.

Furthermore, the return on investment for an oil refinery can often be improved significantly by "breaking bottlenecks." If, for example, by the expenditure of

\$100,000, plant personnel can replace one or two pumps and increase throughput by 5 or 10 percent, they will have contributed substantially to the profitability of the company.

If plant personnel can accomplish such feats through the exercise of their ingenuity and still meet all pollution control limits, we believe they should have the freedom to do so.

## SECTION J

### EMISSION FACTOR LIMITATIONS

If limits are set for SO<sub>2</sub>, NO<sub>x</sub> and particulates in terms of both pounds per hour and tons per year, then we believe separate emission factor limitations should not be required. We suggest that emission factors be used as guidelines, since emission factors will vary somewhat between boilers and process heaters, even when the same fuel is used in both.

On the other hand, if emission factor limits are imposed, then we suggest that hourly and yearly weight limits be dropped.

## SECTION K

### PARTICULATE LIMITATIONS

The particulate emission limits for the Charter refinery expressed in both pounds per hour and tons per year are set at unusually low levels compared to standards for plants burning liquid fuels. These limits were set to insure compliance with EPA rules on Prevention of Significant Air Quality Deterioration as published in the Federal Register of December 5, 1974. Although the limits are quite low, they can be met, based on using diesel as the prime refinery fuel.

Computerized air diffusion models were used to calculate the increase in particulate concentrations in the air at points downwind from the Charter refinery. The highest increases (which set the limits on particulate emissions) occur on days of unusual atmospheric stability and at places above refinery ground level.

The results calculated with the diffusion models are affected by the methods used in formulating the problem.

Further work may show that the increases in particulate concentrations at locations downwind from the refinery will be lower than calculations now show.

Other changes may occur. Columbia County's EPA Designation may be changed from Class II to Class III. Another possibility is that Congress may alter the significant deterioration provisions of the Clean Air Act.

If any of these changes materialize and the plant basis is significantly changed during detailed engineering design, we may request an increase in the particulate limitations that are expressed as pounds per hour and tons per year. In no case, however, will we request an increase above EPA limits set for steam boilers associated with electric power generating plants.

## SECTION L

### RESTRICTIVENESS OF PERMIT

Some sections of the permit seem unusually detailed or restrictive, including those on monitoring and reporting. We recognize, on the other hand, that significant efforts must be made by business establishments to insure and confirm that pollution control limits are in fact being met.

It is Charter's hope that the Oregon Environmental Quality Commission and the Department of Environmental Quality will make concerted efforts to keep restrictions and reporting requirements to a minimum, consistent with the task of insuring compliance with pollution control limits.



## SECTION M

### SULFUR CONTENT OF RESIDUAL FUEL OIL

In Amendment One to the Environmental Impact Assessment, Charter commits to meet Oregon's rules on sulfur content of residual fuel oil.

We do urge, however, that thoughtful consideration be given to a stepwise reduction, such as to 1.0 weight percent in 1979 and to 0.5 weight percent in 1984.

The costs and energy consumption requirements for reducing the sulfur content from 1.0 to 0.5 weight percent are considerable. This is discussed in Amendment One, in which two alternate approaches are presented.

The first approach entails selling about one third of the heaviest parts of the fuel oil to other firms for further processing, probably using partial oxidation to make low heat content gas for either (1) feedstock for ammonia-urea plants, (2) fuel for combined cycle plants to generate electric power, or (3) plant fuel for manufacturing plants or (4) all of the above. From an emission standpoint, long-term, this approach appears to be the better of the two. However, it will require a significant capital investment by other companies and time to make the necessary business arrangements.

The other approach requires about \$20,000,000 in additional facilities and increases fuel and power useage by about 24 and 33 percent respectively. (This creates some indirect pollution). Once these facilities are installed and in use, the price of the 0.5 percent sulfur fuel oil will be approximately \$1.00 - \$1.35 per barrel higher than the price of 1.0 percent sulfur fuel to cover incremental costs and achieve a reasonable return on investment.

Another approach midway between these two may prove feasible.

In any event, we suggest that consideration be given to a two-step reduction, primarily to buy time to achieve the best solution.

## SECTION N

### SUBSTITUTE NATURAL GAS

If Northwest Natural Gas Company decides to re-activate its Substitute Natural Gas (SNG) project, there is a possibility that an agreement can be achieved under which Charter will sell naphtha to Northwest Natural as SNG plant feedstock. The SNG plant site might be changed from the Guilds Lake area near St. Johns Bridge to an area immediately adjacent to the Charter Refinery near St. Helens. It is even possible that the SNG plant could be made an integral part of the Charter Refinery. This could be attractive, as common hydrogen plant, sulfur plant and boiler plant facilities could be utilized.

No agreements have been reached, but Executives of both companies concur that such arrangements could be feasible.

Should Charter's naphtha be used for SNG feedstock, Charter will not produce motor gasoline unless further rearrangements and changes are made. These would probably require new or modified permits.



Robert Brown Associates

December 4, 1974

116-4-154

Mr. Duke R. Ligon, Assistant Administrator  
Federal Energy Administration  
Washington, D. C.

Charter Energy Company  
Refinery Project in Oregon

Dear Mr. Ligon:

We read with interest your comments on U. S. refining siting and capacity considerations in the November 30, 1974 issue of Business Week magazine. You may find the following useful as input for the FEA hearings on refinery siting and capacity in Washington on December 9, 10 and 11, 1974.

We have made feasibility studies and prepared an Environmental Impact Assessment and air and water permit applications for a proposed refinery in Oregon for our client, Charter Energy Company of Monterey, California. Charter Energy is a subsidiary company of the Charter Company, headquartered in Jacksonville, Florida.

A number of alternate sites were considered before one near St. Helens, Oregon was selected. The site is zoned "industrial" and is level, above the flood plain, adjacent to an ammonia-urea plant, outside of areas where chronic air quality problems exist and has access to a planned dock extension on the Columbia River.

As now planned, the refinery will have a capacity slightly above 50,000 barrels per calendar day. The raw material will be North Slope crude oil. Processes will include distillation, desulfurization of various fractions, catalytic reforming of naphtha and sulfur recovery, together with the necessary utility, support and environmental control facilities. No conversion facilities for upgrading distillates or residuals to gasoline are planned, since it is believed that significant petroleum product demand increases will be confined principally to distillates and residuals. It is believed that total gasoline demand will increase rather slowly, if at all. The principal need in the gasoline

range, apparently, will be for steadily increasing quantities of unleaded gasoline as the automobile population changes during the latter half of the 1970's.

The principal liquid products from the refinery will be:

	<u>Barrels Per Calendar Day</u>
Unleaded Gasoline	8,800
Low Sulfur Diesel Fuel	16,500
Low Sulfur Residual Fuel Oil	25,500

The refinery will have the potential for supplying feedstocks to nearby chemical and utility companies. Of particular interest is the potential for supplying an existing (or expanded) ammonia-urea plant with feedstock in the form of low heat content gas.

We have been working on this project since May, 1973. For the past nine months, the principal goal of our efforts has been to obtain environmental approvals and permits. A major effort has been made to keep pollutant emissions at a very low level. The Environmental Impact Assessment and the necessary permit applications have been submitted. Decisions on these are expected in January or February, 1975.

Since the proposed refinery will be located in the Pacific Northwest and Charter Energy Company is located in California, we are sending copies of this letter to the regional FEA directors in Seattle and San Francisco.

We hope this information describing an independent oil company's plans for a refinery to utilize North Slope crude oil will be of interest.

Sincerely,

ROBERT BROWN ASSOCIATES

*Herbert F. Bowerman*

Herbert F. Bowerman

HFB:mjb

cc Mr. William Arntz, Regional FEA Director, San Francisco  
 Mr. Jack Robertson, Regional FEA Director, Seattle  
 Mr. D. N. Keaton, President, Charter Energy Company

FEDERAL ENERGY ADMINISTRATION

WASHINGTON, D.C. 20461

DEC 26 1974

Mr. Herbert F. Bowerman  
Robert Brown Associates  
500 East Carson Plaza Drive  
Suite 215  
Carson, California 90745

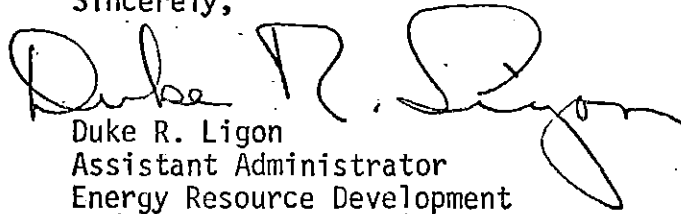
Dear Mr. Bowerman:

This is in response to your letter of December 4, 1974, regarding plans for a new refinery at St. Helens, Oregon.

Your project appears to be a very timely one and is in line with our goal for maintaining an adequate domestic petroleum refining industry. We also note that your projected yield pattern is oriented toward producing more of the products which we now import, as opposed to gasoline, of which very little is imported.

This news is encouraging and we wish you the best success for the new project.

Sincerely,

  
Duke R. Ligon  
Assistant Administrator  
Energy Resource Development

COLUMBIA INDEPENDENT REFINERY, INC.

P. O. BOX 1689 / PORTLAND, OREGON 97207

P. O. BOX 3379 / HONOLULU, HAWAII 96842

(503) 227-5698

Reply to Portland

14 January 1975

Department of Environmental Quality  
Northwest Region  
1010 N.E. Couch Street  
Portland, Oregon 97232

Attention: Mr. John F. Kowalczyk

The accompanying comments relate to the proposed Air Contaminant Discharge Permit preliminary draft for Columbia Independent Refinery, Inc.

Page 1.

Under "Name of Air Contaminant Source," please change "Maximum Capacity" to "Design." The reason for this requested change is that a plant designed to produce 50,000 barrels per day will operate within a range. In the permit applications which were filed with DEQ, we showed a rated maximum for each of the process heaters as well as figures for the normal operating conditions. Normal operating conditions correspond to 50,000 barrels per day.

Page 2.

Paragraph 4.

Please add "(OAR, Chapter 340, Sections 22-005, 22-015 22-025)" which will allow us to sell distillate fuels to marine vessels and interstate carriers as exempted by the administrative regulations.

Page 3.

Paragraph 6.

Please add "(OAR, Chapter 340, Sections 22-005, 22-010, and 22-025)" for the same reasons as mentioned immediately above.

Paragraph 7.

Please amend sentence 1 to read "the permittee shall construct the petroleum refinery with designed processing capacity of 50,000 barrels per day..."

Paragraph 8.

We would like to add the following statement: "Sulfur handling methods can be modified after review and approval by Department." Changes in sulfur handling

methods may be necessary to meet conditions of future or world markets.

Paragraph 9-e.

Please change required action to comply with OAR Chapter 340, Section 28-050.

Page 4.

Paragraph 11.

Please change 30 days to 90 days because generally a refinery is started up sequentially and checked out unit by unit. This process may take up to three months.

Paragraph 13.

In order to finance a refinery project today, it is necessary to have a major percentage of the product committed under long-term contracts in order to raise the financing. Thus, it will be necessary to offer the 0.5 percent sulfur residual oil for sale prior to the date it is required to be burned. We would like this worded "the permittee shall offer for sale prior to June 30, 1978 for delivery and consumption after January 1, 1979...with a maximum sulfur content of 0.5 percent by weight to customers or resellers with which contracts of supply have been executed."

Paragraph 14.

In seeking the dates listed in this paragraph, you requested our expected timetable. The attached timetable is what we submitted. The likelihood of missing any one of these dates by a day, a week, a month, is probably very great. Our bond-counsel has advised us that the condition "if at any time it is apparent that the project is not viable as determined by failure to adhere to the following schedule, the permit shall be subject to modification or revocation." is sufficient to preclude the arrangement of financing for the project. We do not object to submitting written documentation on the increments of progress on the project, but we cannot agree to the condition of modification or revocation were we to miss even one date. Whether or not such modification or revocation would occur is not the point in question. The fact that it can occur is what, in counsel's opinion, precludes our being able to raise financing. Our suggestion is that the modification or revocation of the permit not be allowed



to be effected unless the cumulative effect of slip-pages causes the startup date of the refinery, Item 14-g, to slip by a period of 12 months.

Page 5.

Paragraph 21-a.

We feel that a daily monitoring of the amount of sulfur byproduct reclaimed and/or sold is abnormally frequent. We prefer to make it a part of the normal routine of gauging tanks on a once a week schedule. We request that "daily" be changed to "weekly."

Paragraph 21-b.

"Any observable increase..." We would like clarification as to by whom any increase must be observed.

Paragraph 21-d.

Economically and operationally it would be very difficult to provide sulfur, ash, and nitrogen content of each shipment of residual and distillate fuel oil sold or distributed in any county in Oregon. Nitrogen is not a standard fuel specification. Oregon, to our understanding, does not have a nitrogen specification on fuel, and a nitrogen test is an expensive analytical procedure to perform. We would like to suggest that the paragraph be rewritten as follows:

"The quantity of sulfur and ash content (percent by weight) on monthly composite sample of each type of residual and distillate fuel product sold or distributed in Oregon. The quantity of nitrogen content (percent by weight) on a quarterly/composite sample of distillate fuel oils and of residual fuel oils sold or distributed in Oregon." Since CIRI will be a wholesale supplier and not a retailer, it will not know the ultimate destination of its product. We will cooperate, however, by providing sulfur and ash data to purchasers as it is part of the normal specification. We will make available to the department the data on each type of product produced and sold for the month.

Page 6.

Paragraph 22-c.

This paragraph should parallel paragraph 21-d above.

Page 7.

Paragraph 6.

This paragraph should read "...in such a manner as to exceed an average total of..." This is necessary because of startup and varying efficiencies of fuel.

Page 8.

Paragraph 13.

This paragraph should be changed to read 90 days for the reason mentioned in the discussion on Paragraph 11, Page 4.

Paragraph 14-a.

We question the advisability of requiring lancing or soot blowing between noon and 4 p.m., a time when it is highly visible and there are greater emissions from industry, business, etc. The period from 12 midnight until 4 a.m. would be the time when there is not otherwise heavy loading of the atmosphere with emissions.

Paragraph 14-b.

Eliminate "boilers and". Refinery boilers are the main heat source for steam-traced pitch and asphalt lines and must never be shut down or the content of the lines will solidify. The steam is also a standby power for fire-fighting water pumps (in the event of electric failure). Steam is vital in emergency purging of vapor-filled vessels, in fire-quenching, in operation of the emergency flare stack, etc. Critical safety and fire control reliance on boiler steam dictate that boilers never shut down. The firing rate, of course, can be minimized.

Paragraph 14-c.

Delete "boilers and" for the reasons given immediately above.

Page 10.

Paragraph 17-c.

Change "arrange" to "average."

Dept. of Environmental Quality  
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Page five

Paragraph 2-c.

Please amend this paragraph to read "...exceed an average of 0.43 lbs./hr. in a 24-hour period." to conform with operating conditions.

Page 11.

Paragraph 4.

Please amend this paragraph to read "...not exceed an average of 166 lbs./hr. of wet sludge in a 24-hour period."

Page 12.

Paragraph 13-c.

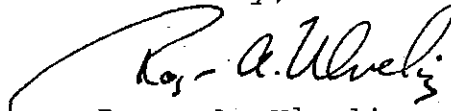
We would like to see "daily" changed to "weekly" so that it can become part of the normal gauging and reporting schedule of the refinery.

Paragraph 13-f.

Please modify daily to weekly for the same reasons.

Please insert a paragraph under special conditions section of each permit which reads as follows: "If within 30 days of delivery of information required for any Department approval required by this permit, the Department fails to notify the permittee in writing of its approval or its disapproval by setting forth its reasons therefore, the department shall be deemed to have given its approval.

Sincerely,



Roger A. Ulveling  
Planning Coordinator



State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

To: E.J. Weathersbee & John Kowalczyk  
Northwest Region  
Date: February 6, 1975

From: Peter McSwain  
Hearings Unit

Subject: Interim hearing reports on Agenda Items J, K, L, and M of  
January 24, 1975 EQC meeting

Attached to this report is a copy of the tentative minutes of the meeting which covers the four hearings matters in issue. After the meeting adjourned and before the expiration of the agreed ten day period, additional materials which reached the hearings unit for inclusion in the record were received of the following parties:

Associated Oregon Industries\*  
Charter Trading Company  
Columbia Independent Refinery  
Columbia Pacific Building and Construction Trades Council  
Mr. Thomas Gilbert\*  
International Brotherhood of Electrical Workers, Local 48  
Metal Trades Council of Portland and Vicinity  
Mr. Al Scheel\*  
Shell Oil Company  
United Steel Workers of America (3 locals in this region)  
Waldemar Seton Company  
Liquid Air, Inc.

Written matter submitted without oral comment at the time of the hearing which is not reflected in the minutes was made available from the following parties:

Bingham Construction, Inc.  
Columbia River Towboat Association  
Northwest Industrial Neighborhood Association  
Mr. George Sabin

All other additional statements are covered in the tentative minutes.

From the above materials the following report has been compiled in an attempt to delineate issues to which staff may wish to address itself in future recommendations to the Commission. While there may be included more issues than staff deems relevant, an attempt has been made to deal with all issues deemed potentially of interest.

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\* Written statement essentially repeating earlier oral presentation.

There follows an attempt to categorize the issues as relating to: a) all four hearings matters; b) all three refinery air contaminant discharge permit hearings; c) the Clean Fuels Policy and the CIRC application only; d) the Charter and Cascade applications only; e) each of the three permits individually; and f) the Clean Fuels Policy. This organization of the issues is felt appropriate in the light of the manner in which the hearings developed and in view of a desire for minimal repetition in dealing with four hearings matters in a single reporting document.

ALL FOUR HEARINGS

1. Other suppliers who might be able to provide low sulfur fuel to any of the affected areas: There was some ambivalence in the staff's position on this point. It was felt that the CIRC installation would be necessary to supply 0.5% for the PMSAQMA. However, the November 22 staff report indicates other suppliers would see no difficulty in this area, a position to which Mrs. Rosso alluded in objection to the CIRC permit. This is a two edged issue in that WETA and Shell have expressed apprehension that the existence of a wide 0.5% sulfur fuel market will either deprive other existing suppliers of economic benefit or force their change to all 0.5% production with a resultant economic impact on consumers outside the areas of the proposed refineries.
2. Baseline data on ambient air quality: This begins with the question of whether it is staff's position that such data exists. From there we move to considerations of what the presence or absence means to measurement of Significant Deterioration Increments (concern of Mr. Guilbert, Associated Oregon Industries, CIRC, and WETA) and subsequent classifications. Also of concern is the validity of any baseline data used (AOI says it is invalid and Mrs. Tsongas says we should await refined diffusion modeling. Mrs. Rosso says we used the wrong years for projection and CIRC says no degree of certitude is required to measure an increment).
3. Classes and Increments: Future class designation will be based on desirable increments (not present ambient air quality standards) insofar as secondary standards are not violated in affected areas. Correct? Can one allow an increment which, added to the existing concentrations, takes an area beyond the national ambient air standards? Is Oregon's national ambient air standard for SO<sub>2</sub> 60 ug/m<sup>3</sup> due to the federal administrator's approval of our implementation plan as Mr. Guilbert contends? Would present issuance of a permit prejudice future redesignation as a Class I area and subsequent reduction of future increments? Is it correct to assume that urban areas should be Class III areas at some future date?

4. Cost of Clean Fuels Policy: Perhaps staff's projected cost of \$3 per capita should be reviewed in the light of Dr. Tsongas' contention that a multiplier effect makes it invalid and also in the light of whether the financial impact of a desirable environmental policy is of direct concern to the Commission or of peripheral concern. Proponents alluded to the increased tax base of the CIRI installation and the consequent assistance to local government. Opponents said the heating costs to schools and hospitals would work to government's detriment and cause higher taxes. Proponents argued that the capital intensive nature of the installation would avoid the need for more schools, roads, and other residential services. Opponents argued that the economy required maximum labor intensive use of industrial land so as to afford maximum jobs per acre. Perhaps this whole area is beyond department expertise and should be met with silence.

ALL THREE AIR CONTAMINANT DISCHARGE PERMIT APPLICATIONS

1. Peripheral economic issues: Many groups supported all three installations on the basis of their economic impact on the areas affected. Some groups opposed them. CIRI forwards the contention that the Commission is under a duty to act on all three applications simultaneously to avoid giving any competitive advantage in cornering preferred customers with contracts. Mr. Frewing argues that cost/benefit analysis of the installations should account for an alleged 15% lower average salary in Oregon attributable to environmental quality. Is this of concern to the Commission in passing on the permits?
2. Water Quality issues: Where a water contaminant discharge permit will be required and the requisite public notice and input provided, to what degree should the department now contend with objections to effluents? Mr. Frewing argued that the staff report "opened the door" on this subject. Is potential oil spillage from the tankers an issue within the Commission's purview? Does it matter whether net oil tanker traffic on the Columbia will be increased or decreased? Should the Commission concern itself with the size of the tankers? Is this the Coast Guard's concern more than ours? Is the possibly self serving expertise of the Columbia River Pilot's Association as alluded to by CIRI the principal expertise relied on by the Department? What other authorities can be cited?
3. Significant Deterioration issues: In the case of any of the proposed permits, does staff's recommendation predicate itself on the assumption, tacit or otherwise, that the affected area is presently

February 6, 1975

at least a full Class II increment below the nationally ambient air standard for SO<sub>2</sub> and particulate concentrations? Does WETA's citation of proposed EPA rules (August 27 Federal Register) to prevent installation of major energy producers in any but Class III (or exempt) areas weigh upon the sagacity of the proposed permits?

4. Output limitations: Should the permit parameters exclude through put requirements? How easily can a new permit be granted if increased throughput is demonstrated feasible without increased pollution? In this regard Mr. McPhillips, Northwest Natural Gas, the Columbia Port Authority, and all three permit applicants expressed concern.

THE CLEAN FUELS POLICY AND THE RELATED CIRI INSTALLATION

1. The interrelation between the two issues: Page seven of the staff report on the Clean Fuels Policy, citing the March, 1974 report on the designation of air quality areas, states 870 tons per year to be the limit of particulate emission increase rate consistent with adherence to the annual particulate air quality standard. This was based on modeling methodology for the area. Mr. Reid, speaking for CIRI, stated that the ambient air limitation for particulates was .25 ug/m<sup>3</sup>, an amount in excess of his projected .21 ug/m<sup>3</sup> for the installation. Can we relate the ug/m<sup>3</sup> to the tons per year with any simple conversion factor? Is Mr. Reid referring to particulate increase after application of the trade-off? Does the Department agree with his figures?

Is the projected reduction in particulate emissions due to use of 0.5% sulfur residual inclusive of any reduction in particulates attributable to lower formation of sulfate particulates from SO<sub>2</sub> emissions?

Given the short distance between Portland and Columbia County, would denial of the CIRI permit and granting of any of the others assure availability of low sulfur fuels which would still accommodate the Clean Fuels Policy. This is corollary to the question of whether the existing suppliers could be relied upon to support the Clean Fuels Policy without the aid of a guaranteed supply from CIRI. Is the difference in market price between distillate and residual the only price check on the required 10,000 barrels per day of 0.5% required by Special Condition Thirteen? Could other suppliers be expected to keep the price competitive?

3

Does the tie between the Clean Fuels Policy and the CIRC application (especially as delineated by the Director's recommendation) render the Clean Fuels Policy a rule essentially preferential to CIRC and violative of the Equal Protection provisions of either the State or federal constitutions? This would be Shell Oil's contention. Another twist to the same question would be the enforceability of Condition 13 without including it in the rule. That is, should the rule state that any area producer of residuals shall produce X amount of low sulfur. This might preclude CIRC's claim that the permit condition is not enforceable. There appears no doubt in Mr. Guilbert's mind that the condition is enforceable. Is this the case even where a competitor undersells CIRC and supplies all the locally needed fuel? Would the Department want to enforce the condition in such a pass?

#### CHARTER AND CASCADE PERMITS ONLY

1. Is the Department in sympathy with the request of the Columbia County Board of Commissioners that the reporting requirements appertaining to the proposed permits be minimized?
2. With reference to the Department's March, 1974 report on the designation of air quality areas, it would appear that both the proposed sites are within an area recommended to be designated as an air quality area for both particulate and SO<sub>2</sub> problems. Would the granting of either or both permits have a foreclosing effect on the other projected new sources of this area (Table 4.4 of the Report)? The staff report indicates 25 square miles to be the area relevant to air impacts for the Charter site. Does this overlap with the impact area of the Cascade site?

#### THE CIRC PERMIT

1. The PMSAQMA rule requires not only feasibility of a trade off but attribution to the proposed source. Would availability to the area of requisite low sulfur fuel from existing suppliers without the area render it inappropriate to credit CIRC with all or part of the projected emission reductions? Does the permit, in this respect, call for a marketing conclusion which has not been sufficiently documented in the public view.
2. What will be the Department's response to the contention that the installation will foreclose the options of neighboring Rivergate industry to convert to heavy fuel in the event of a natural gas curtailment? While this position on the part of the three affected locals of the United Steel Workers has been withdrawn, it is still before the public.



3. What will be staff's recommendation with regard to the wording changes in the permit requested by CIRI?
4. Mrs. Rosso raises an issue in her contention that sheer economic momentum would compel issuance of an amended permit to "fit" the 140 million dollar installation after its completion, if it was unable to comply with the construction state permit. She analogized the Harborton circumstance. Does the Department acknowledge this analogy as accurate?

CHARTER PERMIT

1. Throughput limitations: What significance attaches to the applicant's request that throughput limits be either eliminated or raised 25% beyond design basis.
2. Measurements: Should Charter be favored in its request that the permit deal either in terms of emission factors or in terms of hourly and yearly weights, but not both?
3. What about the suggestion that a phased reduction of sulfur content from 1.0% to 0.5% be allowed from 1979 to 1974? How should this be met in terms of Charter's argument that reduction will cost additional energy and fuel usage, leading to what was <sup>2</sup> x termed "indirect pollution." 24  
7
4. Would a change from production of unleaded gasoline to production of naptha for SNG feedstock be of significance to the area environment?

CASCADE PERMIT

1. Does the Department approve the plan to maintain a weather monitoring station together with distillate consumption conversion facilities as an alternative to the \$1000 to \$2500 daily cleaner fuels consumption required to protect the nearby hillside in adverse weather conditions? Is Mr. Frewing's contention that the emissions would usually be trapped in the low areas as in Longview a correct contention?
2. Is any effect on the aesthetic value of the U.S. 30 Scenic Turnout within legitimate Commission province to compensate monetarily or otherwise remedy?
3. Is off-stream berthing of tankers to prevent oil spillage an item to be further considered in the design? Is the proximity of the site to the Columbia River Wildlife Refuge of significance in terms of phenol effluents, oil spills, or other concerns?

Jack Weathersbee & John Kowalczyk  
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February 6, 1975

CLEAN FUELS POLICY

1. Is the baseline data on which the Clean Fuels Policy is predicated of such a precarious nature as to warrant the "locking" of the policy into the EQC agenda every September as was suggested by the AOI?
2. What weight should be given to WETA's apprehension that the policy will result in higher fuel prices for outside consumers due to the withdrawal of non-conforming, cheaper fuels from the market by existing suppliers?
3. Finally, what is the appropriate response to the contention by the Port of Portland that a Clean Fuels Policy lends sufficient repose to the question of SO<sub>2</sub> emissions to warrant the deletion of this concern from the requirements of the interim PMSAQMA rule?

The above issues are not claimed to be exhaustive, are intended to exceed the number to be appropriately dealt with by staff, and are offered as an inventory to choose from. In all frankness, many of the arguments and issues raised appear to the writer to be non-sensical. These were in many instances included for the following reasons: First, it is beyond the writer's ability to judge the technical aspects of the issues in perspective which would allow his editing. Second, though a given issue may not meet with any generally acceptable criteria of relevance, its source may be one from within the community which, for political or other reasons, requires an answer in staff's report. Finally, it would appear beneficial to the participants in the hearings for us to speak to their concerns for their own information. This might enable them to better understand the Department's actions and to help in our problem solving efforts.

Please inform the writer as to whether this reporting format is of assistance to the staff and, if so, what changes would help. It should be noted that more depth would require more time which, in the light of staff's time frame for reporting to the Commission might render the report less useful.

P.S. I would appreciate information as to any deficiencies you may find in the tentative minutes (Pages T-1 through T-13).

January 23, 1975

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
**RECEIVED**  
JAN 23 1975



**OFFICE OF THE DIRECTOR**

B. A. McPhillips, Chairman  
Environmental Quality Commission  
1234 S.W. Morrison St.  
Portland, Oregon 97205

**Port of Portland**

Box 3529 Portland, Oregon 97208  
503/233-8331  
TWX: 910-464-6151

### PROPOSED CLEAN FUELS REGULATION

The Department of Environmental Quality's report on designation of Air Quality Maintenance Areas dated March 18, 1974 clearly shows that sulphur dioxide air quality levels will exceed state standards in at least one location in the Portland Metropolitan Area before 1985. The Environmental Quality Commission recognized the need for reducing sulfur dioxide emissions when it included SO<sub>2</sub> in the regulation establishing criteria for approval of new air contaminants sources in the Portland Metropolitan special air quality maintenance area. The Port of Portland believes that the need for the proposed Clean Fuels Regulation has been adequately documented and the DEQ staff report as well as independent projections show significant reductions in SO<sub>2</sub> and particulate emissions resulting from this regulation. Therefore the Port of Portland supports immediate adoption of this regulation as necessary for the maintenance of air quality standards and the continuation of industrial development.

The public hearing notice and staff report accompanying this proposed regulation infers that it is needed solely for the purpose of allowing trade-offs to be considered in deliberations on the issuance of an air contaminant discharge permit to the Columbia Independent Refinery. The Department of Environmental Quality's report on designation of air quality maintenance areas clearly puts forth the need for this regulation irrespective of the C.I.R.I. project. Additionally, the DEQ staff has recognized this need most recently in its November 22, 1974 status report to EQC on the proposed refinery. This report states, "that a clean fuel regulation will undoubtedly be needed to maintain air quality standards in the Portland Metropolitan Area, regardless if any oil refineries were built in the state." The C.I.R.I. facility did not influence the ultimate need for this regulation or the implementation date or the degree of control which is proposed. However, C.I.R.I. did influence the timing for proposing this regulation. Additionally, the other proposed refineries, to a lesser degree, influenced the decision to propose a Clean Fuels Regulation now. Again, I quote from the DEQ status report on the three

B. A. McPhillips, Chairman  
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refineries which was presented at the November 22, 1974 EQC meeting: "A new fuels regulation would significantly affect the specific product mix and marketing of all three refineries." Therefore, your action on this proposed regulation is needed now so that implementation of this regulation in terms of available low sulfur fuels may be programmed into all three refineries.

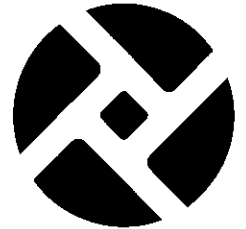
In summary, the Port of Portland reiterates its strong support for the immediate adoption of this proposed Clean Fuels Regulation. Sulfur dioxide emissions will be reduced thereby virtually eliminating the possibility of exceeding air quality standards by 1985. Therefore, you should give strong consideration to amending the criteria for approval of new air contaminant sources in the Portland Metropolitan special air quality maintenance area by eliminating SO<sub>2</sub> from this requirement.



Lloyd Anderson  
Executive Director

P12A

January 23, 1975



B. A. McPhillips, Chairman  
Environmental Quality Commission  
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### COLUMBIA INDEPENDENT REFINERY, INC.

The Environmental Quality Commission will be faced at its January 26, 1975 meeting with the question of whether or not to issue the necessary environmental approvals for the construction of the Columbia Independent Refinery. The Port of Portland has evaluated this facility in terms of economic and community benefits. We are hereby offering this information to you in capsule form so that you will have all pertinent facts available in your forthcoming deliberations.

The construction of this facility involves the expenditure in the local area of approximately \$49 million in payroll. Peak employment of approximately 2,800 jobs will be created during the construction phase of this project, thereby giving the metropolitan area construction industry a vitally needed shot in the arm. These direct payroll expenditures are estimated to generate up to \$74 million in secondary economic activity in this region.

Refinery operations will directly employ approximately 140 persons plus creating an additional 280 jobs in the local community. This means approximately \$2.1 million in payroll and \$7 million in goods and services flowing annually into the local economy.

Financially hard pressed governmental agencies will receive over \$6.4 million annually in property and other taxes. In addition, this facility represents economic diversification for the region, thereby minimizing economic disruptions to the community during periods of recession.

The 50,000 barrels per day of petroleum products produced by this facility are necessary for the maintenance of existing Oregon industries as well as for the attraction of future area economic development. This refinery, as with any other located in the state of Oregon, will aid to soften the short term disruptions in fuel supply in the event of another

B. A. McPhillips, Chairman  
Page 2  
January 23, 1975

Middle East oil embargo. The creation of new domestic refining capacity, however, will not ensure a permanent, long-term supply of petroleum products for the United States or for the state of Oregon.

Utilization of the existing regional petroleum distribution system will minimize the distance with which the product must be transported. This has obvious advantages in terms of traffic congestion with its associated air pollution impact and noise impact. The dock at which the oil will be transferred from the tanker to the refinery will provide the latest in oil spill protection. This dock will provide for complete enclosure of the tanker during transfer and also will provide a rapid response oil spill clean up system that will be available in the event of a spill. This oil spill prevention system will minimize the potential environmental damage from oil spills during petroleum handling operations.

Air emissions from the C.I.R.I. facility represent a significant utilization of a very limited air shed resource. However, the Port of Portland believes that the community and economic benefits provided by this refinery justify the use of this resource.

We have had a long association with Pacific Resources, the parent company of C.I.R.I. This association has evolved over the last five years during which time the Port has been discussing the possibility of a refinery in Rivergate with Pacific Resources, Inc. During this time, the Port has closely evaluated Pacific Resources and has found its financial condition to be very favorable and more importantly its reliability as a company that does what it says is excellent. This attitude and performance by Pacific Resources has earned it environmental awards in the state of Hawaii.

Based upon community benefits and economic factors, the Port of Portland strongly supports the location of this facility in Rivergate. However, the Port does not attempt to evaluate the environmental acceptability of this facility; but, based on the DEQ staff report believes that this is also acceptable. The Port of Portland believes that this facility has undergone adequate DEQ staff review and that all pertinent facts have been presented to you at this hearing. Therefore, we find that little would be gained by delaying a decision on this refinery and strongly urge the Environmental Quality Commission to take final action at its January 26, meeting.



Lloyd Anderson  
Executive Director

P12A

January 24, 1975

TO: Environmental Quality Commission  
FROM: George A. Tsongas, Ph.D.  
SUBJECT: Proposed Fuels Policy

My name is George Tsongas of 2922 N. W. 53rd Drive in Portland. I would like to testify on the proposed fuels policy as a concerned citizen and scientist. Professionally, I am an engineering professor at Portland State University where I teach courses and do research in the areas of air pollution and energy production and utilization.

Regarding the proposed clean fuels policy, I would like to bring to your attention a number of factors which suggest that this particular policy should not be adopted at this particular time. In examining the staff report on this question of reducing the maximum sulfur content of residual fuel oils, I found a great deal of discussion about the ability of a cleaner fuels policy to reduce sulfur dioxide (SO<sub>2</sub>) levels here in the Portland airshed. And I would generally agree that adoption of the policy would result in reduced SO<sub>2</sub> levels. To my surprise, however, there was almost no mention of whether or not Portland even has an SO<sub>2</sub> problem, or whether one is expected in the future. Requesting a fuels policy without addressing that most basic question would seem to me to be unthinkable.

In fact, in examining DEQ data it appears that Portland does not as yet have an acute SO<sub>2</sub> problem. The term "acute" is, of course, relative, but neither the annual nor the 24-hour or 3-hour ambient air quality standards have ever been violated at any of the monitoring stations in the Portland airshed. In general, SO<sub>2</sub> levels are well below standards everywhere in the area except at the Guilds Lake monitoring station. Even there the standards have not been violated, although the levels there are the highest in the Portland area. However, it is well accepted that those levels are not typical except for that localized area. That area is the tank farm oil storage area for Portland, and the source of emissions is the oil-fired heaters used to keep the stored and transferred petroleum products warm and flowable during the cold winter months. Those emissions could in fact be controlled without a clean fuels policy for the whole Portland area. If that area were to become a problem in the future, a cleaner fuels policy for that specific area could be introduced. The fact is, though, that at present Portland doesn't really have a serious SO<sub>2</sub> problem. Actually, that point was continually made by the DEQ staff during numerous Harborton hearings. Why then do we now supposedly have a problem? I would conclude that relative to the really problematical pollutants carbon monoxide and particulates, Portland does not have a critical SO<sub>2</sub> problem.

To support the point that sulfur dioxide ambient air quality is well within standards and should continue to be for some time, I would



like to cite the results of an air quality impact assessment completed last August for Schnitzer Industries, a firm newly located in the Rivergate area. The assessment was made by Glen Odell Consulting Engineers and essentially involved computer modeling of the Portland airshed. While the purpose of the study was to assess the impact of one industry on our air quality, SO<sub>2</sub> levels throughout Portland from all sources were predicted for 1972, 1975, and 1985. The results indicated only minor changes in SO<sub>2</sub> concentrations through 1985, assuming no significant new industries are established. No difficulty was predicted in maintaining compliance with sulfur dioxide ambient air quality standards throughout the Portland metropolitan area through 1985. The assumption of no new significant industrial growth is of course important, especially in light of possible increased oil usage due to natural gas curtailments. To gain a feeling for what is significant growth, the results for the Schnitzer metals recycling complex under study can be used. The facility produces 205 tons/yr of SO<sub>2</sub>, which is about 60% of the increased SO<sub>2</sub> tonnage allowed for any single new industry under DEQ's new interim policy. The impact of the metals recycler and hence of an equivalent fairly large emitter was found to be relatively small and would not cause SO<sub>2</sub> standards to be approached or exceeded anywhere in the airshed. Thus it is reasonable to assume that similar future growth or SO<sub>2</sub> emissions from increased oil usage would not result in SO<sub>2</sub> ambient air quality violations. Hence, I once again would like to suggest that in a relative sense Portland does

not have an SO<sub>2</sub> problem that would require a new clean fuels policy.

Interestingly enough, the DEQ will have at its disposal in about three months, an improved and fairly detailed computer model for analyzing the impact of new sources or gas curtailments on the Portland airshed. It would be used to more exactly establish future SO<sub>2</sub> trends for the Portland area. If SO<sub>2</sub> emissions were to rise sometime in the future such that ambient air standards were in danger of being violated, then a clean fuels policy or some other control strategy could be considered at that time. But to "solve" a "non-problem" now by using precious low sulfur fuels would seem to be a significant waste of energy and money.

Moreover, the clean fuels policy would take effect in four years. Yet who can predict what the situation will be like then? I would suggest that when SO<sub>2</sub> levels become a problem, then that is the proper time to act.

In considering the question of whether or not ambient air SO<sub>2</sub> concentrations are in danger of violating standards, one must also keep in mind that the allowable levels of SO<sub>2</sub> in the air will very likely be increased in the near future. Oregon's annual standard is 25% stiffer than the federal standard. The federal standard was relaxed in 1973 because effects detrimental to health and welfare at the lower level could not be verified. In fact, there is still some controversy as to whether or not the increased federal standard is still too strict. In this light, then, it would appear even more certain that Portland does not have an

acute SO<sub>2</sub> problem, nor will it for some time.

Let me return to the question of an increased future SO<sub>2</sub> problem. During a recent three-day trip to the Chevron Research Laboratories of the Standard Oil Company of California in Richmond, California, I spoke with the head corporate planner and the man in charge of fuels research. Since then I have also contacted the Western Operations Marketing Manager. Their opinion, in light of the fact that oil is a limited, expensive resource, and that our government desires to decrease our dependence on foreign oils, coupled with a continually declining U.S. oil productivity, is that the total amounts of petroleum products available in the U.S. in the future will most likely not increase significantly. In fact, there is a strong likelihood that total supplies will decrease in years to come. What that suggests is that without overall increases in oil, the SO<sub>2</sub> problem here in Portland may very likely not get a lot worse than it is. And it isn't crucial now.

The question of control of SO<sub>2</sub> emissions from the Guilds Lake tank farm referred to earlier brings up another interesting point. While DEQ has specific control or rollback strategies to reduce levels of particulates and carbon monoxide, which definitely are problems in Portland, no such attention has been paid to SO<sub>2</sub>. Aside from the presently adopted fuels policy which restricted sulfur content at the time of the Oregon Implementation Plan in 1972, no rollback strategy has been set up to limit SO<sub>2</sub> emissions until this latest proposed cleaner fuels policy. Again, the reason is that

we have never had a really severe SO<sub>2</sub> problem.

In making these remarks, I would like to make it clear that I am not simply against reducing SO<sub>2</sub> levels in Portland. I would like nothing more than to reduce all pollution levels in our City. However, what is important here is that we be sure what we are getting is worth getting. And a cleaner fuels policy does involve tradeoffs of its own. It does reduce pollution, but at some considerable cost. Frankly, in this case, I do not believe it is worth the costs.

While not an economist, I would like to briefly address this question of costs. To do so I consulted the chief economist for Standard Oil of California. He was highly skeptical of the \$3.00 per person per year cost estimated for cleaner fuels in this area. San Francisco, and Los Angeles, where SO<sub>2</sub> emissions are rather high, have adopted a 0.5% sulfur rule, but in San Francisco the costs have been far in excess of what was expected due to a multiplier effect. Thus we might expect the costs to be much higher than predicted.

Even at the \$3.00 increased cost, the Portland schools, which have already been hit hard with large additional costs due to inflation will now be asked to pay roughly an additional \$400,000.00 for cleaner fuels. Where will they get that kind of money? And that is just one example.

As one who teaches air pollution courses and who is deeply committed to preserving and improving our air quality, I very much want cleaner air as I think we all do. Yet I still realize that we have to pay for these

things, and the gross effect of all the actions to clean up our air adds up to a lot of money. Already we are paying, and rightfully so I believe, to alleviate the more severe carbon monoxide and particulate problems here in Portland at a time when we are all being economically pinched harder than ever; isn't it best to concentrate on those problems that really deserve our efforts and money?

In addition to what I have already said, I would like to register a note of surprise with the DEQ proposal. It ties the clean fuels policy directly to the proposed Rivergate refinery. It would seem to me that if such a clean fuel policy has merit and is required, then it should be implemented whether or not a refinery exists in Rivergate or elsewhere in Oregon. We now have a low sulfur policy for distillates and yet we do not have any refineries.

In conclusion, then, while I am generally in favor of DEQ policies that will help alleviate an air pollution problem in Portland, I feel that DEQ has not shown that sulfur dioxide really is a serious problem pollutant in Portland, nor that it will be. Thus they have not shown that a clean fuels policy is really needed. While a clean fuels policy would undoubtedly be helpful, the anticipated costs would appear to outweigh the advantages. While no one would disagree with the fundamental goal of protecting the health of people, you as Environmental Quality Commissioners should be concerned about unnecessary and uneconomical overkill in regulations which severely limit the sulfur content of fuels or allowable sulfur dioxide emissions when ambient air quality is satisfactory. I, therefore, urge you to vote against the proposed fuels policy at this time.

February 19, 1975

George A. Tsongas, Ph.D.  
2922 N. W. 53rd Drive  
Portland, Oregon 97210

Dear Doctor Tsongas:

Chairman B. A. McPhillips asked that I respond to your comments on the proposed oil refineries and clean fuels policy which will be called to the attention of the Environmental Quality Commission when it deliberates these issues during the February 28, 1975 meeting.

Thank you for writing.

Cordially,

KESSLER R. CANNON  
Director

KRC:cm

MEMORANDUM

January 24, 1975

TO: Environmental Quality Commission

FROM: George A. Tsongas, Ph.D.

SUBJECT: Proposed Oil Refineries in Oregon

I would like to comment on the proposed air contaminant discharge permits for the three new Oregon refinery applicants. In particular, I would like to focus attention not on the permits themselves, or on future air quality tradeoffs, but rather on the question of the present and expected future air quality in Portland.

In that regard, the DEQ recently adopted a rule for approving new or expanded sources in the Portland Metropolitan Special Air Quality Maintenance Area. The rule restricts particulate and sulfur dioxide emissions from such sources, but, more importantly, it also restricts permits to those new or expanded industrial emitters that would not create violations of ambient air quality standards. Thus, the status of Portland's air quality now and in the future is of special importance in deciding upon permits for new air contaminant sources, and it is to that question that I would like to direct my remarks.

The primary air quality problem in Portland is the particulate problem; in fact, it has been the air pollutant of most concern here for a number of years. In 1972, the Oregon Clean Air Implementation Plan provided for a phased rollback strategy that would reduce the concentration of particulates in the ambient air and achieve compliance with national and state standards by June 30, 1975. Since the beginning of that plan, the DEQ staff has predicted the reduction of ambient concentrations of particulates to below the levels of the standards by the 1975 deadline. Yet it has been clear for some time that the rollback strategy has not been working as well as expected and that particulate levels would not be reduced below the levels set in the standards. Nonetheless, the DEQ continued to predict compliance in their March 1974 Report on Designation of Air Quality Maintenance Areas (see Table 3.1 of that report); by 1975 no violations of the annual standard were predicted to occur.

In examining the particulate ambient air quality data for 1970-1973 recorded at sixteen monitoring stations in Portland, four stations have recorded a

violation of the annual standard each year during 1970 to 1973 (Central Fire Station--the most critical downtown site, Industrial Air Products--Guilds Lake, Lakewood Grade School--Lake Oswego, and Pacific Motor Trucking--S. E. Portland). The 1974 results for those stations have just become available, and in all cases except one the annual standard was again violated, although some reduction from 1973 levels was achieved. At the Lake Oswego site, compliance was just barely achieved. However, examination of the trend of the data for the other three sites leads one to conclude that compliance will not be achieved there by June 1975. The below standard levels predicted for 1975 by DEQ are actually far from being achieved. In addition to violations of the annual standard, the short term 24-hour standard has been violated repeatedly at a large number of stations and will continue to be violated well into the future.

In fact, the Implementation Plan rollback strategy has not yet achieved its goals of clean air, and there is serious doubt as to whether compliance with the annual or 24-hour particulate standards can be achieved at any time in the near future in the Portland area. DEQ's own figures predict further violations of the annual and 24-hour standards in the late 1970's and on into the middle 1980's. Actually, the results of computer modelling of the Portland airshed available in an air quality impact assessment completed last August for Schneitzer Industries (done by Glen Odell Consulting Engineers) indicates that violations of the annual particulate standard will occur in 1975 under the present DEQ control strategy as well as through 1985, given either optimistic or pessimistic assumptions about growth in industrial emissions over the next decade. Unfortunately, the plain fact is that the DEQ does not know the cause of Portland's particulate problem. Furthermore, the answer to that major question does not appear to be forthcoming. Thus it is quite likely that particulate violations will continue to occur well into the future. Obviously the DEQ staff is not anxious to admit that such a situation exists, but exist it does.

What I am suggesting here is that the air quality with respect to particulates in Portland is worse than expected, and no change is in sight. In fact, ambient particulate levels are predicted by DEQ to begin to increase again. Hence, in view of the restriction in the Interim Policy cited earlier, the DEQ should not be considering the issuance of an air contaminant discharge permit to a refinery. Actually, DEQ's own figures and charts project particulate standard violations for 1979, the year the Rivergate refinery would begin operation, with or without any tradeoffs. Thus, no permit which would contribute to continued violations of State and Federal standards should be approved.

Some opinions of DEQ staff personnel regarding the Rivergate refinery are perhaps worthy of comment at this point. In a May 16, 1973, memorandum from Wayne Hanson, the CWAPA Deputy Program Director to R. E. Hatchard, the Program Director, Mr. Hanson stated regarding the proposed Rivergate refinery: "Presently the area exceeds the ambient air particulate standards. Although it



January 24, 1975

is projected compliance will be achieved by 1975 with new industries, the standard may be difficult to achieve if not impossible. All new industries in the area should be evaluated carefully....Considering only air quality aspects, the proposed facility should not be located in the Rivergate industrial park with the information we now have."

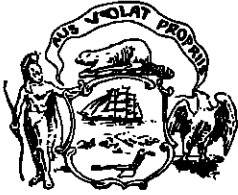
Another DEQ interoffice memo from Jack Payne to John Kowalczyk regarding the Rivergate refinery is also of interest. Mr. Payne stated: "It has been estimated that by 1975 the northwest industrial area will meet ambient air standards. This prediction is based on no new significant emission sources coming into the area. Unfortunately, from an air quality view, this will probably not be the case....In reviewing the refinery, it is apparent it is going to have a significant effect on the future of air quality in the northwest area of Portland."

Thus, on the grounds that particulate air quality standards will very likely be violated in 1979 and thereafter, the Rivergate refinery permit should be denied. At some time or another, DEQ and the EQC must face up to the fact that Portland has a severe particulate problem and that perhaps no new discharge permits can be granted for industries that emit large amounts of particulates. What is at stake is the health and welfare of the public. What right does DEQ have to jeopardize the health and welfare of the citizens of Portland by allowing further continued violations of its standards (not to mention State and Federal laws) just to allow growth of new industries? The standards have been continuously violated for years, and it appears that there is no end in sight to those violations. It seems to me that both DEQ and you as EQC members have to come to grips with this problem sooner or later. Why not now?

From time to time, I have heard the argument that DEQ is simply following a policy of allowing reasonable growth of Portland's industrial base. Yet, eliminating large industrial particulate polluters does not mean curtailing all growth. Certainly numerous cleaner industries can and will locate in Portland, not to mention expansion of existing industries. Hence, restricting the growth of highly polluting industries is by no means eliminating industrial growth in Portland.

In conclusion, then, I am suggesting that the expectation of continued violations of particulate standards well into the future means that the Rivergate refinery permit application should not be approved. Furthermore, the impact of the other two refineries on the stations in violation should also be assessed prior to granting those refineries permits. Their effect, while reduced to some degree relative to a Rivergate refinery, could nonetheless still be important.

GAT:si



COUNTY COMMISSIONERS  
M. JAMES GLEASON, Chairman  
DAN MOSEE  
BEN PADROW  
DONALD E. CLARK  
MEL GORDON

# Multnomah County Oregon

BOARD OF COUNTY COMMISSIONERS

(503) 248-3304 • ROOM 605, COUNTY COURT HOUSE • PORTLAND, OREGON • 97204

February 27, 1975

Chairman  
Environmental Quality Commission  
State Office Building  
Portland, Oregon

Dear Sir:

Be it remembered, that at a meeting of the Multnomah County Board of Commissioners held February 20, 1975, the following action was taken:

In the matter of declaring policy regarding )  
the proposed Rivergate oil refinery and ) RESOLUTION  
maintenance of air quality in the Portland )  
Air Quality Maintenance Area )

Commissioner Clark moved that the Board of Commissioners go on record as advising the Environmental Quality Commission prior to its February 28th meeting that no diminishment of current air quality in the community should be given by special permit to add additional pollutants to the air. Motion duly seconded by Commissioner Buchanan, and it is so

ORDERED, Commissioner Mosee and Commissioner Corbett voting

No.

Very truly yours,

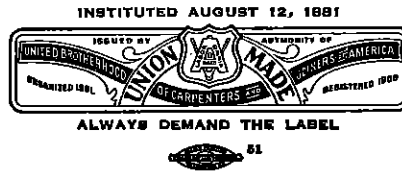
BOARD OF COUNTY COMMISSIONERS

BY Nancy W. Gilliam  
Clerk of Board

nwg  
cc: Kessler Cannon

LOCAL UNION NO. 2066

# United Brotherhood of Carpenters and Joiners of America



ST. HELENS & VIC., OREG., February 25, 1975

Department of Environmental Quality  
Northwest Region  
1010 N. E. Couch Street  
Portland, Oregon 97232

Attention: Kessler R. Cannon, Director

Gentlemen:

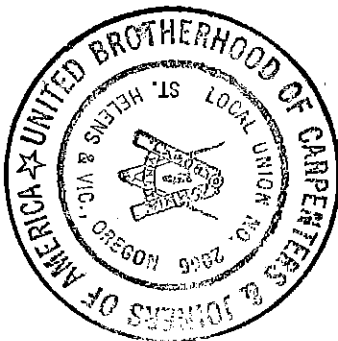
We are submitting this letter in relation to the application of the Charter Oil Company for a permit to build and construct an oil refinery near St. Helens, and also, the application for a refinery to be built near Rainier, Oregon.

The membership of Local Union 2066 unanimously voted the approval of the construction as it would have more diversified areas of employment for Columbia County.

In these days of increasing energy shortages we feel every effort possible should be made to increase production while retaining desired air quality controls.

Sincerely,

Albert Hamilton  
Recording Secretary  
Local Union No. 2066



MEMORANDUM TO MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

From: THOMAS GUILBERT

Re: Low-Sulfur Fuel Allocations, Significant Deterioration,  
and "Sulfates"

Due to the number of public hearings your agenda for January 24 contained, and due to the fact that my agenda did not permit my writing out my remarks prior to appearing before you, I am here summarizing briefly the most important points I made and authorities cited, and clarifying a related point which I understand from private conversations with you has become muddled by other testimony you received.

A. Fuel Allocation

The EQC cannot enforce its 0.5 percent sulfur fuel limitation if Frank Zarb or his successor determines Los Angeles needs the low-sulfur fuel produced by CIRI more than Oregon does. See §7(a) of the Energy Supply and Environmental Coordination Act of 1974 (ESECA) at 7 U.S.C.A. §793(a):

"§793. Protection of public health environment--  
Distribution of low sulfur fuel

(a) Any allocation program provided for in section 792 of this title or in the Emergency Petroleum Allocation Act of 1973, shall, to the maximum extent practicable, include measures to assure that available low sulfur fuel will be distributed on a priority basis to those areas of the United States designated by the Administrator of the Environmental Protection Agency as requiring low sulfur fuel to avoid or minimize adverse impact on public health."

See also 10 CFR, Part 215; the Emergency Petroleum Allocation Act of 1973, 7 U.S.C.A. §§751-756, especially at 7 U.S.C.A. §755(b); and the Federal Energy Administration Act of 1974, 7 U.S.C.A. §§761-786, especially at 7 U.S.C.A. §764. ESECA also gives the Federal Energy Administrator authority to force existing oil-burning plants to convert to coal even if the result would be a violation of the limitations of the state implementation plan. 7 U.S.C.A. §792.

B. Significant Deterioration

1. Background note of clarification: There seems to be widespread misunderstanding that under the EPA rules, Classes I, II, and III, apply, respectively, to very clean, moderately clean, and somewhat dirty airsheds. Actually, under the EPA rules, the zones are in no way tied to existing air quality. They designate only the amount of additional incremental deterioration the state air control agency has determined is appropriate for a region, based upon factors that may exclude entirely the existing air quality in the airshed. Moreover, if one purpose of nondegradation rules is to protect against as yet unknown harmful effects of pollutants at concentrations approaching the secondary standards, then prime candidates for Class I designation should be precisely those regions which have already deteriorated to the point that further degradation would risk deleterious effects.

2. An argument made in Commissioner Somers' December 20 call for the February 7 hearing regarding the Warrenton area was that to allow deterioration greater than the size of a Class I increment there would foreclose any future reasoned designation of the area as Class I. Without, for reasons stated before, commenting on the validity of that argument, it would appear that if it applies in Warrenton, it applies equally to the Rivergate area (where CIRI would locate). As the staff report notes, each of the three refineries which have applied for air contaminant discharge permits would use up either all or a large portion of the Class II-size increments in their respective areas, prejudicing not only later redesignation of these areas as Class I under EPA rules, but also the shape of any more rational rules the EQC may adopt pursuant to its November 22, 1974 resolution to develop significant deterioration rules.

3. Furthermore, since the staff report lacked baseline air quality data, it is not possible to assess whether staff is correct that none of the three refineries would exceed EPA significant deterioration limitations. The Class II increment is the limiting factor only when baseline air quality is greater than a Class II increment below the secondary standard, since the secondary standard is the absolute ceiling above which pollutant concentrations may not be allowed to rise. This calculation for sulfur dioxide in

Oregon is complicated by the fact that at the time Oregon's Clean Air Implementation Plan was adopted the national secondary ambient air quality standard for sulfur dioxide was 60 micrograms per cubic meter (rather than the present 80  $\mu\text{g}/\text{m}^3$ ), and was so adopted into OAR Chapter 340, Section 31-020(1) and the state implementation plan. By its approval by the EPA administrator, moreover, the 60  $\mu\text{g}/\text{m}^3$  in the state implementation plan became federal law in Oregon and beyond the power of the EQC to alter unilaterally.

C. "Sulfates"

The reason EPA changed its national secondary ambient air quality standard for sulfur dioxide from 60  $\mu\text{g}/\text{m}^3$  to 80  $\mu\text{g}/\text{m}^3$  was that accumulating data seemed to indicate that sulfur dioxide is not the danger that it was thought to be at the time Congress passed the Clean Air Act in 1970. However, indications are appearing that other sulfur compounds, imprecisely lumped under the term "sulfates," are much more dangerous than anyone had previously suspected. In §7(b) of ESECA, 7 U.S.C.A. §793(b), Congress required HEW, in conjunction with NIH and EPA, to study the health effects of sulfur oxides. The first EPA special task force study on what EPA refers to as "non-criteria pollutants" (but means sulfates) is due any day now. The National Academy of Sciences is conducting a special study for Senator

Jennings Randolph on sulfates, due March 15, 1975. A related EPA study of the effect of the Clean Air Act and Federal Water Pollution Control Act on utility customers' bills is due to be submitted to Congress by June 30, 1975. Finally, EPA is conducting an internal analysis of the effects on air quality of the use of automobile catalytic converters, which apparently produce sulfates in their operation.

All of the above studies are expected to reveal serious dangers of airborne sulfates. EPA's position will be that more studies need to be made before a numerical standard for sulfates can be set. This Congress, however, is not likely to be patient with EPA's projected 1979 or 1980 date for standard-setting, and might instead enact its own "safety" standard for sulfates, or for total sulfur (sulfur dioxide plus sulfates). The result might be the equivalent of a much lower national secondary ambient air quality standard than the  $80 \text{ ug/m}^3$  of sulfur dioxide (annual mean) than now exists. The ceiling is coming down, in other words. At the same time, if the expected findings concerning the sulfate production of catalytic converters are confirmed, we may learn of an as yet unaccounted for source of this dangerous pollutant. 1975 might bring the knowledge that Portland faces a sulfate crisis.

#### Conclusion

My testimony was not intended either to support or oppose either the proposed Clean Fuel Policy or the CIRI



permit application. Its sole purpose was to inform the Commission of the background of federal laws, existing and likely, against which it makes its decision on this matter. The EQC has jurisdiction over some aspects of both the Clean Fuels Policy and the permit application, but lacks the power to enforce other aspects due to federal preemption. I hope that my testimony has been helpful in clarifying where these respective areas are.

THOMAS G. P. GUILBERT

TGPG:ac

**COLUMBIA INDEPENDENT REFINERY, INC.**

P. O. BOX 1689 / PORTLAND, OREGON 97207

(503) 227-5698

P. O. BOX 3379 / HONOLULU, HAWAII 96842

Reply to Portland  
4 February 1975

BY MESSENGER

Environmental Quality Commission  
1234 S.W. Morrison  
Portland, Oregon 97204

Commissioners:

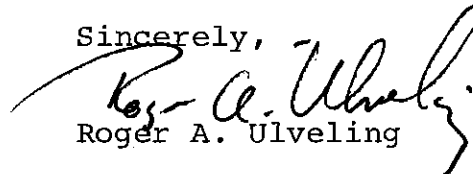
By this letter we are transmitting six copies of Columbia Independent Refinery Inc.'s supplemental written testimony which responds to the testimony given directly on the refinery at the public hearing held January 24, 1975. Our responses do not relate to testimony on the Clean Fuels Policy. In addition, we are submitting six copies of the complete environmental assessment for your use.

Adhering to the rule established by Chairman McPhillips that the record would remain open for ten days and that written testimony would be accepted during that period, the final date for acceptance of testimony being determined by your hearings officer, Mr. McSwain, as February 4, 1975, we are submitting responses to the testimony of January 24, 1975 only. While we recognize additional questions may be raised by testimony submitted during this ten day period, CIRI would be pleased to respond to any questions on the part of the commission not covered in the attached supplemental testimony.

Columbia Independent Refinery, Inc. sincerely believes that its proposed refinery meets all Oregon environmental standards. Consequently, we look forward to a favorable decision by the Environmental Quality Commission with regard to our permits at your meeting on February 28, 1975.

If you have questions on any aspect of our presentation, supplemental testimony, or, in fact, on any aspect of this project, we would be pleased to respond.

Sincerely,



Roger A. Ulveling

Enclosures

cc: DEQ, N.W. Region, w/o assessment  
Paul C. Joy, Pacific Resources, Inc., w/o assessment

m

SUPPLEMENTAL WRITTEN TESTIMONY

in Response to Testimony Presented at the

Oregon Environmental Quality Commission Public Hearing

Held in the Second Floor Auditorium, Public Service Building

920 S.W. Sixth Avenue Portland, Oregon

on January 24, 1975

Submitted to: Oregon Environmental Quality Commission

Submitted by: Columbia Independent Refinery, Inc.

February 4, 1975

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COLUMBIA INDEPENDENT REFINERY, INC.  
SUMMARY STATEMENT

When Pacific Resources, Inc. (the parent company of Columbia Independent Refinery, Inc.) came to Oregon several years ago to examine the feasibility for construction and operation of its proposed refinery, it was guided by two major and closely interrelated criteria. The refinery had to be efficient (economically viable) and had to be a good corporate industrial citizen. The site selection was a major determining factor in both criteria, especially to minimize possible adverse environmental impacts.

Nine sites between Astoria and Portland were examined. No site was perfect from all points of view. Since the potential air quality problem, with regard to CIRI, can be mitigated through a "trade-off" which should improve air quality and/or make room available for additional growth, and since the Rivergate site is best from the aspects of other environmental considerations, project economics, and social benefit, Pacific Resources chose the Rivergate site.

The proposed process scheme for Columbia Independent Refinery was developed to meet the needs of Oregon and the Columbia River Basin. Quantities of specific fuels can be varied to some extent. Both .5 percent and 1.75 percent sulphur by weight residual oil can be produced from the same facility, thereby enabling the needs, not only of the Portland metropolitan area, but of other locations within the State as well, to be met without imposing an economic disadvantage on the areas of the State that do not have an air quality problem similar to Portland's. As Mr. Pelletier, Executive Vice President of our parent company, Pacific Resources, Inc., indicated in his remarks before you at the January 24, 1975 public hearing, the same fraction of the barrel can be used for a variety of purposes, such as feedstock for a synthetic natural gas plant, unleaded gasoline, or military-type jet aircraft fuel. The process scheme allows some flexibility in product mix but market demands will dictate quantities of each type of product. It is our Company's policy to attempt to supply the most critical items first. Columbia Independent Refinery has not examined export markets, either domestic or foreign. Columbia Independent Refinery is being designed to supply the needs of Oregon and the Columbia River Basin. The equipment necessary to meet these needs will be installed.

Under the "Interim Policy" adopted by the Environmental Quality Commission, in October, limits of 430 tons of particulate and 1,430 tons of sulfur dioxide were established for new industry or expansion of existing industry. Twenty-five percent of those limits or 107 and 357 tons respectively, after allowing for trade-off, were established for any one source. Columbia Independent Refinery complies with the "Interim Policy". CIRI does not exceed the 107-ton limitation on particulate nor does it exceed, after trade-off, the 357-ton limit on SO<sub>2</sub>. To accomplish this necessary trade-off, DEQ has indicated in its staff report that a reduction from the effective sulphur content of residual fuel of 1.4 percent sulphur by weight, to a level of 1.3 percent sulphur by weight would be sufficient.

Prompt issuance of permits is important to assure the viability of the various refinery projects. Permits for all refineries should be issued on the same timing so as not to give a commercial advantage to the refinery receiving its permits first. The reason for this is that while there appears to be sufficient market for the proposed refineries, it would enable the refinery getting permits first to tie up all of the most desirable customers. Prompt approval of permits is desirable because it enables domestic crude acquisition activities to commence. This, in turn, will permit engineering and construction to begin at the soonest possible date.

CIRI Response to Testimony  
Presented at EQC Public Hearing  
on January 24, 1975

CIRI Response to Testimony  
of United Steelworkers of America

As a result of a meeting between representatives of the United Steelworkers of America, DEQ staff, and CIRI on January 29, 1975, the United Steelworkers of America have decided to withdraw their January 24, 1975 opposition to the proposed CIRI refinery project.

CIRI Response to Testimony  
of Thomas Gilbert

The attached letter to Mr. Roger A. Ulveling (CIRI) from Mr. Gerard K. Drummond (Rives, Bonyhadi & Drummond Attorneys) dated January 31, 1975 clearly rebuts the presentation by Mr. Thomas Gilbert on January 24, 1975.



RIVES, BONYHADI & DRUMMOND

ATTORNEYS AT LAW

1400 PUBLIC SERVICE BUILDING  
920 SOUTHWEST SIXTH AVENUE  
PORTLAND, OREGON 97204

TELEPHONE 224-3920  
AREA CODE 503

GEORGE D. RIVES  
ERNEST BONYHADI  
HUGH SMITH  
GERARD K. DRUMMOND  
ROBERT F. HARRINGTON  
CHARLES H. HABERNIGG  
HARDY MYERS, JR.  
DEXTER E. MARTIN  
LEONARD A. GIRARD  
RICHARD D. BACH  
GEORGE K. MEIER III  
PATRICK J. SIMPSON  
WILLIAM J. GLASGOW  
IVAN LEWIS GOLD  
MARK H. PETERMAN  
DENNIS BROMKA  
RICHARD A. HAYDEN, JR.

January 31, 1975

ALLAN A. SMITH  
(885-1972)

Roger A. Ulveling  
Project Coordinator  
Pacific Resources, Inc.  
200 S. W. Market Street  
Portland, Oregon 97207

Dear Roger:

You have requested that we review a transcript of the testimony of a Thomas Gilbert, lawyer, who purported to represent himself before the EQC hearing on January 24, 1975.

Mr. Gilbert cited legal authorities supporting, he alleged, the proposition that the Commission had no power to ensure that low sulphur fuels to be produced by Columbia Independent Refinery, Inc., would be burned in Oregon. You have asked us to review the authorities cited by Mr. Gilbert and give you our comments.

Specifically, Mr. Gilbert testified before the EQC that the Commission is unable "to make sure that low sulphur fuel is burned in Oregon" by reason of the Emergency Petroleum Allocation Act of 1973, the Federal Energy Administration Act of 1974, the Energy Supply and Environmental Coordination Act of 1974, and Title 32A CFR, Ch. 13.

Mr. Gilbert asserted that the Emergency Petroleum Allocation Act states that "the Federal Energy Administrator can take any fuel produced and send it any place he wants." That Act, which once required the President to implement a rationing system for petroleum products, provides that the regulations pursuant to which the FEA must act, must provide to the maximum extent practicable for equitable distribution of residual fuel oil among all regions and areas of the United States, economic efficiency and minimization of economic distortion and unnecessary interference with market

Roger Ulveling  
January 31, 1975  
Page Two

mechanisms. Thus, even assuming supremacy of the Federal Energy Administrator, it is highly unlikely that action taken by the Federal Energy Administrator would disturb existing contracts entered into for the sale of low sulphur residual fuel from CIR to Oregon users in order to transport those fuels to users elsewhere in the country. Such transfers would disturb market mechanisms and would create economic distortion if Oregon users would be deprived of fuels for the benefit of, for instance, the California market. Quite obviously, the Act does not permit arbitrary administrative action, as is implicit in Mr. Gilbert's statement. In any event, the regulations adopted by the Administrator under the Emergency Petroleum Allocation Act will expire on February 28, 1975.

Mr. Gilbert states that the Energy Supply and Environmental Coordination Act of 1974 states "that the Federal Energy Administrator may require any firm in the Portland area or any place else in the United States that is currently burning petroleum to convert to coal if he wishes." Section 2, the coal conversion and allocation provision of that Act, provides that the Federal Energy Administrator may prohibit any major fuel burning installation from burning petroleum products as its primary energy source if the Federal Energy Administrator determines that such installation, on the date of enactment of that Act, had the capability and necessary plant equipment to burn coal and if certain other requirements of the Act are met. We are unaware of any major fuel burning installation (including any power plant) in this region currently burning petroleum products that has the necessary plant equipment to burn coal. Thus, even assuming the availability of sufficient coal supplies in this region, as a matter of law, the Federal Energy Administrator would not be able to force conversion to coal under the current terms of the Act within the Portland area.

Mr. Gilbert also refers to Title 32A CFR, Ch. 13. This regulation was recodified at Title 10 CFR, Part 215 (Low Sulphur Petroleum Products Regulations) in May of 1974. It was originally adopted under authority of the Economic Stabilization Act of 1970 (which expired April 30, 1974) and was extended by virtue of the Emergency Petroleum Allocation Act. It was designed to merely affect the timing of shifts to a clean fuels policy, and is only applicable to power generating plants or commercial plants having a total firing rate of 50 million BTU/hour or more. Thus, the regulation is, as a practical matter, inapplicable to the Portland area, and in any event, the authority under which it was adopted will expire on February 28, 1975.

Roger Ulveling  
January 31, 1975  
Page Three

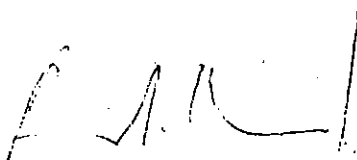
Mr. Gilbert also made a statement about EPA's "no significant deterioration" regulations. As far as we can determine, he suggested that permitting the CIRI refinery in the area proposed would somehow preclude the EQC from redesignating this area as Class I under the regulations, or that the refinery might somehow not be permitted in a Class II zone.

Class I areas are those having special values to be protected, in which little deterioration in air quality will be permitted. It is inconceivable that any metropolitan area could be considered as suitable for a Class I designation.

A Class II designation permits a specific increment of deterioration, so long as ambient standards are not exceeded. Thus, as long as the refinery does not violate the ambient standards, it will be permitted under the EPA regulations in a Class II zone, which is the initial designation of this area.

Thirdly, contrary to Mr. Gilbert's statement, measurement of the area baseline is immaterial. EPA itself has stated that a measured baseline is not meaningful in view of large random variations in background concentrations, and that an accurately measured baseline is not an essential consideration.

Very truly yours,



Gerard K. Drummond

GKD/kw

CIRI Response to Testimony  
of Multnomah County (Mr. Lee)

It is our understanding that this statement was not made by authority of the Multnomah County Commissioners.

Furthermore, the representation that the CRAG Board of Directors has adopted procedures for the designation of areas and activities of critical regional concern is incorrect. The CRAG Directors did not act on the procedures at the meeting referred to. In any event, the adoption of procedures for the future adoption of Regional Goals and Objectives (and the designation of areas of critical regional concern) and a Regional Comprehensive Plan do not constitute the adoption of substantive standards for review. These substantive standards will only be adopted after public hearings and input from all of the affected governmental entities. Although the CRAG staff may give advisory opinions as to compliance with the CRAG Interim Development Policy (IDP), these have no legal effect.

QUESTION: Does the proposed refinery project meet the CRAG, LCDC, and the Lower Willamette River Management Plan guidelines and proposals for land development?

ANSWER: The proposed facility conforms to CRAG plans and to the Lower Willamette River Management Plan. The LCDC has not made a specific finding with respect to CIRI but it appears that CIRI conforms to the LCDC goals and guidelines. See pages 47 through 57 of the Environmental Assessment for further elaboration.

QUESTION: Will the proposed CIRI refinery create a good use of the limited industrial land and limited air shed of the Rivergate area (i.e., will this project provide the most value or jobs per acre)?

ANSWER:

The plans, policies, and zoning for Rivergate indicate what the public thinks is a "good" land use. The project conforms to these and must, therefore, be assumed to be a "good" use of the land. As recently as January 21, 1975, the Port reaffirmed its policy of encouraging capital intensive, water-oriented industry in Rivergate.

With respect to air quality, the EQC has adopted interim guidelines for granting air contaminant discharge permits. If CIRI can meet these guidelines, then presumably its discharges are a "good" use of the air shed.

QUESTION:

Will the CIRI oil tankers transiting the Columbia and Willamette Rivers be of a size relatively uncommon to these waters?

ANSWER:

Ships with drafts of greater than 30 feet are common in the Portland area. Columbia River Pilots' records show that 1,004 transits of vessels with a draft of 30 feet or greater were recorded in 1974. Vessels with drafts of 38 feet or more (such as CIRI tankers) are not as common (eight ships in 1972).

As stated on pages 251 through 252 of the Environmental Assessment:

"The Columbia River Pilots were asked to comment on navigational problems they foresee with these larger ships:

"It is the opinion of the Columbia River Pilots, based on experience, that tankers of from 800 to 1,000 feet in length with a deep draft of not more than 38 feet 6 inches may, under foreseeable conditions, safely transit the Columbia River from sea to Rivergate in Portland without serious delays.

"With draft of from 38 feet 6 inches to 41 feet, transiting is generally possible under certain conditions of freshet and tide provided that the time of transit is controlled by the bar and river pilots.

"This opinion is offered on the assumption that the Corps of Engineers will continue its maintenance dredging program at approximately 45 feet in the 40-foot project area and that they will remove, as scheduled by 1976, the small 37-1/2-foot rock pinnacle at Warrior Rock near St. Helens, Oregon."

QUESTION:

Will the risk for potential major oil spills be significantly increased if the CIRI oil tankers are not equipped with double hulls?

ANSWER:

Available evidence does not support the conclusion that the Columbia and Willamette Rivers will be exposed to greater potential damages with use of single-hull rather than double-hull tankers. A review of tanker groundings and tanker collisions indicate that double-hull vessels are not effective in severe impact accidents. In such cases, the amount of oil released to the aquatic environment would be roughly the same for both single-hull and double-hull vessels.

Tanker ruptures and subsequent oil releases from groundings usually result when ships hit rock; problems are further compounded by heavy seas and wave action. Tankers running aground outside the channels maintained by the Corps of Engineers in the Columbia and Willamette Rivers would likely ground in mud before hitting rock. Wave action common in open seas and unprotected areas is also not present in the rivers.

CIRI Response to Testimony  
of Sharon Roso

QUESTION:

Is the anticipated future level of particulate emissions a more critical problem than SO<sub>2</sub> emissions?

ANSWER:

Yes. The annual average suspended particulate levels in the northwest industrial area and downtown are predicted to exceed standards in the late 1970's. The short term, 24-hour average, standards are already being exceeded. The Clean Fuels Policy is predicted to reduce particulate emissions by 2.6 percent. Recent data indicates that the large reduction in SO<sub>2</sub> emissions will further reduce suspended particulate levels by a reduction in the formation of sulphate particulate.

QUESTION:

Is the Clean Fuels Policy warranted when its benefits will be spread over a three-county area while the impact of CIRI will remain in the North Portland and downtown areas?

ANSWER:

The DEQ staff has determined that a majority of the residual fuel consumed in the greater Portland area is consumed in Northwest Portland and downtown. Thus, the effect of the Clean Fuels Policy will be to reduce emissions in these areas: the same areas which are impacted by CIRI during northwest winds. The trade-offs are such that there will be a net reduction in ambient levels in these areas.

CIRI Response to Testimony  
of Citizens for State Planning (Joyce Tsongas)

QUESTION:

Has CIRI explored the possibilities of marketing its products in foreign markets and domestic markets--other than in just Oregon, southern Washington, and western Idaho?

ANSWER:

CIRI chose the Portland location for a refinery because in terms of petroleum products this area is an island or pocket market. The 40-foot Columbia River channel limits the size of tankers which can transit the river. CIRI sees itself as serving the market defined by Oregon and the Columbia River Basin. The cost of shipping products out of the Portland refinery to other West Coast port areas which already have refineries would make it impossible to economically compete in those areas. Tankers large enough to economically transport products abroad cannot transit the 40-foot channel of the Columbia River. For these reasons, CIRI has not explored the possibilities of marketing its products in other domestic markets or foreign markets, but instead has geared processes to serving the market defined by Oregon and the Columbia River Basin.



CIRI Response to Testimony  
of Al Shiel

QUESTION:

Would CIRI consider establishing a 250-foot setback along the Columbia Slough and assist various governmental bodies, as well as bear a portion of the costs, to open, cleanup, and dike the Columbia Slough? Also, would CIRI assist various governmental bodies, as well as bear a portion of the costs, to improve area roads (such as Swift Boulevard and the route from the CIRI refinery to the St. Johns Bridge), so as to become an asset to the North Portland area?

ANSWER:

It is the policy of CIRI to comply with development standards established by the landlord and regulatory agencies. The property line of the leased area is set back 50 feet from the Columbia Slough. It is CIRI's understanding that this 50-foot setback or buffer strip along the slough is in conformance with the CRAG Interim Development Policy (IDP).

QUESTION:

Has extensive planning been done by Multnomah County, CRAG, or the State regarding development of Rivergate?

ANSWER:

Refer to CIRI Response to Testimony of Multnomah County.

CIRI Response to Testimony  
of Oregon Clean Water Project (John Frewing)

QUESTION: Will the CIRI refinery require a carbon adsorption treatment process to meet DEQ's effluent guidelines on organic hydrocarbons (phenols) and to ensure against fish tainting problems in the Willamette River?

ANSWER: CIRI's NPDES permit application indicates that the plant's effluent will meet all DEQ and EPA standards without use of a carbon adsorption unit.

QUESTION: Will there be a net decrease in Columbia River oil tanker traffic as the result of the proposed CIRI refinery project?

ANSWER: Given expected conditions of 1979, a net reduction in Columbia River oil tanker traffic is anticipated. See pages 251 through 252 of the Environmental Assessment for further elaboration.



**DEPARTMENT OF  
ENVIRONMENTAL QUALITY**

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5301

February 4, 1975

Mr. Thomas C. Donaca  
Counsel  
Associated Oregon Industries  
2187 S. W. Main Street  
Portland, Oregon 97205

Dear Tom:

Thank you for your letter commenting on the proposed maximum sulfur content of residual fuel oils. As I recall, these are essentially parallel to the oral testimony you offered at the public hearing, and the letter will become part of the record of that hearing.

I expect the Commission to take action at the February 28 meeting which will be in Eugene. Best wishes.

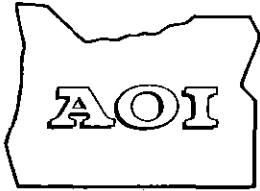
Cordially,

KESSLER R. CANNON  
Director

KRC:cm

cc: ✓ Peter McSwain  
Wayne Hanson

COPY



## ASSOCIATED OREGON INDUSTRIES

2187 S.W. MAIN STREET • PORTLAND, OREGON 97205 • 227-5639

*Ivan Congleton, executive vice president*

January 31, 1975

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
**RECEIVED**  
FEB 4 1975

Mr. Kessler Cannon, Director  
Department of Environmental Quality  
1234 S. W. Morrison Street  
Portland, Oregon 97205

**OFFICE OF THE DIRECTOR**

Re: Public Hearing before the Environmental Quality Commission --  
Reduction in Maximum Sulfur Content of Residual Fuel Oils

Dear Mr. Cannon:

We are submitting this letter for inclusion in the record of the above hearing and it closely parallels the verbatim testimony given by me before the Commission at the hearing on January 24th.

We believe that the historic use and growth of use of residual oil is a less than accurate method for projecting future sulfur dioxide emissions. This is because the shortage of fuels, coupled with substantial increased cost, plus voluntary conservation, will reduce consumption which will alleviate the proposal. As we understand the Department of Environmental Quality's projection of violations of national secondary ambient air standards, they now project violations in 1982. We also believe that over the next few years, particularly if you receive an appropriation from the Oregon Legislature due to air quality monitoring, that you will have much more accurate information upon which to base sulfur dioxide standards than any information which is currently available to you now.

In view of the above we believe that the sulfur dioxide projections may be overstated.

There is indeed an energy shortable which may last for some period of time, perhaps forever, and in view of this uncertainty we are concerned that the rule as proposed may make our energy options very restrictive.

In view of the above we would propose as an alternative that the proposed rule, Chapter 340, Section 20-010, Residual Fuel Oils the following substitutions:

The Environmental Quality Commission intends to reduce the sulfur by weight in residual fuel oils by January 1, 1979 to a level

Mr. Kessler Cannon  
Page 2

determined to be necessary in the light of all environmental, technical, and energy considerations, but not to exceed 0.5% sulfur by weight. Final determination of the sulfur by weight percentage shall be determined, after public hearing by the Environmental Quality Commission, on or before July 1, 1978.

If the substitution suggested above is acceptable to the Commission, we would ask that in view of the gravity of supply situation together with the changing technical information that the issue should be subject to review every year by the Commission prior to the effective date of the proposed rule January 1, 1979. We would suggest that the the September meeting of the Environmental Quality Commission in 1976, 1977 and 1978 would be the appropriate times for such a review.

I appreciate your consideration of our request.

Cordially,



Thomas C. Donaca  
Counsel  
for Associated Oregon Industries  
Air Quality Committee



## DEPARTMENT OF ENVIRONMENTAL QUALITY

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 2295301

February 4, 1975

Mr. Henry McCarthy  
Secretary  
Metal Trades Council of  
Portland and Vacinity  
304 Portland Labor Center  
Portland, Oregon 97201

Dear Mr. McCarthy:

Thank you for your letter lending the support of the Metal Trades Council of Portland and Vicinity to the permit application of Columbia Independent Refinery, Inc. Your comments will be called to the attention of the Environmental Quality Commission to be made a part of the hearing record.

The Commission expects to take final action at the February 28 meeting which will be held in Eugene. Best wishes.

Cordially,

KESSLER R. CANNON  
Director

KRC:cm

✓cc: Peter McSwain

COPY

# METAL TRADES COUNCIL OF PORTLAND AND VICINITY

304 PORTLAND LABOR CENTER ★ PORTLAND, OREGON 97201 ★ 224-5023 - 224-5024

AFL-CIO



January 30, 1975

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED

FEB 4 1975

OFFICE OF THE DIRECTOR

Environmental Quality Commission  
1234 S.W. Morrison Street  
Portland, Oregon 97214

Dear Sir:

The Public Hearing with regard to the proposed "Clean Fuels Policy" and Columbia Independent Refinery, Inc. held on January 24th, 1975, was closed prior to our being able to submit our testimony. Chairman McPhillips indicated that the record would be held open for 10 days. We are submitting our comments in this letter for the record.

The Department of Environmental Quality has indicated that the Clean Fuels Policy is necessary both in terms of approving projects now, which will help to bolster the economy, and in allowing room for growth to maintain a health economy. They further indicated in their staff report that Columbia Independent Refinery, Inc. meets all regulations in terms of water and air quality.

Because Columbia Independent Refinery, Inc. would add a significant number of jobs in the ship building and ship repair industry and also the manufacturing of pumps and pipe over the next two to three years, and because continued delays in approval of the project delay the date at which construction can first get started, I urge you and speaking for the members of the 30 local unions which the Portland Metal Trades Council represents, we urge you to approve Columbia Independent Refinery, Inc. and the accompanying Clean Fuels Policy.

Sincerely yours,

METAL TRADES COUNCIL OF  
PORTLAND AND VICINITY

Henry McCarthy, Secretary

HM:mb  
pocu #11  
af1-cio  
cc: Dept of Environmental Quality  
NW Region - 1010 NE Couch St.  
Portland, Oregon 97232



**DEPARTMENT OF  
ENVIRONMENTAL QUALITY**

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5301

February 5, 1975

Mr. D. H. Lomax  
Vice President  
Liquid Air Inc.  
3200 N. W. Yeon Avenue  
Portland, Oregon 97210

Dear Mr. Lomax:

Your letter and comments relative to Columbia Independent Refinery, Inc., and the proposed Clean Fuels Policy has been received and will be made part of the record. The members of the Environmental Quality Commission have been advised of your position, and I expect the Commission to take final action on the issue at the February 28 meeting which will be held in Eugene. Best wishes.

Cordially,

KESSLER R. CANNON  
Director

KRC:cm

✓cc: Peter McSwain

COPY





# LIQUID AIR INC.

3200 N.W. Yeon Avenue · Portland, Oregon 97210 · (503) 224-4321

January 27, 1975

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
**R E C E I V E D**  
FEB 4 1975

The Environmental Quality Commission  
1234 S. W. Morrison  
Portland, Or. 97214

**OFFICE OF THE DIRECTOR**

RE: Public Hearing - January 24, 1975 on proposal of Columbia Independent Refinery, Inc., (CIRI) and Clean Fuels Policy

Gentlemen:

Columbia Independent Refinery Inc. is a projected \$140,000,000 development to be located on a 225 acre site in the Rivergate Industrial District in North Portland. CIRI is a subsidiary of Pacific Resources Inc. a Honolulu based holding company involved in importing, manufacturing and distributing energy throughout Hawaii and the Pacific basin.

Columbia Independent Refinery, Inc. has requested that the Department of Environmental Quality issue an Air Contaminant Discharge Permit as a petroleum refinery in the Rivergate area. Our company supports the application of CIRI and we urge that the Commission proceed expeditiously with the issuance of the aforesaid permit.

Our support of the CIRI application is based upon the following conclusions:

1. The Portland Metropolitan area must obtain a facility such as proposed by CIRI in order to have a source of clean fuels available to this locality. The Medford and San Francisco area to the south had a sufficient supply of fuel available to them during the recent crisis while the Portland area and industries located in this area were severely limited in supply.
2. Low sulphur content fuel should be made available locally because as of the present time these fuels are being consumed by our neighbors to the south while they are sending to our locality high sulphur content fuels.
3. The Department of Environmental Quality established a rule on criteria for approval of new air contaminant sources in the Portland Metropolitan special air quality maintenance area, and we believe that Columbia Independent Refinery, Inc. has met the criteria established in that rule.

The Environmental Quality Commission

RE: Public Hearing - January 24, 1975 on proposal of Columbia  
Independent Refinery, Inc., (CIRI) and Clean Fuels Policy  
January 27, 1975

Page Two

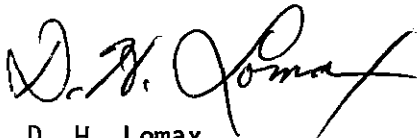
However, and in conclusion, our company would urge the Environmental Quality Commission to adopt a low sulphur fuel policy which would allow the CIRI refinery to meet special air pollution standards. We further believe that it is not necessary for the Environmental Quality Commission to consider reducing the Department's maximum sulphur residual fuel oil limitation from 1.75% to 0.5% in the Portland Metropolitan area.

Rather, we believe that the Department should consider reducing the Department's maximum sulphur content residual fuel oil limitation from 1.75% to 1.3% in the Portland Metropolitan area, which as I understand the requirements of the policy is sufficient to accommodate CIRI.

The addition of the petroleum refinery to the Rivergate Industrial area will benefit the entire community as well as the State. Certainly, the benefit will be in obtaining low sulphur fuels. Our company heartily endorses the proposal submitted by CIRI and we urge the Environmental Quality Commission to grant the necessary permit without any further delay.

Sincerely,

LIQUID AIR INC.



D. H. Lomax  
Vice President

DHL:mr

cc: Department of Environmental Quality  
Northwest Region  
1010 N. E. Couch  
Portland, Or. 97232

RECEIVED

FEB 10 1975

February 4, 1975

OFFICE OF THE DIRECTOR

TO: Environmental Quality Commission

FROM: Joyce Tsongas  
2922 N.W. 53rd Drive  
Portland, Oregon 97210

SUBJECT: DEQ Air Contaminant Discharge Permit for Columbia Independent Refinery, Inc.

The following statement regarding the proposed CIRC Rivergate refinery was prepared on behalf of the Citizens for State Planning, a group of approximately 300 Oregonians who are interested and involved in various aspects of land use planning and who are concerned with issues and decisions which affect land use policies in Oregon. Comments in this statement will focus on three points:

- I. Initial DEQ reactions to the Rivergate refinery site,
- II. The present DEQ position on the Rivergate facility and the Clean Fuels Policy,
- III. Specific suggestions regarding the Rivergate permit application and the Clean Fuels Policy.

I. Initial DEQ reaction to the Rivergate refinery was very negative. In an office memorandum dated May 16, 1973, DEQ Deputy Program Director Wayne Hanson stated that because of air quality impacts of particulates, NO<sub>x</sub>, Oxidant, SO<sub>x</sub>, and odors, no refinery should be located at Rivergate. Mr. Hanson said, "Considering only air quality aspects, the proposed facility should not be located in the Rivergate industrial park." It is interesting to note that initial DEQ assessment of the Rivergate emissions were based, at least in part, on "data supplied by Ed Westerdahl, II, Executive Director, Port of Portland." That fact was noted by DEQ staff engineer Harold Berkitt dated May 9, 1973. The Port has been an outspoken proponent of the Rivergate facility, but air discharge figures they supplied to the DEQ failed to convince the agency that a permit should be granted.

Over a year later the DEQ position on granting a discharge permit to CIRC appeared to be unchanged. According to The Oregonian, August 7, 1974, on July 29, 1974, Kessler Cannon informed CIRC that its permit application to locate in Rivergate would be denied. In a letter, he told the refinery people they were wanted in Oregon but that the DEQ "...did not feel it was possible for them to buy their way in with promises to reduce future emissions." A subtle but very real policy decision seemed to have been made by the DEQ at that point. They seemed to have been operating under the assumption that Oregon wants refineries--a decision which would seem beyond the scope of the DEQ's decision making powers.

Shortly after rejecting the CIRI permit application, Mr. Cannon sent a note to Larry Williams, Executive Director of the Oregon Environmental Council, reiterating the DEQ rejection when he said, "... (the DEQ) staff has no intention of changing our position--the refinery is badly placed--we'd like to have clean fuel produced in Oregon but think the option should be other than in Rivergate." Another subtle DEQ policy decision should be noted in that statement. The agency seemed to have accepted the concept that Oregon needs clean fuels and that those fuels should be produced in the state. Yet in reaching that decision the DEQ did not show that SO<sub>2</sub> is a critical problem in Portland or that such fuel could not be made available to the Oregon market from other areas.

Air quality considerations were of such significance that another refinery applicant rejected the Rivergate site primarily on that basis. Charter Energy Refinery, in their Environmental Impact Assessment, said they gave serious consideration to three sites. They made the following conclusion about the Rivergate site: "The Rivergate site turned out the best of the three, except that Oregon's Department of Environmental Quality ambient air quality standards are often exceeded in the Rivergate area. This was considered to be a negative factor of sufficient weight to cause the Rivergate site to be dropped from further consideration."

II. Within a period of approximately three months, the DEQ completely reversed its initial rejection of the Rivergate refinery permit. The DEQ recommended doing precisely what Mr. Cannon had said three months earlier it would not do; issue a permit based on a clean fuels policy and air quality tradeoffs. The circumlocution and euphemistic language used by the DEQ in a memorandum to the EQC dated November 22, 1974, is incredible, "... a new clean fuels regulation would be needed in order to approve one of the refineries to assure tradeoffs needed to meet the criteria of the new rule for approval of new air contaminant sources in the Portland Metropolitan area." Restated in clearer, more straightforward language, the memorandum might read: We need to require people in the Portland area to use low sulfur fuel to help offset the refinery's detrimental effects on the City's air quality. Certainly a state with Oregon's reputation for environmental concern is capable of better planning than to locate a refinery next to the state's largest population center and to require its residents to use more expensive fuels to subsidize the presence of that refinery.

Not only will Portland area residents be asked to pay an environmental price for the refinery, but they will be asked to assume the cost of the proposed Clean Fuels Policy as well. According to the DEQ Staff Report on the Clean Fuels Policy, the total costs to the affected area would be \$4.3 million per year or \$3.00 per capita per year. I made some simple calculations based on a breakdown of residual fuel users in the area which indicated that costs to groups in the area would be the following: Industry--\$1,039,000; Commercial establishments--\$1,906,667; Schools--\$433,333; Apartments--\$866,666. I was told by an economist that those figures are, if anything, conservative because of an economic rule called the multiplier effect which would push cost estimates even higher.

The fuels policy and related tradeoff concepts contain what appears to be at least one major inconsistency. The Air Contaminant Discharge Permit for the refinery requires the Rivergate facility to, "...make available for sale after January 1, 1979, in Multnomah, Washington, and Clackamas counties within the State of Oregon at least 10,000 barrels per day of residual fuel oil with a maximum sulfur content of 0.5 percent by weight." However, the DEQ staff report on the Rivergate refinery permit prepared for the January 24, 1975 EQC hearing states, on page two, that the possible average production rate for the plant per day would include 6,600 barrels of low sulfur residual fuels. I attempted to trace the origin of the 6,600 figure. Mr. Ulveling of CIRI said that the DEQ had made an erroneous calculation by assuming that half of the low sulfur fuel production capability of the plant as it is presently designed, would be its average projected daily production. Mr. Jack Payne, of the DEQ staff, said he took the 6,600 figure directly from a figure quoted to him by Mr. Ulveling. Mr. Payne said further that the refinery people gave the DEQ more specific production figures on low sulfur fuel, but that they were confidential and proprietary. The public does not have access to those figures because of "marketing considerations" for CIRI.

Since further analysis is obviously impossible, let's take this figure at face value. The company, by it's own figures, anticipates marketing an average of 6,600 barrels per day of low sulfur fuel in the Portland area. Thus we could assume that 4,400 of the anticipated area need of 10,000 barrels per day would be marketed in the Portland area by other companies.

The entire tradeoffs idea and figures give the refinery "credit" for producing all 10,000 barrels per day of the low sulfur fuel used in the Portland area, and yet it is unlikely that all of the clean fuel used here would be produced by CIRI. In terms of the 6,600 production estimate, the refinery would be unnecessary 44 percent of the time. In any case, all of the tradeoff figures on SO<sub>2</sub>, particulates, etc. are in error to the extent to which Portland can obtain low sulfur fuels from sources outside the state. This is another reason why the fuels policy should be considered an issue separate from the refinery and be considered as simply one of several possible sources for clean fuel if the fuels policy is adopted. The refinery should be located in the Rivergate area only if a compelling need is shown to have the fuel produced in that particular location as opposed to other possible sites in the state.

If Portland does have an SO<sub>2</sub> problem serious enough to warrant the implementation of a clean fuels policy, then the DEQ should consider that as a separate issue. The truth is that there is not sufficient data available to objectively evaluate emissions from the proposed refinery or to assess their impact on the Portland Metropolitan airshed. This view was expressed by Ed Westerdahl of the Port of Portland when he said that the interim policy is a good idea but that many problems which exist presently are due to an inability to evaluate the policy and to plan for industrial growth accordingly. He said, "Nobody has an adequate data base" for doing so. I concur with this statement by Mr. Westerdahl, but would go further in suggesting that no new major pollution sources, such as a refinery, should be issued a permit until better airshed evaluation information is available. The DEQ is presently preparing an extensive computer model of the Portland Metropolitan airshed which should be completed by April 1, 1975.

The agency staff hopes to study the model, evaluate its implications, and have a new ten year air maintenance program ready for presentation some time in June. In terms of planning for future industrial growth in the Rivergate area, it would seem best to defer any action on the Rivergate facility and on the clean fuels policy until after this broader data base is available for analysis and until a new ten year maintenance plan is adopted. It would seem ill-timed to allow the refinery to slide in under the wire before the maintenance plan is adopted.

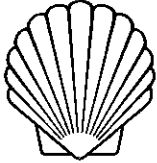
In evaluating the present DEQ position on the refinery, it is appropriate to ask why such a radical policy change took place in the agency in less than three months. A memorandum from the DEQ to the Commission, November 22, 1974, perhaps describes what took place most accurately: "The oil refineries' consultants and the Department staff have worked intensively over at least a six month period developing and documenting among other items, air emission rates, realistic ambient air impact projections,... and calculation of potential air emission tradeoffs." In very simple terms, the refinery people persuaded the DEQ to propose a clean fuels policy and to issue them a permit.

At this point it is significant to note the people who were involved in preparing the DEQ permit and in the "give and take" with the refinery people. During the process of collecting information on the refinery proposal, I attempted several times to locate the DEQ's expert on refineries. I could find no person at the DEQ who would claim to be an expert or even "highly knowledgeable" about refineries. Nor would anyone at the DEQ identify anyone else in the agency as a refinery expert. That self-judgement was confirmed by several people at the Port of Portland and at the DEQ main office who said that the DEQ simply has no expertise in the refinery area. The only incidence of the DEQ calling on a refinery expert of which I am aware was when Herb Bowerman of Charter Energy was asked to look at the flow schematic of the Rivergate facility to evaluate the predicted emissions from the plant. The only refinery experts extensively involved in the permit decision making process were from CIRI, and the emission figures used in writing the permit were supplied by them. It is not surprising that the overburdened, underfunded DEQ staff should be lacking in expertise in this new area, but it would seem ill-advised to grant any permit for a refinery until Oregon has made its own plant siting policies based on opinions from its own qualified consultants and not those of persons promoting refinery locations in the state. With talk of a supertanker port at the mouth of the Columbia, offshore drilling next to the Oregon coast, and a glut of oil from the Alaskan Pipeline, Oregon had better be prepared to deal with an influx of oil companies wanting to do business in the state. The state should establish some sound policies to deal with refineries, supertankers, and the like before granting any permits which could set a precedent for further development by petroleum companies in the state. A refinery is a very permanent fixture, and it would seem that much more study, analysis, and policy making is necessary before placing one on the doorstep of the most densely populated area in the state.

III. Suggestions regarding the Rivergate permit application and Clean Fuels Policy:

- A. Consider the Clean Fuels Policy as a separate issue and weigh it on its own merits.
- B. Investigate thoroughly the legal implications of the DEQ requiring an industry to produce a given amount of low sulfur fuel and to make it available in the Portland area.
- C. Determine the extent to which PIRI has explored marketing its products in foreign markets and domestic markets other than in the Portland area.
- D. Defer any decision on the Clean Fuels Policy and on the Rivergate permit application until the new ten year Air Quality Maintenance Plan for the Portland Metropolitan area is adopted.
- E. Adopt a state policy for siting oil refineries based on objective expert consultation.
- F. Follow those guidelines in considering each individual permit application.
- G. Develop a coordinated state plan to deal with increasing demands the petroleum industry will place on the state in seeking to operate a wide range of new facilities in Oregon.

JT:js



# SHELL OIL COMPANY

ONE SHELL PLAZA  
P.O. BOX 2463  
HOUSTON, TEXAS 77001

January 30, 1975

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

**R E C E I V E D**  
FEB 4 1975

**OFFICE OF THE DIRECTOR**

Environmental Quality Commission  
1234 S. W. Morrison Strret  
Portland, Oregon 97205

Gentlemen:

On January 24, 1975, your Commission held a public hearing on a proposed amendment to your regulation convering sulfur content of residual fuel oils. If adopted, this amendment would limit the sulfur content of residual fuel oils to 0.5%, a major reduction from the presently specified maximum level. We understand the record of the hearing will remain open until February 3, 1975 for submission of written comments by interested persons. Shell Oil Company wishes to comment as follows.

Shell is, and has been, a major supplier of residual fuel oil in Oregon. It is our wish to be able to continue to serve our customers in your State.

Shell Oil Company operates three West Coast refineries. At all three, projects have been completed and other projects are being studied to enable these refineries to comply with air pollution control regulations and to meet present product quality requirements while processing available crude oils of increasingly higher sulfur contents. While the capital investments required for these projects are substantial, they will not directly give Shell the capability to market residual oils containing 0.5% maximum sulfur. We are continuing to study the economics of additional facilities required to reduce sulfur levels in the fuels we market, but, at present, it appears that we will be unable to justify participation in a residual fuel oil market if limited to a maximum of 0.5% sulfur.

The proposed amendment to the subject regulation appears to impose an unfair, and possibly illegal, burden on the existing suppliers and consumers of residual fuel oil in the Portland area of Oregon. This matter does not seem to have been addressed adequately in oral presentations at the time of the public hearing.

The Notice of Public Hearing states specifically that the rule change is necessary to allow the construction of the Columbia Independent oil refinery which, admittedly, will be unable to meet the Department of



Environmental Quality's rule, "Criteria for Approval of New Air Contaminant Sources in the Portland Metropolitan Special Air Quality Maintenance Area." Thus, the proposed rule clearly is not based directly on a concern for the public health of the citizenry but rather is being promulgated for the purpose of offsetting the increased SO<sub>2</sub> emissions anticipated from a new industrial source. In short, the suppliers and users of residual fuel oil will be subsidizing the cost of emission reduction which would otherwise have to be borne by the new refinery.

We submit that the stated purpose of proposed rule is not in keeping with Section 32-020 of the Department's Criteria document noted above which provides in part as follows:

"The particulate and sulfur dioxide emissions allowable under Criteria (1), (2) and (3) above shall be based on net emission increases after taking into account any offsetting emission reductions which may occur within the Portland Metropolitan Special Air Quality Maintenance Area, or portion thereof, which can be (a) assured of implementation and (b) are attributable to the source seeking the permit." (emphasis added)

Thus, while it would be permissible for a new or modified stationary source to offset emission increases against emission reductions, it is clear under the Department's own rules that the principle of offsetting is limited to increases and reductions at the same facility -- an entirely equitable rule.

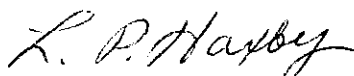
Not only is the proposed regulation inconsistent with the established policy of the Department for new stationary sources, but also the inequity created by the rule may well violate both the equal protection clause of the 14th amendment to the United States Constitution and Article 1, Section 20 of the Oregon Constitution which provides:

"Section 20. Equality of privileges and immunities of citizens. No law shall be passed granting to any citizen or class of citizen privileges, or immunities, which upon the same terms, shall not equally belong to all citizens."

In summary, the Federal Clean Air Act mandates that the states attain and maintain the national ambient air quality standards. Nowhere does that Act require or even imply that a State or agency thereof may abridge traditional principles of law and impose burdens on one party solely for the private benefit of another.

For the above reasons, we urge the proposed amendment to the regulation not be adopted.

Yours very truly,



L. P. Haxby, Manager  
Environmental Affairs

EWS:ddj

cc - Regional Administrator  
Region X  
Federal Energy Administration  
Federal Office Building  
909 First Avenue  
Seattle, Washington 98104

NORTHWEST REGION OFFICE  
RECEIVED

To ESTD JW /  
JFK

FEB - 4 1975

DEPARTMENT OF  
ENVIRONMENTAL QUALITY

2187 SOUTHWEST MAIN STREET  
PORTLAND, OREGON 97205  
503 / 227-5021

WALDEMAR SETON COMPANY  
PROJECT MANAGEMENT

February 3, 1975

Mr. E. J. Weathersby, Regional Administrator  
Department of Environmental Quality  
1010 N. E. Couch Street  
Portland, Oregon 97232

Re: Cascade Energy Inc.  
Columbia County

Dear Sir:

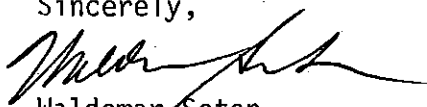
We feel it appropriate to enter into the written record before the 10 day period established by the Commission is up, some comments relative to the economic consequences of burning No. 2 distillate in place of a portion of the No. 6 residual. We alluded to this economic impact in the hearing of January 24th.

If as suggested by the staff report, Cascade Energy be required to burn 1200 bbls. a day on the average of No. 2 distillate oil, this would impose an additional operating cost of approximately \$1600 a day, based upon the present price differential between No. 6 and No. 2 oil. This price differential is probably lower now than it has been generally in the past and therefore we feel that this probably is a conservatively low number.

This use of No. 2 oil was recommended by the staff since under some very particular conditions some receptors might, if the computer models were correct, receive significant impacts of sulfur dioxide. Our technical people with EDI do not believe the model correctly interprets the situation since the models were developed for flat land and do not apply to rough terrain. Our plan of dual firing and weather monitoring would protect these receptors and result in very considerable savings to the plant. It would also provide additional flexibility should it be desirable to burn other fuels for economic or environmental reasons in the future.

It should also be pointed out that despite the classification of all Columbia County as Class II the Rainier area is hardly typical of the County as a whole due to the proximity of pulp, paper, primary aluminum, and wood products industries in Longview. It just makes good sense to us anyway to consider that the area along the Columbia River from Longview to Portland is generally an industrial area and that the areas away from the river should be given the more restrictive classifications. Furthermore, we feel it makes good sense also to burn the No. 6 fuel in new units such as we will have where we will get the highest energy efficiency and produce the lowest levels of pollution. If you have any questions please do not hesitate to call.

Sincerely,



Waldemar Seton  
WS:ek



Robert Brown Associates

January 28, 1975  
116-4-163

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED

JAN 30 1975

OFFICE OF THE DIRECTOR

Mr. B. A. McPhillips, Chairman  
Environmental Quality Commission  
1234 S. W. Morrison Street  
Portland, Oregon 97205

Significant Deterioration--  
Charter Refinery

Dear Mr. McPhillips:

Please consider this letter as an additional submission on behalf of Charter for the Environmental Quality Commission meeting of January 24, 1975.

On Page 4 of Agenda Item L, it is indicated that 100% of the Class II particulate deterioration margin and up to 94% of the sulfur dioxide deterioration margin could be used by the Charter facility.

We suggest that further detailed and comprehensive work probably will reveal that the percentages used up will be substantially below those shown.

If the permits are received and Charter proceeds, we will work with the DEQ and EQC in an effort to more thoroughly delineate the effects. This will require additional work with diffusion models, better definition of meteorological conditions, detailed individual stack design data and possibly model verification by taking measurements in the field.

Much of Charter's work to date on this matter has been based on rather conservative assumptions. As the design work proceeds and more actual data are obtained, we believe the diffusion of particulates and sulfur dioxide will be greater than previously calculated and the increases in concentration of both at nearby locations will be lower than now estimated.

Thank you for your consideration of this material.

Sincerely,

ROBERT BROWN ASSOCIATES

*Herbert F. Bowerman*  
Herbert F. Bowerman

HFB:mjb

cc: Mr. Kessler Cannon, Director, DEQ  
Mr. Jack Weathersbee, Administrator, Northwest Region, DEQ



# Charter Trading Company

General Offices • 666 Camino Aguajito, Monterey, California 93940

Telephone (408) 373-0955 • TWX 910-360-7095 • Telex 351443

Cable Address: CHARTEROIL

D. N. KEATON  
PRESIDENT

CHAIRMAN OF THE BOARD  
CHARTER OIL COMPANY

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
**R E C E I V E D**  
JAN 30 1975

January 28, 1975 **OFFICE OF THE DIRECTOR**

Mr. D. A. McPhillips, Chairman  
Environmental Quality Commission  
1234 SW Morrison Street  
Portland, OR 97205

Dear Mr. McPhillips:

If the necessary environmental permits are issued, Charter intends to proceed with the construction of an oil refinery near St. Helens, Oregon, subject to a final economic review, success in obtaining the necessary capital and approval by the Board of Directors.

If Charter comes to Oregon, we plan to build a refinery incorporating the most modern facilities available. Such plants release pollutants at very low rates and are markedly different from other refineries.

I would appreciate your acceptance of this letter as testimony for the January 24, 1975, Environmental Quality Commission meeting which I was unable to attend.

Sincerely,

  
D. N. Keaton

DNK:sn

cc - Mr. Kessler R. Cannon, Director  
Department of Environmental Quality

Remarks of Irwin S. Adams before the Department of Environmental Quality, State of Oregon, Public Hearing concerning the issuance of an Air Contaminant Discharge Permit to Columbia Independent Refinery, Inc. on January 24, 1975 at 1:30 P.M. in the Public Service Building, 920 S.W. Sixth Avenue, Portland, Oregon.

I am Irwin S. Adams, Executive Vice President of the North Clackamas County Chamber of Commerce, residing at 2453 Lake Road, Milwaukie, Oregon. I appear here pursuant to authorization by the North Clackamas County Chamber of Commerce Board of Directors and on behalf of a membership of 588. Additionally, we present by specific reference authorizations by various members as spokesman for them. Our membership consists of a broad spectrum of commercial, professional, industrial, civic, cultural, recreational, governmental (county, cities, and special districts) and educational entities, all of which have a greater or lesser interest in the subject of energy.

It is undeniable that we confront an energy crisis and that in the State of Oregon we are especially vulnerable, because we have no refining capacity. Especially just now this is a matter of critical concern. It is our information that the projected Columbia Independent Refinery, Inc. will produce liquid propane gas, naptha, gasoline, aircraft turbine fuel, kerosene, diesel fuel, home heating oil, low sulphur residual fuel oil, and Bunker C maritime fuel oil. All of these products are needed without question, and the adequacy of future supplies attaches to each and all of them.

We profess no expertise in the field of air quality. It is our lay impression that the technology in this matter is not at all precise. In fact, on Tuesday of this week on television I heard an officer of Chrysler Corporation testifying before a committee, and relating to one aspect of pollution, say that he understood evergreen forests such as we pride ourselves on in the State of Oregon, are many times the factor in this particular aspect than are automotive emissions. Apparently to the gentleman in question this aspect amounted to a revelation.

Our manufacturers obviously are greatly affected, especially those who heretofore have relied on interruptible gas. Their concern translates into employment in a most direct way. Our governmental entities such as water and sanitary districts, concerned as they are with the maintenance of public health, are important consumers of energy, because it is essential to their continued operation. Hospital members must be reckoned in this same category. In order to discharge the broader governmental functions of county and cities, some form of energy is inescapably needful.

In this connection we have enumerated specific communications from individual entities in the table that follows, supported by the specific comments that are submitted herewith:

1. Omark Industries
2. Oak Lodge Sanitary District
3. Precision Castparts Corp.
4. Brod & McClung-Pace Co.
5. Oak Lodge Water District
6. Gem-Top Manufacturing, Inc.
7. Cornell Manufacturing Co.
8. Northwest Pipe & Casing Company

The North Clackamas County Chamber of Commerce, speaking for its collective membership, and those individually identified herein, respectfully requests your approval of the application of the Columbia Independent Refinery, Inc. for an Air Contaminant Discharge Permit. This is predicated on our settled conviction that such approval is indispensable to a viable future for the State as we confront the complexities of the present energy crisis. Since criteria in the air quality field appears to be in a state of flux, we believe any doubt should be resolved in favor of the applicant. Thank you for the opportunity to be heard.

**OMARK INDUSTRIES****OREGON SAW CHAIN DIVISION**

9701 S. E. McLOUGHLIN BLVD., PORTLAND, OREGON 97222, (503) 654-6531

January 22, 1975

Mr. Irwin S. Adams  
North Clackamas County Chamber of Commerce  
15010 S.E. McLoughlin Blvd.  
Milwaukie, Oregon 97222

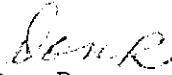
Dear Irwin,

OMARK Industries directly employs approximately 1,000 people in the Portland Metropolitan area. We are engaged in the manufacture of products related to the timber, lumber, and construction industries. OMARK Industries has long been vitally concerned with the impact of industrial and civic expansion on our environment.

It is our understanding that Columbia Industrial Refinery, Inc. has applied for permits to construct and operate a facility in the north Portland area. We also understand that the proposed facility will be designed to meet all aspects of the environmental standards required by the Dept. of Environmental Quality. If this is an accurate appraisal, it is our intent to support the granting of all permits required to allow operation of the facility.

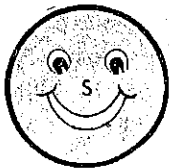
This letter is to serve as authority for you to present Omark's position as outlined herein.

Yours truly,

  
Don Rogers, Manager  
Technical Services

/sj

**Manufacturers of OREGON Saw Chain Products**



# OAK LODGE SANITARY DISTRICT

OFFICE: 13707 S. E. FAIROAKS DRIVE  
P. O. BOX 68522  
OAK GROVE, OREGON 97268  
TEL. 653-1653

January 22, 1975

Mr. Irwin Adams, Executive Vice President  
North Clackamas County Chamber of Commerce  
15010 SE McLoughlin Blvd.  
Milwaukie, Oregon 97222

Dear Mr. Adams:

We hereby officially authorize the North Clackamas County Chamber of Commerce to represent us as spokesman at the hearing for an air contaminant discharge permit for Columbia Refinery, Inc. before the Department of Environmental Quality at 1:30 P.M. January 24, 1975 at the Public Service Building, 920 S. W. 6th Avenue, Portland 97204.

In the daily operation of a sewage treatment plant, considerable petroleum products are vital - for vehicle operation, emergency generation power, lube products for all our machinery and equipment.

When you consider the many treatment plants in operation or in various stages of construction in the urban and suburban Portland area in an effort to clean up Oregon's waters, it is apparent that the availability of these products and the closeness to the source especially in times of shortages, is of utmost importance.

Very truly yours,

OAK LODGE SANITARY DISTRICT

Jeanette E. Norman  
General Manager



PRECISION CASTPARTS CORP.

4600 S. E. HARNEY DRIVE • PORTLAND, OREGON 97206



TWX: 910-464-6130  
AREA CODE 503  
PHONE 777-3881

22 January 1975

TO: Department of Environmental Quality  
Portland, Oregon

This is to authorize Irwin Adams, Executive Vice President, North Clackamas County Chamber of Commerce, Milwaukie, Oregon, to speak on behalf of Precision Castparts Corp. in the matter of an application for a contaminate air discharge permit by Columbia Independent Refining to be heard before the Department of Environmental Quality on Friday, January 24, 1975, in Portland, Oregon.

*R.M. Marvin*

R. M. Marvin  
Vice President Finance

RMM:vr

**BROD & McCLUNG-PACE CO.**

9800 S. E. McBrod Avenue  
Portland, Oregon 97222  
(503) 659-5880

In Reply Refer to:

January 22, 1975

North Clackamas County Chamber of Commerce  
15010 S. E. McLoughlin Blvd.  
Milwaukie, Oregon 97222

Attention: Irwin Adams

SUBJECT: COLUMBIA INDEPENDENT REFINERY INC.

Gentlemen:

We are writing you to indicate our support for the adoption of a special air contaminant permit for Columbia Independent Refinery.

With the advent of increased natural gas shortages an Oregon based refinery for North Slope Oil is a must for the health of our regions economic health.

Please convey our desires to the D.E.Q.

Sincerely

BROD & MC CLUNG-PACE COMPANY

William M. Brod

WMB/bj

A. F. HERR, CHAIRMAN  
R. D. SALTER, SECRETARY  
FRANK LEE, TREASURER

G. M. GOERGENS, COMMISSIONER  
D. L. SHANK, COMMISSIONER  
J. H. DODD, MANAGER

## OAK LODGE WATER DISTRICT

14496 S. E. RIVER ROAD      PHONE 654-7765

MAIL ADDRESS: P. O. BOX 68537  
OAK GROVE, OREGON 97268

January 24, 1975

Irwin Adams  
Executive Vice President  
North Clackamas Chamber of Commerce  
15010 SE McLoughlin Blvd.  
Milwaukie, Oregon 97222

Dear Mr. Adams:

We hereby officially authorize the North Clackamas Chamber of Commerce to represent us as spokesman concerning the Air Contaminate Discharge Permit Application by the Columbia Independent Refinery, Inc. before the Dept. of Environmental Quality Commission at 1:30 P.M., January 24, 1975, at the Public Service Building, 920 S.W. Sixth Ave., Portland, Oregon.

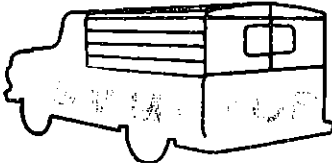
We are a municipal corporation serving approximately 25,000 people. The impact of petroleum shortages during the past year cost this district considerable concern as well as additional expense to obtain the nearly 6000 gallons of fuel we consumed in serving our accounts. Should a future curtailment of needed supply occur again in the future for any reasons a refinery such as proposed by Columbia Independent Refinery, Inc. would help tremendously in our being able to maintain an acceptable level of service in this district.

We do not advocate acceptance of an installation that will cause a great deal of air pollution. We do believe that an agreement can and should be worked out which would enable the producers of clean fuel to locate where desirable to help meet the needs of the area and help in the overall program of putting the United States on the road to self sufficiency as regards our energy needs.

Sincerely,

  
John H. Dodd, Manager  
OAK LODGE WATER DISTRICT

JHD:rh



AREA CODE 503 659-3733

**GEM-TOP MFG. INC.**8811 S. E. HERBERT COURT  
CLACKAMAS, OREGON 97015

January 22, 1975

Mr. Irwin S. Adams, Exec. Vice President  
North Clackamas County Chamber of Commerce.  
15010 S.E. McLoughlin Blvd.  
Milwaukie, Or 97222

Dear Mr. Adams:

You are hereby officially authorized to speak on our behalf concerning the Air Contaminant Discharge Permit Application by the Columbia Independent Refinery, Inc. before the Department of Environment Quality, 1:30 p.m., January 24, 1975, Public Service Building, 920 S.W. Sixth Avenue, Portland, Oregon 97204.

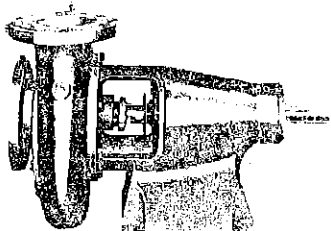
Yours very truly,

GEM TOP MFG., INC.



Don Loghry  
Comptroller

DL/jf



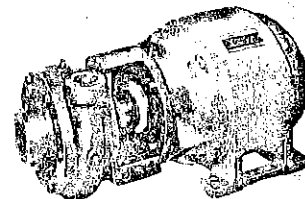
# Cornell Manufacturing Co.

MANUFACTURERS OF QUALITY PUMPS

GENERAL OFFICE AND PLANT

2323 HARVESTER DRIVE — PORTLAND, OREGON 97222 — AREA CODE 503 653-0330

January 23, 1975



North Clackamas Chamber of Commerce  
15010 S. E. McLoughlin Blvd.  
Milwaukie, Oregon 97222

Gentlemen:

This authorizes you to represent our company in regard to the location of a refinery in the Rivergate District.

We are very much in accord with bringing new industry to Portland and special ones that develop new energy.

Sincerely,

CORNELL MANUFACTURING COMPANY

O. B. Winkle  
Manager

OBW:pah

**NORTHWEST PIPE & CASING CO.**

CLACKAMAS, OREGON 97015

TELEPHONE (503) 659-5650

January 22, 1975

North Clackamas County  
Chamber of Commerce  
15010 S. E. McLoughlin Blvd.  
Milwaukie, Oregon 97222

Attention: Mr. Irwin Adams

Dear Mr. Adams:

You are hereby authorized to appear in our behalf on the Air Contaminate Discharge Permit application by the Independent Refinery, Inc. before the Department of Environmental Quality at 1:30 p.m., January 24, 1975, in the Public Service Building.

Sincerely,

NORTHWEST PIPE & CASING CO.



Ralph C. Elle  
President

RCE/ns

Statement by Carl N. Petterson,  
Northwest Natural Gas Company  
123 N.W. Flanders St., Portland,  
Oregon 97209  
January 24, 1975

I am Carl Petterson and am employed as an Engineering Coordinator for Northwest Natural Gas Company. Today one of the permit requirements being considered will limit the amount of crude oil that a refinery could process during a twenty-four period. Adoption of this requirement is unwarranted for the following reasons:

First, this merely places a secondary control on an industrial plant already restricted by limits on point source air emissions, noise, odors, water pollutants and solid waste. This unproductive layer of regulation is regulatory overkill and doesn't accomplish environmental control.

Second, the Commission will be cutting off the public's nose by imposing a limit to the net supply that a new energy source can produce.

As an example, Northwest Natural Gas Company hopes to construct a Synthetic Natural Gas Plant to increase our future gas supply. Normally it will produce fifty million cubic feet of natural gas each day and twice this amount during peak periods. Will it be wise to limit the gas company to the smaller production rate if our environmental controls meet Commission requirements at the higher production rate? No one has yet asked the gas company to supply less gas but the Commission places itself in this questionable position by limiting the energy production rate of any of these proposed refineries.

Third, in accepting a daily production limit the Environmental Quality Commission is destroying the most important control that a refinery has-- its flexibility in a competitive business environment. A refinery throughput rate reflects both today's technology and today's cost relationships. In this dynamic industry they could both change tomorrow.

When people are freezing in January they use more heating oil than they need in July. Industry also has a variable need for petroleum products. If the gas company uses naphtha-based SNG we will certainly require more at some times of the year than at other times. A refinery must be free to meet these changing market needs. A production limitation could turn it into an economic dog by limiting its ability to compete.

In summary I believe that forcing a specific throughput limit on any of the refinery applicants will be non-effective as an environmental control, will place an unnecessary limit on Oregon's energy supply and will limit the ability of a new industry to compete in the marketplace.



NORTHWEST REGION OFFICE  
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FEB - 4 1975

WALDEMAR SETON COMPANY  
PROJECT MANAGEMENT

DEPARTMENT OF  
ENVIRONMENTAL QUALITY

2187 SOUTHWEST MAIN STREET  
PORTLAND, OREGON 97205  
503 / 227-5021

February 3, 1975

Mr. E. J. Weathersby, Regional Administrator  
Department of Environmental Quality  
1010 N. E. Couch Street  
Portland, Oregon 97232

Re: Cascade Energy Inc.  
Columbia County

Dear Sir:

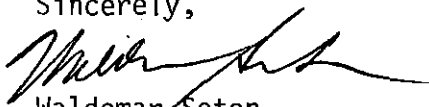
We feel it appropriate to enter into the written record before the 10 day period established by the Commission is up, some comments relative to the economic consequences of burning No. 2 distillate in place of a portion of the No. 6 residual. We alluded to this economic impact in the hearing of January 24th.

If as suggested by the staff report, Cascade Energy be required to burn 1200 bbls. a day on the average of No. 2 distillate oil, this would impose an additional operating cost of approximately \$1600 a day, based upon the present price differential between No. 6 and No. 2 oil. This price differential is probably lower now than it has been generally in the past and therefore we feel that this probably is a conservatively low number.

This use of No. 2 oil was recommended by the staff since under some very particular conditions some receptors might, if the computer models were correct, receive significant impacts of sulfur dioxide. Our technical people with EDI do not believe the model correctly interprets the situation since the models were developed for flat land and do not apply to rough terrain. Our plan of dual firing and weather monitoring would protect these receptors and result in very considerable savings to the plant. It would also provide additional flexibility should it be desirable to burn other fuels for economic or environmental reasons in the future.

It should also be pointed out that despite the classification of all Columbia County as Class II the Rainier area is hardly typical of the County as a whole due to the proximity of pulp, paper, primary aluminum, and wood products industries in Longview. It just makes good sense to us anyway to consider that the area along the Columbia River from Longview to Portland is generally an industrial area and that the areas away from the river should be given the more restrictive classifications. Furthermore, we feel it makes good sense also to burn the No. 6 fuel in new units such as we will have where we will get the highest energy efficiency and produce the lowest levels of pollution. If you have any questions please do not hesitate to call.

Sincerely,



Waldemar Seton  
WS:ek

NORTHWEST INDUSTRIAL NEIGHBORHOOD ASSOCIATION

P.O. Box 10609, Portland, Oregon 97210



OFFICERS:

President: Chas. K. Landskroner,  
Schnitzer Investment Corp.  
Vice President: Ike Bay,  
Fred N. Bay News Co.  
Scribe: Nello Vanelli,  
ESCO Corporation  
Treasurer: Robert Wilhelm, Sr.,  
Wilhelm Trucking Co.

January 24, 1975

Department of Environmental Quality  
Northwest Region  
1010 N.E. Couch  
Portland, Oregon

Gentlemen:

BOARD OF DIRECTORS:

Paul W. Leavans, United States  
National Bank of Oregon  
Charles H. Hawkins,  
FMC Corporation  
Fred "Bob" Thoman,  
NW Marine Iron Works  
Dean Riemann,  
Riemann & McKenny  
Bill Myron,  
Shell Oil Company

*U AQ - C I R I Refinery  
Clean Fuels Policy*

The Officers and Board of Directors of the Northwest Industrial Neighborhood Association (NINA) are advised that Columbia Independent Refinery, Inc. (CIRI) has applied for an Air Contaminant Discharge Permit from the Environmental Quality Commission.

We are further advised that this application which was amended in October, 1974, is for Phase One which is a 50,000 barrel per day crude oil through-put capacity projected to be operational in 1978.

NINA supported the concept and guidelines of the policy recently adopted by this Commission for new or expanded air emission sources in the Portland Metropolitan area particularly when trade-offs in emissions from cleaner burning fuels were considered. We recognize that cleaner burning fuels will cost more and some users will object to the higher costs. However, we believe it is certain that trade-offs will allow CIRI to meet the particulate criteria of the policy for new or expanded air emission sources in the Portland Metropolitan area.

Therefore, we fully support the application of CIRI, and we are prepared to recommend approval of this application to our total membership.

Further, we will recommend that the Department of Environmental Quality refrain from reducing the Department's maximum sulphur

Department of Environmental Quality

Page 2

January 24, 1975

content residual fuel oil limitation from 1.75% to 0.5% in the Portland Metropolitan area.

In the alternative, however, we are prepared to support a reduction to a level above 0.5% if that is determined to be necessary in order to allow the Air Contaminant Discharge Permit to be issued to CIRI.

Sincerely,

A handwritten signature in cursive script, appearing to read "Chas. K. Landskroner", written in dark ink.

Chas. K. Landskroner, President

Northwest Industrial Neighborhood Association

# METAL TRADES COUNCIL OF PORTLAND AND VICINITY

304 PORTLAND LABOR CENTER ★ PORTLAND, OREGON 97201 ★ 224-5023 - 224-5024

AFL-CIO



January 30, 1975

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
**RECEIVED**  
FEB 4 1975

Environmental Quality Commission  
1234 S.W. Morrison Street  
Portland, Oregon 97214

OFFICE OF THE DIRECTOR

Dear Sir:

The Public Hearing with regard to the proposed "Clean Fuels Policy" and Columbia Independent Refinery, Inc. held on January 24th, 1975, was closed prior to our being able to submit our testimony. Chairman McPhillips indicated that the record would be held open for 10 days. We are submitting our comments in this letter for the record.

The Department of Environmental Quality has indicated that the Clean Fuels Policy is necessary both in terms of approving projects now, which will help to bolster the economy, and in allowing room for growth to maintain a health economy. They further indicated in their staff report that Columbia Independent Refinery, Inc. meets all regulations in terms of water and air quality.

Because Columbia Independent Refinery, Inc. would add a significant number of jobs in the ship building and ship repair industry and also the manufacturing of pumps and pipe over the next two to three years, and because continued delays in approval of the project delay the date at which construction can first get started, I urge you and speaking for the members of the 30 local unions which the Portland Metal Trades Council represents, we urge you to approve Columbia Independent Refinery, Inc. and the accompanying Clean Fuels Policy.

Sincerely yours,

METAL TRADES COUNCIL OF  
PORTLAND AND VICINITY

A handwritten signature in cursive script that reads "Henry McCarthy".

Henry McCarthy, Secretary

HM:mb  
pocu #11  
afl-cio

cc: Dept of Environmental Quality  
NW Region - 1010 NE Couch St.  
Portland, Oregon 97232

# UNITED STEELWORKERS OF

*EDW*

*Sub-District 4*  
3661 S. E. 34TH AVENUE  
PORTLAND, OREGON 97202  
TELEPHONE (503) 233-5094

*District*  
**38**

**AMERICA**  
AFL-CIO-CLC

FRANK S. MCKEE, Director

January 30, 1975

Department of Environmental Quality  
Northwest Region  
1010 N.E. Couch Street  
Portland, Oregon

We, the members of Local Unions 3010, 6380 and 8175 of the United Steelworkers of America, wish to withdraw our testimony presented at the January 24, 1975 hearings, regarding the issuance of an air discharge permit to the Columbia Independent Refinery Inc.

Neil Jaeger



Local 3010  
United Steelworkers  
of America

*Columbia-Pacific*

**EARL B. KIRKLAND**  
Executive Sec.-Treas.

**BUILDING & CONSTRUCTION TRADES COUNCIL, AFL-CIO**

Affiliated with Building Trades Department, AFL-CIO

Room 304, Portland Labor Center • 201 S. W. Arthur St. • Portland, Oregon 97201

January 30, 1975

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
**RECEIVED**  
JAN 31 1975

Environmental Quality Commission  
1234 S.W. Morrison Street  
Portland, Oregon 97214

**OFFICE OF THE DIRECTOR**

Dear Sir:

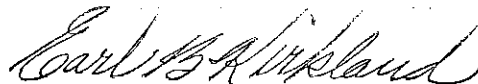
Being unable to testify due to the limited oral testimony which was taken at the public hearing on January 24th, 1975, the Columbia Pacific Building and Construction Trades Council which is comprised of 44 local unions representing approximately 10,000 persons urges you to vote in favor of Columbia Independent Refinery, Inc. and the accompanying Clean Fuels Policy.

DEQ has indicated in its staff reports that Columbia Independent Refinery, Inc. meets all state and federal standards and DEQ staff recommends your approval of the project. The Clean Fuels Policy will allow more room for economic and industrial growth which means jobs at a time when unemployment in this area is increasing.

For the record, we urge prompt approval of Columbia Independent Refinery, Inc. and the Clean Fuels Policy.

Sincerely yours,

COLUMBIA PACIFIC BUILDING AND  
CONSTRUCTION TRADES COUNCIL



Earl B Kirkland, Executive Secy.

EBK:mb  
poeu #11  
afl-cio  
cc: Dept of Environmental Quality  
N W Region - 1010 NE Couch St.  
Portland, Oregon 97232

# International Brotherhood of Electrical Workers

LOCAL UNION NO. 48



TELEPHONE  
226-3073

326 PORTLAND LABOR CENTER  
201 S.W. ARTHUR STREET  
PORTLAND, OREGON 97201

January 29, 1975

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

**RECEIVED**

JAN 30 1975

**OFFICE OF THE DIRECTOR**

Mr. B. A. McPhillips  
Environmental Quality Commission  
1234 S. W. Morrison Street  
Portland, OR. 97205

Dear Mr. McPhillips:

We wish to state our support for the proposed clean fuel policy and the construction of the Columbia Independent Refineries.

We feel the projected growth in our area can be directly related to a supply of a reasonably clean fuel.

We cannot help but feel that the clean fuel policy, while it would probably cause some monetary problems for a certain portion of industry, that the improvement in our environment would more than offset the negative aspect. The construction of the refinery could not but help implement the clean fuel policy by making available in our area a supply of high grade fuel.

With Federal laws as they exist in regard to the distribution of fuel, common sense would dictate that fuel refined in an area would be more likely be used in that area than be shipped elsewhere.

Again, I would like to state our support for the clean fuel policy and the construction of the Columbia Independent Refineries.

Thanking you in advance for your attention to this matter, I remain

Yours very truly,

A handwritten signature in cursive script that reads 'Arthur J. Bauder'.

ARTHUR J. BAUDER,  
Business Manager

REH:AJB  
js - opeu #11



**DEPARTMENT OF  
ENVIRONMENTAL QUALITY**

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5301

January 23, 1975

Honorable Fred Foshaug  
Chairman  
Columbia County Board of  
Commissioners  
331 Columbia County Courthouse  
St. Helens, Oregon 97051

Dear Commissioner Foshaug:

Your comments will be presented to the Environmental Quality Commission and become part of the record of the hearing to be held here in Portland tomorrow, January 24. The amount of crude processed daily is directly related to air emissions, and therefore is a matter of control. In fact, the Company itself in its permit application makes it's own limitation, in effect, stating the amount of crude to be processed, which then translates into emissions to be evaluated against standards.

Best wishes.

Cordially,

KESSLER R. CANNON  
Director

KRC:cm

COPY



COLUMBIA COUNTY

BOARD OF COMMISSIONERS

331 Courthouse, St. Helens, Oregon 97051

TELEPHONE (503) 397-4322

January 17, 1975

Department of Environmental Quality  
Northwest Region  
1010 N. E. Couch Street  
Portland, Oregon 97232

Attention: Kessler R. Cannon, Director

Gentlemen:

This letter is submitted as testimony in the Department of Environmental Quality hearing on January 24, 1975 relating to the application by Charter Oil Company for a permit to construct an oil refinery to be located near St. Helens, Oregon, and the application of Cascade Energy for a permit for a refinery to be located near Rainier, Oregon, both located in Columbia County.

It is our understanding from conversations with representatives of Charter Oil Company that the refinery they propose will be the least complex of all types of refineries which are able to produce products usable in customers' equipment and also meet environmental controls.

The Columbia County Board of Commissioners is in favor of granting the permit to Charter Oil Company, but also which to add our comments regarding preliminary limitations established by DEQ on the amount of crude oil to be processed on a daily basis. It is our feeling that production should not be restricted by any factor other than air contaminant emission. In these days of increasing energy shortages, we feel every effort possible should be made to increase production while retaining desired air quality controls.

We would also hope that the rules, regulations, restrictions and reporting requirements of both DEQ and EQC be held to an absolute minimum.

Department of Environmental Quality

January 17, 1975

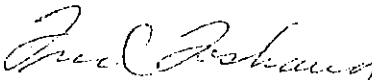
Page 2.

Columbia County is an area of 646 square miles. Of this area, approximately 80% is in timber ownership, primarily by Longview Fiber, Crown Zellerbach, and Publishers Paper. Because of the present construction of the Trojan Nuclear plant near Rainier, Oregon, an additional approximately 1% of the county is now under the power lines of Portland General Electric Company and Bonneville Power Administration. Therefore, there remains a relatively small amount of land in Columbia County suitable for industrial development and housing. Columbia County is a rather remote area, and one that is sparsely populated, as evidenced by the most recent census indicating 32,000 residents.

While we have not had a great deal of contact with representatives from Cascade Energy, we would also hope that every consideration be given to their request for a permit to construct a refinery near Rainier, Oregon.

Sincerely,

COLUMBIA COUNTY  
BOARD OF COMMISSIONERS

  
Fred Foshaug, Chairman

FF:gs

My name is Raymond Ralonde. I live at 6449 S.E. 135th Ave., Portland, Oregon. I am a teacher and for the past two years I have been employed at Whitaker Middle School as an Environmental Education Instructor. During the course of my job I have spent much of my time doing environmental studies of the North Portland area with my students. I can say with some degree of confidence that the living environment of Northeast and North Portland literally stinks, and is getting worse.

I am not the only person in the area that has established this point of view. There now exists a trend of people moving out of the North Portland area to the more desirable neighborhoods to the south. The rule of the game is "Once a family can afford to move out of North Portland they move out". Since October we have had more than 20 families move out of the Whitaker district alone. There are replacements for some of the families, but the trend of families moving into North Portland school districts show that the average income of these families is lower than the average for the city of Portland. The average income of the families in the Whitaker School district is decreasing annually. We are creating an area, with a less desirable living environment, that only the poor sap that doesn't have money is forced to live in. Why are people, who can afford to, moving away from North Portland? One reason I have found is that the rampant increase in unplanned industrialization has left North Portland in a confused mess. People don't like living next door to a dirty, unsightly, smelly industry, nor do they like the flavor of the air in the area. Parents would rather see their children raised in an environment that appeals to their senses rather than stifles them.

People moving out of the area has some repercussions that effect the schools in the area. Some of these are:

- 1) Schools are closing and students and teachers are shuffled around from one school to another like cattle. Moving kids creates a severe problem because they are finding it very difficult to adapt to such sudden changes.

- 2) Schools close or are not fully utilized at considerable loss to the community.
- 3) Creation of a homogenous population of students worsens the instructional program, because students are associated with only a few types of life styles.

As a result of this confusion the students are turning off to school, community, and society.

What is needed in North Portland is planning. This "one at a time" construction of industries is tearing the land, schools, and people apart. An industry especially, and a dirty one such as a refinery certainly will not help the situation.

On many days as I drive down bumpy Columbia Boulevard I see some of my students standing in the dark bus stops at the side of the road and being intimidated by huge noisy trucks passing within just a few feet of them. I see them huddle up together to obtain some sense of security every time one of those big monsters splashes by. Getting out of my car at school and walking down the breeze-way, I smell the nauseous odor of sulfides in the air. As I walk in the building, some of my students ask me what that smell is, and where it is coming from. I am at ends to tell them where it is coming from, and why they have to put up with it. Even worse are the students, who are the majority, hardly notice the odor. We have so stifled their awareness, that they find nothing unusual in not being able to see through the particulates and across the playground, terrifying noise levels, and the smell of noxious gases in the air. It will be a sad day for mankind when he becomes so apathetic about his environment that he will allow himself to become slowly poisoned. North Portland is a perfect breeding ground for this kind of behavior. I can see it in my students.

During the year I teach a short course in Mycology. At the end of the

course we cover the detection of air pollution by the use of lichens. On our

sight at Whitaker we have yet to find even the most pollution tolerant lichen

to be living. In order to find a decent study area we have to travel as far as Sauvie Island and Dodge Park on the Sandy River. It is quite a shock to my students after an on-site study of lichens on the Whitaker grounds to find that the air is not fit to breathe.

In summary I want North Portland to do some planning, and in this process, think about a few things. How can we develop the industrial capacity of the area with as little impact on the total environment of the area? That includes the natural beauty, schools and people. How can we allow an industry that pours large amounts of particulates in the air, when we are not presently meeting our air quality standards? How can we allow a few large industries to dominate Portland's airshed, and exclude the possibility of a number of smaller cleaner industries from the area? Last and most important: What about the kids who have to live with our decisions and guidance?

I appreciate very much this chance to talk with you. I hope you will understand that my intentions are serious.

January 24, 1975

Mr. Mark Loring  
P. O. Box 562  
Gearhart, Oregon 97138

Dear Mr. Loring:

Three oil companies have applications before this Department and the Environmental Quality Commission for permits to construct and operate refineries. The Columbia Independent Refinery, Inc., proposes its facility at Rivergate Industrial Area in North Portland. Charter Oil and Cascade Energy propose their refineries on the lower Columbia in the St. Helens, Rainer areas. The Commission is hearing the proposals at its January 24 meeting, with the record to remain open for a period of time thereafter. Your letter and any additional comments you may wish to make will be entered into the record which becomes the basis for the decision of the Commission.

Best wishes.

Cordially,

KESSLER R. CANNON  
Director

KRC:cm

SIR,

I UNDERSTAND THAT THREE PERMITS HAVE RECENTLY BEEN APPLIED FOR BY OIL COMPANIES WISHING TO BUILD REFINERIES ALONG THE COLUMBIA. I WOULD LIKE TO KNOW WHICH COMPANIES HAVE APPLIED AND WHERE EXACTLY THEY PROPOSE TO BUILD THESE NEW FACILITIES. I WOULD ALSO LIKE TO KNOW WHAT, IF ANYTHING, WE THE RESIDENTS OF THE STATE WILL HAVE TO SAY ABOUT ALL THIS. I KNOW HOW I FEEL, AT LEAST.

IF WE HAVEN'T LEARNED BY NOW THAT THE OIL INDUSTRY IS DYING (AND TAKING THE REST OF US WITH IT?) WHAT IS IT GOING TO TAKE TO SHOW US.

MORE THAN JUST A QUESTION OF THE GREAT NATURAL BEAUTY OF THE COLUMBIA RIVER, OR EVEN OF THE ALMOST ~~BEAT~~ CERTAIN POLLUTING OF OUR AIR AND WATERS, IS THE QUESTION

OF MORAL AND ECONOMIC RESPONSIBILITY. CAN WE AFFORD TO SINK EVEN MORE TIME AND MONEY INTO AN ENERGY SOURCE THAT EVEN TEN, FIFTEEN, TWENTY YEARS AGO WE KNEW WOULDN'T LAST MUCH LONGER? (I REMEMBER THE EXCITEMENT IN THE 1950'S OVER SOLAR BATTERIES, BUT ONLY NOW DOES THERE SEEM TO BE MUCH PUBLIC ATTENTION PAID THIS ALTERNATIVE.)

THAT THE OIL GIANTS ARE WILLING IN SPITE OF ALL TO EXTRACT THE LAST DOLLAR, AT OUR EXPENSE, FROM THEIR FAILING INVESTMENTS RATHER THAN EXPLORE "NEW", MAYBE CHEAPER AND CLEANER, WAYS TO RUN THE WORLD THE WAY WE SEEM TO THINK WE HAVE TO, IS TESTIMONY TO WHOSE INTERESTS THESE DINOSAURS HAVE AT HEART; AT WHATEVER COST TO THE PEOPLE AND THE LAND. THIS IS EXPLOITATION AT ITS MOST BASIC LEVEL.



HERE IN OREGON WE ENJOY A GREAT NATURAL BEAUTY UNEQUALED IN ANY STATE I'VE VISITED, AND AN ABUNDANCE OF THE "LITTLE" THINGS THAT MAKE THE QUALITY OF LIFE HERE SO HIGH. CAN WE SACRIFICE ANY OF THIS FOR CORPORATE PROFITS OF A FOSSIL INDUSTRY THAT DOESN'T CARE ITS TIME IS PASSING, AS LONG AS THERE'S A BUCK LEFT TO BE MADE?

I DON'T MEAN TO BE HARSH, BUT THIS SORT OF THING WORRIES ME. I'VE BEEN TO NEW JERSEY, AND SEEN THE RAPE OF ONE-BEAUTIFUL AREAS BY THESE BOYS BEFORE.

I WOULD APPRECIATE ANY ENLIGHTENMENT YOU CAN OFFER ME ON THE SUBJECT. THANK YOU,

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED

JAN -9 1975

OFFICE OF THE DIRECTOR

SINCERELY

MARK LORING

P.O. Box 562

GEARHART, ORE,  
97138

PRESENTATION TO BE MADE BY ROGER A. ULVELING ON JANUARY 24, 1975 AT THE PUBLIC HEARING ON COLUMBIA INDEPENDENT REFINERY, INC., TO BE HELD BEFORE THE ENVIRONMENTAL QUALITY COMMISSION.

AGENDA ITEM K: PUBLIC HEARING. PROPOSED AIR CONTAMINANT DISCHARGE PERMIT FOR COLUMBIA INDEPENDENT REFINERY, INC., PHASE I, 50,000-BARREL-PER-DAY OIL REFINERY.

I AM ROGER ULVELING, PLANNING COORDINATOR FOR COLUMBIA INDEPENDENT REFINERY, INC. (CIRI), A SUBSIDIARY OF PACIFIC RESOURCES, INC., OF HONOLULU.

FIRST, LET ME TAKE THIS OPPORTUNITY TO COMPLIMENT THE STAFF ON A THOROUGH INVESTIGATION OF OUR PROJECT.

INITIALLY, WE CONSIDERED TWO PHASES OF CONSTRUCTION BUT FOR THE REASONS SET FORTH IN THE STAFF REPORT, WE ARE PRESENTING TODAY A 50,000-BARREL-PER-DAY REFINERY AND UNDERSTAND THAT AN EXPANSION WOULD REQUIRE A NEW PERMIT APPLICATION AND HEARING PROCESS.

NOW, AT THE REQUEST OF MR. JACK PAYNE OF THE NORTHWEST REGION OFFICE, I WILL SUBMIT FOR THE RECORD A COPY OF OUR LETTER TO DEQ OF JANUARY 14, 1975, CONTAINING COMMENT AND REQUESTED CHANGES IN THE PROPOSED AIR CONTAMINANT DISCHARGE PERMIT FOR COLUMBIA INDEPENDENT REFINERY, INC.

OUR PRESENTATION TODAY WILL TAKE ABOUT 20 TO 25 MINUTES  
WILL BE IN THREE PARTS AND WITH YOUR PERMISSION WILL BE  
SLIDE ILLUSTRATED.

I WILL NOW INTRODUCE OUR OFFICERS AND OTHERS HERE TODAY  
WHO WILL MAKE THE PRESENTATION.

MR. PELLETIER, EXECUTIVE VICE PRESIDENT OF PACIFIC RESOURCES,  
INC., THE PARENT COMPANY OF CIRI, WILL SPEAK FIRST.

MR. WILLIAM R. BLOSSER OF CH2M HILL, PROJECT MANAGER FOR THE  
ENVIRONMENTAL ASSESSMENT, WILL GIVE YOU A 10-MINUTE RECAP  
OF THE ASSESSMENT OTHER THAN AIR QUALITY. WITH YOUR PERMISSION,  
WE WILL UTILIZE SLIDES.

MR. RICHARD S. REID OF CH2M HILL WHO WAS RESPONSIBLE FOR THE  
AIR QUALITY SECTION WILL BE ANCHOR MAN WITH A PRESENTATION  
OF APPROXIMATELY 5 MINUTES.

FOLLOWING MR. REID, WE WILL ALL BE AVAILABLE FOR YOUR QUESTIONS.

NOW, IF WE CAN PREPARE FOR THE SLIDE PRESENTATION, MR. PELLETIER  
WILL ADDRESS YOU.

PRESENTATION BY JOSEPH A. PELLETIER ON JANUARY 24, 1975 AT  
THE PUBLIC HEARING ON COLUMBIA INDEPENDENT REFINERY, INC. TO  
BE HELD BEFORE THE ENVIRONMENTAL QUALITY COMMISSION.

MY NAME IS JOSEPH A. PELLETIER. AS EXECUTIVE VICE PRESIDENT  
OF PACIFIC RESOURCES, INC., HONOLULU, HAWAII, I WOULD LIKE  
TO PRESENT A STATEMENT ON BEHALF OF MR. JAMES F. GARY,  
PRESIDENT AND CHIEF EXECUTIVE OFFICER OF OUR COMPANY WHO,  
BECAUSE OF A PREVIOUSLY SCHEDULED BUSINESS TRIP ABROAD,  
COULD NOT ATTEND THIS HEARING.

(PRI-ORGANIZATION CHART AND COMMENT ON GASCO AND ENERCO)

IT HAS BEEN APPROXIMATELY A YEAR AND ONE-HALF SINCE OUR  
COMPANY, PACIFIC RESOURCES, PUBLICLY ANNOUNCED ITS DESIRE TO  
BUILD COLUMBIA INDEPENDENT REFINERY, INC., TO HELP ENSURE A  
FUTURE SUPPLY OF LIQUID FUELS TO THE HOMES AND INDUSTRIES IN  
THE PORTLAND AREA. THE DEDICATION OF PACIFIC RESOURCES TO  
PROVIDE ENVIRONMENTALLY ACCEPTABLE PRODUCTION FACILITIES AND  
CLEANER BURNING FUELS FOR OREGON STEMMED FROM ITS PREVIOUS  
SUCCESSFUL EFFORTS TO PROVIDE IN THE CITY OF HONOLULU,  
HAWAII, A RELIABLE AND CLEAN FUELS PROCESSING PLANT (HAWAIIAN  
INDEPENDENT REFINERY, INC.).

IN THE MID-60's, PRI'S MANAGEMENT RECOGNIZED THE ACCELERATING NEED FOR ENVIRONMENTALLY COMPATIBLE FUELS BOTH IN HAWAII AND ON THE U.S. WEST COAST. HOWEVER, OUR CONCERN FOR THE WELL BEING AND QUALITY OF LIFE OF THE PEOPLE OF HAWAII, THE MAINTENANCE OF ITS BLUE SKIES AND CLEAN WATER PROVIDED THE INCENTIVE TO DESIGN AND BUILD A NEW TYPE OF PETROLEUM REFINING FACILITY IN WHICH ENVIRONMENTAL CONSIDERATIONS WERE GIVEN THE HIGHEST DESIGN PRIORITY. THIS PLANT'S EXCELLENT PERFORMANCE, AFTER 2 YEARS OF CAPACITY OPERATION, WAS RECENTLY RECOGNIZED BY THE AMERICAN LUNG ASSOCIATION'S FIRST "BLUE SKY" AWARD IN HAWAII AND THE GOVERNOR OF HAWAII HAS ALSO COMMENDED PACIFIC RESOURCES, INC., FOR ITS CONTRIBUTION TO THE STATE'S ENVIRONMENTAL QUALITY.

THE MANAGEMENT OF PACIFIC RESOURCES FIRMLY BELIEVES THAT ENVIRONMENTAL PROTECTION IS A MAJOR CORPORATE RESPONSIBILITY AND MUST BE INCLUDED IN THE COST OF DOING BUSINESS. WE KNOW IT IS LESS COSTLY, MORE EFFICIENT ENERGYWISE, AND FAR EASIER TECHNICALLY TO CONTROL NEGATIVE ENVIRONMENTAL EFFECTS BY REMOVING PETROLEUM CONTAMINANTS IN THE BASIC PROCESSING OF CRUDE OIL RATHER THAN AT THE POINT OF FUEL CONSUMPTION. FROM THE STATE STANDPOINT IN TERMS OF ECONOMY AND CONTROLS IT IS BETTER TO MANUFACTURE CLEAN FUELS AT RIVERGATE THAN TO REQUIRE THE HUNDREDS OF FUEL USERS IN THE STATE TO PUT FILTERS AND SCRUBBERS ON EVERY FURNACE, OVEN, OR BOILER STACK.

THIS PHILOSOPHY AND DEDICATION TO BOTH THE NEEDS OF THE IMMEDIATE COMMUNITY AND THE STATE AS A WHOLE HAS JUST EARNED OUR HAWAIIAN INDEPENDENT REFINERY APPROVAL OF THE STATE, FEDERAL GOVERNMENT AND ENVIRONMENTAL PROTECTION AGENCY TO INCREASE THE SIZE OF OUR HAWAII REFINERY TO 125,000 BARRELS PER DAY--A THREE-FOLD INCREASE FROM ITS PRESENT CAPACITY.

KNOWING THE GROWING NEED OF OTHER WESTERN U.S. AREAS FOR HIGHER QUALITY FUELS AND THE LACK OF REFINERY CAPACITY TO MANUFACTURE THEM, OUR COMPANY INITIATED STUDIES IN 1970 TO LOCATE ONE OR TWO OTHER ENVIRONMENTALLY AND ECONOMICALLY SUITABLE SITES ON WHICH CONVERSION FACILITIES WOULD BE FEASIBLE FOR MEETING LOCAL CLEAN FUEL NEEDS. ALTHOUGH MANY POTENTIAL SITES WERE INVESTIGATED IN THE PACIFIC NORTHWEST, THE FINAL SELECTION WAS THE PORT OF PORTLAND'S RIVERGATE INDUSTRIAL PARK; THAT SITE PROVIDED THE MOST DESIRABLE REFINERY LOCATION CONSIDERING THE ENVIRONMENTAL, ECONOMIC, ENERGY, MANPOWER, SAFETY, AND RELIABILITY REQUIREMENTS OF A CLEAN FUELS PLANT.

THE REFINERY WE ARE PROPOSING FOR PORTLAND IS NO ORDINARY REFINERY AND WILL EMPLOY THE BEST TECHNOLOGY. FROM ITS INCEPTION, IT WAS PLANNED TO PROVIDE THE LOWER SULFUR TYPES OF FUEL WE FORESAW WOULD BE ENVIRONMENTALLY NEEDED IN THE PORTLAND METROPOLITAN AREA. THE BASIC PROCESSES OF THE REFINERY WILL BE THE MOST MODERN, POLLUTION-FREE, AND PROVEN

TYPE OF DESIGN AVAILABLE AND ITS PROCESSES WILL HAVE LITTLE  
IN COMMON WITH REFINERIES BUILT 10 YEARS AGO.

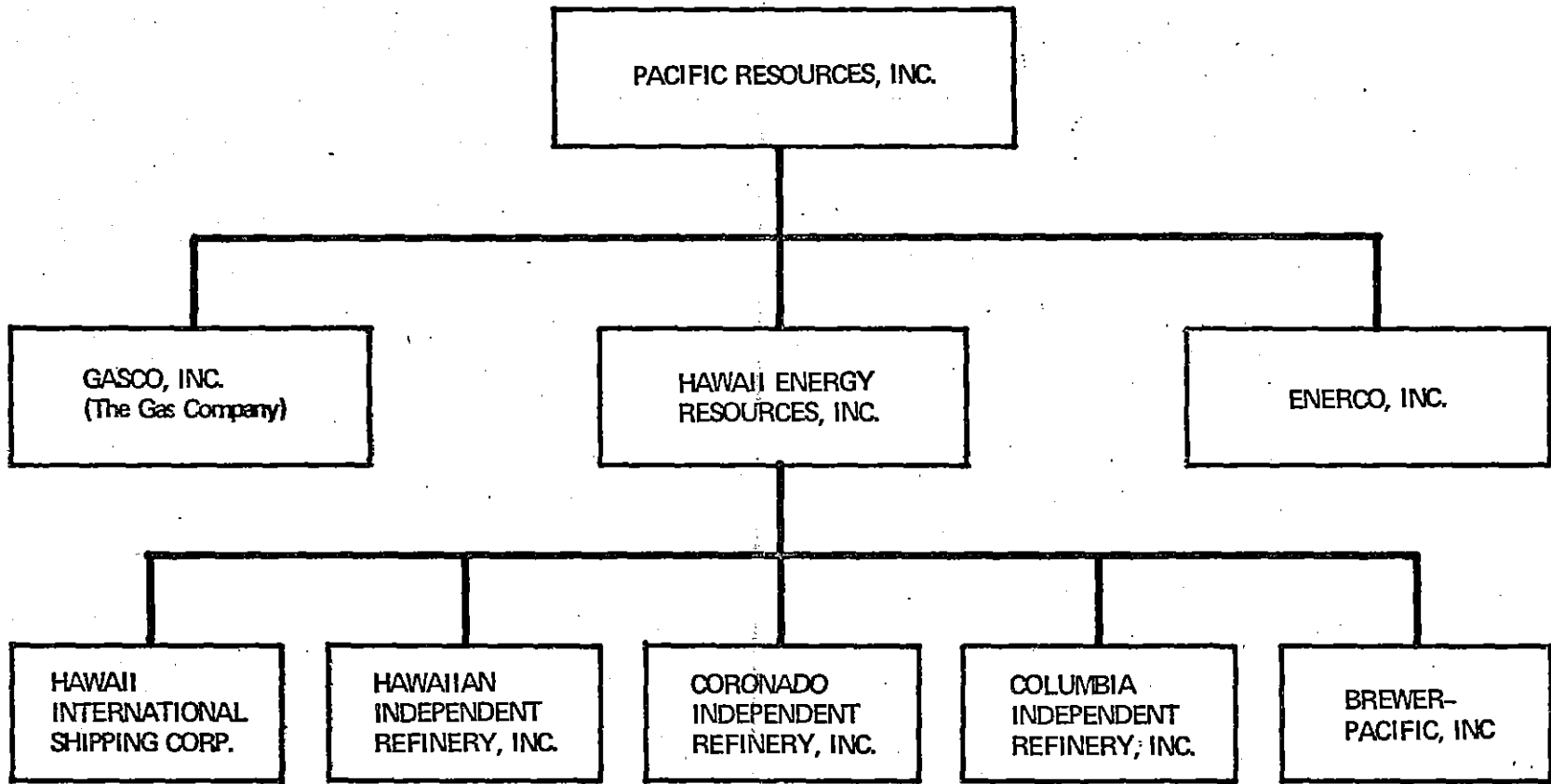
THERE HAVE BEEN MANY COMMENTS AS TO THE PRODUCTS TO BE PRODUCED  
IN THIS PLANT. FRANKLY, WE INTEND TO MANUFACTURE THOSE  
PRODUCTS WHICH ARE IN GREATEST DEMAND IN THE COMMUNITY.  
UNTIL WE HAVE THE PERMITS BEING SOUGHT HERE TODAY AND THEN  
OBTAIN FIRM COMMITMENT FOR SUPPLY, THE FINAL OUTPUT WILL NOT  
BE ESTABLISHED.

FOR EXAMPLE, THE SAME CRUDE OIL FRACTION CAN BE MANUFACTURED  
INTO LEAD-FREE GASOLINE, AIR FORCE JET FUEL, OR NAPHTHA FEED  
STOCK FOR SYNTHETIC NATURAL GAS. GENERALLY, IT IS OUR  
POLICY TO FILL THE GREATEST LOCAL NEED FIRST.

ON A NATIONAL BASIS, PRESIDENT FORD HAS RECENTLY STATED THAT  
30 ADDITIONAL REFINERIES WILL BE REQUIRED IN THE U.S. BY  
1985. OUR COMPANY, PACIFIC RESOURCES, FORESAW THIS NEED AND  
PROPOSES THE COLUMBIA INDEPENDENT REFINERY TO THE PEOPLE OF  
OREGON AS A VIABLE MEANS OF HELPING THEM MEET THEIR ENORMOUS  
CLEAN FUELS REQUIREMENTS OF THE AREA.

PACIFIC RESOURCES BELIEVES THAT CIRI CAN HAVE AN ASSURED  
POSITIVE EFFECT ON IMPROVING PORTLAND'S ENVIRONMENT FROM  
BOTH A SOCIOECONOMIC AND AIR QUALITY VIEWPOINT AND WE  
EARNESTLY SEEK THE SUPPORT OF THE ENVIRONMENTAL QUALITY  
COMMISSION IN OUR EFFORTS.

NOW, LET ME PRESENT MR. BLOSSER.





PRESENTATION BY WILLIAM R. BLOSSER ON JANUARY 24, 1975 AT THE PUBLIC HEARING ON COLUMBIA INDEPENDENT REFINERY, INC., TO BE HELD BY THE ENVIRONMENTAL QUALITY COMMISSION.

MY NAME IS BILL BLOSSER. I AM AN ENVIRONMENTAL PLANNER WITH CH2M HILL IN PORTLAND. OUR FIRM WAS RETAINED BY COLUMBIA INDEPENDENT REFINERY IN MAY 1973 TO PREPARE THE ENVIRONMENTAL ASSESSMENT OF THEIR PROPOSED REFINERY AT RIVERGATE. I WOULD LIKE TO TAKE A FEW MINUTES TO EXPLAIN THE PROJECT AND INDICATE THE MAJOR FINDINGS OF THE ASSESSMENT. SOME OF THE SLIDES I WILL BE USING WERE TAKEN AT CIRI'S SISTER REFINERY IN HAWAII, WHICH IS SIMILAR IN APPEARANCE TO WHAT WOULD BE BUILT AT RIVERGATE.

AS YOU ARE AWARE, THE SITE IS LOCATED IN THE RIVERGATE INDUSTRIAL DISTRICT 8 MILES FROM DOWNTOWN PORTLAND NEAR THE CONFLUENCE OF THE COLUMBIA SLOUGH WITH THE WILLAMETTE RIVER. JUST NORTH OF THE SITE IS KELLEY POINT PARK AND TERMINAL 6, TO THE SOUTH AND WEST IS THE OREGON STEEL MILL AND COOKE GRAIN TERMINAL, WHICH IS UNDER CONSTRUCTION. TO THE EAST IS SMITH LAKE AND THE CITY OF PORTLAND SANITARY LANDFILL.

THE 50,000-BARREL-PER-DAY REFINERY IS PROPOSED TO BE CONSTRUCTED BY 1979. THE SLIDE YOU SEE SHOWS THE PROPOSED SITE PLAN. MOST OF THE PROPERTY IS TAKEN UP BY TANKS.

THE WATER TREATMENT LAGOONS ARE IN THIS AREA; A SITE FOR A POSSIBLE OXYGEN PLANT HAS BEEN SHOWN HERE; THE FLARES ARE IN THIS AREA. A TRUCK AND RAIL LOADING FACILITY IS LOCATED OVER HERE; THESE FACILITIES ARE EXPECTED TO BE USED VERY SPARINGLY. THE ACTUAL REFINING TAKES PLACE HERE NEAR THE CENTER OF THE PROPERTY AND WILL LOOK SOMETHING LIKE THIS.

THE PRIMARY MEANS OF DISTRIBUTING THE PRODUCT WILL BE BY PIPELINE, EITHER TO THE STATEWIDE PETROLEUM DISTRIBUTION AND STORAGE FACILITY IN THE GUILDS LAKE AREA, TO TERMINAL 4, OR TO OTHER MAJOR USERS.

CRUDE OIL WILL BE BROUGHT TO THE REFINERY IN UP TO 77,000-DEAD-WEIGHT-TON TANKERS ARRIVING IN PORTLAND EVERY 8 TO 9 DAYS. THEY WILL UNLOAD AT TERMINAL 4, SLIP 3, EXCEPT DURING FRESHETS ON THE WILLAMETTE WHEN THE PROPOSED DOCK PARALLEL TO THE WILLAMETTE WILL BE USED.

THE REFINERY WILL BE FLEXIBLE IN THE TYPES AND AMOUNTS OF FUEL IT CAN PRODUCE. THIS SLIDE SHOWS THE RANGE OF PRODUCTS THAT CAN BE PRODUCED.

LET ME NOW TOUCH BRIEFLY ON THE ENVIRONMENTAL IMPACTS OF THE PROJECT.

THE REFINERY WILL COST AN ESTIMATED \$140 MILLION. DURING CONSTRUCTION, THE PEAK ONSITE EMPLOYMENT WILL BE ABOUT 1,500. I WANT TO NOTE THAT THIS IS A REDUCTION FROM THE 2,800 SHOWN IN THE ASSESSMENT. THE PAYROLL WILL BE ABOUT \$50 MILLION.

APPROXIMATELY 140 PEOPLE WILL BE EMPLOYED TO OPERATE THE REFINERY, ALL BUT 20 OF WHOM ARE EXPECTED TO BE HIRED LOCALLY. PAYROLLS WILL TOTAL ABOUT \$2.1 MILLION PER YEAR. LOCAL AND STATE TAXES WILL BE ABOUT \$5.8 MILLION YEARLY, WITH ABOUT \$3 MILLION OF THIS BEING LOCAL PROPERTY TAXES.

WITH RESPECT TO WATER QUALITY, OUR ANALYSIS, AS WELL AS THAT OF YOUR STAFF, SHOWS THAT THE DISCHARGES WILL HAVE NO ADVERSE IMPACTS ON WATER QUALITY OR AQUATIC LIFE IN THE WILLAMETTE RIVER OR THE COLUMBIA SLOUGH.

WITH RESPECT TO THE IMPACT ON THE NATURAL ENVIRONMENT, THE ENTIRE RIVERGATE AREA IS OR WAS A MARSHY FLOOD PLAIN. TO MAKE THE AREA USABLE BY INDUSTRY, THE PORT HAS FILLED MUCH OF THE AREA TO ABOVE THE 100-YEAR FLOOD LEVEL. ONE RESULT HAS BEEN TO DISPLACE VIRTUALLY ALL PLANTS AND ANIMALS FROM THE AREA. THE WILDLIFE HAS GENERALLY RELOCATED TO THE SMITH AND BYBEE LAKE AREAS OR TO THE RIPARIAN HABITAT ALONG THE SLOUGH. THE REFINERY WILL LEAVE A 50-FOOT BUFFER ALONG THE SLOUGH TO PRESERVE THIS HABITAT.

THIS SLIDE SHOWS THE PREDICTED NOISE LEVELS TO BE GENERATED BY THE REFINERY. CURRENT NOISE LEVELS ARE ABOUT 50 DECIBELS. THE PREDICTED NOISE LEVELS MEET OSHA AND DEQ STANDARDS. THE NEAREST NOISE SENSITIVE PROPERTY IS A RESIDENCE JUST OVER A MILE AWAY ON SAUVIE ISLAND. IT SHOULD PERCEIVE NO INCREASE IN NOISE.

THE REFINERY WILL BE A RELATIVELY LARGE GENERATOR OF TRAFFIC DURING CONSTRUCTION BUT A MINOR ONE DURING OPERATION. AN ADDITIONAL 3,000 TO 3,500 VEHICLE TRIPS PER DAY COULD BE GENERATED DURING THE PEAK OF CONSTRUCTION. TWO SHIFTS PER DAY WILL OCCUR AND THEY WILL BE STAGGERED TO AVOID THE NORMAL PEAK TRAFFIC PERIODS. MOST OF THIS TRAFFIC IS EXPECTED TO USE EITHER NORTH LOMBARD OR COLUMBIA BLVD. THE TRAFFIC ESTIMATE ASSUMES THAT EVERY WORKER DRIVES HIS OWN CAR; BUT THE REFINERY WILL ENCOURAGE CAR POOLING AND WILL WORK WITH TRI-MET TO IMPROVE BUS SERVICE TO THE AREA.

DURING OPERATION, THE REFINERY IS EXPECTED TO GENERATE A MAXIMUM OF 350 VEHICLE TRIPS PER DAY. THIS TRAFFIC WOULD INCREASE VOLUMES IN THE ST. JOHNS CORE AREA ABOUT 1 PERCENT OVER 1974 LEVELS. THE IMPACT OF THIS IS MINIMIZED SINCE THE TRAFFIC IS SPREAD OVER THREE SHIFTS.

THE REFINERY WILL USE ABOUT 428 GALLONS PER MINUTE OF WATER. FIRE PROTECTION WILL BE PROVIDED BY AN ONSITE FIRE BRIGADE

AND BY THE CITY OF PORTLAND FIRE BUREAU WHICH HAS EQUIPMENT TO FIGHT PETROLEUM FIRES, PORTLAND GENERAL ELECTRIC HAS INDICATED IT CAN PROVIDE THE ELECTRICAL ENERGY NEEDS OF THE REFINERY WHICH ARE ESTIMATED AT ABOUT 14,600 KWH PER HOUR. NO IMPACT IS FORESEEN ON OTHER URBAN SERVICES.

THE STAFF REPORT COVERED THE SUBJECT OF SOLID WASTES WELL AND UNLESS THERE ARE QUESTIONS I WILL ADD NOTHING NOW.

WITH RESPECT TO LAND USE PLANNING CONSIDERATIONS, THE PROPOSED HEAVY INDUSTRIAL USE OF THE SITE CONFORMS WITH EXISTING PLANS FOR THE AREA AND THE PROPER ZONING HAS BEEN APPROVED FOR REFINERY USE.

A MAJOR CONCERN OF MOST PEOPLE ABOUT REFINERIES IS ODOR. THE REFINING PROCESSES AND THE MECHANICAL EQUIPMENT TO BE USED IN THE REFINERY WILL ELIMINATE VIRTUALLY ALL SOURCES OF ODOR. THE DRAFT PERMIT YOU ARE CONSIDERING TODAY IMPOSES RESTRICTIONS ON ODOR AND BASED ON ODOR TESTS WE CONDUCTED ON ANOTHER MODERN REFINERY, THE REFINERY SHOULD HAVE NO DIFFICULTY MEETING THESE STANDARDS.

WITH RESPECT TO AESTHETIC AND VISUAL CONSIDERATIONS, THE REFINERY WILL GENERALLY HAVE A LOW PROFILE BUT THE PROCESS UNITS AND THE 200-FOOT HIGH STACKS WILL BE VISIBLE FOR SOME

DISTANCE. INSURANCE REGULATIONS REQUIRE THAT THE PROCESS AND TANK AREAS BE KEPT FREE OF FLAMMABLE MATERIALS, SO ALL LANDSCAPING WILL BE OUTSIDE THE FENCE LINE, ALONG THE SLOUGH, OR IN THE ADMINISTRATION AREA.

THE LAST ITEM I WISH TO DISCUSS IS THE POSSIBILITY OF OIL SPILLS. WE HAVE TALKED WITH THE COLUMBIA RIVER PILOTS ABOUT THE DANGERS OF TANKER CASUALTIES AND HAVE EXAMINED THEIR SAFETY RECORD. THE PILOTS CURRENTLY BRING ABOUT 170 TANKERS PER YEAR UP THE RIVER TO THE PORTLAND AREA. OUR ANALYSIS CONFIRMS THE PILOTS' OWN OPINION THAT THE REFINERY'S TANKERS CAN TRANSIT THE RIVER SAFELY.

IN OUR OPINION A GREATER THREAT TO THE RIVERS IS THE NUMEROUS SMALL SPILLS THAT OFTEN OCCUR DURING THE SHIP-TO-SHORE TRANSFER OF OIL. IN THE PORTLAND AREA ALONE, FOR EXAMPLE, THE COAST GUARD HAS REPORTED ABOUT 250 SPILLS IN THE LAST 2 YEARS, MOST OF WHICH HAVE BEEN UNDER 50 GALLONS. THE REFINERY PROPOSES TWO THINGS TO AVOID THIS TYPE OF SPILL. FIRST, THE TERMINAL FACILITY WILL HAVE THE MOST MODERN OIL TRANSFER EQUIPMENT AVAILABLE. THE EQUIPMENT AND ITS OPERATION WILL EQUAL OR EXCEED COAST GUARD AND EPA REQUIREMENTS.

SECOND, TERMINAL 4 IS IDEALLY SUITED AS AN OIL TERMINAL AND WAS AN IMPORTANT FACTOR IN SELECTING THE RIVERGATE SITE FOR THE REFINERY. AS YOU CAN SEE IN THIS SLIDE, THE TANKERS

WILL NORMALLY BE TOTALLY CONTAINED WITHIN SLIP 3. AN AIR BARRIER OR FLOATING BOOM ACROSS THE END OF THE SLIP WILL BE DEPLOYED DURING ALL TERMINAL OPERATIONS. WHEN SHIPS MUST BE ANCHORED AT THE RIVERSIDE DOCK, AN OIL BOOM WILL BE PLACED AROUND THEM AND THE OIL CAN BE CHanneLED INTO THE QUIET AREA OF THE SLIP TO BE SKIMMED. NO OTHER TERMINAL FACILITY IN THE COLUMBIA BASIN HAS THIS CAPABILITY. OIL SKIMMING EQUIPMENT IS AVAILABLE IN THE PORTLAND HARBOR WHICH CAN MOVE TO THE SITE WITHIN MINUTES TO CONTAIN AND CLEAN UP A MAJOR SPILL, SHOULD ONE OCCUR.

I HAVE GONE VERY QUICKLY OVER THE ENVIRONMENTAL ASPECTS OF THE PROJECT. I WOULD NOW LIKE TO ASK MR. REID TO DISCUSS THE AIR QUALITY IMPACTS.

PRESENTATION BY RICHARD S. REID ON JANUARY 24, 1975 AT THE PUBLIC HEARING ON COLUMBIA INDEPENDENT REFINERY, INC., TO BE HELD BY THE ENVIRONMENTAL QUALITY COMMISSION.

MEMBERS OF THE COMMISSION AND GUESTS, MY NAME IS RICK REID. I AM A MECHANICAL ENGINEER WITH CH2M HILL AND ASSISTED IN PREPARING THE AIR QUALITY IMPACT ANALYSIS FOR THE REFINERY.

DURING THE AIR QUALITY ANALYSIS, WE WORKED VERY CLOSELY WITH THE NORTHWEST REGION DEQ STAFF. WE WISH TO THANK THE STAFF FOR THEIR HELP AND CONGRATULATE THEM ON WHAT WE FEEL WAS AN IN-DEPTH APPROACH.

SINCE THE ENVIRONMENTAL ASSESSMENT WAS WRITTEN, THE DEQ STAFF HAS REVISED THEIR POSITIVE IMPACT ANALYSIS OF THE CLEAN FUELS POLICY TO INCLUDE UPDATED FUEL CONSUMPTION DATA. WE HAVE REVIEWED THIS LATEST DATA AND AGREE WITH THE RESULTS.

THE REFINERY WILL BE DESIGNED USING HIGHEST AND BEST PRACTICABLE TREATMENT AND CONTROL TO MEET THE INTERIM POLICY FOR APPROVING NEW OR EXPANDED AIR EMISSION SOURCES IN THE PORTLAND METROPOLITAN AREA. THE TWO CONTAMINANT EMISSIONS OF MAJOR CONCERN FROM THE REFINERY ARE SUSPENDED PARTICULATES AND SULFUR DIOXIDE.



THE INTERIM POLICY REGULATES EMISSIONS FROM TWO STANDPOINTS:  
1) TOTAL EMISSIONS ARE NOT ALLOWED TO EXCEED SET LIMITS, AND  
2) THE DISPERSION OF EMISSIONS SHALL NOT CAUSE ANNUAL AMBIENT  
AIR QUALITY STANDARDS TO BE EXCEEDED AT ANY POINT PROJECTED  
TO BE IN COMPLIANCE WITH SUCH STANDARDS. THE POLICY STATES  
THAT NO ONE SOURCE CAN USE UP MORE THAN 25 PERCENT OF EITHER  
ALLOWABLE INCREASE. THE EMISSIONS AND INCREASED AMBIENT AIR  
LEVELS ARE TO BE ASSESSED AFTER TAKING INTO ACCOUNT ANY  
TRADE OFFS IN THE AREA ATTRIBUTABLE TO THE SOURCE.

#### SLIDE 16

THE INTERIM POLICY SPECIFIES THAT EMISSIONS FROM A SINGLE  
NEW SOURCE SHALL NOT EXCEED 107 TONS PER YEAR OF SUSPENDED  
PARTICULATE AND 357 TONS PER YEAR OF SULFUR DIOXIDE AFTER  
ALLOWING FOR TRADE OFFS. THE REFINERY WILL BE DESIGNED TO  
EMIT NO MORE THAN 107 TONS PER YEAR OF PARTICULATES AND  
1,040 TONS PER YEAR OF  $SO_2$ . THUS, TO MEET THE REGULATED  
EMISSION RATES FOR SUSPENDED PARTICULATES THE REFINERY DOES  
NOT REQUIRE A TRADE OFF. TO MEET  $SO_2$  EMISSIONS RATE LIMITA-  
TIONS, THE REFINERY DOES REQUIRE A 683 TONS PER YEAR TRADE  
OFF. THE STAFF REPORT SHOWS THAT A REDUCTION IN SULFUR  
CONTENT TO ONLY 1.3 PERCENT FROM A PRESENT AVERAGE OF 1.4  
PERCENT WILL PROVIDE THE TRADE OFF.

THE MODERN PROCESS EQUIPMENT INCLUDED IN THE REFINERY WILL ALLOW THE PRODUCTION OF RESIDUAL FUEL OILS WITH A MAXIMUM SULFUR CONTENT OF 0.5 PERCENT WHICH WOULD BE AVAILABLE FOR USE IN THE AREA. THE STAFF REPORT SHOWS A REDUCTION OF 394 TONS PER YEAR OF PARTICULATE AND 6,960 TONS PER YEAR OF SO<sub>2</sub> CREATED BY THE USE OF 0.5 PERCENT SULFUR RESIDUAL FUEL OIL IN MULTNOMAH, WASHINGTON, AND CLACKAMAS COUNTIES. THIS WILL PROVIDE SO<sub>2</sub> EMISSION REDUCTIONS TEN TIMES GREATER THAN REQUIRED FOR TRADE OFF BY THE INTERIM POLICY. THESE REPRESENT 2.5 PERCENT AND 26 PERCENT IMPROVEMENTS IN THE TOTAL AIR QUALITY MAINTENANCE AREA RESPECTIVELY.

WE FEEL THAT THE STAFF HAS RIGHTFULLY TAKEN A CONSERVATIVE APPROACH IN THEIR ANALYSIS. IF THE SULFUR CONTENT OF RESIDUAL FUEL OIL IS REGULATED TO 0.5 PERCENT, THE AVERAGE SULFUR CONTENT WILL UNDOUBTEDLY BE LOWER. WITH THE PRESENT REGULATED MAXIMUM OF 1.75 PERCENT, THE AVERAGE SULFUR CONTENT IS 1.4 PERCENT. THE REDUCTION BELOW 0.5 PERCENT WILL RESULT IN EVEN GREATER IMPROVEMENT IN AIR QUALITY THAN IS SHOWN HERE.

SLIDE 17

THE SECOND PROVISION OF THE INTERIM POLICY RELATES TO AMBIENT AIR CONCENTRATIONS. THE MAXIMUM MEASURED SUSPENDED PARTICULATE LEVELS IN THE AREA ARE OCCURRING AT THE CONTINUOUS AIR MONITORING STATION DOWNTOWN. THE ALLOWABLE INCREASE FOR

ANY ONE SOURCE IS  $0.25 \text{ ug/m}^3$ . DISPERSION FROM CIR IS PREDICTED TO INCREASE THE AMBIENT LEVEL BY  $0.21 \text{ ug/m}^3$ . THE BENEFIT OF THE CLEAN FUELS WILL BE EIGHT TIMES THE INCREASE PREDICTED ABOVE. THESE RESULTS AGREE WITH THE STAFF'S ANALYSIS OF THE EFFECTS OF THE INTERIM POLICY, AS PRESENTED TO THE COMMISSION SEPTEMBER 20, 1974.

A SIMILAR ANALYSIS WAS MADE FOR  $\text{SO}_2$  AMBIENT AIR CONCENTRATIONS. THE STATION WITH THE HIGHEST EXISTING CONCENTRATIONS IS LOCATED AT THE STANDARD OIL OFFICE IN NORTHWEST PORTLAND. THE ALLOWABLE INCREASE FOR ANY ONE SOURCE IS  $2.8 \text{ ug/m}^3$ . DISPERSION FROM THE REFINERY IS PREDICTED TO INCREASE THE AMBIENT AIR LEVEL AT THAT STATION BY  $2.1 \text{ ug/m}^3$ . THE CLEAN FUELS POLICY WILL PROVIDE AN IMPROVEMENT OF SIX TIMES THIS FIGURE.

THUS, THE REFINERY EMISSIONS LEVELS ARE WELL BELOW THE INTERIM POLICY REQUIREMENTS. THE ONLY TRADE OFFS REQUIRED ARE TO OFFSET 683 TONS PER YEAR OF  $\text{SO}_2$  EMISSIONS.

ALTHOUGH THE REFINERY ONLY NEEDS TO EFFECT A REDUCTION FROM 1.4 PERCENT TO 1.3 PERCENT SULFUR TO MEET THE REQUIRED TRADE OFF, A CLEAN FUELS POLICY THAT FURTHER REDUCES THE SULFUR CONTENT IN RESIDUAL FUEL OILS BY 1979 WILL PROVIDE EVEN GREATER AIR QUALITY IMPROVEMENT. THE REDUCTION IN  $\text{SO}_2$

EMISSIONS FROM USING LOW SULFUR RESIDUAL FUELS COULD HAVE A  
SUBSTANTIAL SIDE BENEFIT TO SUSPENDED PARTICULATES IN THE  
PORTLAND AREA. RECENT STUDIES SHOW THAT A SUBSTANTIAL  
PORTION OF SUSPENDED PARTICULATES IN URBAN AREAS CONSIST OF  
SURFACE PARTICULATES RESULTING FROM SO<sub>2</sub> EMISSIONS.

REDUCED SO<sub>2</sub> EMISSIONS WILL, THEREFORE, RESULT IN A SIGNI-  
FICANT IMPROVEMENT IN VISIBILITY AND A REDUCTION IN SUSPENDED  
PARTICULATE LEVELS.

THIS COMPLETES OUR PRESENTATION. WE WOULD BE HAPPY TO  
ANSWER ANY QUESTIONS FROM THE COMMISSION.

COLUMBIA INDEPENDENT REFINERY, INC.

P. O. BOX 1689 / PORTLAND, OREGON 97207

P. O. BOX 3379 / HONOLULU, HAWAII 96842

(503) 227-5698

Reply to Portland

14 January 1975

Department of Environmental Quality  
Northwest Region  
1010 N.E. Couch Street  
Portland, Oregon 97232

Attention: Mr. John F. Kowalczyk

The accompanying comments relate to the proposed Air Contaminant Discharge Permit preliminary draft for Columbia Independent Refinery, Inc.

Page 1.

Under "Name of Air Contaminant Source," please change "Maximum Capacity" to "Design." The reason for this requested change is that a plant designed to produce 50,000 barrels per day will operate within a range. In the permit applications which were filed with DEQ, we showed a rated maximum for each of the process heaters as well as figures for the normal operating conditions. Normal operating conditions correspond to 50,000 barrels per day.

Page 2.

Paragraph 4.

Please add "(OAR, Chapter 340, Sections 22-005, 22-015 22-025)" which will allow us to sell distillate fuels to marine vessels and interstate carriers as exempted by the administrative regulations.

Page 3.

Paragraph 6.

Please add "(OAR, Chapter 340, Sections 22-005, 22-010, and 22-025)" for the same reasons as mentioned immediately above.

Paragraph 7.

Please amend sentence 1 to read "the permittee shall construct the petroleum refinery with designed processing capacity of 50,000 barrels per day..."

Paragraph 8.

We would like to add the following statement: "Sulfur handling methods can be modified after review and approval by Department." Changes in sulfur handling

14 January 1975

Page two

methods may be necessary to meet conditions of future or world markets.

Paragraph 9-e.

Please change required action to comply with OAR Chapter 340, Section 28-050.

Page 4.

Paragraph 11.

Please change 30 days to 90 days because generally a refinery is started up sequentially and checked out unit by unit. This process may take up to three months.

Paragraph 13.

In order to finance a refinery project today, it is necessary to have a major percentage of the product committed under long-term contracts in order to raise the financing. Thus, it will be necessary to offer the 0.5 percent sulfur residual oil for sale prior to the date it is required to be burned. We would like this worded "the permittee shall offer for sale prior to June 30, 1978 for delivery and consumption after January 1, 1979...with a maximum sulfur content of 0.5 percent by weight to customers or resellers with which contracts of supply have been executed."

Paragraph 14.

In seeking the dates listed in this paragraph, you requested our expected timetable. The attached timetable is what we submitted. The likelihood of missing any one of these dates by a day, a week, a month, is probably very great. Our bond-counsel has advised us that the condition "if at any time it is apparent that the project is not viable as determined by failure to adhere to the following schedule, the permit shall be subject to modification or revocation." is sufficient to preclude the arrangement of financing for the project. We do not object to submitting written documentation on the increments of progress on the project, but we cannot agree to the condition of modification or revocation were we to miss even one date. Whether or not such modification or revocation would occur is not the point in question. The fact that it can occur is what, in counsel's opinion, precludes our being able to raise financing. Our suggestion is that the modification or revocation of the permit not be allowed

to be effected unless the cumulative effect of slip-pages causes the startup date of the refinery, Item 14-g, to slip by a period of 12 months.

Page 5.

Paragraph 21-a.

We feel that a daily monitoring of the amount of sulfur byproduct reclaimed and/or sold is abnormally frequent. We prefer to make it a part of the normal routine of gauging tanks on a once a week schedule. We request that "daily" be changed to "weekly."

Paragraph 21-b.

"Any observable increase..." We would like clarification as to by whom any increase must be observed.

Paragraph 21-d.

Economically and operationally it would be very difficult to provide sulfur, ash, and nitrogen content of each shipment of residual and distillate fuel oil sold or distributed in any county in Oregon. Nitrogen is not a standard fuel specification. Oregon, to our understanding, does not have a nitrogen specification on fuel, and a nitrogen test is an expensive analytical procedure to perform. We would like to suggest that the paragraph be rewritten as follows:

"The quantity of sulfur and ash content (percent by weight) on monthly composite sample of each type of residual and distillate fuel product sold or distributed in Oregon. The quantity of nitrogen content (percent by weight) on a quarterly/composite sample of distillate fuel oils and of residual fuel oils sold or distributed in Oregon." Since CIRI will be a wholesale supplier and not a retailer, it will not know the ultimate destination of its product. We will cooperate, however, by providing sulfur and ash data to purchasers as it is part of the normal specification. We will make available to the department the data on each type of product produced and sold for the month.

Page 6.

Paragraph 22-c.

This paragraph should parallel paragraph 21-d above.

Page 7.

Paragraph 6.

This paragraph should read "...in such a manner as to exceed an average total of..." This is necessary because of startup and varying efficiencies of fuel.

Page 8.

Paragraph 13.

This paragraph should be changed to read 90 days for the reason mentioned in the discussion on Paragraph 11, Page 4.

Paragraph 14-a.

We question the advisability of requiring lancing or soot blowing between noon and 4 p.m., a time when it is highly visible and there are greater emissions from industry, business, etc. The period from 12 midnight until 4 a.m. would be the time when there is not otherwise heavy loading of the atmosphere with emissions.

Paragraph 14-b.

Eliminate "boilers and". Refinery boilers are the main heat source for steam-traced pitch and asphalt lines and must never be shut down or the content of the lines will solidify. The steam is also a standby power for fire-fighting water pumps (in the event of electric failure). Steam is vital in emergency purging of vapor-filled vessels, in fire-quenching, in operation of the emergency flare stack, etc. Critical safety and fire control reliance on boiler steam dictate that boilers never shut down. The firing rate, of course, can be minimized.

Paragraph 14-c.

Delete "boilers and" for the reasons given immediately above.

Page 10.

Paragraph 17-c.

Change "arrange" to "average."



Dept. of Environmental Quality  
14 January 1975  
Page five

Paragraph 2-c.

Please amend this paragraph to read "...exceed an average of 0.43 lbs./hr. in a 24-hour period." to conform with operating conditions.

Page 11.

Paragraph 4.

Please amend this paragraph to read "...not exceed an average of 166 lbs./hr. of wet sludge in a 24-hour period."

Page 12.

Paragraph 13-c.

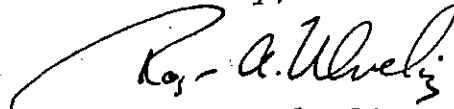
We would like to see "daily" changed to "weekly" so that it can become part of the normal gauging and reporting schedule of the refinery.

Paragraph 13-f.

Please modify daily to weekly for the same reasons.

Please insert a paragraph under special conditions section of each permit which reads as follows: "If within 30 days of delivery of information required for any Department approval required by this permit, the Department fails to notify the permittee in writing of its approval or its disapproval by setting forth its reasons therefore, the department shall be deemed to have given its approval.

Sincerely,



Roger A. Ulveling  
Planning Coordinator



Appvo  
State of Oregon

DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

To: HRP

Date: 1/22/75

From: WH

Subject:

I called you out on the attached. Unfortunately  
Dore was not in so I talked to Emma  
and asked if this couldn't have been handled  
under the public affairs section (like weed  
statement). She didn't know but said records  
I said granted the variance yesterday and  
we have to act on it soon. She would like  
to send their staff report and would like  
to FCC act this Friday. If it is  
(over)



State of Oregon

DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

To: ~~Kess Cannon, Wayne Hanson, and Harold Patterson~~ Date: 1-22-75  
From: Pete Mcswain  
Subject: Open Burning Variance

Mr. St. Louis of the MWRAPA called and related the following problem:

Three Bark-Beetle infested Douglas fir trees require removal from a golf course. The Forestry Department and the local Extension Service authorities have both recommended that removal be accomplished by burning in place as soon as may be.

Mr St. Louis seeks to have the required open burning variance added to the Commission Agenda for January 24th. I advised that the lateness of the hour would preclude bringing the matter up prior to the breakfast. He will forward the Staff Report in the format traditional for agenda items and couched in terms of the conditions set forth' in ORS 468.345. Along with it will be a transmittal letter informing of the person to give the report to the commission and answer any questions they may have as to why open burning is desirable. He will label the matter as item N.

I might note in passing that the Commission might wish at some time to delegate authority for such minor variances to the Department and/or regional authorities (ORS 468.345 (2)).



KESS CANNON  
Director

*cont* - HMP  
Ask Wayne if a response has been given to  
Mid-Willamette

HMP

1/30/74

Joel Dore said that his EDC  
had approved at his last meeting.  
We need to send a letter  
to MWSAAT conform with EDC  
action.

*Wayne*



MICHAEL D. ROACH  
Director

MID WILLAMETTE VALLEY  
**AIR POLLUTION AUTHORITY**

2585 STATE STREET / SALEM, OREGON 97301 / TELEPHONE AC 503 / 581-1715

January 22, 1975

Kessler Cannon, Director  
Department of Environmental Quality  
1234 S.W. Morrison  
Portland, Oregon 97205

Dear Mr. Cannon:

At the regularly scheduled January 21, 1975 meeting of the Board of Directors of the Mid-Willamette Valley Air Pollution Authority, a unanimous vote was obtained on a variance request from the open burning regulations received on January 20th from Salem Golf Club.

The golf club had submitted the variance request after being advised by the Marion County extension office that the only means of controlling an infestation of Douglas Fir bark borers in three small Fir trees, located on the course, was open burning of the trees as they stand. The golf club was advised that the open burning should be conducted as soon as possible, as the young insects are still in the dormant stage.

The Authority requests that, if possible, this matter be considered at the January 24, 1975 meeting of the Environmental Quality Commission. It is the Authority's understanding that public notice is not necessary when a variance as requested under ORS 468.345 is requested for the purpose of averting an environmental hazard.

Your prompt attention to this matter would be appreciated. The Authority will have a staff member present at Friday's meeting to answer any questions the commission members may have. A copy of the variance is enclosed.

Sincerely yours,

David St. Louis  
Acting Director

DS/lc

Encl.

BEFORE THE MID-WILLAMETTE VALLEY  
AIR POLLUTION AUTHORITY

In the Matter of the Application )  
for Variance ) ORDER GRANTING VARIANCE  
 )  
of )  
 )  
SALEM GOLF CLUB. )

This matter came on regularly before the Board of Directors of the Mid-Willamette Valley Air Pollution Authority on January 21, 1975 upon the application of Thomas B. Kay president of the Salem Golf Club, for a variance from Rule 33-005, the open burning restrictions of this Authority.

The Board having considered the recommendation of its staff finds that the conditions of ORS 468.345 have been met in that the burning of the diseased fir trees hereinafter mentioned is required to prevent spreading of infestation of borer or bark beetle and that no alternative method is available, by reason of which strict compliance with the rules of this Authority would be burdensome and impractical, Now Therefore

On Motion duly made, seconded and passed it was resolved by the Board as follows:

IT IS HEREBY ORDERED that the application of Salem Golf Club is granted for a one time burning of three Douglas fir trees at the Salem Golf Club course located at 2025 Golf Course Road South, Salem, Marion County, Oregon.

IT IS FURTHER ORDERED that said open burning shall be accomplished on an open burning day allowed by the Department of Environmental Quality.

IT IS FURTHER ORDERED that a true copy of this Order be forthwith filed with the Environmental Quality Commission and and a true copy forthwith mailed to the Salem Golf Club.

Dated this 22 day of January, 1975.

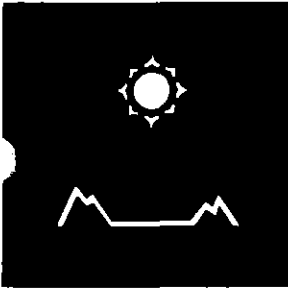
Mid-Willamette Valley Air  
Pollution Authority

By

Harry Carson Jr.  
Chairman

Attest:

David St Louis  
Acting Director



# MID WILLAMETTE VALLEY AIR POLLUTION AUTHORITY

2585 STATE STREET / SALEM, OREGON 97301 / TELEPHONE AC 503 / 581-1715

To: Board of Directors  
From: David St. Louis  
Date: January 21, 1975

Subj: Variance Request from Open Burning Regulations--Salem  
Golf Club

## Background

On January 20, 1975 Thomas B. Kay, President of the Salem Golf Club, 2025 Golf Course Road South, Salem, Oregon, hand carried a written request for a variance from the open burning regulations to the Authority office. The variance request stated that three Douglas Fir trees located in the recreation area, between the 17th and 18th fairways, had become infested by Douglas Fir bark beetles and in the opinion of authorities in the State Department of Forestry and the Marion County extension office, there was no alternative toward preventing the spread of the insects other than open burning of the trees as they stand.

## Discussion

In a telephone conversation conducted January 20, 1975 with Mr. Thomas B. Kay, the Authority staff was informed that in past years the Salem Golf Club had unsuccessfully attempted to utilize insecticides to control the bark borers.

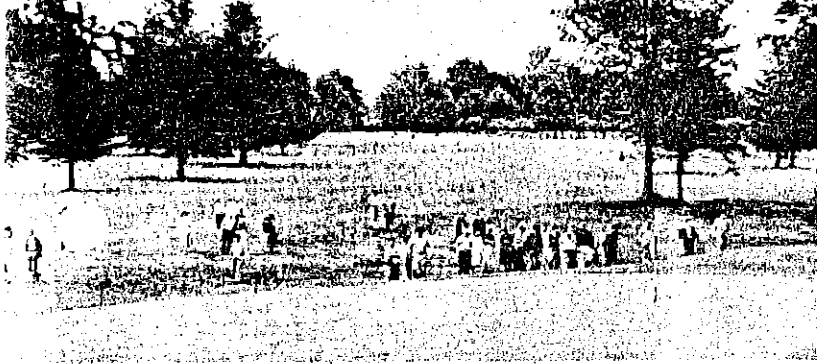
The Authority staff in discussing the recommended methods for controlling the Douglas Fir bark borer, with Marion County extension agent Wilbur Blum, was informed that at present there is no known insecticide that would destroy the insect infestation in the three trees, and that open burning as the trees stand was the only alternative. Any attempt to move the trees would result in migration of the adult bark borers to other trees on the golf course property. Extension agent Blum recommended that the open burning be conducted as soon as possible, as the young insects are still in the dormant stage, however, they would begin migrating by late February.



### Director's Recommendation

The Director recommends, in light of the opinions expressed by the State Department of Forestry and the Marion County extension office, that Salem Golf Club be granted a variance from the open burning regulations to allow open burning of the three small Douglas Fir trees contingent upon the following provisions:

1. The trees are to be burned in a safe manner.
2. The burning is to be conducted on a one time basis on a burning day as determined by the State Department of Environmental Quality.



# Salem Golf Club

2025 GOLF COURSE ROAD S.  
SALEM, OREGON 97302

January 20, 1975

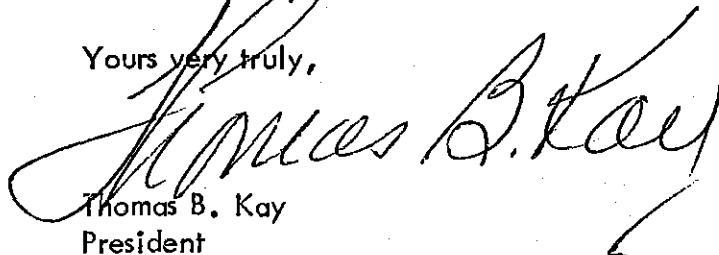
Commissioner Harry Carson, Jr.  
Chairman, Mid-Willamette Valley Air Pollution  
Authority  
2585 State Street  
Salem, Oregon 97301

Gentlemen:

At the Salem Golf Club, we have an unusual infestation of three Douglas Fir trees by a borer or bark beetle. It is the opinion of the authorities in the State Department of Forestry and of the Marion County Extension Office (Agent, Wilbur Blum), that there is no alternative toward preventing the spread of this problem other than burning in place. Any attempt to remove these trees or transporting them has the affect of spreading the infestation.

We hereby apply for a burning variance to accomplish this end. This is an urgent request and any assistance towards expediting such permission would be more than appreciated. We would further appreciate your decision relative to this request at the earliest possible date.

Yours very truly,

  
Thomas B. Kay  
President  
TBK/lr

P.S.: The three diseased trees in question are located in the center of the recreation area between the 17th and 18th fairways.

REC - MWVAPA

JAN 20 1975

DNE JEMB PERM