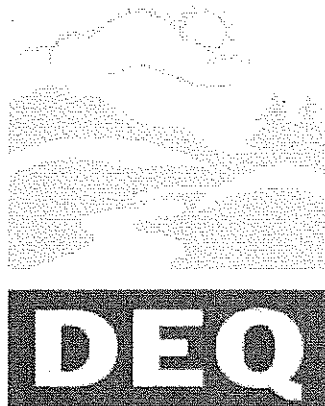


1/23/1987

**OREGON**  
**ENVIRONMENTAL QUALITY**  
**COMMISSION MEETING**  
**MATERIALS**



State of Oregon  
**Department of  
Environmental  
Quality**

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OREGON ENVIRONMENTAL QUALITY COMMISSION MEETING

January 23, 1987

Fourth Floor Conference Room  
Executive Building  
811 S. W. Sixth Avenue  
Portland, Oregon

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TENTATIVE AGENDA

9:00 a.m. CONSENT ITEMS

These routine items are usually acted on without public discussion. If any item is of special interest to the Commission or sufficient need for public comment is indicated, the Chairman may hold any item over for discussion.

- A. Minutes of December 12, 1986 regular meeting and December 19, 1986 special conference call meeting.
- B. Monthly Activity Report for November 1986.
- C. Tax Credits.

9:10 a.m. PUBLIC FORUM

This is an opportunity for citizens to speak to the Commission on environmental issues and concerns not a part of this scheduled meeting. The Commission may discontinue this forum after a reasonable time if an exceptionally large number of speakers wish to appear.

ACTION AND INFORMATION ITEMS

Public hearings have previously been conducted on items marked by an asterisk (\*). The Commission may, however, wish additional information on these items and accept comments from interested persons or call on interested persons to answer questions. This opportunity shall not replace comments at public hearings. Public testimony will be accepted on all other items.

- \*D. Proposed adoption of Oregon's Oil and Hazardous Materials Response Plan.
- E. Informational Report: Oregon's Recycling Opportunity Act; Report on implementation to the 1987 Oregon Legislative Assembly.
- F. Informational Report: The status of implementation of the Metro Waste Reduction program.

- 10 a.m. G. Proposed adoption of temporary rule that would revise "Definitions," OAR 340-108-002(9) (b); "Subdivision B: Reportable Quantities," OAR 340-108-010(1) (d) and (2); and repeal OAR 340, Division 108, Appendix I.
- H. Informational Report: Eagle-Picher Minerals, Inc.
- I. Informational Report: Vehicle Inspection Program.
- J. Issue Paper: Determination of percent allocable for pollution control tax credits.
- K. Request for an exception to OAR 340-41-026(2) (an EQC policy requiring growth and development to be accommodated within existing permitted loads) by Wacker Siltronic Corporation.
- 11 a.m. L. Public hearing and proposed adoption of modifications to Section  
to 1 p.m. 401 Certification rules, OAR Chapter 340, Division 48.
- 9:15 a.m. M. Request for extension of the July 1, 1986 deadline for providing the opportunity to recycle in the Portland wasteshed.

#### WORK SESSION

Following this meeting the staff of the Department of Environmental Quality will conduct a work session for the Commission on the landfill siting process.

As space permits, the public is invited to monitor the work session.

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Because of the uncertain length of time needed, the Commission may deal with any item at any time in the meeting except those set for a specific time. Anyone wishing to be heard on any item not having a set time should arrive at 9:00 am to avoid missing any item of interest.

The Commission will have breakfast (7:30 a.m.) at the Portland Inn, 1414 S.W. Sixth Avenue. Agenda items may be discussed at breakfast. The Commission will lunch at the DEQ offices, 811 S.W. Sixth Avenue, Portland.

The next Commission meeting will be March 13, 1987, in Portland.

Copies of the staff reports on the agenda items are available by contacting the Director's Office of the Department of Environmental Quality, 811 S.W. Sixth Avenue, Portland, Oregon 97204, phone 229-5395, or toll-free 1-800-452-4011. Please specify the agenda item letter when requesting.

THESE MINUTES ARE NOT FINAL UNTIL APPROVED BY THE EQC

MINUTES OF THE ONE HUNDRED SEVENTY-SIXTH MEETING

OF THE

OREGON ENVIRONMENTAL QUALITY COMMISSION

December 12, 1986

On Friday, December 12, 1986, the one hundred seventy-sixth meeting of the Oregon Environmental Quality Commission convened in the fourth floor conference room of the Executive Building, 811 SW Sixth Avenue, in Portland, Oregon. Present were Commission Chairman James Petersen, Vice-Chairman Arno Denecke, and Commission members Mary Bishop, Wallace Brill and Sonia Buist. Present on behalf of the Department were its Director, Fred Hansen, and several members of the Department staff.

The staff reports presented at this meeting, which contain the Director's recommendations mentioned in these minutes, are on file in the Office of the Director of the Department of Environmental Quality, 811 SW Sixth Avenue, Portland, Oregon. Written information submitted at this meeting is hereby made a part of this record and is on file at the above address.

#### BREAKFAST MEETING

##### Review of 1987 Legislative Concepts

Stan Biles, Assistant to the Director, Director Hansen, and various Division Administrators reviewed for the Commission the status of legislative concepts proposed to be submitted by the Department for the 1987 Legislative Session.

#### FORMAL MEETING

##### AGENDA ITEM A: Minutes of the October 24, 1986 EQC Meeting

It was MOVED by Commissioner Bishop, seconded by Commissioner Brill, and passed unanimously that the minutes be approved.

##### AGENDA ITEM B: Monthly Activity Report for September and October, 1986

It was MOVED by Commissioner Bishop, seconded by Commissioner Buist and passed unanimously that the monthly activity report be approved.

##### AGENDA ITEM C: Tax Credit Applications

It was MOVED by Commissioner Bishop, seconded by Commissioner Brill and passed unanimously that the following Director's Recommendation be approved.

Director's Recommendation

It is recommended that the Commission take the following action:

1. Issue tax credit certificates for pollution control facilities:

<u>Appl.</u> <u>No.</u>	<u>Applicant</u>	<u>Facility</u>
T-1839	Wilbur-Ellis Co., Inc.	Loading Dock Enclosure
T-1842	Portland General Electric	Oil Spill Containment
T-1843	Portland General Electric	Oil Spill Containment
T-1844	Evanite Battery Separator	Groundwater Monitoring Wells
T-1845	Conrad Wood Preserving Co.	Lift Truck to move Hazardous Material
T-1847	Newberg Garbage Service	Recycling Center and Storage

2. Revoke Pollution Control Facility Certificate No. 1123 issued to Reichhold Chemical and reissue the certificate to CPEX Pacific, Inc.
3. Revoke Pollution Control Facility Certificates No. 363, 489 and 494 issued to Boise Cascade, Salem Paper Mill.
4. Revoke Pollution Control Facility Certificates No. 921, 1001, and 1200, issued to Glacier Ranch and reissue to Glacier Ranch, Inc.

PUBLIC FORUM

Bill Johnson, ENUF, Foster, Oregon, appeared regarding alternate uses for straw instead of burning. Mr. Johnson said that in Europe straw pellets are used for fuel or cattle feed. In the United States, he continued, straw pellets cannot be used for cattle feed because of pesticides, but could be used for fuel. He said that this use of straw could stop field burning, but that manufacturers of other sources of fuel would not like to see straw used for fuel. Mr. Johnson said that Oregon should develop an industry based on straw utilization for fuel and asked the Commission to give consideration to alternatives to field burning and to push for development of alternatives.

Chairman Petersen assured Mr. Johnson that the Commission was keenly interested in trying to find a way to eliminate the necessity to burn fields. Chairman Petersen said it occurred to him that with as much money as has been spent on research into field burning alternatives, he was surprised that if there was a demand for straw pellets for fuel, it had not been developed. He said the Commission would support alternatives that make sense economically and requested Mr. Johnson to give any

information he had on the subject to the Department. Mr. Johnson said that half of the money collected from farmers each year in field burning fees goes to Oregon State University for research into alternatives, but so far there have been no results.

Bill Schneider, Vale, appeared regarding the Eagle Picher plant in Malheur County which was built directly in front of his home. Since the plant was built, Mr. Schneider said, they have been plagued with noise and air emission problems for which the plant has been cited on several occasions. Mr. Schneider said the company was flaunting the law, and he was concerned about public health. Originally, he opposed the construction of the plant and the issuance of permits, but upon assurance by DEQ that the public would be protected, and also assurances from Eagle Picher, he withdrew his objections to the plant. Eagle Picher said no part of the plant would be visible from his property, but it is. In addition, he continued, Eagle Picher said its emissions were only steam, but they have an immense particulate problem emitting a hazardous substance as defined by EPA. Mr. Schneider said some emissions can be seen from as far away as three miles from the plant. He showed the Commission pictures of emissions from the plant and said that the plant's own engineers state the emissions contain up to 40% cristobalite. He said the emissions were irritating, and some people were more susceptible than others to the fallout which is mixing with their soil so they will be breathing it for years. Mr. Schneider cited instances where bee colonies had been lost because the particulate is so sharp it killed the bees along with other flying insects needed to pollinate fields.

Mr. Schneider expressed concern that DEQ is bowing to political pressure. He said his questions regarding the makeup of the Vale airshed had not been answered. He said that DEQ could apparently vary the definition of the airshed to suit a Fortune 500 company.

Mr. Schneider said that in 1984 he was assured protection from noise impact. Mr. Schneider said it was the state's responsibility to protect citizens. He said that since the plant has been running, he was only getting two hours of sleep a night. He said doctors had determined there was nothing organically wrong with him, only that he was sensitive to the noise.

Mr. Schneider also expressed concern that almost all of the data for issuing the permits came from the industry, not from an independent analysis by DEQ.

Jack Torrey, Vale, owns 267 acres adjacent to the Eagle Picher plant. He said he signed the petition in favor of the plant on assurances that it would have to comply with standards and regulations, and considering the need for jobs in Malheur County. Mr. Torrey was concerned about the health and welfare of his family. He has a daughter at risk from an inherited form of emphysema. Mr. Torrey said he did not want to see the plant close, but it was the state's responsibility to protect the people of the state. He contended his complaints to the DEQ Noise Section were met with rudeness. Mr. Torrey said they had to keep their windows closed all summer because of the noise from the plant. He too said the plant had ignored their emission limits. Mr. Torrey said the citizens could not wait another six months to a year for the plant to comply.

Mr. Torrey said DEQ had never done independent noise tests on the plant, but that the tests were run by a private firm hired by Eagle Picher. He said an acceptable noise level should have been established before the plant was built. He also questioned how the tests were run as he had information the plant deliberately operated quieter during testing by cutting fans and dropping RPMs.

Mr. Torrey thanked the EQC for their time. He said he has gone without sleep for six months and his lack of sleep was affecting his work day. He complimented the DEQ staff, but asked the EQC for help in moving the process along. He said if they did not receive results, they would be seeing the Commission again.

Commissioner Buist asked what was known about the emissions from the plant. Tom Bispham, Administrator of the Department's Air Quality Division, said that the information on cristobalite comes from Eagle Picher. He said the amount was much lower in the raw material. Commissioner Buist said there needed to be adequate information about emissions and because the current information is inadequate, people are more alarmed than they need to be. Commissioner Buist said that if cristobalite was being formed, then Mr. Schneider had a right to be concerned. She said the hazard needed to be identified, the concentration, and particulate size. She said that for reassurance to the people concerned, generally if you can see the particulate there is less need to be concerned than if it cannot be seen. She said it was the very small particle sizes that cause problems. Commissioner Buist said that one large exposure cannot cause silicosis. She said it would need to be extreme heavy exposures for six to nine months to develop acute silicosis. It was Commissioner Buist's educated guess that the size range of the particles was large and probably not a real health hazard, but very irritating. She requested Director Hansen to get more information about the content of the plant's emissions.

Mr. Bispham said the Department was trying to get more information to pass on to residents in the area. He said there were problems at the plant and the Department was taking enforcement actions. Mr. Bispham said that fugitive emissions were very difficult to quantify, but the Department's Laboratory and Regional Operations Divisions would be doing ambient monitoring to get more information. Commissioner Buist emphasized that the size of the particles was important. She said it was easy to be alarmed, but not enough information was known at this time.

Mr. Torrey expressed concern that Commissioner Buist's educated guess may be wrong and that her information was limited. He said there should have been concern shown about asbestos sooner, also, which was now shown to be such a problem.

Chairman Petersen said he thought Mr. Torrey and Mr. Schneider were saying that the conditions of the permit were being violated, but then asked if they were saying the permit was not strict enough. Mr. Torrey said he could live with the noise standards if the plant was in compliance. However, he had noticed respiratory problems in his cattle which prompted him to check with a veterinarian. He said he could live with a permit that called for 57 tons per year of stack emissions, but fugitive emissions were another matter. He said that the company had been served with a five day notice and that the Department's Eastern Region Office was writing up

six additional violations. But, he continued, the company was not concerned about violations. Mr. Torrey said he understood the fugitive emissions from the finished product were the most dangerous.

Chairman Petersen said the Department needed to be given a chance to respond and suggested this matter be put on the Commission's agenda for its next meeting. He said it was too bad Mr. Torrey and Mr. Schneider had to come to the EQC. Chairman Petersen said Mr. Torrey and Mr. Schneider would be kept informed and the Department would be getting back to them.

Director Hansen said it was important to point out that on both noise and air the Department agrees there is a problem and will continue with enforcement. He said the background testing on noise is parallel to what had been found in other quiet areas of the state and is consistent with those other areas. Director Hansen assured the Commission that at such time the Department determines whether or not the company is in compliance, the Department will do the testing and not rely on the company.

Howard Baker, Sweet Home, appeared concerned about smoke from field burning. He said he had not received answers to questions about what he is breathing in the smoke. Mr. Baker was concerned about the high rate of cancer in the valley. Mr. Baker said that burning under favorable winds meant sending the smoke towards Sweet Home and Lebanon instead of Eugene which is more populated. He thought the law could be changed to give equal treatment to residents of Eugene and Salem.

Chairman Petersen said he was sympathetic to Mr. Baker's concerns, but that the smoke has to go somewhere and the Legislature has made a policy decision to send the smoke to the least populated areas. Chairman Petersen suggested the best place for Mr. Baker to go would be to the Legislature.

Director Hansen assured the Commission the Department does respond to questions. Chairman Petersen told Mr. Baker the Department would tell him everything it knew.

Jack Smith, Northwest Environmental Defense Center, appeared to inform the Commission it was filing suit in Federal District Court against EPA regarding the pollution of the Tualatin River. He said they were moved to legal action after petitioning DEQ and the EQC for eight years requesting water quality standards for nutrients and excessive algae growths.

Jack Churchill, appeared to also express his disappointment with the Commission and the Department for not moving on nutrient standards. Mr. Churchill also expressed concern about the public involvement process as he was not informed about the issuance of new permits for the sewage treatment plants along the Tualatin River, as he had been promised. He asked when the Department was going to take a stand in terms of the sewage treatment problems in the Tualatin Basin. He also said it was time the Commission looked at the administration of the Department.



AGENDA ITEM D: Request for authorization to conduct public hearings on proposed amendments to OAR Chapter 340, Divisions 60 and 61 to require annual submittal of recycling reports, amend the list of principal recyclable material, and change the telephone number on used oil recycling signs

This item requests authorization to conduct a public hearing on a proposed rule amendment to require wastesheds to submit annual recycling reports and persons conducting recycling programs required under the Oregon Recycling Opportunity Act to submit data on the amount of material they recycle and the number of users of on-route collection programs. Also proposed are rule changes to make corrections to the list of principal recyclable materials in certain wastesheds, and amend the oil recycling sign rule in order to eliminate the requirement that a particular DEQ telephone number (now nonfunctional) be listed. Authorization is also requested to conduct an additional public hearing on an earlier proposed rule to add yard debris to the list of principal recyclable material in the Portland metropolitan wastesheds.

Director's Recommendation

Based upon the summations in Sections I, II and III of the staff report, it is recommended that the Commission authorize public hearings to take testimony on proposed amendments: (a) to OAR 340-60-010 and OAR 340-60-045 to require annual submittal of recycling reports and to define "recycling setouts"; (b) to OAR 340-60-030 to amend the list of principal recyclable materials; and (c) to OAR 340-61-062 to change the telephone number required on oil recycling signs.

Commissioner Bishop asked how much burden was the paperwork going to be to haulers. Director Hansen said the Department did not like to add extra paper burdens if it was not necessary. He said the Department has been working closely with an advisory committee which includes haulers and local government representatives, and the committee is satisfied with this proposal. He said the Department believed it was doable and had been accepted by the advisory committee.

It was MOVED by Commissioner Bishop, seconded by Commissioner Buist and passed unanimously that the Director's Recommendation be approved.

Commissioner Buist asked where things stood regarding plastics recycling. Director Hansen replied that the Department had a plastics recycling task force evaluating what could be done and the conclusions from that task force are mixed. He said there was no consensus that the process for recycling plastics was very far along or that independent actions of this state would be able to accomplish much. Director Hansen said the Department was trying to find ways to encourage greater markets without which opportunities to recycle plastics are limited.

AGENDA ITEM E: Proposed adoption of the Slash Burning Smoke Management Plan revisions as an amendment to the State Implementation Plan (OAR 340-20-047)

This Plan addresses the concerns expressed by the Commission at its October 24, 1986 meeting. Specifically the "objective" statement in the rule has been revised to include protection of public health and reductions in emissions. The "assumption" section in the Directive has been deleted entirely.

#### Director's Recommendation

Based on the summation in the staff report, it is recommended that the Commission adopt the revised Smoke Management Plan and Directive as an amendment to the State Implementation Plan (OAR 340-20-047)

William L. Toffler, M.D., Portland, testified he was a family physician at OSHU and was previously in private practice in Sweet Home which gave him experience with people affected by smoke. He said that the Smoke Management Plan needs specifics and the health impact was beyond question. Dr. Toffler said the question was how much smoke causes the problem, not if there was a health problem at all. He said the difficulty was in quantifying the problem. Dr. Toffler said that often the experts in the field do not have a medical practice to actually see the effects. He has personal knowledge of people who had had to move from the area because of health problems due to smoke. He said there was clear evidence to show there was a particulate health impact at far less a level than was previously thought. During field burning, he said, there are times it is hard to see 100 meters. He said there was not much of a problem in Portland, but in Sweet Home he saw someone every week who was affected by the smoke. Dr. Toffler said there were people everywhere so sending the smoke to less populated areas was not a solution.

Commissioner Buist asked what proportion of the population experiences an adverse health impact from smoke. Dr. Toffler said he did not have an answer, but that it was an excellent question that needed an answer. Commissioner Buist said there was an enormous body of literature relating to the effects of various types of air pollution. In setting public policy, she continued, the problem is deciding where the cut point should be. All air pollution cannot be done away with. She would, however, like to see field burning done away with. In the absence of alternatives, Commissioner Buist said, it has to be determined what to do with the smoke, and to decide what is an acceptable level of adverse health effects. Commissioner Buist said that no doubt there was an economic burden to the affected people which has to be offset by the economic benefit to the burners. Commissioner Buist said that as far as it is known the levels of pollution do not create disease where there was no disease before, but may aggravate disease where it already exists. In order to answer her question to Dr. Toffler, a population based study needed to be done using instruments that are probably not available, Commissioner Buist said.

Dr. Toffler agreed with Commissioner Buist on the economic argument, and agreed that it was not known how many people are affected, and that there is no knowledge of long-term impact. Dr. Toffler believed it was a priority to determine the impact and the problem with existing standards is that answers are not given for Oregon.

Chuck Stringham, Lincoln City physician, expressed concern about the health effects of slash and field burning. He agreed with Dr. Toffler and said there was no question that during the time of slash and field burning there is a marked increase in his patients for respiratory problems. He said this was a short-term and economic affect. Dr. Stringham said he did not have studies for long-term effects, but knows it is a problem for the people affected. He urged investigation of health impact and enforcement of already existing air quality standards. He encouraged the development of forest practices that would decrease pollution. Dr. Stringham thought there were alternatives that could meet the forestry needs and not impact the health of people in the vicinity of the burning. He asked the Commission to address these concerns to assure health is protected.

Kathy Williams, Seal Rock, realized that the Smoke Management Plan is being reviewed as the support document to the visibility State Implementation Plan. She reminded the Commission the basic purpose of the Clean Air Act was to protect public health. Ms. Williams was concerned about the health effects of slash burns and disagreed with the staff report that the smoke was not affecting people. She said with the particulate levels DEQ already has, it could be determined where the particulate standards are being exceeded. Ms. Williams asked why regulations were not applied the same to the forest industry as to other industry. She said the staff report was only the opinion of some DEQ staff and that others on the DEQ staff were not agreeable. She wanted DEQ to return to the Department of Forestry to develop new and more enforceable rules to protect public health.

Director Hansen believed that the issues coming forth at this meeting have been motivated by pesticide and herbicide concerns. He said new information was coming out, but was still preliminary. He said DEQ was very interested in that data, however did not believe it needed to be addressed in the Smoke Management Plan. If the data leads the Department to believe different regulations are required, then the Department would proceed accordingly.

Chairman Petersen asked for comment on the issue raised that there was not adequate data to assess health impact of short duration exposure to smoke. Director Hansen said the federal standard was based on 24 hours. If an exceedance lasts for only one to two hours it must be at such a level that if averaged over 24 hours it would exceed the 24 hour standard. Commissioner Buist said that this was part of the missing information. If there is a one hour exceedance, she continued, as opposed to constant exposure, then there is inadequate data as to the health impact. Chairman Petersen asked what it would take to develop the data. Commissioner Buist said it was more effective to look toward prevention which is the long-term solution, not to pour money into more research. Commissioner Buist said she had tried to think of ways to study the problem and estimated it could not be done for less than several million dollars.

Chairman Petersen asked what was the extent of research into alternatives. Director Hansen replied that in field burning a specific portion of the fees go into research. He said there had been a lot of work in this area, some of it productive such as alternative crops and better ways to burn.

However, no suitable alternatives have been developed. Regarding slash burning, Director Hansen said, there are some forest managers who do not utilize burning or herbicides. He said this was probably tied to utilization of the slash as well as management of the forests.

Neil Skill, Department of Forestry, said research was being done on a number of topics, but so far no economically feasible way had been found to get rid of the slash. Forestry has advocated a number of strategies, he continued, such as different timing and burning under favorable weather conditions, and removing slash for other purposes. However, so far that has not been a workable solution.

Commissioner Buist said that one of the advantages of slash burning is that it is cheap and quick. As long as it is allowed, there is no incentive to develop alternative technology. Mr. Skill said there were two reasons for slash burning, economics as well as removing the fire hazard and for the reforestation effort. He said the practice was to use burning as a tool. Commissioner Buist said it was controversial as to whether burning slash is the best or only way to prepare the forest for reforestation.

Chairman Petersen said that the people complaining were in rural areas where they do not have political clout and feel their complaints are not heard. He was sympathetic to that, but not sure solving their complaints was within the scope of this agenda item. Mr. Skill said the Department of Forestry felt the same way and that is why they have made a substantial effort to control the smoke the best way they can. Chairman Petersen emphasized he was not being critical of the Department of Forestry because they are charged by law to regulate the forests. Therefore, he continued, the Department of Forestry is not in the position to take the lead in finding more expensive alternative ways to take care of the slash. Mr. Skill said Forestry believes that working for the public interest is their job. Chairman Petersen apologized if his comments were taken otherwise.

Commissioner Denecke complimented Forestry and DEQ for their concerted efforts in this matter.

Director Hansen said he believed the Plan will reduce smoke impacts and within the next eight years the Department is expecting an overall 22% reduction in smoke impacts. Although, he said, that does not satisfy the people who have to face the remaining percent. He said this Plan was an attempt to reduce total emissions.

Commissioner Denecke said he was not unsympathetic to the people who testified, but would support the Plan because of assurances that DEQ and Forestry will continue to make strides in this area. Chairman Petersen agreed.

Commissioner Buist said she would support the Director's Recommendation, but asked how to send a stronger message that the Commission does not think this is an adequate way to solve the problem—that prevention is the answer. She did not think there was any teeth in the Plan to provide an incentive to get to the root of the problem. Director Hansen said there were a number of ways that could be relayed. For field burning more alternative research could be done. For slash burning the most productive area is to have better utilization of the existing slash.

In response to Commissioner Bishop, Director Hansen said the Plan would be reviewed in three years.

Director Hansen said he thought the forest industry was seen as a key aspect of the state's economy and has had a very hard time. It will be difficult, he said, but that does not mean that some additional steps in forestry regarding slash utilization could be taken, which may mean the Legislature authorizing additional money or people to do the job.

It was MOVED by Commissioner Brill, seconded by Commissioner Denecke and passed unanimously that the Director's Recommendation be approved.

Commissioner Brill commented that the Plan was a place to start in solving the problem. Commissioner Bishop said she hoped the public knew their comments were very helpful to the Commission and could make a difference in decisions. Chairman Petersen agreed, and thanked the testifiers for their comments.

AGENDA ITEM F: Proposed adoption of amendments to the Hazardous Waste Permit Fee Schedule, OAR 340-105-110

This item requests adoption of proposed amendments to the hazardous waste permit fee schedule. The proposed amendments would increase the annual compliance determination fees for hazardous waste disposal sites and would temporarily rescind the permit application filing and processing fees for hazardous waste storage facilities.

Director's Recommendation

Based upon the summation in the staff report, it is recommended that the Commission adopt the proposed amendments to the hazardous waste permit fee schedule in OAR 340-105-110.

There was no public testimony during the hearing.

It was MOVED by Commissioner Denecke, seconded by Commissioner Bishop and passed unanimously that the Director's Recommendation be approved.

AGENDA ITEM G: Proposed adoption of Pollution Control Tax Credit Rule amendments, OAR Chapter 340, Division 16

The proposed amendments to OAR Chapter 340, Division 16 are intended to detail legal requirements related to revocation and reissuance of tax credits and to provide further guidance regarding eligible and ineligible facility costs.

Director's Recommendation

Based on the summation in the staff report, it is recommended that the Commission adopt the proposed amendments to the Pollution Control Tax Credit Rule, OAR Chapter 340, Division 16.

Rich Miller, Willamette Industries, was concerned about the rule requiring application within 10 years of facility construction. He was also concerned about retroactively dated certificates. Mr. Miller said an original certificate is good for 10 years from the date of original issuance. He understood the intent of the statute was to give incentive to industry to solve pollution problems. He asked what difference it would make if the transfer is made after 10 years as long as the facility is still used to control pollution. Mr. Miller requested that OAR 340-16-040(2) not be adopted.

Michael Huston, Assistant Attorney General, commented it had been the Attorney General's Office consistent advice to the Department that the statute precludes the retroactive granting of a certificate.

Maggie Conley, the Department's Tax Credit Program Coordinator, felt it was only equitable to give to the transferee the same rights of the original certificate holder which is that the certificate would be valid for 10 years. Otherwise, she continued, the certificate could potentially be extended each time it is transferred. The Department felt such action would be difficult to administer, she said, so proposed the 10 year limit.

Mr. Miller said his clients simply forgot to file in a timely manner for the transfer of a certificate, and were therefore being penalized. Chairman Petersen asked how the statute was being frustrated when a facility was built, was eligible and would have gotten credit had they applied in a timely fashion. Mr. Miller said the intent of the statute was frustrated if application is made after the 10 year period. He said the Department of Revenue only considers credit lost during the intervening years, but the credit can be used after the certificate is transferred.

Commissioner Denecke asked about the Attorney General's advice on this matter. Maggie Conley said that both Elizabeth Stockdale and Arnold Silver from the Attorney General's office worked on developing the proposed rule and agreed it is one way of addressing the problem--not the only way--but an equitable way of dealing with the matter which does not take any rights away from the transferee that were granted to the original certificate holder. Mr. Huston said it was the Attorney General's Office advice that the Commission could go to rulemaking. He said the language calling for 10 consecutive years was in the statute and based on that, as a matter of policy, the Commission could adopt a rule calling for an absolute 10 year limit.

Director Hansen said the original certificate holder has the ability to take credit for a total of 10 years, but can put it off for 3 years and if they do not have any tax liability in that time, they lose the credit. He asked why should a transferee, who may not have had a tax liability, be able to drag that time out. The Department decided, he said, it made best sense to be able to put a 10 year limit on the time by policy choice. Mr. Miller said he did not think there was any intent to drag out the credit.

R. A. Cantlin, representing Ogden-Martin Systems, Inc., did not object to the regulations as written, but strongly objected to the staff interpretation. He said it was important to realize that these regulations are proposed to be interpreted contrary to statutory intent. He thought it was within the Commission's policy making purview to deal with interpretation.

The Commission deferred action on this item.

AGENDA ITEM H: Tax Credit Application, Ogden-Martin of Marion, Inc.

Because of the size and complexity of the Ogden-Martin of Marion, Inc.'s resource recovery tax credit, it has been separated from other tax credits as an agenda item. Staff have analyzed eligible costs and have calculated a percentage allocable based on all available information.

Director's Recommendation

Based on the summation in the review report, it is the Director's recommendation that a Pollution Control Facility Certificate bearing the cost of \$51,046,228 with 54% allocable to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1841 after receipt of documentation regarding the sale and amendments to the tax credit rules are filed with the Secretary of State.

Director Hansen explained that this was a very complex financial arrangement. He said that if certain pieces of the financial arrangement were taken out and analyzed against other types of tax credits a different conclusion could be made than the one the Department came to. He urged the Commission to look at the whole of the financial transaction and evaluate it accordingly. Director Hansen also urged the Commission to keep in mind that the decisions on tax credits, although not like the Commission was signing a check, the effect on the drain in the general fund is the same.

Dick Cantlin, Attorney for Ogden-Martin Systems of Marion, Inc., countered that while one could characterize tax credits as a drain on the revenue of the state, that drain was mandated by the Legislature and he did not think that the purpose at this meeting was to determine whether or not the Legislature was correct in the legislation it passed. He said the purpose at this meeting was to make a determination under the legislation as it exists.

Mr. Cantlin referred the Commission to his overview memorandum dated December 12, 1986. This memorandum is made a part of the Commission's record in this matter. Most of the Commission indicated they had just received the memorandum and had not yet had a chance to read it.

Mr. Cantlin said they disagreed with the conclusions reached in the DEQ staff report regarding the amount of allowed credits based on the law as enacted by the Legislature, its application to the facts, what they perceive to be the proper economic and financial treatment of the data

which has been submitted, and generally accepted accounting and financial standards. He believed the staff report seriously understated the proper amount of credit.

Mr. Cantlin said the staff report relied heavily on staff interpretation of regulations some of which have not been adopted, and all of which were proposed long after the facility was financed and constructed. In certain instances, he said, they do not believe the interpretation given by the staff to those regulations is supportable by law. He said those interpretations were not known until the staff report was made public just a week prior to this Commission meeting.

Mr. Cantlin said the Commission's decision in this matter would have a tremendous effect not only on Marion County but also on any other mass burn facilities in the state. He said they felt the Legislature intended to give the Commission the discretion to fit the type of facility into the most appropriate determining factor in the statute.

Randy Franke, Marion County Commissioner, gave the Commission some background history on the waste-to-energy facility. He said that the Marion County facility was being viewed as a model throughout the Country.

Commissioner Franke said that state pollution tax credits were never intended to be revenue to Ogdan-Martin. The money was always intended to go to reduce the cost of disposal to the residents of Marion County. He said the total facility was for the sole purpose of reducing pollution caused by garbage. Without the possibility of state pollution tax credits this facility would not have been built, he continued. Likewise, the facility would not have been built without innovative financing. Commissioner Franke said they believed the Commission's decision on this matter was not only important to the residents of Marion County, but also as a policy statement for the rest of the state.

Commissioner Franke commented that the State of Oregon should be doing more to encourage resource recovery throughout the state as opposed to landfilling, where it is financially feasible and appropriate.

Commissioner Franke said he was not criticizing DEQ staff for coming to the Commission with what Marion County felt was an extremely conservative position. He said DEQ staff recommended a 54% allocation. He said the purpose of appearing at this meeting was to provide the Commission with information needed make a higher than a 54% allocation. He asked the Commission to look at all the factors; they felt the staff only looked at two factors.

Commissioner Petersen asked why it was important for the Commission to make a decision at this meeting. Mr. Cantlin responded that a decision on the certification must occur in 1986. The credits will be sold to Columbia-Willamette leasing. The difference in the price which accrues to Marion County between being able to affect the sale in December 1986 or January 1987 would be in the neighborhood of \$900,000 to \$1.1 million. Commissioner Petersen clarified that the decision literally did not have to be made at this meeting, but did have to be made prior to December 30, 1986.



Commissioner Petersen asked why the County reasonably expected a 90 to 100% credit, but not less than 80%. Commissioner Franke said legislative committee discussions indicated to the County that taking everything into consideration the chances were very good that they would have 90-100%. Granted, he continued, it was not guaranteed.

Commissioner Petersen asked what the County would have done differently if they had known before construction that the percent allocable would be 54%? Commissioner Franke said when the County was making the decision in late 1981 they were making many comparisons and part of that comparison was the availability of pollution control tax credits, which at that time was 100% for solid waste. Had they known at the time the allocation would be only 54%, the county would have perhaps just gone for more landfilling.

Commissioner Denecke asked if Commissioner Franke recollected anything presented to the legislative committees in the way of exhibits which may be recorded in the legislative history which would put any light on supporting the County's anticipation that a higher percentage would be allocable. Commissioner Franke said he could not recall.

Commissioner Buist said it seemed to her it boiled down to what it costs to dispose of garbage. She asked what it costs at this time for a homeowner in Marion County to dispose of a can of garbage a week, and if the Commission were to recommend the 54%, what would that really do to the cost of garbage disposal? Commissioner Franke said it was approximately \$6.25 for one can per week in Marion County right now. Mr. Cantlin said the difference would be about \$5.00 per ton. Director Hansen said about 10% of the per ton cost was translated on to the can for residential, and about 50% per ton on to the commercial disposal. Mr. Cantlin said that under the law as written, Commissioner Buist's question was irrelevant. He said the credits are mandated by the Legislature.

Director Hansen said that in the questions on the tax credit, the Department was in no way raising a concern about the burner. He said there had clearly been a commitment on behalf of Marion County with which the Department was very pleased.

Mr. Cantlin presented to the Commission the ruling from the Department of Revenue approving this project; a request from Ogden-Martin and a response from Brown and Caldwell. These items are made a part of the Commission's record on this matter.

Mr. Cantlin explained that "low floater" is variable rate municipal debt which can be put to the issuing entity every seven days. This was the first project of its type ever to use low floaters. "Fixed rate debt," Mr. Cantlin explained is like a mortgage, outstanding for a period of years, has set interest rates and stated terms.

Mr. Cantlin said they agreed with staff that the plant is a qualified pollution control facility which meets the test in the law. And as importantly, he continued, it is a single-purpose pollution control facility. ORS 468.190 tells the Commission what they have to do next, he said. This statute says the Commission has to allocate eligible costs and in doing so "the Commission shall consider the following factors." Mr. Cantlin said they read that portion of the statute as "must consider."

ORS 468.190 reads as follows:

Allocation of costs to pollution control.

- (1) In establishing the portion of costs properly allocable to the prevention, control or reduction of air, water or noise pollution or solid or hazardous waste or to recycling or properly disposing of used oil for facilities qualifying for certification under ORS 468.170, the commission shall consider the following factors:
  - (a) If applicable, the extent to which the facility is used to recover and convert waste products into a salable or usable commodity.
  - (b) The estimated annual percent return on the investment in the facility.
  - (c) If applicable, the alternative methods, equipment and costs for achieving the same pollution control objective.
  - (d) Any related savings or increase in costs which occur or may occur as a result of the installation of the facility.
  - (e) Any other factors which are relevant in establishing the portion of the actual cost of the facility properly allocable to the prevention, control or reduction of air, water or noise pollution or solid or hazardous waste or to recycling properly disposing of used oil.
- (2) The portion of actual costs properly allocable shall be from zero to 100 percent in increments of one percent. If zero percent the commission shall issue an order denying certification.
- (3) The commission may adopt rules establishing methods to be used to determine the portion of costs properly allocable to the prevention, control or reduction of air, water or noise pollution or solid or hazardous waste or to recycling or properly disposing of used oil.

Regarding factor (a), Mr. Cantlin said the only use of the facility is to convert municipal waste into electricity, therefore they conclude that the only possible result from applying this factor is that 100% of the cost of the facility qualifies for tax credit. He said the Department maintains that because the boiler is only 71% efficient, only 71% of the cost is properly allocable under this factor. He said they had been trying to understand what boiler efficiency had to do with this test and had been unable to do so. Mr. Cantlin said if the Legislature intended efficiency to be a factor, they would have written the statute that way.

Factor (b), Mr. Cantlin said was not the most appropriate. It must be noted, he continued, they did not include the computation required by this factor in the original application because they do not think factor (b) was relevant and prepared the computation only after DEQ insisted. In response to Chairman Petersen, Mr. Cantlin said they did not think this factor was relevant because the statute tells the Commission to examine the most

relevant criteria and make a determination predicated on its judgment as to the most relevant factor. He said they were not saying the Commission should not consider this factor, just that they do not think it is the most relevant. Mr. Cantlin said they believed the staff report misapplies the formula to the Marion County facility and thus reaches an incorrect conclusion as to the proper percentage of allocable costs.

In regard to factor (c), Mr. Cantlin said the only alternative to the Marion County mass burn facility is siting a landfill with all the attendant environmental, timing, financial and long-term problems. In their view, he said, that alternative is more costly and would not or could not achieve the same pollution control objective. In applying this factor, Mr. Cantlin said, they felt the qualifying certification had to be 100%.

Regarding factor (e), Mr. Cantlin said they believed this was an important factor. If it is believed as a matter of public policy, he continued, that mass burning of solid waste is environmentally superior to any other practical method presently available (as believed in Marion County), then the Commission should recognize that it must be encouraged. Tax credits are an appropriate and necessary means of that encouragement, therefore the appropriate public policy response because the sole purpose of the facility is the reduction of solid waste by a process that produces energy, is to recognize this factor at 100%, Mr. Cantlin said. A second way of looking at this factor, Mr. Cantlin said, would be to measure the efficiency with which the facility reduces the volume of solid waste. He said the purpose of the letter from Ogden-Martin to Brown and Caldwell and the response was to tell the Commission how that measurement could be done. As Brown and Caldwell states, the volume reduction is 87%. Therefore, the factor for allocating the cost of the tax credit if this criteria is used would be 87%.

Commissioner Brill asked if consideration had been given to the fact that the people in Marion County would benefit more from the tax credit than others in the state. Mr. Cantlin replied that as a matter of legislative policy the Legislature has said that is the way it is going to be. Mr. Cantlin said that in his view that would not be a relevant factor.

David Brown, tax lawyer and Alan Schnider, a national tax partner, outlined for the Commission with the use of charts various ways the tax credit could be calculated.

Bob Cannon, Marion County legal counsel, followed SB 112 through the 1983 legislative session because Marion County had the greatest vested interest. Mr. Cannon said there were two disputes during the Legislative Session. One was to have 100% financing of the certified costs eligible for tax credit as a continuation of the then-existing statute. He said they knew, however, that that was not likely to continue. Marion County felt that the legislation that they helped amend correctly and adequately provided that if a pollution control facility was dedicated solely to pollution control it would be 100% eligible. Responding to Commissioner Brill's earlier question, Mr. Cannon said this was a state law which allows for tax credits for all communities in the state, not just Marion County. Mr. Cannon said the county had urged other local governments to look at state pollution tax credits for the means by which they are able to control

some of the pollution that arises out of garbage. He said this is a means of helping local government and residents dispose of a very severe pollution problem.

Chairman Petersen said the one issue the applicant had been driving home was the question of the inconsistent result when applying the sale of the credit and the timing of the decision to change the financing mechanism, and why the Department believes that those should be considered part of the actual costs. Lydia Taylor, Administrator of the Department's Management Services Division, said staff had examined the bulk of the issues brought before the Commission. Because this was complex issue the Department had not dealt with in the past, Ms. Taylor said the Department asked the advice of Jim Joseph of E.F. Hutton to observe whether there were thoughts about the deal that the Department could not observe because it was unfamiliar with this sort of financial arrangement, and to point them out. Also, the Department asked specifically if revenue from the proceeds of selling tax credits should be considered an income item in the return on investment calculation. To which Mr. Joseph responded, yes. Ms. Taylor said Ogden-Martin had a contract with Marion County about the sale of the tax credits and what they are supposed to do with any benefit derived from the use of the tax credits. When the Department looked at the arrangements and the original proposal on return investment sent by Ogden-Martin, it included the deduction of \$600,000 per year reduction in service fee because of the contract with Marion County to pass through use of the tax credits, but they did not report any potential income from sale of the tax credits. It was the Department's feeling that either the tax credit sale deal is part of the entire package, or it is not a part of the entire financial transaction.

Chairman Petersen asked for a response to the inconsistent result argument. Ms. Taylor said there was some flaw in the inconsistent result information provided to the Commission by Ogden-Martin. The flaw is, she said, the contract with Marion County says Ogden-Martin shall pass through to Marion County 9/10ths of any benefit derived from use of the tax credits. If \$600,000 a year is taken off the calculation it must be assumed that there is taxable income against which to apply that tax credit. Ms. Taylor said that is not the case. Ogden-Martin has said the reason that tax credits might be sold is because they do not make enough income to write them off. The Department has, Ms. Taylor said, taken the specific written agreements between Ogden-Martin and Marion County and applied them to the return on investment.

Chairman Petersen asked if this was a "tail wagging the dog" problem when those types of impacts were considered and having then that tail wag the dog of making the best financial decisions. Ms. Taylor said she could see the difficulty in any rule that is written that relates to tax laws or to corporate structure. Ms. Taylor said that when someone is in business they use to the best of their ability the laws they have to work with, one of which is the Department of Revenue rules. In this case these are tax laws and applications.

Chairman Petersen asked that when the Marion County Commission was making its decision on this project, was it unreasonable for them to assume that they would get 80-100% tax credit? Ms. Taylor said the tax credit law changed in 1983 and it was her understanding the preliminary decision to

build the plant was made in 1981 when 100% of the facility would have been eligible for tax credit. She said the question was at what point is a decision changed based upon a change in law.

Commissioner Denecke asked Mr. Huston for his observations on the language in the statute which says, "the commission shall consider the following factors." In addition, Commissioner Denecke said the legislation also says "the commission may adopt rules establishing methods to be used to determine the portion of costs..." Subsequent to this legislation, Commissioner Denecke said, the Commission adopted a regulation which requires the Commission to use the factors which result in the smallest portion of costs allocable. Mr. Huston replied that unfortunately this was not an issue he was aware of at the time he reviewed the staff report so he had not had an opportunity to look at this particular issue. Mr. Huston said it seemed to him that the 1983 legislation did two significant things.

One is that it added solid and hazardous waste facilities to an existing statute for allocation of tax credits and determination of costs allocable to pollution control. Secondly, Mr. Huston thought it was rather significant that there was a major new subsection added which delegated to the Commission rulemaking authority for the methods of determining percent allocable. Mr. Huston thought when that was combined with the fact that the preexisting statute also allowed the Commission to determine other relevant factors and apply those, that the total result is a fair amount of legislative discretion delegated to the Commission, particularly for rule adoption. Arguably, Mr. Huston said, for the Commission to adopt a rule under its authority in the statute that precluded consideration of one of the five factors, might well be beyond its authority.

Commissioner Brill asked at what point in time was the Commission delegated to make rules. Mr. Huston said the authority was in the 1983 legislation.

Commissioner Denecke said it would be his reaction, that even without subsection (3) of the statute, given the five factors, the Commission would be required to make rules.

Chairman Petersen said it did not appear to him to be inconsistent to say that if all the factors are considered, they may come up with different numbers. He said they do not necessarily lead to one, inescapable conclusion. Mr. Huston said it would seem to require an inherent balance in the consideration of the factors.

Ms. Taylor said advice from E.F. Hutton indicated the Department should consider not allowing conversion costs under certain circumstances. And, the Commission might consider adopting a rule that says whether or not it will allow conversion costs in a financial transaction. In response to Chairman Petersen, Ms. Taylor said she was speaking about conversion from one type of financing to another. Ms. Taylor said the company had included conversion costs in capitalized costs for the actual cost of the facility. The Department wrote a rule which said costs for long-term debt should be pro rated because the benefit of long-term debt is received over time not just during the period of construction.

Ms. Taylor said Ogden-Martin provided the Department with a breakdown of costs and one of those costs was the cost of converting from floating term to fixed term, (which the company did opt to do) and to pay back in advance some of the debt they had outstanding. Ms. Taylor thought that conversion costs could be looked at many different ways. After reading the consultant's suggestion that conversion costs were not appropriate to charge to a facility unless there was a date specific upon which the conversion would be made, the Department did not include the conversion costs as allocable costs under the actual costs of the facility. Ms. Taylor said the Department tried hard to abide by the written contracts and agreements and did not speculate in trying to apply given revenue dollars and given operating expense dollars to the return on investment formula.

Chairman Petersen asked what the result would be if the cost of conversion was included. Ms. Taylor said if the cost of conversion were included and amortized the result would be 54.023% cost allocable. If the total conversion cost were added to the DEQ original recommended cost of the facility the portion allocable would be 55.46%, she said.

John Charles, Oregon Environmental Council (OEC), said they had been interested in pollution control tax credits for a long time. He had been on the Department's task force to look at the Department's program. Mr. Charles said he had toured the Marion County facility and found it very impressive and thought there was a lot of potential for energy recovery facilities.

Mr. Charles said the company was in error, and the Department was suggesting far too much in tax credit for the facility. First, Mr. Charles said DEQ erroneously concluded that the sole purpose of the facility is pollution control. He said that is not true as the facility is an electric power generating plant that happens to use municipal solid waste as a fuel. In the process, he said, the facility creates new forms of pollution including highly toxic air pollutants, constant noise pollution, and sludge that is considered by DEQ to be hazardous waste (which is now being stored in a Woodburn solid waste facility but is being segregated in the event it has to go to a hazardous waste disposal site). Mr. Charles said the facility was a processor of solid waste and generates a usable product, but is not a pollution control facility.

Secondly, Mr. Charles continued, DEQ has erroneously calculated the allowable percentage of costs. In the terms of pollution control, Mr. Charles said it was arguable which was the better facility--the garbage burner or a landfill. As a general matter, Mr. Charles said other alternatives cannot be written off.

Mr. Charles said it was relevant to look at the control or reduction of air, water or noise pollution. This facility does not reduce air or noise pollution, he said, it creates that pollution where there was none.

Thirdly, Mr. Charles said, the facility does not comply with its DEQ permits and it is unclear whether they will. By statute and rule, the Commission must find that the facility will comply with its permits. Mr. Charles said in reference to the air quality permit, the Company is apparently not even going to try to comply with the nitrogen oxide

standard, but will ask the Department to raise the permit levels to match what they are emitting. Mr. Charles said it would be imprudent for the Commission to determine at this meeting that the facility will comply with the air quality permit.

Mr. Charles suggested the Commission only give credit for expenditures that are solely related to pollution control which are the baghouse, scrubber, etc., cooling tower, acid storage and caustic storage tank, etc.

Mr. Charles also suggested the Commission defer action on this immensely complicated matter and decide what should be done with the violation of the nitrogen oxide standard, and further simply having the company representatives say they are going to comply is not enough.

Mr. Charles requested that even though there is a lot of pressure for the Commission to decide this matter by the end of December, it is the Commission's role to issue the final determination and he would be disappointed if the Commission would somehow feel they had to make the decision by the end of December. Mr. Charles said this was part of the risk of doing business.

Director Hansen explained he thought the Commission's decision options were to take Mr. Charles' recommendation that the facility's sole purpose was not for pollution control, then the cost allocable was 0 except for the items such as air pollution control equipment and so on. If the Commission does not do that, Director Hansen said, then the Commission faces the issue of the result of the lowest formula and if it wants to change that it needs to adopt some sort of an emergency rule. Regarding the issue of the sale of tax credits, it seemed to Director Hansen that if the Commission determines it is a commodity and a salable item, then it should be treated as the Department has.

Chairman Petersen noted the requirement that the facility will achieve compliance. He said there was a revocation provision that if the company did not comply the credit could be revoked. The Director made a specific finding in his recommendation that the facility will comply. Director Hansen said the Department has looked at the facility and determined it will comply as required by statute.

Commissioner Denecke said that was not true on nitrogen oxide. Director Hansen said the Department's determination on nitrogen oxide was that the change in the permit condition would be reasonable and therefore still in compliance. If that change were not made in the permit, the Department would expect the facility to come into compliance on nitrogen oxide.

Chairman Petersen suggested that the issues be laid out by both the Department and the applicant in a memorandum to the Commission, not be more than three pages in length, summarizing the issue and the arguments and the conclusion on each issue, and submit it to the Commission within a week. Chairman Petersen said the Commission needed to make a good faith effort to get this matter resolved prior to the end of the year.

The Commission set 10:00 am on Friday, December 19 to further consider this item by special conference call meeting.

AGENDA ITEM I: Request for extension of the July 1, 1986 deadline for providing the opportunity to recycle in the Milton-Freewater watershed (ORS 459.185(9))

The Recycling Opportunity Act, adopted by the 1983 Legislature, requires that the opportunity to recycle be provided to all persons in Oregon by 1986. Milton-Freewater has requested an extension of the deadline to April, 1987 because it will be changing its collection system for solid waste and would like to institute the recycling collection as an integral part of the new solid waste collection system.

Director's Recommendation

Based on the findings in the summation of the staff report, it is recommended that the Commission grant an extension to April 30, 1987 of the July 1, 1986 deadline for providing the opportunity to recycle, with two conditions, as follows:

1. The recycling depot at the Milton-Freewater disposal site be completed and ready to accept recyclable materials by January 1, 1987.
2. The initial publicity be provided at least four weeks prior to the beginning of the recycling collection service, and notification to residents also precede the initiation of service, to allow people time to start saving their recyclable materials.

It was MOVED, seconded, and passed unanimously that the Director's Recommendation be approved.

AGENDA ITEM J: Information Report: City of Sheridan request for grant from Pollution Control Bond Fund

The City of Sheridan has requested that the Department provide them a grant from the Pollution Control Bond Fund in the Amount of \$252,000. The grant would be used to pay 30% of the cost of a sewage treatment lagoon to accommodate a new federal minimum/medium security prison in Sheridan.

Director's Recommendation

The Director recommends that the Department introduce a Legislative Emergency Board request on behalf of the City of Sheridan, but that the Department remain neutral as to whether such a grant should be issued.

The request should stipulate that any grant approved be subject to the project qualifying for funding and the facility plan receiving approval from DEQ Water Quality Division.

Bruce Peet, Sheridan City Administrator, presented a letter from Sheridan Mayor J.A. "Art" Hebert in support of the proposal. This letter is made a part of the Commission's record on this matter.



Patrick Curran, Sheridan City Engineer, also testified in support of a grant from the Pollution Control Bond Fund for the construction of sewage treatment facilities to serve the federal correctional institution. He said the prison is to be in service by January 1989 and the treatment facility and lagoons are essential to maintain the quality of the South Yamhill river. He said the City intends full compliance with state water quality standards and has instituted a vigorous program to control discharges from the lagoons. Mr. Curran requested the Commission's support for a grant and asked the Commission to direct the staff to advocate on behalf of the City of Sheridan before the Emergency Board.

Director Hansen explained that in order for an item to go before the Emergency Board it must be presented by a state agency. Director Hansen saw the Department as a facilitator to get this matter before the Emergency Board. He recommended a neutral stand as the most appropriate, as normally the Department would recommend against any grants from the Pollution Control Bond Fund.

Commissioner Denecke MOVED the Director's Recommendation be approved, noting he did not think the endorsement of the Commission would mean that much in this matter. The motion was seconded by Commissioner Buist and passed unanimously.

AGENDA ITEM K: Court of Appeals remand of "Arnold Irrigation District v. DEQ" for reconsideration

On April 23, 1986, the Oregon Court of Appeals reversed an EQC order that had affirmed the Department's decision to deny a 401 certification for a hydroelectric project proposed by the Arnold Irrigation District. The project is proposed at Benham Falls on the Deschutes River south of Bend. This item directs the Department to proceed in reconsidering the District's application for a 401 Certificate.

Director's Recommendation

Based on the summation in the staff report, it is recommended that the Commission return the application of Arnold Irrigation District to the Department with instructions to: (1) assist the applicant to secure the necessary additional information, but include the Deschutes County land use review process as a part of the information-gathering effort unless the county fails to make a good faith effort, (2) complete a reevaluation of the application with due regard to the requirement of state and federal law and the opinion of the Court of Appeals, and (3) advise the applicant of the Department's new decision in the matter. It is also recommended that the Commission direct the Department to follow public involvement procedures as outlined in OAR 340-48-020(4). If the applicant notifies the Department within 20 days of notice of a decision that it is dissatisfied with that decision, the contested case hearing before the Commission will be reopened at the earliest possible date.

Chairman Petersen read into the record a letter from Neil R. Bryant, attorney representing Arnold Irrigation District.

Bruce White, Oregon Chapter of the Sierra Club, said that the Northwest Environmental Defense Center had appealed the EQC's decision to the Court of Appeals on the question of the impact on designated uses. NEDC, he said, wanted a clarification as to what the Department's position was in terms of whether there was any role for designated uses after the Arnold decision.

Michael Huston, Assistant Attorney General, commented he did not think the court decision would preclude DEQ from considering beneficial uses. Commissioner Denecke said the question presented to the Commission under the decision now is, should it be returned to the county asking if there is anything in the land use plan and goals that has any connection with water quality. He said it was Mr. Bryant's contention there was nothing that affected water quality. Commissioner Denecke said he was not saying there was not an answer to Mr. White's question, only that the Commission did not have it at this particular time.

Mr. White said NEDC wanted to preserve its options to have this issue addressed by the staff in the next round of the licensing procedure. He noted the denial of November 27, 1974 made by the Director on land use grounds and eight deficiencies in water quality. He also noted that nothing in the contested case proceeding addressed those water quality deficiencies. It appeared to him that those deficiencies were addressed informally and nothing in the record addresses the reasons for the denial. Mr. White asked what constituted the record in this case. Mr. Huston said the Department initially cited eight minor water quality problems to which the applicant replied. It was presented on the record as a satisfactory response. Whether it was ever in the proper written form, Mr. Huston did not know. Mr. White said that an exchange of correspondence in the record is enough to meet requirements.

Mr. White asked what kind of a proceeding comes after denial and what would constitute the record of that proceeding. Mr. Huston said that on the first round the Department denied the application. It was appealed and a contested case hearing was held in which Arnold was the only one who testified. Deschutes County requested intervention and the Commission declined to grant them intervention. It seemed to Mr. Huston there would be a decision by the Department that would be subject to a contested case procedure before the Commission and other interested parties would then have an opportunity to request intervention in that proceeding.

Director Hansen said the Department would make a decision that could be appealed through the contested case process to the Commission.

Chairman Petersen asked about putting a 60 day time limit on the processing. Richard Nichols, Administrator of the Department's Water Quality Division, explained that whether or not that was sufficient time would depend on the time it would take to put together the public notice, publish it and have the notice out for the required 30 days as Director Hansen said the Department's goal was to proceed expeditiously.

Commissioner Denecke MOVED adoption of the Director's Recommendation with a 60 day limit on the process, and if toward the end of the 60 days the Department found it unrealistic to meet the deadline, the Commission should be informed and the time would be extended. The motion was seconded by Commissioner Bishop and passed with Chairman Petersen abstaining.

AGENDA ITEM L: City of Klamath Falls petition requesting an order waiving OAR 340-48-020(2)(i) and directing DEQ to deem complete the City's 401 certification application

Several months ago, the City of Klamath Falls submitted an application for a 401 certification of its Salt Caves hydroelectric project on the Klamath River. Based upon the Department's rules for 401 certification and the Department's interpretation of the Arnold decision rendered by the Oregon Court of Appeals, the Department has requested submittal of land use information before the application can be considered complete for processing. The City believes the Department's position is inappropriate and has petitioned the Commission to waive the rule requiring land use information.

Director's Recommendation

Based on the summation in the staff report, it is recommended that the petition of the City of Klamath Falls be denied.

George Flitcraft, Mayor of Klamath Falls, testified the City has a sincere desire to limit delays and is concerned that DEQ is mistaken in the way it is handling the 401 certification which creates unnecessary delay. He said they were determined to carry the project through, but it must be on an expeditious basis. He said it was not fair for the project to be held up in DEQ on county land use issues. DEQ's expertise is in water quality he continued. Mayor Flitcraft said that the City filed its application in August and it was now December and DEQ refuses to begin review of the application and has stated that the City must undergo a six month land use process before the Department will consider the application complete.

Mayor Flitcraft proposed that the 401 process proceed concurrently with the land use process and requested that the City's application be accepted and deemed complete.

Peter Glaser, Attorney representing the City of Klamath Falls, testified the dispute was that DEQ will not consider a Section 401 application complete until a land use compatibility statement is submitted from a local governing body. He argued that such action will lead DEQ to deny their application for failure to submit land use information and that the Arnold decision says an application cannot be denied for that reason. He also said the DEQ apparently believes the Commission does not have the authority to waive the regulation and believes that rule making is necessary. The City disagrees. Mr. Glaser argued that the Commission has authority to waive any procedural filing requirement in its rules and cited a U.S. Supreme Court case to support his argument. Mr. Glaser urged the Commission to grant the City's petition, i.e., waive the procedural

filing requirement, declare the City's application complete, and proceed with processing simultaneously with processing of the City's application to the County for land use approval which the City commits to filing soon.

Bob Beach, Klamath Falls businessman, appeared as Chairman and founder of "Save Our Klamath Jobs," an organization with 2,490 members organized to support the Salt Caves project. He testified that the project would mean a great deal to the economy of the City of Klamath Falls. He requested the Commission be sensitive to the reasons behind the project when determining how to schedule consideration of the water quality aspects of the project. He said there was no reason DEQ and the county could not act concurrently in this administrative process. He said the City had bent over backwards to make this a good hydro project and appealed to the Commission to grant the petition.

Bruce White, Sierra Club, testified that the EQC is being urged to act because delay will hurt. What has not been addressed, he said, is why the City has not yet applied to the county for the land use process to start if delay is of such concern. Mr. White said the City has just applied to FERC in the last two weeks and the FERC process takes a very long time. He said it would not be holding up the process if the Commission does not act immediately. He believed the local land use process should be observed and did not believe those programs should be run roughshod over by not giving the county an opportunity to go through its process. He urged the petition be rejected and the land use process proceed.

Commissioner Denecke said it seemed to him no question that the present regulation is contrary to the Court of Appeals decision and would have to be modified. Director Hansen agreed. However, Commissioner Denecke was not sure where to go from there. Chairman Petersen asked exactly what was involved in looking at the plan. Director Hansen said a full analysis of the county land use plan would have to be done to determine what are the water quality provisions of the plan and then determine how to handle it in the 401 Certification process.

Commissioner Denecke asked why it would take six months for the county to review land use issues. Director Hansen referred the Commission to the letter from Klamath County regarding its process (the letter was attached to the Staff report).

Commissioner Buist asked why the county would take 75 days before the first public hearing. Director Hansen said that at the county level an amendment to the land use plan was going to be required and 75 days is a fast track for a change in a land use plan.

Director Hansen said that what is at issue is that there is a process that will have to be gone through. The Department has not said it will deny. He said the county would already be four months into the process if Klamath Falls had filed an application with the county at the same time it filed with DEQ.

Chairman Petersen asked Mr. Huston to comment on the waiver issue and Mr. Glaser's argument that a waiver is appropriate. Mr. Huston stated that state law is less clear than federal law on the authority of an administrative agency to waive procedural requirements. He stated that

it is not legally advisable to waive a rule requirement; the better course of action is to change the rule requirement. He further noted that the state Administrative Procedures Act does not recognize a petition for a waiver as a remedy to a problem—it does recognize a petition for rulemaking. He recommended the Commission pursue rulemaking with appropriate notice if the Commission wished to pursue the merits of the City's proposal.

Chairman Petersen expressed frustration at what he perceived to be a continuing effort to have the Commission and Department expand its authority under the Clean Water Act beyond what it has. He said the Department either grants or denies a certification under the water quality criteria and then if it does grant the certificate it can be conditioned with water quality related issues as decided by Arnold. He thought it would be a mistake to do otherwise.

He indicated he appreciated the Department's effort to give difference to other state laws and interagency agreements, but felt it was a mistake to take other than a narrow view of the authority given the Department under the federal Clean Water Act.

Director Hansen stated that was the crux of this issue--do we comply with land use and other requirements of state law to the maximum extent possible under Arnold, or do we go for the minimum extent possible.

Chairman Petersen indicated his desire to grant some relief as requested by the City, but was unsure of the process to follow to do so. Director Hansen advised that the Commission could act today by adopting a temporary rule, or could authorize the Department to give notice of a hearing, draft rule amendments, and proceed rapidly through a normal rulemaking process. He further indicated the Department would need guidance from the Commission on the extent of amendments desired and the role of land use authorities in order to draft rule amendments.

Commissioner Denecke asked if the Department would visualize seeking input from the County. Director Hansen indicated one option would be to send materials submitted by the applicant to the County, ask for its review and advice, and if no comments are received within 60 days, proceed with processing the application. Chairman Petersen and Commissioner Denecke both felt that such an option made sense in that it defers to the County, but establishes a time limit.

It was MOVED by Commissioner Denecke to deny the petition and direct the Department to issue public notice of proposed rulemaking, draft rule amendments to conform the 401 rules to the Arnold decision, and establish an alternative with a time certain for planning jurisdictions to provide advice to the Department on land use requirements that may be water quality related, and hold the rulemaking hearing before the Commission at its January 23, 1987 meeting. The motion was seconded by Commissioner Buist and passed unanimously.

There being no further business, the meeting was adjourned.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Carol Splettstaszer". The signature is written in a cursive style with a large initial "C".

Carol Splettstaszer  
EQC Assistant

THESE MINUTES ARE NOT FINAL UNTIL APPROVED BY THE EQC

MINUTES OF A SPECIAL MEETING

OF THE

OREGON ENVIRONMENTAL QUALITY COMMISSION

December 19, 1986

On Friday, December 19, 1986, a special conference call meeting of the Oregon Environmental Quality Commission was held. Connected by conference call telephone were Commission Chairman James Petersen in Bend, Vice-Chairman Arno Denecke in Salem, Commissioners Mary Bishop and Sonia Buist in Portland, and Commissioner Wallace Brill in Medford. Department Director Fred Hansen was present by phone in Salem and several members of the Department staff and public were present by phone in Portland.

The purpose of this meeting was to continue the discussions from the Commission's December 12, 1986 meeting regarding the Ogden-Martin application for pollution control tax credit.

Director Hansen said that two sets of issues needed to be addressed at this meeting: the Ogden-Martin tax credit question, and a clarification on two items raised during the consideration of the tax credit on December 12. That is, is the facility even eligible for tax credit, and the issue of compliance.

On the eligibility and compliance issues, Director Hansen said the concerns that had been raised about eligibility are issues that are more properly raised before the Legislature, not before the Commission. He said the statute was clear that energy recovery facilities are intended to be eligible for tax credit, not just that portion which are more normally termed pollution control devices, such as the baghouse. Director Hansen said the Department felt this was a very straight forward issue. Chairman Petersen indicated he was comfortable with the issue as outlined by Director Hansen. Commissioner Denecke asked if this was in response to John Charles' (Oregon Environmental Council) argument. Director Hansen replied it was. Chairman Petersen commented that in the Oregon Environmental Council's latest mailing to the Commission they take the position they believe the entire facility is eligible under ORS 468.155. The remainder of the Commission indicated they did not have any problem with the eligibility issue.

Chairman Petersen asked Director Hansen to brief the Commission on the current status of the air, noise and hazardous waste permits for the facility and to comment on where the facility is out of compliance, how the Department anticipates the company achieving compliance. Chairman Petersen said it was his understanding that in order to be eligible for a certificate to begin with the facility must be in compliance. Director Hansen replied that the actual language in the rule is "...will achieve compliance with Department statutes and rules or Commission orders or permit conditions where applicable."

Basically, Director Hansen said, in terms of the water, noise and air issues (except for nitrogen oxide) the facility is in compliance. Relative to nitrogen oxide, preliminary data shows the facility at a level above what is allowed in the permit. The Department is contemplating a change in the permit which would go through the normal public review process. The company expects that either it will meet the modified permit, or if the Department chooses to not modify the permit, the company will meet the existing nitrogen oxide limitation. In regard to the hazardous waste permit, Director Hansen continued, at the present time there are discussions between the Department and the company about the nature of the ash resulting from the burning process. The Department is doing additional testing and establishing protocols for the analyses of the ash. In any event, he said, the analyses is moving forward and whatever the outcome of those analyses are, the company will comply with the applicable rules and regulations. Director Hansen said from the Department's perspective, there was no doubt the facility would achieve compliance.

Commissioner Buist said it seemed to her the matter of compliance was a secondary issue. She asked if tax credits were ever revoked if a facility fails to meet compliance standards. Director Hansen replied the statute did not provide for revocation for reasons of noncompliance. Certificates can only be revoked for fraud or if the facility is removed from use.

Commissioner Bishop asked if the certificate could be conditioned so that if the facility did not come into compliance future tax credits would not be allowed. Chairman Petersen said that statutory authority would be needed for such a condition.

Director Hansen explained that if in the Department's best engineering judgment the facility can achieve compliance, then it meets the test in the regulations. If in the future the facility does not achieve compliance, he continued, there are enforcement tools to be able to address the noncompliance other than the tax credit revocation. Chairman Petersen said that 340-16-035 in the rules says the Commission can revoke the certificate if it is found the holder of the certificate has "failed substantially to operate the facility for the purpose of preventing, controlling or reducing.....pollution, or has failed to operate the facility in compliance with Department or Commission statutes, rules, orders or permit conditions." Michael Huston, Assistant Attorney General, said the rule language almost paralleled statutory language for revocation, so noncompliance would appear to be grounds for revocation. Commissioner Denecke said the Commission could also revoke the operating permits.

Chairman Petersen said he was concerned that the permits might be amended to fit the fact. Director Hansen said there was no question requirements would be complied with. What the Department would be doing is that permit changes would be contemplated depending upon the operation of the facility. The change in the nitrogen oxide permit limit, Director Hansen said, was not a change being contemplated merely to accommodate the company, but will allow standards to be maintained and the plant to be able to operate. The Commission indicated satisfaction with the explanation on the compliance issue.



Introducing the percent allocable to pollution control question, Chairman Petersen said the Commission needs to decide (according to ORS 468.190) the portion of costs allocable to the reduction of solid waste by using the five factors stated in the statute. He said there had been a lot of discussion about whether or not the Commission should consider all the factors. It was Chairman Petersen's opinion that the Legislature gave the Commission a great deal of latitude to use its best judgment in making the decision. He said it was important to consider all the factors, even though the Commission may make a finding that one or more factors are not really applicable to the situation. Chairman Petersen said it was also important to come up with a composite result.

Director Hansen said when the Department looked at the issue of a garbage burner it looked at a series of factors with different computations on what the percent allocable to pollution control result in. One of the issues was the reduction of garbage into ash, which resulted in about an 87% reduction, and therefore one basis of being able to determine what the percent allocable would be to look at that waste reduction.

Another issue, Director Hansen said, was the facility also generates electricity and the efficiency of that conversion of waste to electricity should also be considered. That computation resulted in 71% allocable to pollution control based on boiler efficiency.

The project does provide a certain level of profit, Director Hansen continued, and the computations that are associated with the return on investment analysis came out to the lower 50% range.

Looking at the above three factors, Director Hansen asked what was the prime purpose of the facility. The Department's answer was that it was waste reduction and concluded that it makes reasonable sense to provide extra weighting to that computation. The other factors of the production of electricity and the return on investment are important factors but are not the primary purpose of the operation of the facility. Therefore, they should be considered, but at some lesser level. The Department's proposal was for the Commission to consider that a double weighting be made to the prime purpose of the facility and the other two significant factors should receive a one weighting. When that averages out it works out to be 75.5% allocable cost to pollution control. Director Hansen said it made best sense in the long-run to be able to consider a variety of factors in a facility such as a garbage burner because the facility had multiple purposes. Director Hansen was proposing this to the Commission as a way to provide for the computation and arrive at a percent allocable number.

Chairman Petersen said that the majority of the tax credit decisions the Commission makes are more straight forward than this one and that is why the Commission was struggling with this particular tax credit application as it was the first time it had to deal with this type of facility.

Regarding the weighting of factors to come up with the final percent allocable, Chairman Petersen said the Department was suggesting a weighting of two on the reduction factor, and a weighting of one on the efficiency and return on investment elements. He asked if it was the Department's suggestion that the actual amount of weight be determined by the Commission on a case-by-case basis, or did the Department think it was advisable for

the Commission to adopt the 2-1-1 weighting as a rule. Director Hansen said that issue needed to be looked at more thoroughly before he would say that those were the exact numbers to be applied in each case. He said there was no question that there should be a heavier weight on factors which are the prime purpose and a lesser weight on factors that are significant but not prime, at least in this case. However, he said the Department would like to do more thinking about this method's applicability in other situations where the weighting might be important. Director Hansen said the Department would want to be able to do that through the Commission's rule making process. Chairman Petersen and Commissioner Denecke indicated their agreement with Director Hansen.

The Commission then moved through the five factors in 468.190, making findings as required.

468.190(1)(a) If applicable, the extent to which the facility is used to recover and convert waste products into a salable or usable commodity.

Chairman Petersen said he tended to agree with the applicant that the only use of the facility is to reduce solid waste by a recovery process that produces electricity that is a salable commodity. He said that was obviously a factor the Commission needed to consider and he tended to agree that this factor ought to be given the greatest weight. He said he did not think that the efficiency of the boiler belonged in this particular factor. If the Commission were to consider the boiler efficiency, Chairman Petersen said, it should fall under 468.190(1)(e).

Chairman Petersen said the emphasis in this factor was on the use of the facility which in this case is clearly to reduce solid waste. Commissioner Buist indicated her agreement.

Michael Huston, Assistant Attorney General, commented that it would not make any difference whether the salable or usable commodity question is considered under subsection (a) or (e). Technically, it would not seem to comply with the conversion of subsection (a), but might be better viewed as an other relevant factor under subsection (e).

468.190(1)(b) The estimated annual percent return on investment in the facility.

Chairman Petersen thought that what the Legislature was saying in this subsection was that the state wants to provide an incentive to purchase equipment for facilities that will reduce pollution. But by the same token, if these facilities realize a return on their investment they should not get a windfall at the taxpayers expense. He believed that the Legislature wanted the Commission to take it into consideration. The Commission agreed with Chairman Petersen's analysis.

Chairman Petersen said he was not sure the Commission's present rules were adequate to cover this subsection. He said he would end up recommending the Department go back to the drawing board on this issue.

Regarding the issue of the sale of the tax credit, Chairman Petersen said the Commission had heard arguments on both sides. In thinking about this, Chairman Petersen, said he really did not believe that the disposition of tax credits ought to be a factor in any way in the calculation. On page 2 of the staff report, he continued, the Department says that if the Commission were to decide that the sale of tax credits should be taken into consideration, "the entire effect of the tax credit sale should be eliminated from the ROI calculations." He asked what the Department meant by that statement and what would be the effect.

Lydia Taylor, Administrator of the Department's Management Services Division, said she meant that in the original application by the company it had included in its calculations a reduction in anticipated revenue due to the pass-through of tax credits to Marion County. It was the Department's feeling that if the pass-through were allowed, the revenue should be included and both sides of that formula should be included. Or, if the Commission determined that the tax credit should not be included at all, it should be eliminated completely so that the tax credit had no impact upon it and the result would be that the revenue would not be counted, nor would the reduction in revenue be counted.

Dick Cantlin, representing Ogden-Martin Systems, Inc., said from their view taking the effect out would fall under subsection (e). What the Company argued was that taking it out still requires the Company to show a deduction for the amount. Ms. Taylor said the Department did not agree. She said the difference was if the \$600,000 per year deduction was allowed, but the \$6 million in revenue was not allowed it severely skews the return on investment to show that there was a great deal less return on investment by ignoring half of what has occurred in that transaction.

Chairman Petersen asked for a quantification of leaving out both sides of the equation. Ms. Taylor said it would result in a difference in the annual cash flow. She said the annual cash flow that would include the tax credit on both sides would be \$12.5 million. The annual average cash flow without it would be \$4.3 million. The difference in the return on investment percent allocable would be approximately 3%. The difference being if consideration of the tax credit is deleted entirely, 56.89% is the percent allocable due to return on investment.

Chairman Petersen proposed that both sides of the use of tax credits issue be eliminated from the calculation. Commissioner Denecke clarified that that would change the calculation by \$600,000.

Director Hansen said what the Commission had before them was a decision in the whole financial package that contemplated from the very beginning the sale of the tax credit and therefore ought to be considered a part of the deal. In addition, where it become a sale as opposed to being taken by the company, it becomes a commodity and as a result the revenue should be taken into account. Chairman Petersen said he did not think much of Director Hansen's commodity argument. He said he did not think it was a commodity within the meaning of the statute and was still persuaded by the fact that the Schedule 5 was a pre-tax calculation.

Chairman Petersen asked how the Department would view the matter if it knew in advance the applicant was going to use the tax credit. Director Hansen said that under the computation it is a pre-tax calculation and the decrease in taxes is not shown because the expenditure on taxes is not picked up as part of the computation. He said it is picked up only if it is sold.

Chairman Petersen was troubled by the fact that the statute allows the sale of tax credit and there are different results between applicants. Director Hansen said it was a debatable issue.

The Commission indicated agreement with Chairman Petersen on this issue.

Chairman Petersen said the next issue was the conversion from variable interest rate to fixed interest rate. He said there were two issues here, one is the effect on revenue from changing rates. The other is the cost of converting. Chairman Petersen said this issue caused him the most problem. The applicant argues that they could have delayed the decision to convert until after the tax credit was issued and thereby avoid the problem. Chairman Petersen asked if this was true would there have been anything the Commission could have done to revoke or amend the certificate, or could the certificate be conditioned in advance on certain factors and if those factors change could the percent allocable change. Director Hansen replied that a computation made to issue the tax credit before conversion would have included just the interest rate of the low floaters and nothing else. Mr. Huston said the Commission did not have any express authority in the statute to condition a certificate, it would have to be implied, and Mr. Huston did not see the latitude for that.

Commissioner Denecke said it was his reaction that for good financial reasons the County did switch and that was the system of financing the Commission was now faced with. What the County could have done really should not enter in to the Commission's thinking. Commissioner Bishop agreed and said the Commission should just take what is actual cost of financing and include it. In response to Commissioner Denecke, Ms. Taylor said the cost of conversion was \$1.2 million, and the alternatives might be (if the Commission determines to include them in the cost of the facility), (1) to amortize those costs, or (2) to include the entire cost. Clarifying, Ms. Taylor said the costs would be amortized over the life of the debt as was done with other bond costs. Director Hansen said it would all be part of the debt financing costs and should be spread evenly across the whole of the debt.

Ms. Taylor said if the cost were amortized, it would add \$270,000 to the Department's recommended cost of the facility. If the entire amount were added, she said, \$1.2 million would be added to the cost of the facility. The total difference with an amortized costs the Department's recommended cost of the facility is \$51,336,505. If the entire cost of conversion were added to the cost of the facility the Department's recommended amount would be \$52,335,027.

Chairman Petersen said if the Commission were to include the debt service at the fixed rate rather than the variable rate how would that be offset by the cost of conversion. He asked if it would be more equitable to take the total cost or the amortized cost. Ms. Taylor said there could be a

reasonable argument made for including the full amount. She said it was up to the Commission to determine which is more fair. Director Hansen said a strong argument can be made for the fact that the conversion cost is unique from the across-the-board financing. Chairman Petersen said that from what he understood no one would consider low floaters for the life of the project, and there had to be some anticipation that conversion would be necessary.

Chairman Petersen said he thought the Commission ought to take the actual debt service. He was troubled by the timing question and the only way the Commission could deal with that was by future rule making.

Chairman Petersen proposed that the revenue impact of the debt conversion be considered as well as the cost of the conversion which would be \$1.2 million. He said he thought this would be the equitable offset. Commissioner Bishop asked why this would be more equitable than amortizing. Chairman Petersen said he was sure it was a cost which was contemplated in this project. The Commission agreed with Chairman Petersen's proposal.

Ms. Taylor said if the cost of the facility was adjusted to include the total cost of conversion the cost of the facility, according to her calculations, would be \$52,335,027. Mr. Cantlin agreed that Ms. Taylor's calculations were correct.

468.190(1)(c) If applicable, the alternative methods, equipment and costs for achieving the same pollution control objective.

Chairman Petersen said the Commission had not heard anything about alternative methods. Director Hansen said that when looking at alternative methods, that subsection (c) applies most appropriately to more traditional forms of pollution control equipment on industrial-type facilities. In this context, only apple and orange type comparisons can be made. It was the Department's conclusion, Director Hansen said, that this factor is not applicable to the computation. Commissioner Denecke commented that the Commission knows the political problems with landfilling, which is the most available alternative, and other alternatives are untried for any volume of garbage.

Chairman Petersen said the Commission had considered subsection (c) and decided it was not relevant.

468.190(1)(d) Any related savings or increase in costs which occur or may occur as a result of the installation of the facility.

Chairman Petersen said he felt this factor was too vague to apply to this situation. Director Hansen said that wherever there might be relevancy the Department would consider that would be picked up in subsection (b) computation.

Commissioner Buist asked if the cost to the customer was relevant. Director Hansen said that it was very difficult to apply that cost to this situation. He said a landfill may or may not be less expensive than the garbage burner. He said the Department did not necessarily think that the savings are either computable or very germane to the analysis. Director

Hansen said the Department just did not see how it would apply.

The Commission agreed subsection (d) did not apply.

468.190(1)(e) Any other factors which are relevant in establishing the portion of the actual cost of the facility properly allocable to the prevention, control or reduction of air, water or noise pollution or solid or hazardous waste or to the recycling or properly disposing of used oil.

Chairman Petersen said the Department had suggested in its proposal that the efficiency of the boiler is another relevant factor. Chairman Petersen said the only other factor he saw was the legislative priority of handling solid waste; considering landfilling as a last resort. He said this facility does comply with the wishes of the legislature to avoid landfilling.

Commissioner Brill commented that in the Medford area landscape gardeners are using the ash from the garbage burners in the area. So the use of the ash, Commissioner Brill said, was worth thinking about.

Chairman Petersen said he was a little troubled about boiler efficiency being considered. Ms. Taylor said when the Department talked about using that particular factor, it considered that the law talks about solid waste facilities which recover a product or create energy. She said the boiler efficiency speaks to the creation of that energy and therefore is an appropriate factor to consider.

In response to concerns expressed by Chairman Petersen, Commissioner Denecke said that in the materials he had received Ogden-Martin stated that its boilers are from 67-71% efficient. Michael Downs, Administrator of the Department's Hazardous and Solid Waste Division, said the calculation on boiler efficiency was specific to this particular facility, however, there would be similar results from other facilities.

Chairman Petersen said he did not feel strongly one way or the other about including the boiler efficiency. He said it did not seem that relevant to him, but he would not object if the rest of the Commission wanted to include it. The Commission agreed.

Chairman Petersen said that now, after finishing discussing each factor, the Commission needed to decide on the Department's proposal to weigh the factors differently. He said the Department proposed a weighting of two in the case of reduction, one in the case boiler efficiency, one in the case of the return on investment.

Commissioner Denecke said he agreed with the weighting proposal. He said he was influenced by the statute specifically saying that the tax credits are to control or reduce solid waste as well as other waste by giving tax credit. Commissioner Denecke said the only purpose of this facility was to reduce solid waste and therefore that factor should be given a double weight.

Commissioner Buist commented that this was a very reasonable proposal, and in the end it was really arbitrary because the guidelines are just that and the Commission has to make its own way through those guidelines.

Chairman Petersen said the only number that needed to be recalculated based on the Commission's decisions so far is the return on investment number. Commissioner Buist said the 87% reduction number was still questionable in her mind. Director Hansen said that was a computation in terms of volume reduction that was provided by the applicant, it was not one that the Department had independently recalculated. Ms. Taylor said she believed the applicant had asked for that number from an independent firm. Mr. Cantlin explained that the 87% was computed by Brown and Caldwell, an independent consulting engineering firm. Mr. Cantlin said the applicant's own internal calculations are higher than 87%, but they are willing to accept the independent engineering report at 87%. Commissioner Buist was satisfied with this explanation.

In response to Chairman Petersen's questions about the actual costs of the facility given the Commission's earlier decisions, Ms. Taylor said the staff had anticipated the alternatives and projected what the percent return on investment would be under different options the Commission might choose. Ms. Taylor said the option chosen by the Commission where the sale of the tax credit is deleted results in a return on investment of 56.897%. Working through the weighting calculation, Chairman Petersen said a weighting of two would be given to 87% which is 174.0%; a weighting of one on the 71.000%; a weighting of one on the return on investment of 56.897%; the total is then 301.897% which is divided by four for a final figure of 75.474%. Mr. Cantlin said the computation would need to be rounded to the nearest whole percent which would be 75.5%.

Chairman Petersen asked for a motion to determine that the percent allocable to this facility is 75.5%. Commissioner Denecke so MOVED, Commissioner Buist seconded, and the motion passed unanimously.

Mr. Huston said the statutes require that a written notice and concise statement of findings and reasons for the Commission's decision be issued. and asked for a provision be made for that. He suggested the Department be authorized to develop those findings and reasons consistent with the Commission's deliberations and either circulate among the Commission or have the Chair authorized to sign that notice. The Commission agreed with Mr. Huston's suggestion, and Chairman Petersen with the agreement of the Commission, would review the notice and sign it.

Mr. Cantlin asked when the Certification would take place. Chairman Petersen said it would occur as soon as the Certificate was sent to him, and clearly before the end of the year.

Ms. Taylor said the law states that the percent allocable must be rounded to the nearest whole percent. Chairman Petersen said the staff knows what the Commission's decision is, and has all of the the elements needed to go in to the computation. He said the Commission would defer the final checking of the numbers to the applicant and the Department to make sure that it complies with the statute and the Commission's decision.

Chairman Petersen MOVED to defer any action on agenda item G from the December 12, 1986 EQC meeting dealing with changes to the tax credit rules, and direct the Department to prepare proposed amendments to the tax credit rules which would not only include the previously proposed items in agenda item G, but also additional items the Department believes require clarification for facilities of this type.

Director Hansen recalled for the Commission testimony on this item at the December 12 meeting from Willamette Industries. Ms. Taylor said there were two items that Willamette Industries testified about. One was they concurred that the Department could not retroactively issue a tax credit certificate. The other issue was whether or not the Department could issue a tax credit after 10 years had elapsed after the date of first issuance. Ms. Taylor said the difference of opinion between the Department of Revenue's legal advisor and DEQ's interpretation of the law would indicate that if the rules were left as they now stand the tax credit certificate could be issued to the new owner without regard to the 10 year limitation. Director Hansen said the effect would be that Willamette Industries would go to the Department of Revenue and have a discussion with Revenue on whether or not they had anything left on that tax credit which could be claimed. Director Hansen said that was the most appropriate setting for Willamette Industries to resolve that issue. Chairman Petersen agreed.


Chairman Petersen's motion was seconded by Commissioner Denecke and passed unanimously.

There was some discussion about when to set hearings on the proposed landfill sites during April. Mr. Downs explained that the window the Department had was April 9-21. The Commission deferred this item to its next meeting.

Chairman Petersen thanked the staff and Mr. Cantlin and his group for all the hard work and effort put into this process.

There being no further business, the meeting was adjourned.

Respectfully submitted,

  
Carol Spletstaszer  
EQC Assistant

DOY396.3





## Environmental Quality Commission

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### MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. B, January 23, 1987, EQC Meeting  
November 1986 Program Activity Report

### Discussion

Attached is the November 1986 Program Activity Report.

ORS 468.325 provides for Commission approval or disapproval of plans and specifications for construction of air contaminant sources.

Water Quality and Solid Waste facility plans and specifications approvals or disapprovals and issuance, denials, modifications and revocations of air, water and solid waste permits are prescribed by statutes to be functions of the Department, subject to appeal to the Commission.

The purposes of this report are:

1. To provide information to the Commission regarding the status of reported activities and an historical record of project plan and permit actions;
2. To obtain confirming approval from the Commission on actions taken by the Department relative to air contaminant source plans and specifications; and
3. To provide logs of civil penalties assessed and status of DEQ/EQC contested cases.

### Recommendation

It is the Director's recommendation that the Commission take notice of the reported program activities and contested cases, giving confirming approval to the air contaminant source plans and specifications.

Fred Hansen

SChew:y  
MD26  
229-6484  
Attachment

DEPARTMENT OF ENVIRONMENTAL QUALITY

Monthly Activity Report

November, 1986

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DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Air Quality, Water Quality,  
Hazardous and Solid Waste Divisions  
(Reporting Units)

November, 1986  
(Month and Year)

SUMMARY OF PLAN ACTIONS

	Plans Received		Plans Approved		Plans Disapproved		Plans Pending
	Month	FY	Month	FY	Month	FY	
<u>Air</u>							
Direct Sources	4	24	3	14	0	0	15
Small Gasoline Storage Tanks Vapor Controls	-	-	-	-	-	-	-
Total	4	24	3	14	0	0	15
<u>Water</u>							
Municipal	5	70	4	73	0	0	35
Industrial	6	50	14	50	0	0	7
Total	11	120	18	123	0	0	42
<u>Solid Waste</u>							
Gen. Refuse	1	10	2	8	-	-	16
Demolition	-	1	-	2	-	-	1
Industrial	-	9	1	9	-	-	15
Sludge	1	1	-	1	-	-	1
Total	2	21	3	20	0	0	33
Hazardous Wastes	-	0	-	0	-	-	-
<u>GRAND TOTAL</u>	17	165	24	157	0	0	90

DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION

MONTHLY ACTIVITY REPORT

DIRECT SOURCES  
PLAN ACTIONS COMPLETED

Permit Number		County	Plan Action Number	Source Name	Process Description	Date Rcvd	Status Assigned
20	8194	LANE	180	WESTERN PANEL MANUFACT.	INSTALLATION OF BAGHOUSE	11/03/86	APPROVED
12	0036	GRANT	182	D & E WOOD PRODUCTS	INSTALLATION OF CYCLONE	11/03/86	APPROVED
10	0134	DOUGLAS	183	COMPANION ANIMAL CLINIC	INSTALL INCINERATOR	11/24/86	APPROVED
TOTAL NUMBER QUICK LOOK REPORT LINES					3		

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Air Quality Division  
(Reporting Unit)

November 1986  
(Month and Year)

SUMMARY OF AIR PERMIT ACTIONS

	Permit Actions Received		Permit Actions Completed		Permit Actions Pending	Sources Under Permits	Sources Req'r'g Permits
	Month	FY	Month	FY			
<u>Direct Sources</u>							
New	2	9	2	14	8		
Existing	2	16	1	8	18		
Renewals	14	54	15	51	89		
Modifications	<u>0</u>	<u>24</u>	<u>5</u>	<u>32</u>	<u>10</u>		
Total	18	103	23	105	125	1368	1394
<u>Indirect Sources</u>							
New	0	5	2	12	1		
Existing	0	0	0	0	0		
Renewals	0	0	0	0	0		
Modifications	<u>0</u>	<u>1</u>	<u>0</u>	<u>2</u>	<u>0</u>		
Total	<u>0</u>	<u>6</u>	<u>2</u>	<u>14</u>	<u>1</u>	<u>262</u>	<u>263</u>
<u>GRAND TOTALS</u>	18	109	25	119	126	1630	1657

Number of  
Pending Permits

14  
22  
8  
10  
6  
13  
47  
5  
125

Comments

To be reviewed by Northwest Region  
To be reviewed by Willamette Valley Region  
To be reviewed by Southwest Region  
To be reviewed by Central Region  
To be reviewed by Eastern Region  
To be reviewed by Program Operations Section  
Awaiting Public Notice  
Awaiting end of 30-day Public Notice Period

DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION

MONTHLY ACTIVITY REPORT

DIRECT SOURCES  
PERMITS ISSUED

Permit Number	County Name	Source Name	Appl. Rcvd.	Status	Date Achvd.	Type Appl.	
15	0145	JACKSON	ROGUE VALLEY OIL CO	04/10/86	PERMIT ISSUED	10/29/86	EXT
21	0054	LINCOLN	YAQUINA VENEER CO.	06/05/86	PERMIT ISSUED	10/29/86	MOD
22	6012	LINN	ALBANY ROCK PRODUCTS	07/22/86	PERMIT ISSUED	10/29/86	RNW
23	0014	MALHEUR	ONTARIO CONCRETE CO.	06/09/86	PERMIT ISSUED	10/29/86	RNW
24	5955	MARION	RIVERBEND SAND&GRAVEL	05/16/86	PERMIT ISSUED	10/29/86	RNW
26	2435	MULTNOMAH	THOMAS INDUSTRIES INC	10/13/86	PERMIT ISSUED	10/29/86	MOD
26	3071	MULTNOMAH	PORT OF PORTLAND, TERM. 5	05/01/86	PERMIT ISSUED	10/29/86	RNW
27	6018	POLK	WILLAMETTE SEED & GRAIN	10/11/85	PERMIT ISSUED	10/29/86	RNW
29	0060	TILLAMOOK	S-C PAVING COMPANY	08/14/86	PERMIT ISSUED	10/29/86	RNW
07	0022	CROOK	LES SCHWAB WAREHOUSE	03/29/85	PERMIT ISSUED	11/12/86	NEW
26	3035	MULTNOMAH	MYERS CONTAINER CORP	10/22/86	PERMIT ISSUED	11/14/86	MOD
26	3036	MULTNOMAH	AMCOAT ENAMELING	10/22/86	PERMIT ISSUED	11/14/86	MOD
26	3091	MULTNOMAH	ROSS HOLLYWOOD CHAPEL	09/26/86	PERMIT ISSUED	11/14/86	RNW
31	0013	UNION	HOFF-RONDE VALLEY LUMBER	09/23/86	PERMIT ISSUED	11/14/86	MOD
07	0019	CROOK	D & E WOOD PROD INC	05/05/86	PERMIT ISSUED	11/17/86	NEW
12	0004	GRANT	OREGON PINE LUMBER, INC.	05/01/86	PERMIT ISSUED	11/17/86	RNW
22	1034	LINN	KNIGHT TRUCKING CO	02/24/86	PERMIT ISSUED	11/17/86	RNW
33	0017	WASCO	TYGH VALLEY SAND & GRAVEL	09/26/86	PERMIT ISSUED	11/20/86	RNW
15	0058	JACKSON	HUSKY INDUSTRIES, INC.	09/21/83	PERMIT ISSUED	11/21/86	RNW
24	5145	MARION	OREGON STATE HOSPITAL	06/18/86	PERMIT ISSUED	11/21/86	RNW
26	1853	MULTNOMAH	KENTON ALUMINUM & BRASS	05/28/86	PERMIT ISSUED	11/21/86	RNW
36	3001	YAMHILL	CRABTREE ROCK CO	12/03/85	PERMIT ISSUED	11/21/86	RNW
37	0183	PORT.SOURCE	REID-WOLF INC	10/02/86	PERMIT ISSUED	11/21/86	RNW

TOTAL NUMBER QUICK LOOK REPORT LINES

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DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Air Quality Division  
(Reporting Unit)

November 1986  
(Month and Year)

PERMIT ACTIONS COMPLETED

* County	* Name of Source/Project * /Site and Type of Same	* Date of * Action	* Action	*
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Indirect Sources

Clackamas	SRO-Cinema, 959 Spaces, File No. 03-8612	11/05/86	Final Permit Issued	
Washington	Murrayhill Marketplace, 720 Spaces, File No. 34-8613	11/07/86	Final Permit Issued	

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DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Water Quality  
(Reporting Unit)

November 1986  
(Month and Year)

PLAN ACTIONS COMPLETED - 18

* County	* Name of Source/Project	* Date of	* Action	*
*	* /Site and Type of Same	* Action	*	*
*	*	*	*	*

MUNICIPAL WASTE SOURCES - 4

Deschutes	Tumalo School Septic System Expansion	11-26-86	Provisional Approval
Columbia	Clatskanie Swedetown Village Sewers	12-1-86	Provisional Approval
Clatsop	Seaside Cove Area Sewers and Pump Station	12-5-86	Provisional Approval
Tillamook	Jack Riedesel Neskowin RV Park Revised Disposal Plans	12-3-86	Approved

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Water Quality Division  
(Reporting Unit)

November 1986  
(Month and Year)

PLAN ACTIONS COMPLETED - 18

* County	* Name of Source/Project	* Date of	* Action	*
*	* /Site and Type of Same	* Action	*	*
*	*	*	*	*

INDUSTRIAL WASTE SOURCES - 14

Douglas	Glide Lumber Products Co. Glide	11-04-86	Approved
Clackamas	Portland General Electric Oil Spill Containment Fac. Colton Substation	09-22-86	Approved
Clackamas	Portland General Electric Oil Spill Containment Fac. Mt. Pleasant Substation	09-22-86	Approved
Multnomah	Portland General Electric Oil Spill Containment Fac. Orient Substation	09-22-86	Approved
Polk	Praegitzgr Upgrade Metals Removal	11-28-86	Approved
Washington	Tektronix, Inc. Surface Impoundment Retrofit	11-05-86	Approved
Polk	Portland General Electric Oil Spill Containment Facility Willamina Substation	10-29-86	Approved
Coos	Pacific Power & Light Co. Oil Spill Containment Facility North Bend Substation	11-03-86	Approved

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Water Quality Division  
(Reporting Unit)

November 1986  
(Month and Year)

PLAN ACTIONS COMPLETED

* County	* Name of Source/Project	* Date of	* Action	*
*	* /Site and Type of Same	* Action	*	*
*	*	*	*	*

INDUSTRIAL WASTE SOURCES (cont'd)

Jackson	Diamond Rogue & Timber Company Cyanide Destruction	11-20-86	Approved	
Lake	UMTRA Project 2nd Retention Basin	11-20-86	Approved	
Multnomah	Boeing of Portland Groundwater Monitoring Well	11-21-86	Approved	
Lane	Zip-O-Log Co Antistain Control System	11-25-86	Approved	
Tillamook	Richard Chelone Manure Control System	11-26-86	Approved	
Benton	Evanite Battery Off-Site Groundwater Well Pumps	11-14-86	Application withdrawn	

Summary of Actions Taken  
On Water Permit Applications in NOV 86

Source Category & Permit Subtype	Number of Applications Filed						Number of Permits Issued						Applications Pending Permits Issuance (1)			Current Number of Active Permits		
	Month			Fiscal Year			Month			Fiscal Year			NPDES	WPCF	Gen	NPDES	WPCF	Gen
	NPDES	WPCF	Gen	NPDES	WPCF	Gen	NPDES	WPCF	Gen	NPDES	WPCF	Gen						
Domestic																		
NEW		1			8			2		1	4		5	12				
RW				1									1	1				
RWO	4	5		29	16		4	2		13	9		49	29				
MW										1			2					
MWO				1	4			1		1	2		4	2				
Total	4	6		31	28		4	5		16	15		61	44		234	169	29
Industrial																		
NEW	1	1		2	4	14	2	1	3	2	2	23	5	9				
RW													1					
RWO	3	3		21	8		2	1		13	6		24	13				
MW										1			1					
MWO				2		1				4		2	4	1	1			
Total	4	4		25	12	15	4	2	3	20	8	25	35	23	1	172	133	356
Agricultural																		
NEW					1									1				
RW																		
RWO				1							1		1					
MW																		
MWO																		
Total				1	1						1		1	1		2	11	56
Grand Total	8	10	0	57	41	15	8	7	3	36	24	25	97	68	1	408	313	441

1) Does not include applications withdrawn by the applicant, applications where it was determined a permit was not needed, and applications where the permit was denied by DEQ.

It does include applications pending from previous months and those filed after 30-NOV-86.

NEW - New application  
 RW - Renewal with effluent limit changes  
 RWO - Renewal without effluent limit changes  
 MW - Modification with increase in effluent limits  
 MWO - Modification without increase in effluent limits

CAT	PERMIT NUMBER	SUB-TYPE	FACILITY	FACILITY NAME	CITY	COUNTY/REGION	DATE ISSUED	DATE EXPIRES
<u>General: Suction Dredges</u>								
IND	700	GEN07 NEW	102265/A	SUBIA, DAVID		JACKSON/SWR	04-NOV-86	31-JUL-91
IND	700	GEN07 NEW	102434/A	BALSER, ROBERT		MOBILE SRC/ALL	19-NOV-86	31-JUL-91
<u>General: Gravel Mining</u>								
IND	1000	GEN10 NEW	102468/A	BEAVER STATE SAND & GRAVEL, INC.		DOUGLAS/SWR	24-NOV-86	31-DEC-86
<u>NPDES</u>								
DOM	100249	NPDES RWO	60335/A	NESKOWIN LODGE INVESTORS	NESKOWIN	TILLAMOOK/NWR	12-NOV-86	30-SEP-91
IND	100250	NPDES NEW	100122/A	CHEVRON U.S.A. INC.	WHITE CITY	JACKSON/SWR	12-NOV-86	31-AUG-91
DOM	100253	NPDES RWO	36156/A	HALFWAY, CITY OF	HALFWAY	BAKER/ER	18-NOV-86	31-OCT-91
IND	100254	NPDES RWO	2142/A	AMALGAMATED SUGAR COMPANY, THE	NYSSA	MALHEUR/ER	26-NOV-86	30-JUN-91
IND	100255	NPDES NEW	32650/A	GEORGIA-PACIFIC RESINS, INC.	MILLERSBURG	LINN/WVR	26-NOV-86	31-AUG-91
IND	100257	NPDES RWO	71443/A	PORTLAND WILLAMETTE COMPANY	PORTLAND	MULTNOMAH/NWR	28-NOV-86	30-SEP-91
DOM	100258	NPDES RWO	13438/A	DON CALLAHAN'S, INC.	ASHLAND	JACKSON/SWR	28-NOV-86	31-OCT-91
DOM	100261	NPDES RWO	6667/A	BAY CITY, CITY OF	BAY CITY	TILLAMOOK/NWR	28-NOV-86	31-OCT-91

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CAT	PERMIT NUMBER	TYPE	SUB-TYPE	FACILITY	FACILITY NAME	CITY	COUNTY/REGION	DATE ISSUED	DATE EXPIRES
<u>WPCF</u>									
DOM	100248	WPCF	RWO	30404/A	PAUL M. VETRUS	TURNER	MARION/WVR	12-NOV-86	30-SEP-91
DOM	100251	WPCF	RWO	10926/A	BREITENBUSH COMMUNITY, HEALING-RETREAT-CONFERENCE CENTER		MARION/WVR	12-NOV-86	30-SEP-91
DOM	3587	WPCF	MWO	73432/A	RAJNEESH NEO-SANNYAS INTERNATIONAL COMMUNE	RAJNEESHPURAM	JEFFERSON/CR	17-NOV-86	31-OCT-87
IND	100252	WPCF	RWO	70590/A	PORT OF MORROW	BOARDMAN	MORROW/ER	18-NOV-86	31-JUL-91
IND	100256	WPCF	NEW	100137/A	GRACE, W. R. & CO.	BEND	DESCHUTES/CR	26-NOV-86	30-SEP-91
DOM	100259	WPCF	NEW	100151/A	HEIDGERKEN, GEORGE	BREITENBUSH	MARION/WVR	28-NOV-86	30-SEP-91
DOM	100260	WPCF	NEW	15120/A	NESKOWIN CREEK, INC.	NESKOWIN	TILLAMOOK/NWR	28-NOV-86	31-JUL-91

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Hazardous and Solid Waste Division  
(Reporting Unit)

November 1986  
(Month and Year)

SUMMARY OF SOLID AND HAZARDOUS WASTE PERMIT ACTIONS

	Permit Actions Received		Permit Actions Completed		Permit Actions Pending	Sites Under Permits	Sites Reqr'g Permits
	Month	FY	Month	FY			
<u>General Refuse</u>							
New	-	2	-	2	-		
Closures	-	-	-	2	2		
Renewals	4	7	-	11	17		
Modifications	-	5	-	6	-		
Total	4	14	0	21	19	182	182
<u>Demolition</u>							
New	-	1	-	2	-		
Closures	-	-	-	-	1		
Renewals	-	-	-	-	-		
Modifications	-	2	-	3	-		
Total	0	3	0	5	1	13	13
<u>Industrial</u>							
New	-	4	-	8	7		
Closures	-	3	-	-	2		
Renewals	-	4	-	2	13		
Modifications	-	3	-	3	-		
Total	0	14	0	13	22	103	103
<u>Sludge Disposal</u>							
New	-	-	-	1	1		
Closures	-	-	-	-	-		
Renewals	-	-	-	-	-		
Modifications	-	1	-	1	-		
Total	0	1	0	2	1	16	16
Total Solid Waste	4	32	0	41	43		

Hazardous Waste

Outputs currently under revision.

Listing of Solid Waste Permit Actions Completed

None were completed during the month of November, 1986.



DATE	WASTE TYPE	SOURCE	DISPOSE ANNUALLY
03-NOV-86	SOLIDIFIED PAINT SLUDGE MIXED WITH SOIL	PAINTS	225 CU YD
03-NOV-86	SOLIDIFIED PAINT SLUDGE	PAINTS	41 CU YD
06-NOV-86	LAB PACK	ELEMENTARY & SECONDARY SCHOOLS	0.54 CU YD
06-NOV-86	LAB PACK - CORROSIVE BASES	ELEMENTARY & SECONDARY SCHOOLS	0.27 CU YD
06-NOV-86	LAB PACK - ORM-B	ELEMENTARY & SECONDARY SCHOOLS	0.81 CU YD
06-NOV-86	LAB PACK - OXIDIZERS	ELEMENTARY & SECONDARY SCHOOLS	0.54 CU YD
06-NOV-86	LAB PACK - FLAMMABLES	ELEMENTARY & SECONDARY SCHOOLS	0.54 CU YD
06-NOV-86	LAB PACK - CORROSIVE ACIDS	ELEMENTARY & SECONDARY SCHOOLS	0.27 CU YD
06-NOV-86	LAB PACK - CORROSIVE ACIDS	ELEMENTARY & SECONDARY SCHOOLS	0.54 CU YD
06-NOV-86	LAB PACK - ORM-E	ELEMENTARY & SECONDARY SCHOOLS	0.54 CU YD
06-NOV-86	LAB PACK - ORM-C	ELEMENTARY & SECONDARY SCHOOLS	0.27 CU YD
06-NOV-86	LAB PACK - ORM-B	ELEMENTARY & SECONDARY SCHOOLS	0.27 CU YD
06-NOV-86	LAB PACK - ORM-A	ELEMENTARY & SECONDARY SCHOOLS	0.27 CU YD
07-NOV-86	LAB PACK - POISON B	OTHER GOVERNMENT AGENCY	2.16 CU YD
13-NOV-86	FLOURESCENT LIGHT BALLASTS	ELEMENTARY & SECONDARY SCHOOLS	12.15 CU YD
13-NOV-86	LAB PACK COMBUSTIBLES	ELEMENTARY & SECONDARY SCHOOLS	0.27 CU YD
19-NOV-86	PESTICIDE RESIDUE	WOOD PRESERVING	18 CU YD

17 Request(s) approved for generators in Oregon

15

03-NOV-86	PNA CONTAMINATED SOIL	NON-SUPERFUND SITE CLEANUP	100 CU YD
03-NOV-86	SPENT SULFURIC ACID PICKLE LIQUOR	METAL COATING, ALLIED SERVICES	67.91 CU YD
03-NOV-86	TAR CONTAMINATED SOIL	NON-SUPERFUND SITE CLEANUP	48.51 CU YD
07-NOV-86	MERCURIC NITRATE SOLUTION	DEPARTMENT OF DEFENSE	10.8 CU YD
07-NOV-86	LAB PACK - WASTE OXIDIZER	COMMERCIAL TESTING LABS	0.27 CU YD

DATE	WASTE TYPE	SOURCE	DISPOSE ANNUALLY
07-NOV-86	LAB PACK - ORM-E	HW TREAT/STORE/DISPOSE FCLTY	4 CU YD
07-NOV-86	CORROSIVE SOLID	ELEMENTARY & SECONDARY SCHOOLS	0.27 CU YD
13-NOV-86	LAB PACK POISON B	MEDICAL & SURGICAL HOSPITALS	0.81 CU YD
13-NOV-86	LAB PACK - WASTE ACID LIQUOR	HW TREAT/STORE/DISPOSE FCLTY	2.7 CU YD
13-NOV-86	TANKS, PIPING, DEBRIS, ETC CONTAMINATED WITH HEAVY METALS	HW TREAT/STORE/DISPOSE FCLTY	10000 CU YD
13-NOV-86	PCB CONTAMINATED SOIL	RAILROADS, LINE-HAUL OPERATING	22.2 CU YD

11 Request(s) approved for generators in Washington

28 Requests granted - Grand Total

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Noise Control Program  
(Reporting Unit)

November, 1986  
(Month and Year)

SUMMARY OF NOISE CONTROL ACTIONS

Source Category	New Actions Initiated		Final Actions Completed		Actions Pending	
	<u>Mo</u>	<u>FY</u>	<u>Mo</u>	<u>FY</u>	<u>Mo</u>	<u>Last Mo</u>
Industrial/ Commercial	5	53	8	39	219	222
Airports			0	3	1	1

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Noise Control Program (Reporting Unit)	November, 1986 (Month and Year)
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FINAL NOISE CONTROL ACTIONS COMPLETED

County	Name of Source and Location	Date	Action
Clackamas	Design Craft, Portland	11/86	In Compliance
Clackamas	Magic Toppers, Portland	11/86	In Compliance
Clackamas	P/A System, Milwaukie	11/86	No Violation
Multnomah	Bar Room Buddies Tavern, Portland	11/86	In Compliance
Benton	Corvallis Kennels, Corvallis	11/86	In Compliance
Linn	Rick Wilson Lumber Company, Sweet Home	11/86	In Compliance
Deschutes	Custom Remanufacturing, Tumalo	11/86	In Compliance
Klamath	WDL Rental & Sales, Inc., at Weyerhaeuser Rock Quarry, Beatty	11/86	In Compliance

CIVIL PENALTY ASSESSMENTS  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
1986

CIVIL PENALTIES ASSESSED DURING MONTH OF NOVEMBER, 1986:

<u>Name and Location of Violation</u>	<u>Case No. &amp; Type of Violation</u>	<u>Date Issued</u>	<u>Amount</u>	<u>Status</u>
Food Express, Inc. Scappoose, Oregon	AQ-NWR-86-121 Caused excessive fugitive emissions from a railcar to truck starch unload- ing operation.	11/7/86	\$300	Paid 11/20/86.
Robert L. Coats dba/Deschutes Ready-Mix Sand & Gravel Co. Klamath County	AQ-CR-86-120 Several violations of an Air Contaminant Discharge Permit for a portable concrete paving plant.	11/7/86	\$1,700	Paid 11/28/86.

VAK:b  
GB6278



November, 1986  
DEQ/EQC Contested Case Log

<u>ACTIONS</u>	<u>LAST MONTH</u>	<u>PRESENT</u>
Preliminary Issues	1	1
Discovery	0	0
Settlement Action	3	3
Hearing to be scheduled	0	0
Department reviewing penalty	1	0
Hearing scheduled	2	0
HO's Decision Due	0	0
Briefing	1	3
Inactive	<u>4</u>	<u>4</u>
SUBTOTAL of cases before hearings officer.	12	11
HO's Decision Out/Option for EQC Appeal	0	1
Appealed to EQC	2	2
EQC Appeal Complete/Option for Court Review	0	0
Court Review Option Taken	1	1
Case Closed	<u>2</u>	<u>0</u>
TOTAL Cases	17	15

15-AQ-NWR-86-178

15th Hearing Section case in 1986 involving Air Quality Division violation in Northwest Region jurisdiction in 1981; 178th enforcement action in the Department in 1981.

§ Civil Penalty Amount  
 ACDP Air Contaminant Discharge Permit  
 AGl Attorney General l  
 AQ Air Quality Division  
 AQOB Air Quality, Open Burning  
 CR Central Region  
 DEC Date Date of either a proposed decision of hearings officer or a decision by Commission  
 ER Eastern Region  
 FB Field Burning  
 HW Hazardous Waste  
 HSW Hazardous and Solid Waste Division  
 Hrng Rfrl Date when Enforcement Section requests Hearing Section schedule a hearing  
 Hrngs Hearings Section  
 NP Noise Pollution  
 NPDES National Pollutant Discharge Elimination System wastewater discharge permit.  
 NWR Northwest Region  
 OSS On-Site Sewage Section  
 P Litigation over permit or its conditions  
 Prtys All parties involved  
 Rem Order Remedial Action Order  
 Resp Code Source of next expected activity in case  
 SS Subsurface Sewage (now OSS)  
 SW Solid Waste Division  
 SWR Southwest Region  
 T Litigation over tax credit matter  
 Transcr Transcript being made of case  
Underlining New status or new case since last month's contested case log  
 WQ Water Quality Division  
 WVR Willamette Valley Region

November 1986

DEQ/EQC Contested Case Log

Pet/Resp Name	Hrng Rqst	Hrng Rfrl	Hrng Date	Resp Code	Case Type & No.	Case Status
WAH CHANG	04/78	04/78		Prtys	16-P-WQ-WVR-78-2849-J NPDES Permit Modification	Current permit in force. Hearing deferred.
WAH CHANG	04/78	04/78		Prtys	03-P-WQ-WVR-78-2012-J NPDES Permit Modification	Current permit in force. Hearing deferred.
HAYWORTH FARMS, INC., and HAYWORTH, John W.	01/14/83	02/28/83	04/04/84	Prtys	50-AQ-FB-82-09 FB Civil Penalty of \$1,000	Court of Appeals affirmed EQC 11/19/86.
McINNIS ENTERPRISES, LTD., et al.	09/20/83	09/22/83		Prtys	56-WQ-NWR-83-79 WQ Civil Penalty of \$14,500	Hearing deferred.
McINNIS ENTERPRISES, LTD., et al.	10/25/83	10/26/83		Prtys	59-SS-NWR-83-33290P-5 SS license revocation	Hearing deferred.
FUNRUE, Amos	03/15/85	03/19/85	06/20/85	Dept	05-AQ-FB-84-141 Civil Penalty of \$500	EQC affirmed \$500 penalty June 13, 1986. Department of Justice to draft final order reflecting EQC action.

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November 1986

DEQ/EQC Contested Case Log

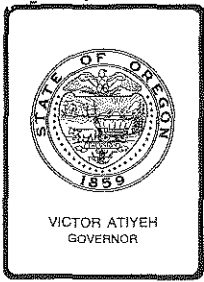
Pet/Resp Name	Hrng Rqst	Hrng Rfrl	Hrng Date	Resp Code	Case Type & No.	Case Status
DANT & RUSSELL, INC.	05/31/85	05/31/85	03/21/86	Prtys	15-HW-NWR-85-60 Hazardous waste disposal Civil Penalty of \$2,500	Settlement action.
BRAZIER FOREST PRODUCTS	11/22/85	12/12/85	02/10/86	Dept	23-HSW-85 Declaratory Ruling	EQC issued declaratory ruling July 25, 1986. Department of Justice to draft final order reflecting EQC action.
NULF, DOUG	01/10/86	01/13/86	05/05/86	Dept	01-AQFB-85-02 \$500 Civil Penalty	<u>Decision imposing \$300 civil penalty issued 12/3/86.</u>
VANDERVELDE, ROY	06/06/86	06/10/86	11/06/86	Prtys	05-WQ-WVR-86-39 \$5,500 Civil Penalty	Post hearing briefing.
MALLORIE'S DAIRY, INC.	09/08/86	09/08/86	11/24/86	Prtys	07-WQ-WVR-86-91 WPCF Permit violations \$2,000 Civil Penalty	<u>Post hearing briefing and settlement dicussions.</u>
MALLORIE'S DAIRY, INC.	09/08/86	09/08/86	11/24/86	Prtys	08-AQOB-WVR-86-92 \$1,050 Civil Penalty	<u>Post hearing briefing and settlement discussions.</u>

November 1986

DEQ/EQC Contested Case Log

Pet/Resp Name	Hrng Rqst	Hrng Rfrrl	Hrng Date	Resp Code	Case Type & No.	Case Status
MAGNA CORP. INC.	09/09/86	09/10/86	10/16/86	Prtys	09-AQOB-NWR-86-93	Hearing postponed for submission of settlement agreement to EQC.
MONTEZUMA WEST	10/09/86	10/09/86		Prtys	10-HW-SWR-86-46	Settlement action.
In re ROBERT "BUCK" FROMAN, dba BUCK'S STOVE PALACE	11/10/86			Dept	Request for Declaratory Ruling ORS 468.635 and OAR 340-21-105.	<u>Department reviewing merit of petition.</u>

24



# Department of Environmental Quality

811 S.W. SIXTH AVENUE, PORTLAND, OREGON 97204 PHONE (503) 229-5696

## MEMORANDUM

To: Environmental Quality Commission  
From: Director *Jel*  
Subject: Agenda Item C, January 23, 1987, EQC Meeting

### TAX CREDIT APPLICATIONS

#### Director's Recommendations

It is recommended that the Commission take the following action:

1. Issue tax credit certificates for pollution control facilities:

<u>Appl. No.</u>	<u>Applicant</u>	<u>Facility</u>
T-1846	PGE Abernethy Substation	Oil spill containment system
T-1848	PGE Faraday Substation	Oil spill containment system
T-1849	PGE Sullivan Substation	Oil spill containment system
T-1850	PGE Grand Ronde Substation	Oil spill containment system
T-1851	PGE Station E Substation	Oil spill containment system
T-1852	PGE Round Butte Switchyard	Oil spill containment system
T-1853	PGE Canemah Substation	Oil spill containment system
T-1854	PGE North Plains Substation	Oil spill containment system
T-1855	PGE Estacada Substation	Oil spill containment system
T-1856	PGE Boones Ferry Substation	Oil spill containment system
TC2055	Precision Castparts	Cartridge type dust collector
TC2058	Precision Castparts	Bag filter dust collection

Fred Hansen

S. Chew  
229-6484  
31 Dec 1986

EQC Agenda Item C  
January 23, 1987  
Page 2

Proposed January 23, 1987 totals:

Air Quality	\$ 71,044.03
Water Quality	288,570.69
Hazardous/Solid Waste	-0-
Noise	-0-
	<u>\$ 359,614.72</u>

1986 calendar year totals for tax credits certified:

Air Quality	\$ 3,714,299.01
Water Quality	3,694,732.74
Hazardous/Solid Waste	53,725,866.88
Noise	69,079.00
	<u>\$61,203,977.63</u>

SChew  
229-6484  
31 December 86

State of Oregon  
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

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1. Applicant

Portland General Electric Company  
121 S.W. Salmon Street  
Portland, OR 97204

The applicant owns and operates an electric utility company with substations throughout Oregon.

Application was made for tax credit for a water pollution control facility.

2. Description of Facility

The facility is an oil spill containment system at the Abernethy Substation near Oregon City, Oregon. The facility consists of 230 feet of pressure treated 2 x 14 lumber, 24 yards of mason's sand, and 13 yards of 3/4 minus crushed rock.

Claimed Facility Cost: \$ 13,024.17

3. Procedural Requirements

The facility was completed after December 31, 1983, so it is governed by ORS 468.150 through 468.190 in effect on January 1, 1984, and by OAR 340-16-015 (effective July 13, 1984; amended March 21, 1985).

The facility met all statutory deadlines in that:

- a. The request for preliminary certification was filed October 9, 1984 less than 30 days before construction commenced on October 12, 1984. The application was reviewed by DEQ staff and the applicant was notified that the application was complete and that construction could commence.
- b. The request for preliminary certification was approved before application for final certification was made.
- c. Construction of the facility was substantially completed on November 28, 1984 and the application for final certification was found to be complete on October 14, 1986 within 2 years of substantial completion of the facility.

4. Evaluation of Application

- a. The facility is eligible because the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution.

This prevention is accomplished by the containment of industrial waste as defined in ORS 468.700.

In accordance with federal law, electric utility companies must provide oil spill containment facilities at substations where oil filled equipment is utilized.

Two sides of the Abernethy Substation have been trenched and backfilled with mason's sand. A 2 x 14 pressure treated wood timber has been partially buried in the sand to act as a containment berm. The sand has been covered with crushed rock.

The two other untrenched sides of the substation are upgradient. Normal storm runoff will flow towards the trenches and pass through the sand under the timber. In the event of an oil spill, the sand would retard the oil to provide time for the cleanup crew to be dispatched to the site. Equipment monitors would warn crews of any failure. The crews would remove the oil and contaminated sand, and reconstruct the facility following site cleanup.

The Abernethy Substation does not contain any PCB oils. No spills have occurred at this site.

- b. Analysis of Eligible Costs

There is no return on investment from this facility. One hundred (100) percent of the cost of the facility is allocated to pollution control.

5. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible for final tax credit certification in that the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution and accomplishes this purpose by containment of industrial waste as defined in ORS 468.700.
- c. The facility complies with DEQ statutes and rules.
- d. The portion of the facility cost that is properly allocable to pollution control is 100 %.

6. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$ 13,024.17 with 100 % allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1846.

L.D. Patterson:c

WC1421

(503) 229-5374

12/26/86

State of Oregon  
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

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1. Applicant

Portland General Electric Company  
121 S.W. Salmon Street  
Portland, OR 97204

The applicant owns and operates an electric utility company with substations throughout Oregon.

Application was made for tax credit for a water pollution control facility.

2. Description of Facility

The facility is an oil spill containment system at the Faraday Substation near Estacada, Oregon. The facility consists of a concrete sump, an oil-stop valve, curbing, and earthwork.

Claimed Facility Cost: \$ 54,336.42  
(Accountant's certification was provided)

3. Procedural Requirements

The facility was completed after December 31, 1983, so it is governed by ORS 468.150 through 468.190 in effect on January 1, 1984, and by OAR 340-16-015 (effective July 13, 1984; amended March 21, 1985).

The facility met all statutory deadlines in that:

- a. The request for preliminary certification was filed April 15, 1985 more than 30 days before construction commenced on June 1985.
- b. The request for preliminary certification was approved before application for final certification was made.
- c. Construction of the facility was substantially completed on June 23, 1986 and the application for final certification was found to be complete on November 3, 1986 within 2 years of substantial completion of the facility.



4. Evaluation of Application

- a. The facility is eligible because the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution.

This prevention is accomplished by the containment of industrial waste as defined in ORS 468.700.

In accordance with federal law, electric utility companies must provide oil spill containment facilities at substations where oil filled equipment is utilized.

Storm runoff from the substation entered a storm sewer which drained to the Clackamas River. There were no facilities to contain transformer oil spills and prevent the oils from entering the river. The new facility includes paving and curbing to direct substation runoff to a new sump which was installed in the existing yard drain. The sump contains an oil-stop valve which closes in the presence of oil. In the event of an oil spill, the oil would be contained within the bermed substation until crews could remove the oils.

The Faraday Substation does not contain any PCB oils. No spills have occurred at this site.

- b. Analysis of Eligible Costs

There is no return on investment from this facility. One hundred (100) percent of the cost of the facility is allocated to pollution control.

5. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible for final tax credit certification in that the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution and accomplishes this purpose by containment of industrial waste as defined in ORS 468.700.
- c. The facility complies with DEQ statutes and rules.
- d. The portion of the facility cost that is properly allocable to pollution control is 100 %.

6. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$ 54,336.42 with 100 % allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1848.

L.D. Patterson:c

WC1421

(503) 229-5374

12/26/86

State of Oregon  
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

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1. Applicant

Portland General Electric Company  
121 S.W. Salmon Street  
Portland, OR 97204

The applicant owns and operates an electric utility company with substations throughout Oregon.

Application was made for tax credit for a water pollution control facility.

2. Description of Facility

The facilities are oil spill containment systems at the Sullivan Plant Substation at Oregon City, Oregon. The upper yard facility consists of 280 feet of pressure treated 2 x 14 lumber, mason's sand, and 3/4 minus crushed rock. The lower yard facility consists of a concrete sump, an oil-stop valve, and curbing.

Claimed Facility Cost: \$ 50,217.00

3. Procedural Requirements

The facility was completed after December 31, 1983, so it is governed by ORS 468.150 through 468.190 in effect on January 1, 1984, and by OAR 340-16-015 (effective July 13, 1984; amended March 21, 1985).

The facility met all statutory deadlines in that:

- a. The request for preliminary certification was filed June 18, 1985 more than 30 days before construction commenced on July 25, 1985.
- b. The request for preliminary certification was approved before application for final certification was made.
- c. Construction of the facility was substantially completed on November 19, 1985 and the application for final certification was found to be complete on November 3, 1986 within 2 years of substantial completion of the facility.

4. Evaluation of Application

- a. The facility is eligible because the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution.

This prevention is accomplished by the containment of industrial waste as defined in ORS 468.700.

In accordance with federal law, electric utility companies must provide oil spill containment facilities at substations where oil filled equipment is utilized.

Storm runoff from the Sullivan Plant Substations two yards drains to the Willamette River. There were no facilities to contain transformer oil spills and prevent them from entering the river.

Three sides of the Sullivan Plant Substation upper yard have been trenched and backfilled with mason's sand. A 2 x 14 pressure treated wood timber has been partially buried in the sand to act as a containment berm. The sand has been covered with crushed rock.

The fourth (untrenched) side of the substation upper yard is upgradient and serves as the entryway to the site. Normal storm runoff will flow towards one of the three trenches and pass through the sand under the timber. In the event of an oil spill, the sand would retard the oil to provide time for the cleanup crew to be dispatched to the site. Equipment monitors would warn crews of any failure. The crews would remove the oil and contaminated sand, and reconstruct the facility following site cleanup.

The new facility at the substations lower yard includes paving and curbing to direct substation runoff to a new sump. The sump contains an oil-stop valve which closes in the presence of oil. In the event of an oil spill, the oil would be contained within the bermed substation until crews could remove the oils.

The Sullivan Plant Substation does not contain any PCB oils. No spills have occurred at this site.

- b. Analysis of Eligible Costs

There is no return on investment from this facility. One hundred (100) percent of the cost of the facility is allocated to pollution control.

5. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible for final tax credit certification in that the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution and accomplishes this purpose by containment of industrial waste as defined in ORS 468.700.
- c. The facility complies with DEQ statutes and rules.
- d. The portion of the facility cost that is properly allocable to pollution control is 100 %.

6. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$ 50,217.00 with 100 % allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1849.

L.D. Patterson:c  
WC1421  
(503) 229-5374  
12/26/86

State of Oregon  
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

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1. Applicant

Portland General Electric Company  
121 S.W. Salmon Street  
Portland, OR 97204

The applicant owns and operates an electric utility company with substations throughout Oregon.

Application was made for tax credit for a water pollution control facility.

2. Description of Facility

The facility is an oil spill containment system at the Grand Ronde Substation. The facility consists of 680 feet of pressure treated 2 x 14 lumber, mason's sand, and 3/4 minus crushed rock.

Claimed Facility Cost: \$ 23,033.90  
(Accountant's Certification was provided)

3. Procedural Requirements

The facility was completed after December 31, 1983, so it is governed by ORS 468.150 through 468.190 in effect on January 1, 1984, and by OAR 340-16-015 (effective July 13, 1984; amended March 21, 1985).

The facility met all statutory deadlines in that:

- a. The request for preliminary certification was filed October 9, 1984 more than 30 days before construction commenced on January 1985.
- b. The request for preliminary certification was approved before application for final certification was made.
- c. Construction of the facility was substantially completed on April 15, 1985 and the application for final certification was found to be complete on November 3, 1986 within 2 years of substantial completion of the facility.

4. Evaluation of Application

- a. The facility is eligible because the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution.

This prevention is accomplished by the containment of industrial waste as defined in ORS 468.700.

In accordance with federal law, electric utility companies must provide oil spill containment facilities at substations where oil filled equipment is utilized.

All four sides of the Grand Ronde Substation have been trenched and backfilled with mason's sand. A 2 x 14 pressure treated wood timber has been partially buried in the sand to act as a containment berm. The sand has been covered with crushed rock.

Normal storm runoff will flow towards the trenches and pass through the sand under the timber. In the event of an oil spill, the sand would retard the oil to provide time for the cleanup crew to be dispatched to the site. Equipment monitors would warn crews of any failure. The crews would remove the oil and contaminated sand, and reconstruct the facility following site cleanup.

The Grand Ronde Substation does not contain any PCB oils. No spills have occurred at this site.

- b. Analysis of Eligible Costs

There is no return on investment from this facility. One hundred (100) percent of the cost of the facility is allocated to pollution control.

5. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible for final tax credit certification in that the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution and accomplishes this purpose by containment of industrial waste as defined in ORS 468.700.
- c. The facility complies with DEQ statutes and rules.
- d. The portion of the facility cost that is properly allocable to pollution control is 100 %.

6. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$ 23,033.90 with 100 % allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1850.

L.D. Patterson:c

WC1421.1

(503) 229-5374

12/26/86



State of Oregon  
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

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1. Applicant

Portland General Electric Company  
121 S.W. Salmon Street  
Portland, OR 97204

The applicant owns and operates an electric utility company with substations throughout Oregon.

Application was made for tax credit for a water pollution control facility.

2. Description of Facility

The facilities are oil spill containment systems at the Station E Substation on N.W. First Avenue in Portland, Oregon. The north facility consists of 342 feet of pressure treated 2 x 12 lumber, mason's sand, and 3/4 minus crushed rock. The south facility consists of 243 feet of pressure treated 2 x 12 lumber, mason's sand, and 3/4 minus crushed rock.

Claimed Facility Cost: \$ 31,109.25  
(Accountants Certification was provided).

3. Procedural Requirements

The facility was completed after December 31, 1983, so it is governed by ORS 468.150 through 468.190 in effect on January 1, 1984, and by OAR 340-16-015 (effective July 13, 1984; amended March 21, 1985).

The facility met all statutory deadlines in that:

- a. The request for preliminary certification was filed August 9, 1985 more than 30 days before construction commenced on September 15, 1985.
- b. The request for preliminary certification was approved before application for final certification was made.
- c. Construction of the facility was substantially completed on December 20, 1985 and the application for final certification was found to be complete on November 3, 1986 within 2 years of substantial completion of the facility.

4. Evaluation of Application

- a. The facility is eligible because the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution.

This prevention is accomplished by the containment of industrial waste as defined in ORS 468.700.

In accordance with federal law, electric utility companies must provide oil spill containment facilities at substations where oil filled equipment is utilized.

Station E Substation is divided into North and South Yards. The lower sides of each yard have been trenched and backfilled with mason's sand. A 2 x 12 pressure treated wood timber has been partially buried in the sand to act as a containment berm. The sand has been covered with crushed rock.

Normal storm runoff will flow towards the trenches and pass through the sand under the timber. In the event of an oil spill, the sand would retard the oil to provide time for the cleanup crew to be dispatched to the site. Equipment monitors would warn crews of any failure. The crews would remove the oil and contaminated sand, and reconstruct the facility following site cleanup.

- b. Analysis of Eligible Costs

There is no return on investment from this facility. One hundred (100) percent of the cost of the facility is allocated to pollution control.

5. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible for final tax credit certification in that the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution and accomplishes this purpose by containment of industrial waste as defined in ORS 468.700.
- c. The facility complies with DEQ statutes and rules.
- d. The portion of the facility cost that is properly allocable to pollution control is 100 %.

6. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$ 31,109.25 with 100 % allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1851.

L.D. Patterson:c

WC1421

(503) 229-5374

12/26/86

State of Oregon  
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

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1. Applicant

Portland General Electric Company  
121 S.W. Salmon Street  
Portland, OR 97204

The applicant owns and operates an electric utility company with substations throughout Oregon.

Application was made for tax credit for a water pollution control facility.

2. Description of Facility

The facility is an oil spill containment system at the Round Butte Switchyard at the Round Butte Hydroelectric Plant near Madras. The facility consists of 1300 feet of pressure treated 2 x12 lumber, mason's sand, and 3/4 minus crushed rock.

Claimed Facility Cost: \$ 38,721.82  
(Accountant's Certification was provided).

3. Procedural Requirements

The facility was completed after December 31, 1983, so it is governed by ORS 468.150 through 468.190 in effect on January 1, 1984, and by OAR 340-16-015 (effective July 13, 1984; amended March 21, 1985).

The facility met all statutory deadlines in that:

- a. The request for preliminary certification was filed May 23, 1985 more than 30 days before construction commenced on June 28, 1985.
- b. The request for preliminary certification was approved before application for final certification was made.
- c. Construction of the facility was substantially completed on October 7, 1985, and the application for final certification was found to be complete on November 3, 1986 within 2 years of substantial completion of the facility.

4. Evaluation of Application

- a. The facility is eligible because the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution.

This prevention is accomplished by the containment of industrial waste as defined in ORS 468.700.

In accordance with federal law, electric utility companies must provide oil spill containment facilities at substations where oil filled equipment is utilized.

Three sides of the electrical switching station have been trenched and backfilled with mason's sand. A 2 x 12 pressure treated wood timber has been partially buried in the sand to act as a containment berm. The sand has been covered with crushed rock.

The fourth (untrenched) side of the substation is upgradient. Normal storm runoff will flow towards the trenches and pass through the sand under the timber. In the event of an oil spill, the sand would retard the oil to provide time for the cleanup crew to be dispatched to the site. Equipment monitors would warn crews of any failure. The crews would remove the oil and contaminated sand, and reconstruct the facility following site cleanup.

- b. Analysis of Eligible Costs

There is no return on investment from this facility. One hundred (100) percent of the cost of the facility is allocated to pollution control.

5. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible for final tax credit certification in that the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution and accomplishes this purpose by containment of industrial waste as defined in ORS 468.700.
- c. The facility complies with DEQ statutes and rules.
- d. The portion of the facility cost that is properly allocable to pollution control is 100 %.

6. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$ 38,721.82 with 100 % allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1852.

L.D. Patterson:c

WC1421

(503) 229-5374

12/26/86

State of Oregon  
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

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1. Applicant

Portland General Electric Company  
121 S.W. Salmon Street  
Portland, OR 97204

The applicant owns and operates an electric utility company with substations throughout Oregon.

Application was made for tax credit for a water pollution control facility.

2. Description of Facility

The facility is an oil spill containment system at the Canemah Substation near Oregon City, Oregon. The facility consists of a concrete sump, an oil-stop valve, and earthwork.

Claimed Facility Cost: \$ 29,759.38  
(Accountant's certification was provided)

3. Procedural Requirements

The facility was completed after December 31, 1983, so it is governed by ORS 468.150 through 468.190 in effect on January 1, 1984, and by OAR 340-16-015 (effective July 13, 1984; amended March 21, 1985).

The facility met all statutory deadlines in that:

- a. The request for preliminary certification was filed April 15, 1985 less than 30 days before construction commenced on April 17, 1985. The application was reviewed by DEQ staff and the applicant was notified that the application was complete and that construction could commence.
- b. The request for preliminary certification was approved before application for final certification was made.
- c. Construction of the facility was substantially completed on May 30, 1985 and the application for final certification was found to be complete on November 3, 1986 within 2 years of substantial completion of the facility.

4. Evaluation of Application

- a. The facility is eligible because the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution.

This prevention is accomplished by the containment of industrial waste as defined in ORS 468.700.

In accordance with federal law, electric utility companies must provide oil spill containment facilities at substations where oil filled equipment is utilized.

Storm runoff from the substation entered a storm sewer which drained to the Willamette River. There were no facilities to contain transformer oil spills and prevent the oils from entering the river. The new facility includes ditching to direct substation runoff to a new sump which was installed in the existing yard drain. The sump contains an oil-stop valve which closes in the presence of oil. In the event of an oil spill, the oil would be contained within the bermed substation until crews could remove the oils.

The Canemah Substation does not contain any PCB oils. No spills have occurred at this site.

- b. Analysis of Eligible Costs

There is no return on investment from this facility. One hundred (100) percent of the cost of the facility is allocated to pollution control.

5. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible for final tax credit certification in that the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution and accomplishes this purpose by containment of industrial waste as defined in ORS 468.700.
- c. The facility complies with DEQ statutes and rules.
- d. The portion of the facility cost that is properly allocable to pollution control is 100 %.



6. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$ 29,759.38 with 100 % allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1853.

L.D. Patterson:c

WC1421

(503) 229-5374

12/26/86

State of Oregon  
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

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1. Applicant

Portland General Electric Company  
121 S.W. Salmon Street  
Portland, OR 97204

The applicant owns and operates an electric utility company with substations throughout Oregon.

Application was made for tax credit for a water pollution control facility.

2. Description of Facility

The facility is an oil spill containment system at the North Plains Substation near North Plains, Oregon. The facility consists of 449 feet of pressure treated 2 x 14 lumber, 43 yards of mason's sand, and 30 yards of 3/4 minus crushed rock.

Claimed Facility Cost: \$ 15,211.06

3. Procedural Requirements

The facility was completed after December 31, 1983, so it is governed by ORS 468.150 through 468.190 in effect on January 1, 1984, and by OAR 340-16-015 (effective July 13, 1984; amended March 21, 1985).

The facility met all statutory deadlines in that:

- a. The request for preliminary certification was filed January 28, 1986 less than 30 days before construction commenced on February 14, 1986. The application was reviewed by DEQ staff and the applicant was notified that the application was complete and that construction could commence.
- b. The request for preliminary certification was approved before application for final certification was made.
- c. Construction of the facility was substantially completed on March 31, 1986 and the application for final certification was found to be complete on November 12, 1986 within 2 years of substantial completion of the facility.

4. Evaluation of Application

- a. The facility is eligible because the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution.

This prevention is accomplished by the containment of industrial waste as defined in ORS 468.700.

In accordance with federal law, electric utility companies must provide oil spill containment facilities at substations where oil filled equipment is utilized.

All four sides of the North Plains Substation have been trenched and backfilled with mason's sand. A 2 x 14 pressure treated wood timber has been partially buried in the sand to act as a containment berm. The sand has been covered with crushed rock.

Normal storm runoff will flow towards the trenches and pass through the sand under the timber. In the event of an oil spill, the sand would retard the oil to provide time for the cleanup crew to be dispatched to the site. Equipment monitors would warn crews of any failure. The crews would remove the oil and contaminated sand, and reconstruct the facility following site cleanup.

The North Plains Substation does not contain any PCB oils. No spills have occurred at this site.

- b. Analysis of Eligible Costs

There is no return on investment from this facility. One hundred (100) percent of the cost of the facility is allocated to pollution control.

5. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible for final tax credit certification in that the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution and accomplishes this purpose by containment of industrial waste as defined in ORS 468.700.
- c. The facility complies with DEQ statutes and rules.
- d. The portion of the facility cost that is properly allocable to pollution control is 100 %.

6. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$ 15,211.06 with 100 % allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1854.

L.D. Patterson:c

WC1421

(503) 229-5374

12/26/86

State of Oregon  
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

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1. Applicant

Portland General Electric Company  
121 S.W. Salmon Street  
Portland, OR 97204

The applicant owns and operates an electric utility company with substations throughout Oregon.

Application was made for tax credit for a water pollution control facility.

2. Description of Facility

The facility is an oil spill containment system at the Estacada Substation near Estacada, Oregon. The facility consists of 258 feet of pressure treated 2 x 14 lumber, 24 yards of mason's sand, and 15 yards of 3/4 minus crushed rock.

Claimed Facility Cost: \$ 15,169.94

3. Procedural Requirements

The facility was completed after December 31, 1983, so it is governed by ORS 468.150 through 468.190 in effect on January 1, 1984, and by OAR 340-16-015 (effective July 13, 1984; amended March 21, 1985).

The facility met all statutory deadlines in that:

- a. The request for preliminary certification was filed August 19, 1985 more than 30 days before construction commenced on October 12, 1985.
- b. The request for preliminary certification was approved before application for final certification was made.
- c. Construction of the facility was substantially completed on January 22, 1986 and the application for final certification was found to be complete on November 22, 1986 within 2 years of substantial completion of the facility.

4. Evaluation of Application

- a. The facility is eligible because the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution.

This prevention is accomplished by the containment of industrial waste as defined in ORS 468.700.

In accordance with federal law, electric utility companies must provide oil spill containment facilities at substations where oil filled equipment is utilized.

Three sides of the Estacada Substation have been trenched and backfilled with mason's sand. A 2 x 14 pressure treated wood timber has been partially buried in the sand to act as a containment berm. The sand has been covered with crushed rock.

The fourth (untrenched) side of the substation is upgradient. Normal storm runoff will flow towards the trenches and pass through the sand under the timber. In the event of an oil spill, the sand would retard the oil to provide time for the cleanup crew to be dispatched to the site. Equipment monitors would warn crews of any failure. The crews would remove the oil and contaminated sand, and reconstruct the facility following site cleanup.

The Estacada Substation does not contain any PCB oils. No spills have occurred at this site.

- b. Analysis of Eligible Costs

There is no return on investment from this facility. One hundred (100) percent of the cost of the facility is allocated to pollution control.

5. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible for final tax credit certification in that the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution and accomplishes this purpose by containment of industrial waste as defined in ORS 468.700.
- c. The facility complies with DEQ statutes and rules.
- d. The portion of the facility cost that is properly allocable to pollution control is 100 %.

6. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$ 15,169.94 with 100 % allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1855.

L.D. Patterson:c

WC1421

(503) 229-5374

12/26/86

State of Oregon  
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

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1. Applicant

Portland General Electric Company  
121 S.W. Salmon Street  
Portland, OR 97204

The applicant owns and operates an electric utility company with substations throughout Oregon.

Application was made for tax credit for a water pollution control facility.

2. Description of Facility

The facility is an oil spill containment system at the Boones Ferry Substation near Lake Oswego, Oregon. The facility consists of 258 feet of pressure treated 2 x 14 lumber, 59 yards of mason's sand, and 31 yards of 3/4 minus crushed rock.

Claimed Facility Cost: \$ 17,987.75

3. Procedural Requirements

The facility was completed after December 31, 1983, so it is governed by ORS 468.150 through 468.190 in effect on January 1, 1984, and by OAR 340-16-015 (effective July 13, 1984; amended March 21, 1985).

The facility met all statutory deadlines in that:

- a. The request for preliminary certification was filed August 2, 1985 more than 30 days before construction commenced on September 5, 1985.
- b. The request for preliminary certification was approved before application for final certification was made.
- c. Construction of the facility was substantially completed on December 30, 1985 and the application for final certification was found to be complete on November 20, 1985 within 2 years of substantial completion of the facility.



4. Evaluation of Application

- a. The facility is eligible because the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution.

This prevention is accomplished by the containment of industrial waste as defined in ORS 468.700.

In accordance with federal law, electric utility companies must provide oil spill containment facilities at substations where oil filled equipment is utilized.

Three sides of the Boones Ferry Substation have been trenched and backfilled with mason's sand. A 2 x 14 pressure treated wood timber has been partially buried in the sand to act as a containment berm. The sand has been covered with crushed rock.

The fourth (untrenched) side of the substation is upgradient. Normal storm runoff will flow towards the trenches and pass through the sand under the timber. In the event of an oil spill, the sand would retard the oil to provide time for the cleanup crew to be dispatched to the site. Equipment monitors would warn crews of any failure. The crews would remove the oil and contaminated sand, and reconstruct the facility following site cleanup.

The Boones Ferry Substation does not contain any PCB oils. No spills have occurred at this site.

- b. Analysis of Eligible Costs

There is no return on investment from this facility. One hundred (100) percent of the cost of the facility is allocated to pollution control.

5. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible for final tax credit certification in that the principal purpose of the facility is to comply with a requirement imposed by the federal Environmental Protection Agency to prevent water pollution and accomplishes this purpose by containment of industrial waste as defined in ORS 468.700.
- c. The facility complies with DEQ statutes and rules.
- d. The portion of the facility cost that is properly allocable to pollution control is 100 %.

Application No. T-1856

Page 3

6. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$ 17,987.75 with 100 % allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1856.

L.D. Patterson:c

WC1421

(503) 229-5374

12/26/86



State of Oregon  
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

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1. Applicant

Precision Castparts Corp.  
Titanium Plant  
4600 S.E. Harney Drive  
Portland, OR 97206

The applicant owns and operates a foundry for the production of titanium investment coatings at 5001 S.E. Johnson Creek Boulevard in Milwaukie, Oregon.

Application was made for tax credit for an air pollution control facility.

2. Description of Facility

The facility consists of a bag filter dust collection system.

Claimed Facility Cost: \$44,296.50  
(Accountant's Certification was provided).

3. Procedural Requirements

The facility was completed after December 31, 1983, so it is governed by ORS 468.150 through 468.190 in effect on January 1, 1984, and by OAR 340-16-015 (effective July 13, 1984; amended March 21, 1985).

The facility met all statutory deadlines in that:

- a. The request for preliminary certification was filed February 7, 1986 more than 30 days before construction commenced on March 17, 1986.
- b. The request for preliminary certification was approved before application for final certification was made.
- c. Construction of the facility was substantially completed in August 1986 and the application for final certification was found to be complete on December 12, 1986 within 2 years of substantial completion of the facility.

4. Evaluation of Application

- a. The facility is eligible because the sole purpose of the facility is to prevent a substantial quantity of air pollution.

This prevention is accomplished by the installation of an air cleaning device as defined in ORS 468.275.

The air cleaning device, consisting of the bag filter dust collection system, was required to prevent silica dust emissions from sandblast operations that were recently installed on the shell removal line, located in the cleaning department.

The claimed facility has been inspected by Department personnel and has been found to be operating in compliance with Department regulations and permit conditions. It has been reported by Precision Castparts Corporation that the facility, which has a rated efficiency estimated at 99.9%, collects approximately 18,144 pounds of silica dust per year.

All material collected is transported to a landfill for disposal. Therefore, there is no return on the investment in the facility and 100% of the facility is allocable to pollution control.

5. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible for final tax credit certification in that the sole purpose of the facility is to prevent a substantial quantity of air pollution and accomplishes this purpose by the installation of an air cleaning device as defined in ORS 468.275.
- c. The facility complies with DEQ statutes and rules and permit conditions.
- d. The portion of the facility cost that is properly allocable to pollution control is 100%.

6. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$44,296.50 with 100% allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1858.

W.J. FULLER:a  
AA5827  
(503) 229-5749  
December 18, 1986

State of Oregon  
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

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1. Applicant

Precision Castparts Corporation  
Titanium Plant  
4600 SE Harney Drive  
Portland, OR 97206

The applicant owns and operates a foundry for the production of titanium investment castings at 5001 SE Johnson Creek Boulevard in Milwaukie, Oregon.

Application was made for tax credit for an air pollution control facility.

2. Description of Facility

The facility consists of a cartridge type dust collector.

Claimed Facility Cost: \$26,747.53.  
(Accountant's Certification was provided).

3. Procedural Requirements

The facility was completed after December 31, 1983, so it is governed by ORS 468.150 through 468.190 in effect on January 1, 1984, and by OAR 340-16-015 (effective July 13, 1984; amended March 21, 1985).

The facility met all statutory deadlines in that:

- a. The request for preliminary certification was filed February 7, 1986, more than 30 days before construction commenced on April 7, 1986.
- b. The request for preliminary certification was approved before application for final certification was made.
- c. Construction of the facility was substantially completed on May 21, 1986 and the application for final certification was found to be complete on December 1, 1986 within 2 years of substantial completion of the facility.

4. Evaluation of Application

The facility is eligible because the sole purpose of the facility is to prevent a substantial quantity of air pollution.

This prevention is accomplished by installation of an air cleaning device as defined in ORS 468.275.

The air cleaning device consisting of a cartridge type dust collector was required to prevent emissions of vanadium pentoxide into the work area or the ambient air. Vanadium pentoxide is generated by burn-off of the fill port risers on the titanium castings which are alloyed with vanadium. Vanadium pentoxide is considered a toxic material and has an occupational threshold limit value (TLV) of  $0.05\text{mg}/\text{m}^3$ . There are no published limits for the concentration of vanadium pentoxide in the ambient air, however, since exposure times in ambient air are greater, the levels should be considerably lower. In the absence of any applicable Oregon standard the New York guidelines were used which is 1/300 of the TLV for hazardous and toxic materials. This would establish an acceptable ambient level of  $0.00017\text{mg}/\text{m}^3$ .

The claimed facility has been inspected by Department personnel and has been determined to be operating in compliance with all permit conditions and Department regulations. The cartridge type dust collector has a rated efficiency in excess of 99.9%. The calculated annual emissions of vanadium pentoxide is  $0.00625\text{mg}/\text{yr}$ . Discharge concentrations based on average room concentration and the rated efficiency of the claimed facility are computed to be an average of  $0.0000031\text{mg}/\text{m}^3$  well within the computed limit.

All material collected is transported to a disposal site and disposed of through authorized means. Therefore, since there is no return on the investment in the claimed facility and the sole purpose of the facility is pollution control 100% of the facility is allocable to pollution control.

#### 5. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible for final tax credit certification in that the sole purpose of the facility is to prevent a substantial quantity of air pollution and accomplishes this purpose by the installation of an air cleaning device as defined in ORS 468.275.
- c. The facility complies with DEQ statutes and rules and permit conditions.
- d. The portion of the facility cost that is properly allocable to pollution control is 100%.

6. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$26,747.53 with 100% allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1857.

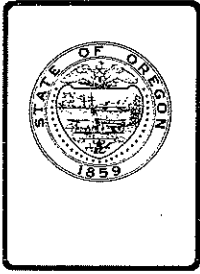
WJF:d

AD46

229-5749

12/22/86





## Environmental Quality Commission

~~Mailing Address: Box 1760, Portland, Oregon 97207~~

~~822 Southwest Sixth Avenue, Portland, OR 97204~~ PHONE (503) 229-5696

811 SW Sixth Avenue, Portland, Oregon 97204

### MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item D, January 23, 1987, EQC Meeting

Proposed Adoption of Oregon's Oil and Hazardous Materials  
Emergency Response Plan

### Background

Pursuant to ORS Chapter 401, the Executive Department's Emergency Management Division (EMD) is charged with the coordination of the state's emergency response programs. EMD has written a document known as Oregon's Emergency Operations Plan which describes how the state will function during all emergencies. It contains a number of annexes relating to specific types of emergencies such as flooding, earthquakes, volcanic eruptions, etc. Annex O is the Hazardous Materials Emergency Response Plan. It was written in 1984 by the Oregon Accident Response System Council (OARS), a committee of 16 state agencies involved in emergency response activities. Annex O details the responsibilities and authorities of state agencies during a hazardous materials emergency. It also outlines how the spill response system is supposed to work although local government was not involved in its preparation.

Over the past several years, critiques of several significant spill incidents by the OARS Council have consistently identified problems with the implementation of the existing emergency response system. The problems stem from:

1. A lack of clearly defined roles and responsibilities for responders at all levels of government.
2. A lack of a mutually acceptable protocol for determining who is in charge of an incident.
3. Inadequate on-scene communications capabilities.
4. A lack of initial and followup hazardous materials training for all responders.
5. A lack of adequate equipment, including personal safety protection equipment, to contain and control major releases of chemically hazardous materials.

6. A lack of periodic testing of the Emergency Response System through drills and exercises.
7. A lack of a state cleanup fund to use when a responsible party could not be identified or the responsible party failed to take timely or appropriate action.

To address these concerns, the Department introduced HB 2146 during the 1985 Legislative session. The bill passed and is now codified as ORS 466.605 to 466.690. Although HB 2146 was originally implementation oriented, the legislature concluded that a statewide hazardous material emergency response plan to replace Annex 0 was needed before they dealt with the implementation issues.

Section 466.620 of the statutes specifically requires that the Environmental Quality Commission (EQC) adopt an oil and hazardous material emergency response master plan after consultation with the Interagency Hazard Communication Council, the Oregon State Police, the Oregon Fire Chiefs' Association, and any other appropriate agency or organization. The Interagency Hazard Communication Council (IHCC) was established by HB 3005 during the 1985 Legislative Session to oversee, among other programs, the hazardous material planning activities of the DEQ. It is composed of 15 state agency heads and 4 members of the public.

#### Discussion

To help the Department of Environmental Quality (DEQ) implement the development of a statewide response plan, three technical advisory committees were established to look at the following major issues; emergency response planning, hazardous material training, and equipment needs. All sectors of the emergency response community were encouraged to participate on these committees. The membership is attached as

Attachment V. The following goals were identified for each group:

1. The planning committee's task was to advise on the adoption of a master plan and to determine local hazardous material planning needs.
2. The training committee's task was to advise DEQ and others on the training needs of various emergency responders and to propose a statewide training program.
3. The equipment committee's task was to determine presently available hazardous material response equipment and to propose a series of minimum equipment standards for all responders.

A steering committee was formed to oversee the work of the three technical committees, to set monthly agendas and to ensure that the state agencies worked together. It was composed of the DEQ, the Emergency Management

Division (chair of the planning committee), the Department of Energy (chair of the training committee) and the State Fire Marshal's office (chair of the equipment committee).

In addition, a Policy Advisory Committee was also formed to look into policy issues and, in particular, to study and make recommendations on an appropriate funding mechanism for the overall program. It was composed of administrative level representatives from private industry, local government and the public sector. It was chaired by James Van Dyke, Executive Dean of Portland Community College's Rock Creek campus. The membership is attached as Attachment VI.

Early in the process, it was determined that the main focus of the plan would be to outline how government agencies would work together during a hazardous materials emergency. It would not be designed to provide the level of detail necessary to be an actual response procedure, but it could serve as a model for local governments and agencies to utilize in developing their own plans and procedures.

The draft plan was completed on September 30, 1986. On October 24, we requested EQC authorization to hold five public hearings in regional locations the first week of December. The hearings request was approved and the hearings were held in Pendleton on December 1; Bend, December 2; Medford, December 3; Eugene, December 4 and Portland on December 5.

On the 16th of November, more than 1,100 copies of the draft plan were mailed out to all fire departments, police departments, emergency medical care providers, emergency coordinators, local and state agencies, select industries and members of the Federal Regional Response Team. The comment period remained open until December 10th at 5:00 p.m.

A total of 80 people attended the five hearings. Thirteen persons gave oral testimony. The hearings officers reports are included as Attachment VII. In addition, 15 agencies and individuals provided written comments to the plan on or before the December 10th deadline. Public comments received during both the oral testimony and the written comment period raised a number of issues. These are discussed in detail in the Responsiveness Summary, Attachment VIII.

Two issues concerned the process rather than the plan itself. The first of these was with the representation on the technical committees. One party felt quite strongly that rural and volunteer fire departments were not given enough opportunity to participate in the plan development. The meeting times (afternoons) and place (Salem) strongly favored those fire departments that had paid staff such as Salem, Portland and Eugene. Other participants in the process took exception to this. From the beginning, the Department made extensive efforts to involve all sectors of the response community. The meetings were open to anyone who chose to attend. Of the 70 people who regularly attended the Technical Advisory Committee meetings, 25 represented various sectors of the fire service community

including: the State Fire Marshal's office, the Oregon Fire Chiefs' Association, The Oregon Fire Medical Administrators Association, The Oregon Fire Instructors Association, Oregon State Fire Fighters Council and numerous fire departments. We also regularly mailed out information updates to all the fire departments in the state. In addition, we traveled to all 36 counties in July and made presentations to county fire defense boards and county emergency managers.

A second process issue involved the recent passage of the Federal Superfund Amendments and Reauthorization Act of 1986, particularly Title III which mandates a hazardous material planning process within each state. The concern was that the state plan is not consistent with the provisions of the Act. The Act which was passed on October 17, 1986, requires local planning districts to develop comprehensive emergency response plans by October 1988. The local plans must include:

- 1) identification of chemical facilities,
- 2) emergency response procedures,
- 3) designation of emergency response coordinators,
- 4) description of available response equipment and facilities, and
- 5) schedules for emergency response exercises and training.

Our reading of Title III raises no immediate consistency questions because it does not require a state plan. In fact, we believe the existence of the state master plan will facilitate the early implementation of the local planning process. Many of the coordination issues addressed by the state plan will be readily transferable to the local plans that are mandated by Title III.

There were a number of issues that were raised during the hearings and written comments period that dealt directly with the plan. None of the issues required major revisions in the plan, but were more directed toward providing better definition and clarification. As a result of the comments, the following changes have been made to the plan:

- 1) Additional language is provided to clarify how and when the notification system is used;
- 2) The description of the roles and responsibilities of different response organizations is expanded to more clearly identify expected responses during emergencies;
- 3) The State Fire Marshal's incident reporting system and hazardous substance data base are discussed in more detail;
- 4) The role of the Poison Control Center and its relations to the State Health Division is clarified;

- 5) The role of industry is clarified after concern was raised that the plan had removed some of their responsibility to report incidents and perform cleanup and restoration;
- 6) The incident command and unified command system are discussed in more detail, and
- 7) A qualifier was added to the section on training to emphasize that the proposed training program is not mandatory.

In addition, it was requested that more resource information should be made available to first responders. Specifically, it was felt that the plan should have a detailed list of phone numbers of state, federal and industry haz-mat information services. In response to this request, an example list of haz-mat information phone numbers is included in the Example Procedural Guidelines, Attachment XII. The Guidelines are meant to be used by local governments and response agencies to develop their own procedures and plans. The primary haz-mat response numbers are included in the State plan (Attachment IV). The intent is to limit the number of necessary phone calls by encouraging the use of the local, state and federal notification systems.

Finally, there was a comment that the roles and responsibilities laid out in the plan were going to put additional liability on responders who attempted to fulfill their designated roles. This was an issue of some concern to the Department as well so an Attorney General's opinion was requested. The response from the Attorney General indicated that the plan will not effect the current liability of state or local government. The Attorney General did suggest adding a disclaimer to this effect so that everyone was aware of the liability situation.

The final hazardous material response plan is attached (Attachment IV). It is a consensus document worked out with the planning committee and in coordination with the Department of Energy (DOE), Oregon State Police and Oregon Fire Chiefs' Association. The DOE has planning responsibilities for radioactive materials emergencies under ORS 469.611. Emergency response to radiation incidents has been incorporated into the plan as one type of hazardous material emergency. The Department has received concurrence on the plan from the IHCC (at their December 10, 1986 meeting), the three technical advisory committees and the Policy Advisory Committee.

The plan provides:

1. An overview of Oregon's emergency preparedness program and its four main components: coordinated plans and procedures, trained responders, hazardous material response equipment and hazardous materials information systems.

2. A narrative summary of the emergency response system including:
  - a) Notification requirements,
  - b) An incident command system and an interagency unified command system,
  - c) Technical assistance to on-scene responders,
  - d) Emergency operation centers,
  - e) Role of voluntary services such as Red Cross and Salvation Army, and
  - f) The coordination of public information.
3. A detailed description of the roles and responsibilities of local, state, and federal agencies, industry and volunteer organizations.
4. A depiction of how the system will work for different kinds of incidents which shows the building of a unified command structure and the increasing involvement of different groups of responders as the severity of an incident increases.

Several background reports have been prepared as resource materials to the plan. They are included as follows:

- Attachment IX - A description of state agency authorities and response capabilities,
- Attachment X - A proposal for the establishment of regional hazardous material response teams and a state hazardous material response team,
- Attachment XI - The final reports of the Technical Advisory Committees which include a proposal for a coordinated statewide training program, and a proposal to adopt minimum equipment standards for various responders,
- Attachment XII - A set of example procedural guidelines for first responders.

#### Alternatives

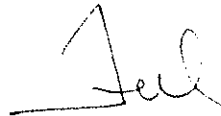
ORS 466.620 requires the Environmental Quality Commission to adopt an oil and hazardous material emergency response master plan. A major question the Department considered is whether the plan should be adopted as a regulatory rule or a statewide plan. Unlike most environmental programs, the plan is designed to coordinate emergency response for all levels of government, private industry and volunteer organizations. Adherence to it is voluntary and will vary depending on local government resources and capability. It carries no enforcement consequences. For these reasons, the Department believes that it is more appropriate for the Commission to adopt it as a statewide plan rather than a rule.

Summation

HB 2146 mandates the Department to develop a statewide plan for responding to emergency incidents involving oil and hazardous materials. Through an advisory process involving several committees, a draft plan was completed. The public was given an opportunity to provide written comments on the plan as well as oral testimony through a series of public hearings. The testimony and comments have been evaluated and incorporated into the final plan where appropriate. No substantive changes were requested and none were made. Language was, however, added in several places to provide better definition and clarification. The plan provides an overview of Oregon's emergency preparedness program, a description of a recommended emergency response system; and it details the roles and responsibilities of all responders. It is expected that the Department will review the plan annually and propose amendments as appropriate.

Director's Recommendation

Based on the summation, the Department requests the Commission to adopt the hazardous material response plan as it is presented in Attachment IV.



Fred Hansen

- Attachments:
- I. Statement of Need and Fiscal Impact
  - II. Land use Compatibility Statement
  - III. Public Notice
  - IV. Oregon's Oil and Hazardous Materials Emergency Response Plan
  - V. Technical Advisory Committee Members
  - VI. Policy Advisory Committee Members
  - VII. Hearing Officers' Reports
  - VIII. Responsiveness Summary
  - IX. State Agency Authorities and Response Capabilities
  - X. Regional and State Hazardous Materials Response Teams (concept paper)
  - XI. The Hazardous Material Technical Advisory Committees Final Reports
  - XII. Example Procedural Guidelines for First Responders

Bruce Sutherland:b  
229-6047  
December 23, 1986  
ZB6050

Before the Environmental Quality Commission of the State of Oregon

Proposed Adoption of Oregon's	)	Statement of Need for
Oil and Hazardous Materials	)	Proposed Plan and
Emergency Response Plan	)	Fiscal and Economic Impact

Statutory Authority

ORS 466.620 requires that the Environmental Quality Commission adopt an oil and hazardous materials emergency response master plan.

Need for the Plan

A coordinated approach to dealing with hazardous materials emergencies which clearly outlines how the response system works and details the roles and responsibilities of all responders is needed. Oregon's Oil and Hazardous Materials Emergency Response Plan addresses those needs.

Principal Documents Relied Upon

Chapter 733 Oregon Laws 1985, ORS 466.005 to 466.890.

Oregon Emergency Operations Plan, including Annex O, Hazardous Materials Emergency Response Plan.

Radioactive Materials Emergency Response Plan, draft, Oregon Department of Energy.

Fiscal and Economic Impact

Because the Hazardous Materials Plan is not regulatory, it should result in no costs to small businesses or individuals and may benefit them by providing for a more coordinated response to hazardous material incidents. Local governments may incur some costs if they choose to revise or update their emergency plans to be consistent with this state plan. State agencies may likewise incur costs if they have to revise their agency emergency operations plan.



Attachment II  
Agenda Item D  
1/23/87, EQC Meeting

Before the Environmental Quality Commission of the State of Oregon

Proposed Adoption of Oregon's	)	Land Use Consistency
Oil and Hazardous Materials	)	
Emergency Response Plan	)	

The proposed plan does not affect land use as defined in the Department's coordination program approved by the Land Conservation and Development Commission.

GBS:b  
ZB6050.2

# A CHANCE TO COMMENT ON...

## Oregon's Oil and Hazardous Material Emergency Response Plan

Date Prepared: 9/30/86  
Hearing Dates: 12/1/86 to  
12/5/86  
inclusive  
Comments Due: 12/10/86

**WHO IS AFFECTED:** All local, state and federal agencies, private industry, volunteer organizations and residents of the state of Oregon.

**WHAT IS PROPOSED:** The Department pursuant to ORS 466.620 has developed a statewide master plan for hazardous material incidents. The draft plan is entitled: Oregon's Oil and Hazardous Materials Emergency Response Plan.

**WHAT ARE THE HIGHLIGHTS:** The plan provides:

1. An overview of Oregon's emergency preparedness program and its four main components: coordinated plans and procedures, trained responders, hazardous material equipment and a hazardous materials information system.
2. A narrative summary of emergency response system including:
  - a) Notification requirements,
  - b) Incident command system,
  - c) The providing of technical assistance to on-scene responders,
  - d) Establishing emergency operation centers,
  - e) Voluntary services that are available, and
  - f) The coordination of public information.
3. A detailed description of the roles and responsibilities of local, state, and federal agencies, industry and volunteer organizations.
4. A depiction of how the system will work for different kinds of incidents which shows the building of a unified command structure and the increasing involvement of different groups of responders as the severity of an incident increases.

**HOW TO COMMENT:** Public Hearings Schedule

Pendleton  
December 1, 1986 at 2:00 p.m.  
Blue Mountain Community College  
M130 - Lecture Hall  
2411 N.W. Garden  
Pendleton, Oregon

Medford  
December 3, 1986 at 2:00 p.m.  
City Council Chambers  
Medford City Hall  
411 West Eighth  
Medford, Oregon

(over)



811 S.W. 6th Avenue  
Portland, OR 97204

11/1/86

**FOR FURTHER INFORMATION:**

Contact the person or division identified in the public notice by calling 229-5696 in the Portland area. To avoid long distance charges from other parts of the state, call 1-800-452-4011.

Public Hearings Schedule (continued)

Bend

December 2, 1986 at 2:00 p.m.  
Cascade Natural Gas Co.  
334 N.E. Hawthorn  
Bend, Oregon

Eugene

December 4, 1986 at 2:00 p.m.  
Lane Community College  
4000 East 30th Avenue  
Eugene, Oregon

Portland

December 5, 1986 at 2:00 p.m.  
DEQ Headquarters  
811 S.W. Sixth Avenue  
Portland, Oregon

A Department staff member will be appointed to preside over and conduct the hearings. Written comments should be sent to:  
Department of Environmental Quality, 811 S.W. Sixth Avenue,  
Portland, OR 97204

The comment period will end December 10, 1986. All comments should be received at the Department by 5:00 p.m.

For more information or copies of the plan, contact Bruce Sutherland at 229-6047 or toll-free at 1-800-452-4011.

**WHAT IS THE  
NEXT STEP:**

After the public testimony has been received and evaluated, the plan will be revised as appropriate and presented to the Environmental Quality Commission in January, 1987. The Commission may adopt the Department's recommendation, amend the Department's recommendation or take no action.

ANNEX O: OREGON EMERGENCY OPERATIONS PLAN

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OREGON'S  
OIL AND HAZARDOUS MATERIALS EMERGENCY  
RESPONSE PLAN

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Prepared by the Oregon Department of Environmental Quality

January 1987

For Information on the Plan Call:  
DEQ - Hazardous Materials Section  
1-800-452-4011 toll-free  
or 229-5759

<p>In Case of Emergency Notify: 9-1-1 (if available) or local fire or police and the Oregon Accident Response System (OARS) at 1-800-452-0311 (24-Hour Phone in state) or 503-378-4124 (out-of-state)</p>
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Disclaimers:

1. This plan is a description of the state system for dealing with oil and hazardous materials emergencies. It does not carry the force of law. It is not an operational procedure to be used during an emergency.
2. Governmental entities, while complying with the provisions of this plan, shall not be liable for death, injury, or loss of property except in cases of willful misconduct, gross negligence or bad faith.
3. The phone numbers listed in this plan may be subject to change at any time and need to be verified periodically.

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## Related Resource Materials

The following informational materials are available upon request from the Department of Environmental Quality at 1-800-452-4011 or 229-5759 or write to DEQ, 811 S.W. 6th, Portland, OR 97204

1. State Agency Authorities and Response Capabilities
2. Regional and State Hazardous Material Response Teams
3. Hazardous Materials Technical Advisory Committees Final Reports
4. Example Procedural Guidelines for Initial Responders

## Acronyms

DEQ - Department of Environmental Quality  
EMD - Emergency Management Division  
EPA - Environmental Protection Agency  
EOC - Emergency Operations Center  
FEMA - Federal Emergency Management Agency  
IC - Incident Commander  
ICS - Incident Command System  
OARS - Oregon Accident Response System  
ODOE - Oregon Department of Energy  
ODOT - Oregon Department of Transportation  
OSC - On Scene Coordinator  
OSHD - Oregon State Health Division  
OSP - Oregon State Police  
PIO - Public Information Officer  
RERT - Radioactive Emergency Response Team  
RRT - Federal Regional Response Team  
RRTA - Radiological Emergency Technical Assistant  
SFM - State Fire Marshall  
USCG - U.S. Coast Guard

## SECTION I

### Purpose and Scope

The Oregon Departments of Energy (ODOE) and Environmental Quality (DEQ) have been directed to develop a statewide plan for responding to oil, and hazardous material emergencies. Hazardous materials include radioactive materials and waste as well as chemically hazardous materials and waste and communicable disease agents.

Oregon's Oil and Hazardous Materials Emergency Response Plan satisfies Oregon Revised Statutes ORS 469.611 (ODOE) and ORS 466.620 (DEQ). It is Annex O of the State's Emergency Operations Plan, replacing the outdated Annex's O and P. It is intended to be consistent with the Federal Government's National and Regional Contingency Plans.

The plan covers all incidents involving the spill or release of oil or hazardous materials. This includes transport incidents, fixed location mishaps, and abandoned materials incidents. [See exceptions below].

The plan has been developed in cooperation with all levels of government and industry. It describes the typical roles and responsibilities of all responders. It identifies who will be in charge of an incident. It provides guidelines for coordinating local, state, federal, industry and volunteer emergency response resources. Local governments, state agencies and industry are asked to make their plans consistent with this plan and are encouraged to use this plan as a model and build upon it in developing their own detailed plans.

Local governments are expected to assume the lead role during the emergency phases of an incident. State and federal agencies shall provide technical support to local governments during the emergency phases of an incident. State or Federal agencies shall assume the lead role for directing the cleanup and site restoration. Private industry is legally responsible for reporting the spill, performing cleanup or hiring a cleanup contractor and disposing of the spilled materials. Volunteer organizations will be requested to provide for the social needs of victims.

### EXCEPTIONS: Incidents not Covered by This Plan.

Nuclear Reactor accidents, which are addressed in the Oregon Department of Energy's Trojan Emergency Plan, Annex L of the State Emergency Operations Plan.

Military Weapons or Weapons Related Materials incidents which will be directed by the U.S. Department of Defense or Energy. The ODOE will coordinate local and state help.

Spills into Coastal Waters of the United States may be directed by the U.S. Coast Guard under the National Contingency Plan. (The Coastal Zone includes most coastal rivers up to the first bridge crossing, and the Pacific Ocean to the highwater line, the Columbia River to Bonneville Dam, and the Willamette River to Oregon City). The DEQ will coordinate state assistance to the Coast Guard if requested.



## SECTION II

### Definitions of Key Terms

Emergency Operations Center (EOC) means site from where local, state and federal agencies coordinate off-scene support to on-scene responders.

Emergency Service means those activities provided by state and local government to prepare for and carry out any activity to prevent, minimize, respond or to recover from an emergency.

Hazardous Material (Haz-Mat) -- means any element, compound, mixture, solution or substance which, when spilled or released into the air or into or on any land or waters of the state, may present a substantial danger to the public health, safety, welfare or the environment. (See also OAR 340-Div. 108).

Hazardous Materials Specialists means individuals who are trained and equipped for hazardous material response. This includes trained individuals from DEQ, members of Haz-Mat teams and Regional Radiological Technical Assistants (RRTAs) who are trained in radiation response and certified by the Oregon Department of Energy and the Oregon State Health Division.

Incident means any event, that results in a spill or release of oil or hazardous materials. Action by emergency service personnel will be required to prevent or minimize loss of life or damage to property and/or natural resources.

Incident Commander (IC) means the one individual in charge at any given time of an incident. During the emergency phases the incident commander will usually be an official of the local lead agency. During cleanup and restoration the incident commander will normally be a lead state agency official. The Incident Commander will be responsible for establishing a unified command with all on-scene coordinators.

Incident Command Post means the location where field commands are given. The Incident Commander and the OSCs direct the on-scene response from this location.

Incident Command System (ICS) means the combination of facilities, equipment, personnel, procedures, and communications operating with a common command structure.

Lead State Agency means the agency which will coordinate state support to local government. The lead agencies are:

- o Oregon Department of Environmental Quality (DEQ) - Oil and Chemically Hazardous Material Incidents
  
- o Oregon Department of Energy (DOE) - Radiological Transportation Incidents

- o Oregon State Health Division (OSHD) - Radiological Fixed Site Incidents
- o Oregon State Health Division (OSHD) - Communicable Disease Agents Incidents

Oil means gasoline, crude oil, fuel oil, diesel oil, lubricating oil, sludge, oil refuse or any other petroleum-related products. (See also OAR 340-Div. 108)

On Scene Coordinator (OSC) means the individual on-scene responsible for coordinating the resources at each respective level of government. OSC's may include:

- Local On-Scene Coordinator (LOSC)
- State On-Scene Coordinator (SOSC)
- Federal On-Scene Coordinator (FOSC)

Public Information Officer (PIO) means a person designated by the incident commander who, in coordination with the lead state agency, provides information to the public and media.

Regional Hazardous Materials Response Team means a team of local emergency responders trained, equipped and organized to respond to hazardous materials incidents in a given geographic area.

Responsible Party means the person or firm who by law is strictly liable for clean-up of any spill or release.

State Hazardous Materials Response Team means a team of state emergency responders trained and equipped for hazardous materials response. This team may be composed of personnel from one or more state agencies depending on the incident and expertise required. The team would usually oversee cleanup and restoration activities. It includes the Radiation Emergency Response Team (RERT) which is composed of individuals from the Oregon State Health Division Radiation Control Section. This team will respond to any radioactive materials incident.

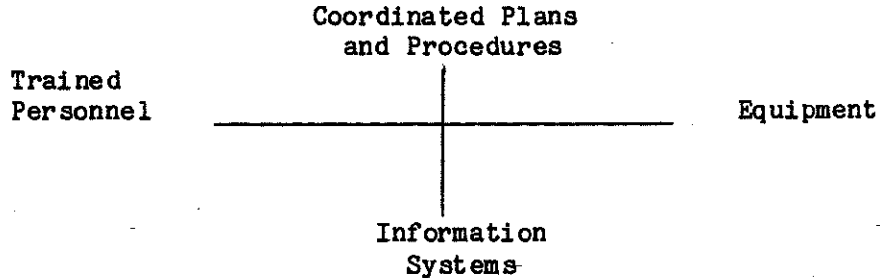
Unified Command means the method by which local, state and federal agencies will work with the Incident Commander to:

1. Determine their roles and responsibilities for a given incident.
2. Determine their overall objectives for management of an incident.
3. Select a strategy to achieve agreed upon objectives.
4. Deploy resources to achieve agreed upon objectives.

### SECTION III

#### Oregon's Emergency Preparedness Program

Oregon's preparedness for hazardous materials emergencies involves four main elements; A) coordinated plans and procedures, B) trained personnel, C) Haz-Mat equipment and D) hazardous material information.



#### A. Coordinated Plans and Procedures

This plan outlines the basic responsibilities of those who may be involved in an emergency. Procedures to implement the plan will be developed by each agency and organization. The DEQ, EMD, SFM and the DOE will work with other response agencies to see that procedures are consistent with one another and with this plan. (Example procedural guidelines for first responders have been prepared as resource materials to this plan)

This plan will be tested in at least three field drills each year. The DEQ, SFM, EMD, and DOE will also work with local agencies to sponsor additional drills of their plans and procedures. Based on critiques of drills and actual emergencies, this plan will be reviewed at least annually and appropriate revisions made.

#### B. Trained Personnel

The state's training program will include a basic Haz-Mat awareness course recommended for all responders and series of recommended advanced courses for different specialists.

The identified audiences for the specialist courses include; dispatchers, emergency medical personnel, emergency managers, state agency representatives, public works personnel, law enforcement and fire service personnel. Three (3) levels of certified training would be provided for Haz-Mat technicians who would be on regional or state Haz-Mat teams. (A more complete discussion of the training programs has been developed as additional resource material to this plan). (See Technical Advisory Committees Final Reports.)

#### C. Equipment

Minimum equipment standards are proposed for different types of responders. An individual trained to a certain level of response capability will need a minimum level of equipment to safely perform the task trained for. (A more

complete discussion of the equipment standards has been developed as additional resource material to this plan). (See Technical Advisory Committees Final Reports.)

D. Hazardous Materials Information

A computerized call up system will be developed by the State Fire Marshal's Office as funds are available. The system will provide data on the location and type of hazardous materials stored in fixed site locations around the state. It will also provide technical information on various hazardous materials. (See OAR 837-90-125)

Other information on hazardous materials can be obtained from state and federal agencies and industry (See Section IVD, Technical Assistance).

This plan together with the information system, the training program and the equipment standards is designed to insure that all emergency responders are adequately prepared for Haz-Mat incidents.

## SECTION IV

### Key Elements of Oregon's Emergency Response System

#### A. Notifications

1. Local Notification - shall be through 9-1-1, if available, or local fire and police departments.
2. State Notification - Most incidents, depending on quantity and type, that involve oil or hazardous materials must be reported by the spiller to the Oregon Accident Response System (OARS) - 1-800-452-0311 (out of state 503-378-4124) (Refer to OAR Chapter 340 Division 108). Local agencies are also requested to notify OARS. OARS is managed by the Oregon Emergency Management Division. Depending on the type of incident the OARS operator will notify the appropriate lead state agency and other agencies as necessary.
3. Federal Notification - Some spills, depending on quantity and type of material spilled, also require the spiller to notify federal agencies (40 CFR Part 302, Table 302.4). Notification shall be through the National Response Center (NRC) 1-800-424-8802. The NRC is managed by the U.S. Coast Guard.

#### B. Incident Management

##### 1. Emergency Response

A hazardous material incident may involve a variety of local, state, federal and private sector resources. No single agency will have the necessary resources to carry out all response activities. In addition, there may be overlapping authorities and responsibilities. Because speed is so important during an emergency, coordination among the responding agencies is essential. This coordination must clearly come from one source. A centralized command structure will be needed. (See Figure I)

##### a. Incident Command

The first public safety official on scene should assume incident command. The person will:

- i. Assess the situation
- ii. Activate the local emergency response system
- iii. Initiate actions to protect the public.

##### b. Local Incident Command

The lead local emergency response agency predesignated in local plans shall:

- i. Assume incident command upon arriving on scene.
- ii. Designate a local on-scene coordinator (LOSC) for local resources
- iii. Establish an appropriate incident command post
- iv. Be in charge of and responsible for all emergency response operations. (See Sections VB and VIIB)

c. Unified Command

The incident commander will also set up a unified command system if more than one level of government is involved. All on-scene coordinators (OSCs) shall have a representative at the command post who will work with the incident commander. (See Figure 1).

d. Change of Command

Incident command will remain at the local level until emergency operations which include stabilization and control activities are completed unless:

- i. The local resources are overwhelmed and the incident commander requests one of the other on-scene coordinators to assume control.
- ii. The incident occurs in areas of federal jurisdiction, such as defense installations or United States waters, in which case, the federal government will be the incident commander. (Section 105, CERCLA).
- iii. If necessary, Oregon statute grants the Governor authority to assume command of emergency operations (ORS 469.671 and ORS 401.115)

2. Stabilization and Control

Under most circumstances, the incident command will remain at the local level during the stabilization and control phase of a response. If requested, a state or federal agency could assume control. Several levels of government may be involved in this phase. The incident commander and OSCs are expected to work within a unified command structure.

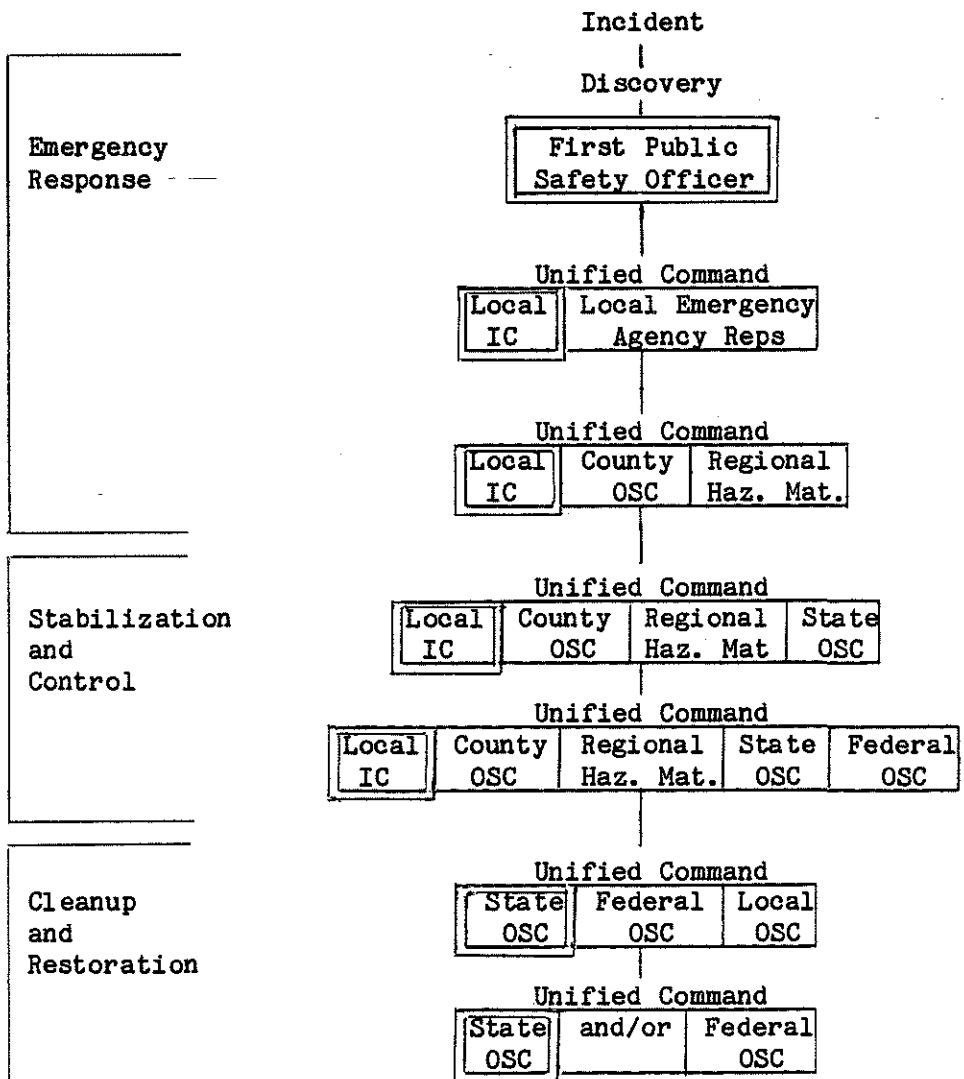
3. Cleanup and Restoration

- a. State Incident Command -- Once the emergency is over, local responders expect to return to normal duties. At a mutually agreed upon time, the local incident commander would usually turn command over to the lead state agency who will then direct cleanup and restoration. Local agencies may need or choose to remain involved. Command could remain at the local level.

Cleanup and restoration activities include:

- i. Compliance with cleanup standards
  - ii. Restoration of environment and site
  - iii. Investigation of cause
  - iv. Assessment of damages
  - v. Enforcement actions
  - vi. Cost recovery
- b. Federal Command -- The federal on-scene coordinator (FOSC) could also assume command if requested by the state or if the incident occurs in an area under federal jurisdiction (See 1d above).

Figure 1. Incident Management -- The following diagram depicts the command structure described in Section IV.B. The double outlined box indicates the incident commander. The local on-scene coordinator (LOSC) would be the incident commander (IC) unless otherwise designated. For a minor incident this structure may not proceed beyond the second box. For a major incident the command structure builds during the emergency phase as various agencies and levels of government arrive on scene. The structure decreases as the incident is controlled. Note that during cleanup, the command shifts to the state.



- C. Emergency Operations Centers (EOCs). During major incidents, the heads of local and state agencies will meet at EOCs to coordinate their off-scene support to on-scene operations. The federal government can activate the Regional Response Team (RRT) to coordinate federal off-scene support. The RRT is composed of representatives from all affected federal agencies and states in the region.
1. The local EOC will be activated by the head of local government in coordination with the local emergency manager.
  2. The State EOC will be activated by the Governor or by the Administrator of the Emergency Management Division in coordination with the state OSC. The State EOC is in Salem in the basement of the Capitol.
  3. The Federal Regional Response Team (RRT) will be activated by the chairman of the RRT when there is a major incident or upon request from the FOSC or a member of the RRT. The Regional Response Team is based in Seattle.

D. Technical assistance from state and federal agencies will be provided to on-scene responders. It would usually be in the following sequence:

1. By the lead State Agency who will contact the local Incident Commander.

Lead State Agencies are:

DEQ - for oil and chemically hazardous materials incidents. Can provide information on chemical characteristics, environmental effects, control, cleanup and disposal of hazardous materials. (For details, see page 18) Contact through OARS at 1-800-452-0311.

State Health - for all incidents involving radioactive materials other than transportation incidents and for all communicable disease agents. Can provide information on the public health effects of hazardous materials. (See page 19) Contact through OARS at 1-800-452-0311.

ODOE - for radioactive materials transportation incidents (See page 20) Contact through OARS at 1-800-452-0311.

2. By Other State Resources.

- a. The Poison Control Center at 1-800-452-7165 outside Portland or 225-8968 in the Portland area provides 24 hr. immediate toxicological information and medical treatment advice to on-scene responders.

- b. The Pesticide Analytical Response Center (PARC) at 378-3783 provides information on pesticide related health concerns (not treatment related) and environmental exposure from drift or contaminated water. Contact through OARS after hours, 1-800-452-0311.

- c. The State Fire Marshal for information on hazardous materials at fixed sites. 378-2885. Contact through OARS after hours, 1-800-452-0311.



- d. The Public Utility Commission for information on motor carrier and rail shipments of hazardous materials at 378-6204. Contact through OARS after hours, 1-800-452-0311.
3. By locally available specialists. This includes Hazardous Material Specialists and Regional Radiological Technical Assistants.
  4. By Regional Hazardous Materials Response teams if available.
  5. By the State Hazardous Materials Response team if available and by the Radiation Emergency Response Team.
  6. By Federal specialists.
    - a. For incidents involving radioactive materials, response teams may be dispatched from the US Department of Energy, Richland Operations, or from adjacent states. The Oregon DOE or Health Division will activate this help.
    - b. For oil or hazardous materials spills on U.S. waters, in the coastal zone, the US Coast Guard will respond directly. It will provide the Federal OSC and the Incident Commander. The state will notify the Coast Guard of all spills on U.S. waters. The lead state agency will coordinate state support and provide technical assistance to the Federal OSC. Local agencies will provide emergency functions such as fire suppression and emergency medical help. Contact through the National Response Center at 1-800-424-8802.
    - c. For public health information, the Agency for Toxic Substances and Disease Registry provides 24 hour service at 1-404-452-4100.
    - d. Several agencies within the Federal government can also provide technical support for both inland and coastal spills [see Section V.D).
- E. Technical assistance for certain types of hazardous materials incidents is available from industry:
1. CHEMTREC, an off-scene 24 hr. information service operated by the Chemical Manufacturers Association Chemical Transportation Emergency Center. 1-800-424-9300. CHEMTREC can supply chemical and safety data as well as contacts to product manufacturers. It can activate a number of industry based response actions including:
    - a) The CHLOREP team for chlorine incidents which is currently fielded by the Pennwalt Corporation in Portland.
    - b) CHEMNET - An industry-wide mutual aid program activated by the shipper.
    - c) Response teams for Pesticides, Hydrogen Cyanide, Hydrogen Fluoride, Phosphorus and Liquified Petroleum Gas.

2. The Association of American Railroad's Bureau of Explosives for incidents involving the railroads. 1-800-826-4662 (24 hrs.)
3. Clean Rivers Cooperative, a nonprofit organization of petroleum companys which contracts to control and cleanup oil spills on the lower Columbia and Willamette Rivers. (503) 221-7802 for 1987.

F. Volunteer Services

1. American Red Cross - can offer emergency relief in the form of food, shelter and clothing. (See phone book for nearest office).
2. Salvation Army - can provide emergency food, shelter and clothing. (See phone book for nearest office).
3. Amateur Radio Emergency Service - can provide radio communications through a network of amateur radio operators. Contact through local emergency coordinator.
4. Other locally available volunteer services.

G. Coordination of Public Information

The news media can provide an important public service by distributing information about the nature of an incident. Successful emergency operations require accurate and timely public information. Public information will be coordinated between on-scene and off-scene operations. A Public Information Officer (PIO) will be designated by the incident commander to issue information about the incident. The PIO will issue information provided by the incident commander and in coordination with the lead state agency information representatives. The lead state agency will see to it that the PIO has accurate public health information. The lead state agency will issue information in coordination with the PIO.

## SECTION V

### Responsibilities of Local, State and Federal Agencies, Industry and Volunteer Organizations

- A. Overview of the Responsibilities of local, State and Federal Agencies, Industry and Volunteer Organizations.
- o Figure 2 is a matrix which shows the responsibilities of the various agencies and organizations at each level of government that might be involved in an emergency response. Because local resources vary, exceptions may occur depending on the jurisdiction in which an incident occurs. The matrix provides only an overview of Oregon's response network. Agency participation depends on the type of incident, its severity, and the threat to health and welfare. Duplication in lead roles shows that all levels of government have predesignated several lead agencies which could provide an incident commander if necessary. Local government would usually assume the lead unless it chooses to pass command on to another level of government.
- B. Specific responsibilities of Local and Regional Responders.
1. Local Agencies
    - a. Provide personnel who have been trained in Haz-Mat emergency response.
    - b. Provide an incident commander and establish a command post. Establish a unified command with other government agencies depending on the incident.
    - c. Undertake emergency response actions including:
      - Notifications
      - Initial hazard determination
      - Initial measurements to detect concentrations of materials if possible
      - Communications
      - Life-saving/rescue
      - Emergency medical care
      - Fire Fighting
      - Security (site perimeter, traffic and crowd control)
      - On-scene liaison with other parties
      - Providing public information
      - Evacuation
      - Shelter
- These activities are generally shared among local fire, law enforcement, emergency medical, public works, health departments, etc.
2. Regional Haz-Mat Response Team, RRTA's and Haz-Mat Specialists.

Under the direction of the Local Incident Commander, and in communication with the Lead State Agency, these specialists verify or help establish the following:

Figure 2

\*TYPICAL ROLES OF RESPONSE AGENCIES DURING A GENERIC HAZARDOUS MATERIAL INCIDENT

RESPONSE ACTIVITIES AFTER ACCIDENT OCCURS	CITY GOVERNMENT & FIRE DISTRICTS				OTHER MEDIC SERV.	COUNTY GOVERNMENT			STATE GOVERNMENT										FEDERAL GOVERNMENT					VOLUNTEER AGENCIES					
	POLICE	FIRE	DISPATCH	EMERGENCY	CITY OFFICIALS	AMBULANCE	ROAD SERVICE	HEALTH	EMERGENCY	REGIONAL HAZ MAT	OSFM	DOE Radiation	DEQ Chemical	HEALTH	EDMOT	ODDFW	FORSTRY	PA	AGRICULTURE	STATE HAZ MAT	COAST GUARD	EPA	DEPT OF COMMERCE		DEFENSE	UNSW	ENR	PACIFIC STRIKE TEAM	INDUSTRY
Initial Investigation	●	○		○					○	●					○	○					●		○					○	
Notification	○	○	●					○	●	○	●			○	○						●		○	○				○	
Problem Recognition	●	●						○	○	○	○	○	○	○	○						●	○	○	○	○	○	○	○	○
Radio Communications	●	●	○	○				○	○	○	○	○		○	○	○					●	○	○	○	○	○	○	○	○
Search & Rescue	○	○	○					○	○	○	○		○								●	○	○	○	○	○		○	○
First Aid	○	○	●			●	○	○	○	○	○		○								○	○	○	○	○	○	○	○	○
Hazard Evaluation	○	○						○	○	○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Evacuation(decision)	○	○		○				○	○	○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Evacuation(implement)	○	○		○				○	○	○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Shelter	○			○				○	○	○			○																○
Fire Suppression	○	●		○						○	○										○		○	○	○	○	○	○	○
Spill Containment	○	○		○				○	○	○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Site Security(access)	○	○		○				○	○	○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Crowd Control	○	○		○				○	○	○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Traffic Control	○	○		○				○	○	○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Road Closure(decision)	○	○		○				○	○	○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Road Closure(implement)	○	○		○				○	○	○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Public Information	○	○		○				○	○	○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Technical-Health Effects						○	○	○	○	○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Technical-Environ. Effects							○	○	○	○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Technical-Biological Agents							○	○	○	○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Technical-Radiation							○	○	○	○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Technical-Oil & Haz Chemical							○	○	○	○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Environmental Monitoring							○	○	○	○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Cleanup Decisions	○			○						○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Cleanup										○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Disposal Decisions										○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Investigation(fire)	○	○								○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Investigation(environ)										○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Investigation(transport)										○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Investigation(radiation)										○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Damage Assessment(environ)										○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Damage Assessment(structure)	○	○								○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Damage Assess.(human health)										○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Enforcement	○	○						○	○	○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
Cost Recovery	○									○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
POTENTIAL INCIDENT COMMANDER	○	○						○	○	○	○	○	○	○	○						○	○	○	○	○	○	○	○	○
ON SCENE COORDINATOR	○	○						○	○	○	○	○	○	○	○						○	○	○	○	○	○	○	○	○

- Agencies that typically have prime responsibility or share prime responsibility for the activities indicated
- Agencies that would typically play a support role for the activities indicated
- Agencies would normally not expect to perform this activity

- Spill containment
- Hazard determination
- Measurements of concentrations of materials
- Contamination control
- Control of exposure for emergency workers and the public
- On-scene liaison
- Initial decontamination (if necessary)
- Environmental protection measures
- Support to hospital emergency room (if possible and necessary) for contamination control

C. Specific Responsibilities of State Agencies

Primary Notification Agencies

1. Emergency Management Division (EMD)
  - a. Maintains 24-hour notification capability, OARS (Oregon Accident Response System)
  - b) Notifies lead state agency, other notifications made as needed or upon request
  - c) Activates, operates and maintains the State's Emergency Operations Center.
  - d) Provides and/or coordinates state-wide communications systems.
2. Oregon State Police (OSP)
  - a) Receives initial OARS notification on weekends, holidays, and after hours; notifies Emergency Management Division Duty Officer or appropriate state response agency.
  - b) Acts as initial Incident Command Agency until local command agency is on scene, or if no local agency is available
  - c) Provides Law-Enforcement support including traffic control, crowd control and site security.

Primary Response Agencies for oil and hazardous materials incidents

1. Department of Environmental Quality (DEQ) -- lead State Agency for oil and chemically hazardous materials incidents.

Coordinates state assistance during oil spills and hazardous material incidents

- Receives notification via OARS
- Provides technical assistance and advises on necessary protective actions

- Evaluates the environmental implications of a spill. In coordination with the State Health Division, evaluates possible public health effects
- Coordinates state support to on-scene personnel in cooperation with the Emergency Management Division
- Coordinates public information with local PIO
- Liaison with federal agencies, adjacent states, private firms (shippers, carriers, etc.), as needed
- Collects and analyzes water, soil, vegetation or tissue samples
- Identifies clean-up requirements
- Works with industry to insure that clean-up/restoration is done to specified standards
- If necessary, coordinates with Governor to exercise Governor's authority to protect health and safety and the environment
- Insures that materials are disposed of in appropriate manner
- Investigates cause and pursues enforcement actions
- Assesses environmental damages

2. Oregon State Health Division (OSHD)

Coordinates state assistance during incidents involving communicable disease agents.

- Receives notification via OARS
- Evaluates public health implications of incident in cooperation with the Poison Control Center and local health authorities.
- Recommends measures to protect public health
- Coordinates emergency medical services within the state
- Coordinates state support to on-scene personnel
- Coordinates public information with Poison Control, the local health authority and the local PIO.
- Collects and analyzes samples
- Insures that clean-up/restoration is done to specified standards
- If necessary, coordinates with Governor to exercise Governor's authority to protect health and safety
- Insures that materials are disposed of in appropriate manner
- Investigates cause
- Assesses damages
- Coordinates mortuary services

Provides assistance during incidents involving other hazardous materials to protect public health, prevent drinking water contamination and shellfish contamination.

- Assures that Haz-Mat training is provided to emergency medical personnel.
- Evaluates public health implications of incident
- Recommends measures to protect public health
- Coordinates emergency medical services within state
- Collects and analyzes samples
- Coordinates public information with local PIO
- Coordinates mortuary services.

## Primary Response Agencies for Radiation Incidents

1. Oregon Department of Energy (ODOE) -- lead State Agency for transportation emergencies involving radioactive materials.
  - a) Coordinates emergency preparedness for transportation emergencies.
    - Provides training, drills and exercises
    - Coordinates the distribution of radiation detection equipment
    - Provides coordination of plans and procedures
  - b) Coordinates state assistance during a transportation emergency
    - Receives notification via OARS
    - Initiates and coordinates State response
    - Provides technical assessment and protective action recommendations
    - Coordinates state support operations to on-scene personnel with Emergency Management Division
    - Coordinates public information with local PIO
    - Liaison with federal agencies, adjacent states, private firms (shippers, carriers, etc.). as needed
    - Insures that clean-up/restoration from transportation accidents is done to specified standards
  
    - If necessary, coordinates with Governor to exercise Governor's authority to protect health and safety and the environment.
  
2. Oregon State Health Division (OSHD) -- lead State Agency for all radiation emergencies other than transportation accidents.
  - a) Provides emergency preparedness for radiation emergencies (lead agency except for transportation).
    - Provides training, drills and exercises
    - Provides the distribution of radiation detection equipment
    - Assists the development of plans and procedures
  - b) Coordinates State assistance during a fixed-site emergency
    - Receives notification via OARS
    - Initiates and coordinate state response
    - Provides technical assessment and advises on necessary protective actions
    - Coordinates public information with local PIO
    - Liaison with federal agencies, adjacent states,

- private firms, (shippers, carriers, etc.)
- Insures that clean-up/restoration from a radiation incident is performed.
  - Investigates cause
  - Assesses damages
  - Coordinates mortuary services

Other State Agencies Capable of Providing Specific Expertise

1. State Fire Marshal's Office (SFM)
  - a) Arranges for fire-service response to on-scene operations when conflagration act is initiated through the Governor.
  - b) Through field deputies provides communications, logistics, and other support to local Incident Commander, as requested
  - c) Provides training and planning assistance to fire service agencies and local and state agencies
  - d) Provides fixed site information on oil and hazardous materials from hazardous substance survey data base
  - e) Maintains hazardous materials incident reporting system, records incidents for informational and statistical purposes.
  - f) Maintains Fire Service Haz-Mat Equipment Resource Directory.
2. Oregon Department of Transportation
  - a) Notifies OARS and local emergency response personnel if Highway Division is first on-scene
  - b) Closes a state highway and re-routes traffic, as requested and necessary
  - c) Provides barricades and personnel to implement a closure and detour.
  - d) On state highways will direct spiller to start immediate cleanup.
3. Parks and Recreation Division:
  - a) Notifies OARS and local emergency response personnel if first on scene.



- b) For an incident affecting a state park, Parks and Recreation personnel assist other agencies in crowd and/or traffic control and provide equipment and facilities, as possible.

4. Department of Fish and Wildlife:

- a) Notifies OARS and local emergency response personnel if first on scene.
- b) Responds to incident that could degrade land or water to the point that fish or wildlife would be adversely affected, or their habitat degraded or destroyed.
- c) Evaluates and documents impact on fish and wildlife and scales payment of damages for losses of fish, wildlife or habitat.
- d) Provides advice, counsel and logistics support, as necessary and if possible.

5. Oregon Department of Forestry:

- a) Notifies OARS and local emergency response personnel if first on scene or upon receiving a report from a forest operator.
- b) Ensures that an operator/landowner takes initial remedial action on pesticide and oil spills if the spill occurs on lands regulated under the Oregon Forest Practices Act, and will communicate subsequent clean-up direction to operators as provided by the Department of Environmental Quality.
- c) If requested by the lead state agency, the Department of Forestry is capable of mobilizing a substantial response organization to provide support to emergency responders (radio systems, dispatch and command center trailers, public information personnel, kitchens and other support services).
- d) Will respond directly as a landowner to any incident on lands managed by the Department of Forestry. May respond upon request with available people and equipment to any incident connected to an operation on forest lands.

6. Public Utility Commissioner (Motor Carrier, Rail and Air Incidents):

Provides investigation of transportation incidents after incident has been stabilized.

7. Department of Agriculture:

- a) Provides on-site technical support to an agricultural chemical spill.
- b) Evaluates adverse impact of an accident on agricultural resources (crops and dairy products).
- c) Operates the Pesticide Analytical Response Center (PARC) which provides technical assistance on material spilled, containment methods, procedures for decontamination and treatments for exposure.
- d) Provides laboratory analysis capability.

8. Accident Prevention Division

Investigates employee injuries or fatalities

9. Military Department (Oregon National Guard, Army and Air):

In a major incident provides site security, administers first aid, care for evacuees, transports specialists, and assists in the recovery, identification and disposition of the deceased.

10. Oregon State University

- a. Provides training in toxicology, chemistry and other technical aspects of hazardous materials.
- b. Can call on a wide variety of expertise on a non-emergency basis.
- c. Operates the Extension Toxicology Network and the Oregon Toxicology Information Center which can provide specific information on toxicology. These services can be accessed through PARC.

D. Specific Responsibilities of Federal Agencies

Technical assistance for oil spills and hazardous material incidents is available from a variety of Federal Agencies. The following section briefly summarizes their roles as outlined in the National Contingency Plan.

Primary Federal Agencies

1. The United States Coast Guard (USCG) provides:

- a) Expertise and management of Federal Programs in domestic/international fields of port safety and security, maritime law enforcement, ship navigation, safety of vessels and marine facilities.

- b) Predesignated federal on-scene coordinator (FOSC) for the coastal zone if a federal response is required.
  - c) Continuously manned facilities which can be used for command, control, and surveillance of oil discharges and hazardous substance releases occurring in the coastal zone.
2. The Environmental Protection Agency (EPA) provides:
- a) Expertise on environmental effects of oil discharges or releases of hazardous substances, pollutants, or contaminants and environmental pollution control techniques.
  - b) Predesignated on-scene coordinator (FOSC) for the inland zone if a federal response is required.
  - c) Scientific support coordinator for responses in inland areas.
3. The Department of Defense (DOD) assumes incident command if an incident involves defense related materials. It acts as the lead response agency within the designated National Security Area.
4. The Department of Energy (USDOE) provides assistance to the FOSC and incident commander during radiation incidents. Help is available from their Richland Operations Office.

Other Federal Agencies

- 1. The Department of Transportation (DOT) offers expertise in the requirements for packaging, handling and transporting regulated hazardous materials.
- 2. The Department of Agriculture (USDA) provides expertise in managing agricultural, forest, and wilderness areas. USDA's Soil Conservation Service provides predictions of the effects of pollutants on soil and their movements over and through soil.
- 3. The Department of Commerce (DOC), through National Oceanic and Atmospheric Administration (NOAA), provides:
  - a) Scientific expertise on living marine resources and their habitats.
  - b) Scientific Support Coordinator (SSC) who will coordinate scientific support for responses and contingency planning in coastal and marine areas. They can assess hazards that may be involved, predict movement and dispersion of oil and chemicals through trajectory modeling and provide information on sensitive coastal environments.

- c) Information on actual and predicted hydrologic, and oceanographic conditions for marine, coastal, and inland waters. They can provide charts and maps, including tide and circulation information for coastal and territorial waters and for the Great Lakes.
  - d) Information on actual and predicted meteorological conditions through the National Weather Service.
4. The Army Corps of Engineers has specialized equipment and personnel for maintaining navigation channels, removing navigation obstructions and maintaining hydroelectric facilities.
  5. The U.S. Navy is knowledgeable in ship salvage, shipboard damage control and diving. It has an extensive array of specialized equipment and personnel that can be used for collection, containment and removal of pollution materials.
  6. The Department of Health and Human Services (HHS) is responsible for providing assistance on all matters related to the assessment of health hazards at a response, and protection of both response workers' and the public's health. Includes the Agency for Toxic Substances and Disease Registry (ATSDR) which provides advise to health care providers in cases of public health emergencies and coordinates assistance from the Center for Disease Control (CDC), NIOSH and the FDA.
  7. The Federal Emergency Management Agency (FEMA):
    - a) Provides advice and assistance to the OSC on coordinating civil emergency planning and mitigation efforts with other federal agencies, State and local governments, and the private sector.
    - b) In the event of a major disaster declaration or emergency determination by the President, FEMA will coordinate all federal disaster or emergency actions with the FOSC.
  8. The Department of the Interior (DOI) has jurisdiction over the National Park System, National Wildlife Refuges and Fish Hatcheries, forest and grazing lands, and certain water projects in western states. In addition, bureaus and offices have relevant expertise as follows:
    - a) Fish and Wildlife Service: Fish and wildlife, including endangered and threatened species, migratory birds, certain marine mammals; habitats, resource contaminants; laboratory research facilities.
    - b) Geological Survey: Geology, hydrology (groundwater and surface), and natural hazards.

- c) Bureau of Land Management: Minerals, soils, vegetation, wildlife, habitat, archeology, wilderness, hazardous materials, etc.
  - d) Minerals Management Service: Manned facilities for Outer Continental Shelf (OCS) oversight.
  - e) Bureau of Mines: Analysis and identification of inorganic hazardous substances.
  - f) Office of Surface Mining: Coal mine wastes, land reclamation.
  - g) National Park Service: Biological and general natural resources expert personnel at Park units.
  - h) Bureau of Reclamation: Operation and maintenance of water projects in the west; engineering and hydrology; and reservoirs.
  - i) Bureau of Indian Affairs: Coordination of activities affecting Indian lands.
  - j) Office of Territorial Affairs: Assistance in implementing the National Contingency Plan in American Samoa, Guam, the Trust Territory of the Pacific Islands, and the Virgin Islands.
9. The Department of Labor (DOL), through the Occupational Safety and Health Administration (OSHA), provides the OSC with advice, guidance, and assistance on:
- a) Hazards to workers involved in removal or control of oil discharges and hazardous materials releases, and
  - b) The precautions necessary to reduce risk to worker health and safety.

E. Responsibilities of Indian Nations

Indian tribes have sovereign governmental powers within federally-recognized reservations. If resources are available they will respond to incidents that occur on their reservations. The tribes should familiarize themselves with this plan and make their plan consistent with state and local plans.

- a. Confederated tribes: Warm Springs 553-1161
- b. Confederated tribes: Umatilla 278-0550
- c. Confederated tribes: Siletz 444- 2532

F. Responsibilities of Adjacent States

The agencies responsible for hazardous material incidents in Idaho, Washington and California are:

1. Washington

- a. Department of Ecology - lead state agency for spill response and cleanup. (206) 459-6803.
- b. Department of Emergency Management - lead agency for notification and coordination. (206) 753-5990 out of state or (800) 262-5990 in state.

2. Idaho

- a. Division of Environment - lead state agency for coordination of spill response. (208) 334-5879.
- b. Emergency Medical Services - lead agency for notification. 24 hour number: (800) 632-8000 in state or (208) 334-2241 out of state.

3. California

- a. Office of Emergency Services - lead agency for notification and coordination. (800) - 852-7550 in state, (916) 427-4341 out of state.
- b. California Highway Patrol - lead state agency for response to incidents on all freeways and state owned highways. (916) 445-2211.

4. Nevada

- a. Division of Emergency Management - lead state agency for notification and coordination. 24 hour number (702) 885-5300. Day number (702) 885-4240.
- b. Divisions of Environmental Protection - lead state agency for hazardous materials incidents (702) 885-4670.

G. Responsibilities of Industry

- a. Private industry is responsible for familiarizing themselves with this plan and working with state and local government to see that their emergency operations plans are consistent with this plan and local plans.
- b. Private industry is responsible for responding to emergencies as required by law unless otherwise directed by the government agency with jurisdiction to enforce the applicable law.
- c. Private industry is responsible for cleanup and site restoration when required to do so by law or when industry in its discretion decides to do so.
- d. When requested and if possible, private industry will provide expertise and resources to local and/or state government to help mitigate the effects of a hazardous materials incident.
- e. Private clean-up contractors can provide resources, equipment and knowledge on the removal and disposal of contamination.

H. Responsibilities of Volunteer Organizations

Volunteer organizations such as Red Cross, the Salvation Army and Amateur Radio Operators can provide public assistance in the form of food, clothing, shelter and communications during incidents where the public welfare is affected.

## SECTION VI

### Categorization of Emergencies by Severity

The following section categorizes oil and hazardous materials incidents by the severity of the threat to public health or the environment. Five types of emergencies are defined by increasing severity. The actual severity of an incident is dependent on the amount of material spilled, the location, the toxicity of that material and potential for exposure. Thus a spill involving thousands of gallons of a material with low toxicity could be a minor incident if it poses no public health or environmental threat. On the other hand, a small spill of an extremely toxic material, or a spill in a very sensitive location, could be a major incident if people are exposed or the environment is severely threatened.

The type and level of emergency response is dependent on the severity of the incident. These are described below. Section VII depicts the responsibilities of the various responders and the activities that must be performed during each of the 5 types of incidents.

### Types of Incidents

#### A. Unusual Incident

An event which is out of the ordinary. No oil or hazardous materials are released. Public health and safety may be threatened.

#### Examples:

1. Mechanical breakdown of a vehicle carrying high-level radioactive shipment, Class A explosives or highly toxic materials requiring it to be parked at one location for a long period of time.
2. Fire at a facility storing or utilizing hazardous materials. The materials not initially involved in the fire.
3. Abandoned drums discovered, no release.

#### B. Minor Incident

An incident involving the spill or release of a small amount of oil or hazardous materials. Public health, safety and environment are not immediately threatened. A potential exists for the incident to escalate.

#### Examples:

1. Vehicle or fixed site incident with a small spill or release of oil or hazardous materials.
2. Discovery of abandoned oil or hazardous materials with a small spill or release of products.
3. Vehicle accident with a potential release of radioactive materials.

4. Fire or explosion involving small quantities of oil or hazardous materials.

C. Medium Incident

An incident resulting in a localized release of oil or hazardous materials (i.e., within several hundred feet). The health and safety of people and emergency workers in the immediate area may be threatened if protective actions are not taken. A probable environmental impact exists. It may involve activation of the Oregon Emergency Operations Plan.

Example:

1. Accident involving transport of oil or hazardous materials which results in release of substance to air, ground or water in amounts sufficient to pose threat to public health or the environment.
2. Package or container containing radioactive materials crushed or damaged during handling.
3. A fire or explosion at a facility which utilizes hazardous material.
4. An incident which results in a significant amount of uncontrolled radioactive material.
5. Discovery of abandoned oil or hazardous materials being released to environment and posing a threat to public health or the environment.

D. Major Incident

An incident resulting in a spill or release of oil or hazardous materials which requires evacuation or sheltering of nearby residents or businesses or which causes a serious environmental threat. It will probably involve activation of the Oregon Emergency Operations Plan.

Example:

1. Truck, rail or fire incident with radiologically contaminated smoke or toxic fumes.
2. Shipping accident resulting in a large release of oil or hazardous materials to a waterway.
3. Radioactive material directly involved in fire or explosion at a fixed facility, resulting in spread of material, or significant accidental exposure to radiation.
4. A fixed facility or transport incident resulting in a major release of toxic fumes to air or hazardous materials to public waters used for drinking water or important to fish and wildlife or other beneficial uses. Results in serious public health and/or environmental impacts.



E. Security Incident

Threatened or actual sabotage or demonstration of civil disobedience. Security events are further classified as follows:

- a. Blockage of a shipment of hazardous materials
- b. Threatened or actual sabotage to the shipment

## SECTION VII

### Response Activities Dependent on Incident Severity

The severity of an incident directly affects;

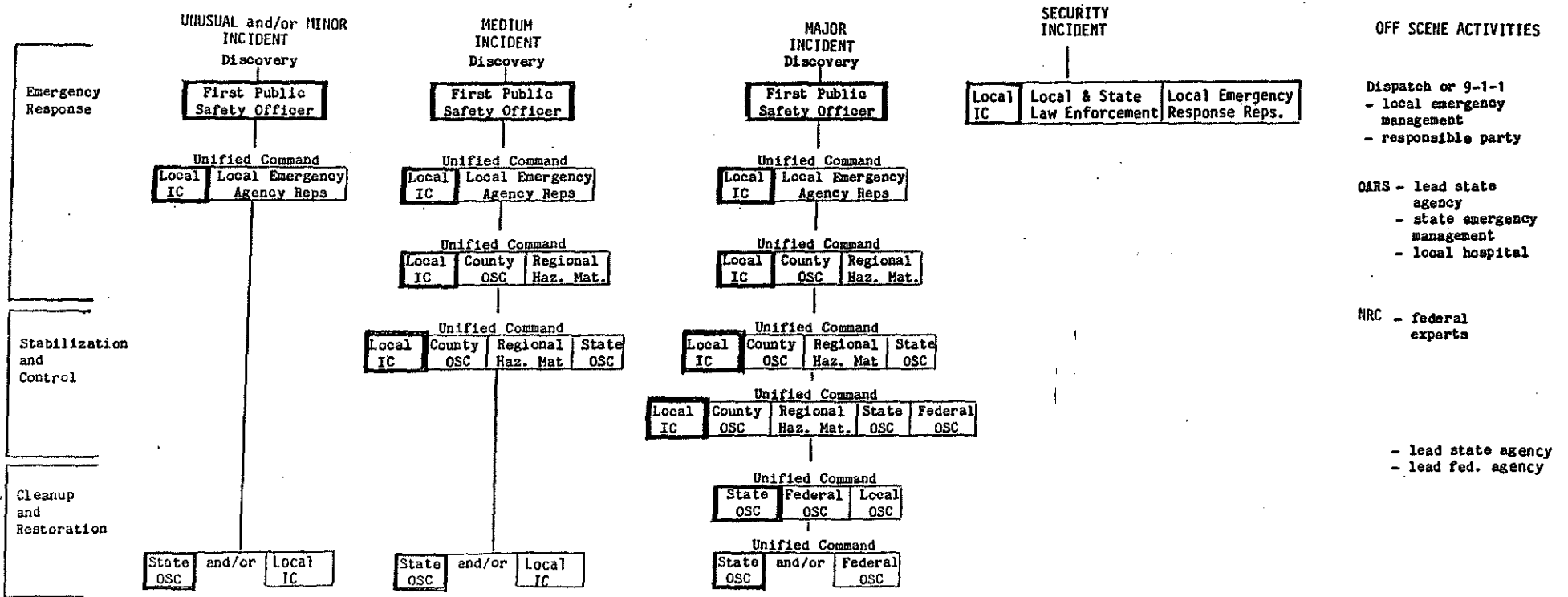
- A. The kind of response that is needed.
- B. The number of agencies and levels of government that must respond,  
and
- C. The roles and responsibilities of those that do respond.

A minor incident may involve only local government emergency responders and a simple command organization. A major incident may involve many responders from different levels of government who can provide specialized expertise or resources. Such an incident requires a unified command structure. An incident may escalate into a major one or decrease to a minor one as more information becomes available about its severity.

The following section takes each of the 5 types of incidents and depicts the incident management structure and the typical roles and responsibilities of the various responders.

A. The incident management structure for the five types of incidents (refer to figure 1, page 12).  
 [Note that the severity of the incident typically dictates the number of agencies involved and the complexity of the management structure.]

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B. Typical Roles and Responsibilities

1. UNUSUAL INCIDENT

An event which could or does involve hazardous materials. No materials are released but a potential public health and safety threat exists. The situation would normally be handled by local emergency response crews with standard emergency equipment. If the situation escalates, outside assistance might be needed.

Roles and Responsibilities:

On Scene

RESPONSIBLE PARTY

- Notifies 9-1-1 or fire or police dispatch
- Acts to resume normal operations

LOCAL AGENCIES

- Assures public safety
- Assists responsible party
- Coordinates public information

Off Scene

RESPONSIBLE PARTY

- Acts to resume normal operations

LEAD STATE AGENCY

- Assists responsible party and provides technical advice if needed.

## 2. MINOR INCIDENT

An accident or incident involving a small spill or release of hazardous materials. Public health, safety and environment are not immediately threatened but a potential exists for the incident to escalate. The situation would normally be handled by local emergency response crews with standard emergency equipment. Technical assistance from the state might be needed. The Regional Haz-Mat team should be alerted.

### Roles and Responsibilities:

#### On Scene

##### FIRST PUBLIC SAFETY OFFICER

- Notifies 9-1-1 or fire or police dispatch
- Assumes initial command
- Assesses the hazards
- Activates local emergency response system
- Initiates actions to protect the public

##### LOCAL INCIDENT COMMANDER

- Assumes command upon arriving on scene
- Responsible for:
  - rescue
  - emergency medical
  - fire fighting
  - security (traffic & crowd control)
  - notifications
  - communications
  - on-scene liaison
  - public information
  - hazard determination
  - initial protective actions
  - decontamination control

##### RESPONSIBLE PARTY

- Notifies OARS and NRC (if necessary)
- Provides support to incident commander
- Cleans up or contracts cleanup
- Acts to resume normal operations

##### HAZ MAT SPECIALIST

- Provides technical support to incident commander if needed
- Assures cleanup is done properly.
- Assures materials disposed of properly

#### Off Scene

##### LOCAL EMERGENCY MANAGEMENT

- Provides support to on scene operations
- Sets up EOC if necessary

##### RESPONSIBLE PARTY

- Provides operational support to on-scene responders
- Provides information about materials

##### LEAD STATE AGENCY

- Provides technical support to incident commander if necessary
- Coordinates with local agencies to provide public information
- Coordinates with responsible party to assure cleanup
- Contracts for cleanup if no responsible party

### 3. MEDIUM INCIDENT

An incident resulting in a localized spill or release of oil or hazardous materials (i.e., within several hundred feet). The health, and safety of people and emergency workers in the immediate area may be threatened if protective actions are not taken. A probable environmental impact exists. It may involve activation of the Oregon Emergency Operations Plan. The situation will require state technical assistance and a Regional Haz-Mat team which can provide specialized equipment and expertise. It may require the State Haz-Mat team.

#### Roles and Responsibilities:

##### On Scene

###### FIRST PUBLIC SAFETY OFFICER

- Notifies 9-1-1 or fire or police dispatch
- Assumes initial command
- Assesses the hazard
- Activates local emergency response system
- Initiates actions to protect the public

###### LOCAL INCIDENT COMMANDER

- Assumes command upon arriving on scene
- Responsible for:
  - rescue
  - emergency medical
  - fire fighting
  - security (traffic & crowd control)
  - notifications
  - communications
  - on-scene liaison
  - public information
  - hazard determination
  - initial protective actions
  - decontamination control

###### RESPONSIBLE PARTY

- Notifies OARS and NRC (if necessary)
- Provides support to incident commander
- Cleans up or contracts for cleanup
- Acts to resume normal operations

##### Off Scene

###### LOCAL EMERGENCY MANAGEMENT

- Provides support to on scene operations
- Sets up EOC if necessary

###### RESPONSIBLE PARTY

- Provides operational support to on-scene responders
- Provides information about materials

###### LEAD STATE AGENCY

- Provides technical support to incident commander if necessary
- Coordinates with local agencies to provide public information
- Coordinates with responsible party to assure cleanup
- Contracts for cleanup if no responsible party

**HAZ-MAT SPECIALIST**

- Supports incident commander with:  
hazard determination  
appropriate response actions  
decontamination

**REGIONAL HAZ-MAT TEAM**

- Provides support to  
incident commander with  
stabilization and control

**STATE HAZ-MAT TEAM**

- Assumes command for  
oversight of cleanup  
and restoration

**STATE EMERGENCY MANAGEMENT**

- Provides support to on scene  
operations if needed
- Sets up state EOC if needed

**LOCAL HOSPITAL**

- Treats injured
- Maintains contamination  
control procedures

#### 4. MAJOR INCIDENT

An incident resulting in a spill or release of oil or hazardous materials that requires the evacuation or sheltering of nearby residents or businesses or that is a serious environmental threat. It will probably involve activation of the Oregon Emergency Operations Plan. The situation will require state technical assistance, a Regional Haz-Mat team, the State Haz-Mat team and if needed, Federal assistance.

##### Roles and Responsibilities:

###### On Scene

###### FIRST PUBLIC SAFETY OFFICER

- Notifies 9-1-1 or fire or police dispatch
- Assumes initial command
- Assesses the hazard
- Activates local emergency response system
  
- Initiates actions to protect the public

###### LOCAL INCIDENT COMMANDERS

- Assumes command upon arriving on scene
- Responsible for:
  - rescue
  - emergency medical
  - fire fighting
  - security (traffic & crowd control)
  - notifications
  - communications
  - on-scene liaison
  - public information
  - hazard determination
  - initial protective actions
  - decontamination control

###### RESPONSIBLE PARTY

- Notifies OARS & NRC (if necessary)
- Provides support to incident commander
- Cleans up or contracts cleanup
- Acts to resume normal operations

###### Off Scene

###### LOCAL EMERGENCY MANAGEMENT

- Provides support to on scene operations
- Sets up EOC if necessary

###### RESPONSIBLE PARTY

- Provides operational support to on-scene responders
- Provides information about materials

###### LEAD STATE AGENCY

- Provides technical support to incident commander if necessary
- Coordinates with local agencies to provide public information
- Coordinates with responsible party to assure cleanup
- Contracts for cleanup if no responsible party.

###### STATE EMERGENCY MANAGEMENT

- Provides support to on scene operations if needed
- Sets up state EOC if needed

###### LOCAL HOSPITAL

- Treats injured
  
- Maintains contamination control procedures



**LEAD FEDERAL AGENCY**

- Provides technical support to on-scene operations if needed

**HAZ-MAT SPECIALIST**

- Supports incident commander with:  
hazard determination  
appropriate response actions  
decontamination

**REGIONAL HAZ-MAT TEAM**

- Provides support to incident commander with stabilization and control

**STATE HAZ-MAT TEAM**

- Assumes command for oversight of cleanup and restoration

**CLEANUP CONTRACTOR**

- performs final cleanup and decontamination at direction of state

**FEDERAL EXPERTS**

- provide technical and logistic support to incident commander if needed

5. Security Incident

Threatened or actual sabotage incident or a civil disobedience demonstration. Security events are further classified as follows: The situation would normally involve local emergency response crews and law enforcement agencies.

Roles and Responsibilities

<u>On Scene</u>	<u>Off Scene</u>
<b>LOCAL AND STATE LAW ENFORCEMENT</b>	<b>LEAD STATE AGENCY</b>
<ul style="list-style-type: none"><li>- Responsible for notifications</li><li>protection of shipment</li><li>crowd and traffic control</li><li>guidance for unnecessary delay</li><li>liaison with shipper (defense related)</li></ul>	<ul style="list-style-type: none"><li>- Provides technical assistance to law enforcement agencies about nature of shipment</li></ul>
<b>RESPONSIBLE PARTY</b>	
Supports law enforcement	

Threatened or actual sabotage to Shipment or Material

<b>LOCAL AND STATE LAW ENFORCEMENT</b>	<b>LEAD STATE AGENCY</b>
<ul style="list-style-type: none"><li>- Responsible for notifications</li><li>protection of shipment</li><li>investigation and arrests saboteurs</li><li>avoidance of unnecessary delay with federal law enforcement agencies</li></ul>	<ul style="list-style-type: none"><li>- Technical assistance to on-scene operations</li><li>- Initiates state emergency response plan (if necessary)</li></ul>
<b>LOCAL INCIDENT COMMANDER</b>	
<ul style="list-style-type: none"><li>- Responsible for on-scene operations as necessary and possible</li><li>Initiates emergency response actions</li></ul>	

HB 2146 HAZARDOUS MATERIALS  
PLANNING COMMITTEE  
MEMBERSHIP

State Agencies

1. Joseph Murray - Chairperson  
2146 Steering Committee  
Emergency Mgmt. Division
2. Bruce Sutherland - Proj. Coordinato  
2146 Steering Committee  
Dept. of Environmental Quality
3. Rich Reiter, Proj. Manager, DEQ  
2146 Steering Committee  
Dept. of Environmental Quality
4. Bob Robison  
2146 Steering Committee  
Dept. of Energy
5. Virginia Honeywell/Mike Boyce  
2146 Steering Committee  
State Fire Marshal
6. Nick Goevlinger/Bob Crosby  
Health Division
7. Dan Shults  
Dept. of Forestry
8. Paul Henry  
Public Utility Comm.
9. Rob Edgar  
Dept. of Transportation
10. Major Richard Verbeck  
Oregon State Police
11. Irving Jones  
Ore. Dept. of Fish & Wildlife

Federal Agencies

1. Gordon Goff  
Environmental Protection Agency
2. Gary Rundell  
Bureau of Land Management
3. Lt. Ivan Nance  
U.S. Coast Guard

Industry

1. Trucking  
  
Bruce Leonard  
ANR Freight
2. Railroads  
  
Michael Eyer  
Bureau of Explosives
3. Chemical Manufacturers  
  
Lewis Weidewitsch  
Pennwalt Corp.
4. Mark Warkington  
Tektronix Corp.

Emergency Groups

1. Oregon Fire Chiefs' Assn.  
Sid Boddy - Medford FD  
Duke Groff - Charleston FD
2. Alvin Allen  
Ore. Assn. of Chiefs of Police
3. Casey Marley  
Emergency Mgmt. Assn.
4. John Graham  
Douglas County Health
5. Frank Divers  
Oregon Fire Instructors Assn.

Emergency Medical

1. Mary McGettingan  
Oregon Fire Medical Adm. Assn.
2. Chuck Harris  
Emergency Medical Tech. Assn.

Indian Nations

1. Dale Parker  
Warm Springs

Other Participants

1. Maurice Thompson  
Portland Fire Bureau
2. Mark Walkley  
Portland Fire Bureau
3. Tom Almond  
Portland Fire Bureau
4. Steve Ramberg  
Coos Bay Fire Dept.
5. Bill Belding  
Winston-Dillard Fire Dept.
6. Gary Rose  
Douglas Co. Fire Dist. #2
7. Frank Oulman  
City of Beaverton Emergency Mgmt.
8. Mike Lander  
Portland Emergency Mgmt.
9. James Hill  
Salem Fire Dept.
10. Jim Corcoran  
City of Salem, Pollution Control
11. Al McMahan  
Marion Co. Fire Dist #1
12. Tom Thompson  
Tualatin Fire Dist.
13. Paul Sunset  
Mt. Hood Comm. College
14. Colleen King  
Umatilla Co. Emergency Mgmt.
15. Mitch Wang  
State Fire Marshal
16. Dan Loomis  
State Health Division
17. Dave Yandell  
Emergency Mgmt. Div.

HB 2146 HAZARDOUS MATERIALS  
TRAINING COMMITTEE  
MEMBERSHIP

State Agencies

1. Bob Robison - Chairperson  
2146 Steering Committee  
Dept. of Energy
2. Bruce Sutherland - Proj. Coord.  
2146 Steering Committee  
Dept. of Environmental Quality
3. Rich Reiter - Project Mgr.  
2146 Steering Committee  
Dept. of Environmental Quality
4. Joseph Murray  
2146 Steering Committee  
Emergency Management Division
5. Le Ann Janusch/Virginia Honeywell  
2146 Steering Committee  
State Fire Marshal
6. Nancy Clarke  
Health Division
7. Dan Shults  
Dept. of Forestry
8. Dale Rhodes  
Accident Prevention Division
9. Dave White  
Dept. of Transportation
10. Howard Brock  
Dept. of Education
11. Jim Stewart  
Brd. of Police Standards & Trng.
12. Lt. Richard Bouie  
Oregon State Police

Federal Agencies

1. Gordon Goff  
Environmental Protection Agency
2. Gary Rundall  
Bureau of Land Management

Industry

1. Trucking  
  
Carol Fuller  
Widing Transportation

2. Railroads  
Rick Sloan  
Southern Pacific Railroad

- Michael Eyer  
Bureau of Explosives
3. Chemical Manufacturers  
  
Lewis Weidewitsch  
CMA - Pennwalt Corp.

Local Emergency Groups

1. Rick Hopkins  
Oregon Fire Chiefs' Assn.
2. Dave Rouse  
Ore. Assn. of Chiefs of Police
3. Penny Malmquist  
Emergency Management Assn.
4. Joe Reeves/Harold Halleck  
Ore. State Fire Fighters Council
5. Oregon State Sheriffs' Assn.

Community Colleges

1. Bill Henle  
Portland Community College
2. Brian Bay  
Chemeketa Community College

Emergency Medical

1. Chuck Harris  
Emergency Medical Tech. Assn.
2. Charles Fish  
Emergency Nurses' Assn.

Indian Nations

1. Jerry Huff  
Warm Springs Fire Dept.

Other Participants

1. Steve Ramberg  
Coos Bay Fire Dept.

Other Participants (cont'd.)

2. Michael Sherman  
La Grande Fire Dept.
3. Al McMahan  
Marion County Fire Dist. #1
4. Mark Walkley  
Portland Fire Bureau
5. Tom Almond  
Portland Fire Bureau
6. Maurice Thompson  
Portland Fire Bureau
7. Larry Van Moss  
Eugene Fire Dept.
8. Jim Corcoran  
Salem Pollution Control
9. Jeff Johnson  
Douglas Co. Haz Mat Team
10. Ronald Tobias  
Tualatin Fire Dist.
11. Tom Thompson  
Tualatin Fire Dist.
12. George McCoy  
State Fire Marshal
13. Mike Boyce  
State Fire Marshal
14. Bob Crosby  
State Health Division
15. Joann Bassett  
Media Resources Inc.

HB 2146 HAZARDOUS MATERIALS  
EQUIPMENT COMMITTEE  
MEMBERSHIP

State Agencies

1. Mike Boyce - Chairperson  
2146 Steering Committee  
State Fire Marshal
2. Bruce Sutherland - Proj. Coord.  
2146 Steering Committee - DEQ  
  
Rich Reiter - Proj. Manager - DEQ  
2146 Steering Committee
3. Bob Robison  
2146 Steering Committee  
Dept. of Energy
4. Joseph Murray  
2146 Steering Committee  
Emergency Management Div.
5. Bob Crosby  
Health Division
6. Dan Shults  
State Forestry
7. Curt Shaw  
Accident Prevention Div.
8. Jim Stevenson  
Oregon State Police
9. Bill James  
Dept. of Transportation

Federal Agencies

1. Gordon Goff  
Environmental Protection Agency

Industry

1. Trucking  
  
Bruce Johnson  
Speeds Towing
2. Railroads  
  
Rick Sloan  
Southern Pacific
3. Clean-up Contractors  
  
Bob Keesee  
Riedel Environmental Services

Industry (cont'd.)

4. Equipment  
  
Robert Rucinski  
Mine Safety Appliances
5. Chemical Manufacturers  
  
Lewis Wiedewitsch  
Pennwalt Corp.

Emergency Groups

1. Len Malmquist  
Oregon Fire Chiefs' Assn.
2. Joe Reeves/Harold Kalleck  
Oregon State Fire Fighters Council

Indian Nations

1. Jerry Huff  
Warm Springs Fire Department

Other Participants

1. Jim Corcoran  
Salem Pollution Control
2. Alan McMahan  
Marion County Fire District #1
3. Larry Von Moos  
Eugene Fire Department
4. Gary Rose  
Douglas County Fire District #2
5. Jeff Johnson  
Douglas County Haz Mat Team
6. Mark Walkley  
Portland Fire Bureau
7. Tom Almond  
Portland Fire Bureau
8. Penny Malmquist  
Multnomah Co. Emerg. Mgmt.

House Bill 2146  
Policy Advisory Committee

Chairperson:

James Van Dyke, Executive Dean, Rock Creek Campus  
Portland Community College (244-6111) X 4591

Local Government:

Jeanne Hughes, County Commissioner, Umatilla County (276-7111)

Mike Gleason, City Manager, Eugene (687-5010)

Pete Hansen, Oregon Fire Chiefs' Assn., Bend (388-5533)

John DeFrance, Oregon County Emergency Mgmt. Assn.,  
Columbia County (397-2100)

Fred Pearce, Oregon State Sheriffs' Assn.,  
Multnomah County (255-3600)

Citizens:

Danielle Green, Ore. Environmental Council, Portland (244-1181)

Sarah Laumann, Oregon State Public Interest  
Research Group, Portland (222-9641)

Cherilyn Foglio, Oregon Red Cross, Portland (295-5042)

Marguerite Watkins, League of Women Voters, Coos Bay (267-4615)

Industry:

John Burns, Petroleum Industry, Attorney, Portland (224-5858)

Edward Locke, Chemical Mfg. Assn., Plant Manager,  
Pennwalt Corp., Portland (228-7655)

Dean Scheel, Oregon Trucking Assn., Vice President,  
Arrow Transport, Portland (222-1876)

Pat McCormick, American Electronics Assn., Salem (363-3902)

Everett Cutter, Oregon Railroad Assn., Mgr., Portland (227-0060)



MEMORANDUM

To: Environmental Quality Commission  
From: Steve Gardels, Regional Manager, Eastern Region  
Subject: Hearings Officer's Report, Draft Oil and Hazardous Materials  
Emergency Response Plan

On December 1, 1986 at 2:00 p.m. in Lecture Hall M130 of Blue Mountain Community College at 2411 N.W. Garden, Pendleton, Oregon, a public hearing was held on the Draft Oil and Hazardous Materials Emergency Response Plan. Fourteen persons were in attendance. One person testified. Table 1 lists the participants in the public hearing.

Table 1

<u>Name &amp; Representing</u>	<u>Present at Hearing</u>	<u>Testified at Hearing</u>
Dennis Olson, Umatilla County Emergency Mgmt.	X	
Jeanne Hughes, Umatilla County Commissioner	X	
John S. Nelson, City of Pendleton	X	
Ronald A. Campbell, Pendleton Fire Department	X	
R.D. Hopper, Pendleton Fire Department	X	X
Bob Brown, Pendleton Grain Growers, Inc.	X	
Dan Loomis, Oregon State Health Division	X	

Hearings Officer's Report  
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Michael B. Sherman, La Grande Fire Department	X
Dick McClellan, La Grande Fire Department	X
Dennis Spray, Union County Emergency Mgmt.	X
Wayne Stephens, Umatilla Electric Co-op, Hermiston	X
Chester Sparky Spencer, The Umatilla Tribe, Tribal Health Department	X
Mike Brown, Wallowa County Court	X
Tom McCan, Chief of Stanfield Police Dept.	X

Testimony

Comment (Hopper)

The section which describes trained personnel in the plan leaves it unclear as to whom or what agency is in charge of providing that training.

GBS:b  
ZB6286

Steve Gardels

*Steve D. Gardels*  
*Regional Manager*  
*Eastern Region*

MEMORANDUM

To: Environmental Quality Commission  
From: John Hector, Regional Manager, Central Region  
Subject: Hearings Officer's Report, Draft Oil and Hazardous Materials  
Emergency Response Plan

On December 2, 1986 at 2:00 p.m. in the Cascade Natural Gas Company's Community Hearings Room at 334 N.E. Hawthorne, Bend, Oregon, a public hearing was held on the Draft Oil and Hazardous Materials Emergency Response Plan. Six persons were in attendance. No people testified. Table 1 lists the participants in the public hearing.

Table 1

<u>Name &amp; Representing</u>	<u>Present at Hearing</u>	<u>Testified at Hearing</u>
Don Rice, Jefferson County Health Dept.	X	
Chriss Geiger, Sun River Fire Department	X	
Robert E. Shotwell, <u>The Oregonian</u>	X	
Kent C. Barnes, Redmond Fire Department	X	
Stephennie Monsen, <u>The Bulletin</u>	X	
Scott Thayer, KTVZ News	X	



John Hector

GBS:b  
ZB6286

MEMORANDUM

To: Environmental Quality Commission  
From: Fred Bolton, Administrator, Regional Operations Division  
Subject: Hearings Officer's Report, Draft Oil and Hazardous Materials  
Emergency Response Plan

On December 3, 1986 at 2:00 p.m. in the Medford City Hall, City Council Chambers, 411 West 8th, Medford, Oregon, a public hearing was held on a Draft Oil and Hazardous Material Emergency Response Plan.

Fifteen persons were in attendance. Three persons testified. Table 1 lists the participants in the public hearing.

Table 1

<u>Name &amp; Representing</u>	<u>Present at Hearing</u>	<u>Testified at Hearing</u>
Chet Yanase, Illinois Valley Fire District	X	
Eric Dittmer, Rogue Valley Council of Governments	X	X
Perry Richard, Klamath County Health Department	X	
Dan Calvert, Josephine County Sheriff's Office	X	
Frank Taus, Josephine County Sheriff's Office & Emergency Services	X	
<u>R. Sterling,</u> <u>The Mail Tribune</u>	X	
Bob Kennedy, Jackson County Sheriff's Office	X	
David Penicock, Medford Fire Department	X	X
Barry Enoch, Jackson County Fire District #3	X	

Ike Jensen, Jackson County Fire District #5	X	
Gary Stevens, Jackson County Health Department	X	X
Leroy King, Ashland Fire Department	X	
Wilber Strait, Ashland Fire Department	X	
Jerry Orndoff, Medford Fire Department	X	
Dennis Macey, Jackson County Fire District #3	X	

Testimony

Comment (Dittmer)

A lack of equipment and training are the major problems facing responders in the Rogue Valley. The state's funding request should be approved and the Rogue Valley Council of Governments is prepared to support those proposals.

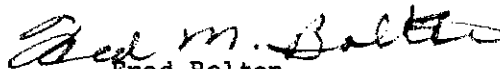
Comment (Stevens)

The plan is good but needs funding. They strongly support funding and implementation of the response plan.

Comment (Penicock)

The plan clearly defines local agencies roles and responsibilities. Local fire departments have improved their ability to respond over the years, but they lack funding for equipment. With more materials being transported, they feel that state funding support is needed and they support our effort to provide regional response capability.

Other questions relating to the plan were answered by Bruce Sutherland of the Department's staff.

  
Fred Bolton

MEMORANDUM

To: Environmental Quality Commission  
From: Linda Zueker, EQC Hearings Officer  
Subject: Hearings Officer's Report on the Draft Oil and Hazardous Materials Emergency Response Plan

On December 4, 1986 at 2:00 p.m. in Room 216 of the Apprenticeship Hall at Lane Community College, 4000 East 30th Avenue in Eugene, Oregon, a public hearing was held on the Draft Oil and Hazardous Materials Emergency Response Plan. Twenty-seven people attended, seven persons testified. Table 1 lists the participants in the public hearing.

Table 1

<u>Participant Representing</u>	<u>Present at Hearing</u>	<u>Testified at Hearing</u>
Ed Schnee, Springfield Fire Department	X	
Gene H. Highfill, Springfield Fire Department	X	
Stan Nelson, American Red Cross	X	
Frank Deavers, Eugene Fire Department	X	
Stanley Petrosek, Lane County Environmental Health	X	X
Jeannette Bobst, Lane County Health	X	X
John Graham, Douglas County Health Department	X	

Report on Draft Oil & Hazardous Materials Emergency Response Plan  
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Jeffery D. Johnson, Douglas Haz-Mat	X	
Ronald Clauseau, North Bend Fire Department	X	
Andy Anderson, Coos Bay Fire Department	X	
Roger J. Cleland, Eugene Fire Department	X	X
Neva Hassaneiu, Save Our Eco Systems, Inc..	X	
Judy McNesby, Save Our Eco Systems, Inc.	X	
Carl Di Paolo, Red Cross, Lane County	X	X
Donald McCullough, Eugene Fire Department	X	
Ed Black, City of Springfield Public Works	X	X
Steve Ramberg, Coos Bay Fire Department	X	X
Roger Garver, Eugene Fire Department	X	
Carolyn Zucker, Citizen	X	
John Cable, Reedsport Volunteer Fire Dept.	X	
Eric Mortenson, <u>Eugene Register Guard</u>	X	
Dick Nice, Goshen Fire Department	X	
Randy Wood, Goshen Fire Department	X	
Greg Mitch, Borden, Inc.	X	

J. Dravich,  
Citizen

X

X

COMMENTS

Comment (Petrosek, Bobst)

The plan lacks contribution from local health departments. Local health may have to respond, particularly if a spill enters public waters that are used for domestic water supplies. A notification procedure for local health departments should be identified in the plan.

Comment -(Petrosek)

Hazardous materials training for local health officials should be included in the training section of the plan.

Comment (Cleland)

Page 9 of the plan should emphasize that notification to OARS should occur immediately.

Comment (Ramberg)

The plan has not had sufficient contribution from rural and volunteer fire departments. Approximately 70% of all the fire fighters in Oregon are volunteers and will be expected to respond to incidents, but volunteers have not had an adequate opportunity to participate in the process because all of the meetings were held during the day in Salem. The large, paid fire departments such as Salem, Portland and Eugene have been able to send people to all the meetings, but they do not represent the needs of the local areas. The plan will not work for rural jurisdictions.

Comment (Ramberg)

A resource list of important phone numbers and available state resources should be included in the plan with blanks that local responders can fill in.

Comment (Ramberg)

The initial responder guidelines, the training outline and the equipment list were not included in the draft.

Comment (Ramberg)

A number of phone numbers in the plan are incorrect and there is one that should be added, that is the agency for Toxic Substances and Disease Registry at 404-452-4100.



Comment (Ramberg)

Is it possible for local incident command to be passed quickly to someone more knowledgeable about hazardous materials.

Comment (Ramberg)

The procedures used to obtain the Governor's authority to take over an incident appear slow to implement.

Comment (Ramberg)

The procedures to activate the federal Regional Response Team (RRT) appear cumbersome. Can a local incident commander activate the RRT directly?

Comment (Ramberg)

The plan identified some activities that local jurisdictions may not be able to perform, such as taking initial measurements of spilled materials.

Comment (Black)

The plan should more clearly define what an emergency phase is, should provide better guidelines on notification and also provide a better detail of what a unified command should be.

Comment (Black, Dravich)


The plan should require identification of materials that are being transported into a community and provide a mechanism for prior notification of those transports to local officials involved in emergency response.

Comment (Black)

The plan gives various groups certain responsibilities. What liability will those responders be assuming?

Comment (Di Paolo)

The plan indicates that state and local health agencies have the prime responsibility for evacuation and shelter, but, in fact, the American Red Cross is better prepared to provide shelter during evacuation.

  
Linda K. Zucker

MEMORANDUM

To: Environmental Quality Commission

From: Gwen Dayton, Regional Operations Division

Subject: Hearings Officer's Report - Draft Oil and Hazardous Material  
Emergency Response Plan

On December 5, 1986 at 2:00 p.m. in Room 4 of the Department of Environmental Quality's Main Headquarters Office at 811 S.W. Sixth, Portland, Oregon, a public hearing was held on the Draft Oil and Hazardous Materials Emergency Response Plan. Eighteen people were in attendance and two people testified. Table 1 lists the participants in the public hearing.

Table 1

<u>Participant Representing</u>	<u>Present at Hearing</u>	<u>Testified at Hearing</u>
John T. De France, Columbia County Emergency Services	X	
Sheldon H. Rich, Northern Wasco County Public Utility Department	X	
Gary Rundell, U.S. Bureau of Land Management	X	
Harold Merryman, Interested Citizen	X	
Allan Gosnell, Olympic Pipeline Co.	X	
Mike Boyce, State Fire Marshal's Office	X	
Don Potter, Federal Highway Administration	X	X

Hearing Officer's Report  
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Page 2

Douglas Morrison, Northwest Pulp Paper Association	X	X
John Peterson, Reidel Environmental Services	X	
Terry Worrell, Portland General Electric	X	
Steve Ramberg, Coos Bay Fire Department	X	
William Knotts, Portland Fire Bureau	X	
Mark Walkley, Portland Fire Bureau	X	
Tom Almond, Portland Fire Bureau	X	
Ed Burgeois, Portland Fire Bureau	X	
Richard Kosesan, Idaho Power Company	X	
Peter Green, Oregon Legislature	X	
Dave Deitz, Oregon Food & Shelter	X	

Testimony

Issue 1 Comments (Morrison)

The relationship between the plan and the Superfund Reauthorization Bill, specifically Title III of the bill is not clear. It appears that the plan does not fulfill the requirements of the bill with respect to:

1) notification requirements, 2) administrative responsibilities, 3) the community right to know provision. It also appears that the State Fire Marshal's information system may not be in accord with the bill. It is very important that there is coordination between the state and federal plans so that there is not a dual system set up.

Issue 2 Comments (Morrison)


The plan may not be an emergency response plan, but in fact a policy guideline for the benefit of local agencies and state agencies. If this is the case, shouldn't the title be amended to reflect that it is not a plan but a guideline.

Issue 3 Comments (Morrison)

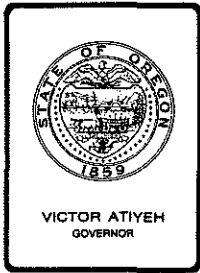
On page 4, paragraph 5, it states that private industry "shall provide resources for cleanup," but it should say "will report spills and perform cleanup as required by law."

Issue 4 Comments (Potter)

The federal Department of Transportation is required to notify Washington, D.C. of any incident that closes an interstate highway for six hours or more, and of any incident that closes a primary highway for 24 hours or more. The plan should reflect appropriate notification of the Oregon Department of Transportation so that they may notify the federal Department of Transportation and allow them to perform their mandated responsibility.



Gwen Dayton



# *Environmental Quality Commission* Attachment VIII

Mailing Address: BOX 1760, PORTLAND, OR 97207

Agenda Item D  
1/23/87, EQC Meeting

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

## MEMORANDUM

To: Environmental Quality Commission  
From: Bruce Sutherland, Project Coordinator  
Subject: Responsiveness Summary

On October 24, 1986, the EQC authorized five public hearings on the Draft Oil and Hazardous Material Emergency Response Plan. Hearings were held the first week of December at Bend, Pendleton, Medford, Eugene and Portland (see hearings officers' reports). Copies of the draft plan were also mailed to more than 1,100 agencies and individuals on November 17 for review and comment. The comment period was open until 5:00 p.m. on December 10.

The following persons or agencies provided either verbal testimony or written comments as shown below:

<u>Name/Representing</u>	<u>Verbal Testimony</u>	<u>Written Comment</u>
R. D. Hopper Pendleton Fire Department	X	
Eric Dittmer Rogue Valley Council of Govt.	X	
David Penicock Medford Fire Department	X	
Gary Stevens Jackson County Health	X	
Stanley Petrosek Lane County Environmental Health	X	
Jeannette Bobst Lane County Health	X	
Roger Cleland Eugene Fire Department	X	

Responsiveness Summary  
Page 2

<u>Name/Representing</u>	<u>Verbal Testimony</u>	<u>Written Comment</u>
Carl Di Paolo Red Cross, Lane County	X	
Steve Ramberg Coos Bay Fire Department	X	
J. Dravich Citizen	X	
Don Potter Federal Highway Administration	X	
Irv Jones, Oregon Dept. of Fish & Wildlife		X
Christine Gebbie, Oregon State Health Division		X
Arthur Labrousse, Wasco County Sheriff's Dept.		X
Oregon Dept. of Transportation		X
John Neely, citizen		X
James Bone, Salem Fire Department		X
T.R. Webster, U.S. Dept. of Health & Human Services		X
State Fire Marshal's Office		X
Tom Grice, Rainier Rural Fire District		X
R. J. Hess, Portland General Electric Co.		X
Michael Huston, Oregon Dept. of Justice		X
Edward Black, City of Springfield Public Works	X	X
Douglas Morrison, Northwest Pulp and Paper Industry	X	X
Ronald Hall, Oregon State Health Division		X

<u>Name/Representing</u>	<u>Verbal Testimony</u>	<u>Written Comment</u>
Scott Porter, U.S. Coast Guard		X

NOTE: Page numbers referenced under the comments section refer to the draft plan that was the subject of public hearings. Page numbers referenced in the response section refer to the revised plan that is Attachment IV.

ISSUE 1: NOTIFICATION

Comment (Jones)

Does the local responder call OARS or will the 9-1-1 or other dispatch operator call OARS?

Response

We are requesting that the local responder notify OARS but that notification could come through the 9-1-1 or other dispatch centers.

Comment (State Fire Marshal's Office)

Section VA.3 on federal notification is not clear as to who should do the notification.

Response

Depending on the type and quantity of material spilled, the spiller is required by law to report to the National Response Center. Additional wording has been included on page 10.

Comment (State Fire Marshal's Office, Ramberg)

Can the Federal Regional Response Team be activated by the local incident commander directly?

Response

No, the protocol in the plan has been previously determined by the Regional Response Team (RRT) and is outlined in their Regional Contingency Plan. The RRT can be activated by the DEQ who represents the state on the RRT. No changes necessary.

Comment (State Fire Marshal's Office, Ramberg)

A number of phone numbers on page 14, page 25 and page 26 are incorrect.

Response

The numbers have been rechecked and revised as necessary (see pages 14, 26 and 27).

Comment (U.S. Coast Guard)

The National Response Center's 24-hour number should be placed on the cover of the plan.

Response

Local responders are not expected to call the National Response Center. Consequently, placing the number on the cover may be confusing. Protocol for notifying the National Response Center is indicated under Section IVA. No changes necessary.

Comment (Black, Potter)

The notification process is not clear. Who does the notification and when is it done?

Response

The notification system has had additional language added to indicate that spiller is required to report to OARS and to the National Response Center depending on the quantity and type of material spilled. Local responders are requested to call OARS (see page 10).

Comment (Hess)

Does the plan eliminate industry's responsibility to notify the Coast Guard of spills in U.S. waters?

Response

No, under federal law, only the responsible party can satisfy the reporting requirements. No changes needed.

ISSUE 2: TRAINING

Comment (Jones)

Is the training described in Section IIIB recommended or required?

Response

The wording has been changed to indicate that the training is recommended (see page 8).



Comment (Petrosek)

Hazardous materials training for local health officials should be included in the training section of the plan.

Response

The proposed state training program as outlined in the Technical Advisory Committee's Final Report includes training for public health officials. The Committee reports are being prepared as resource materials to support the plan.

Comment (Neely)

Are the responsible parties or agencies prepared to deal with possible mixtures of hazardous chemicals?

Response

The possibility of several chemicals mixing during an incident is a major concern. People need comprehensive training as well as access to good technical information. The training program we are proposing, which will include a basic awareness course for all responders and specialized courses for specific disciplines, will help prepare responders and technical assistance agencies for these kinds of situations. No changes needed.

Comment (Labrousse, Hopper)

The plan indicates that the first line of responsibility rests with the line officer. This is correct, but the local jurisdiction may be unable to fund the state mandated training. Who is in charge of providing that training?

Response

The training section in the plan has been revised to emphasize that the program is not mandatory (see page 8). State financial assistance is planned. Details on the training program are provided in the Technical Advisory Committee's Final Report.

ISSUE 3: INCIDENT COMMAND

Comment (Ramberg)

Is it possible for local incident command to be passed quickly to someone more knowledgeable about hazardous materials?

Response

Yes, incident command may be passed on if the local incident commander feels that the situation is beyond his or her capability and other more knowledgeable persons are available to take charge. No changes necessary.

Comment (Bone)

Local control should be maintained throughout an incident including the cleanup phase.

Response

The concept which was agreed to by the Technical Planning Committee and by the Policy Advisory Committee is that once that the emergency is over local emergency response agencies will want to return to their normal duties rather than spending hours or days on-scene supervising cleanup. The plan proposes, and most parties have agreed, that the state should take control of cleanup. This does not preclude locals from remaining on-scene if they choose and, depending on circumstances, maintaining control of the incident. The incident command system assumes that command will be passed on at a mutually agreed upon time on a case-by-case basis in the field. No changes necessary.

Comment (Bone)

There needs to be clarification of what a unified command is. Is it a method by which on-scene agencies will coordinate or is it a command by committee?

Response

The unified command system is meant to be a method for coordination. The incident commander will at all times be in charge, but the other agencies at the command post would be able to provide advice to the incident commander with respect to their area of responsibility. The definition has been changed to state: "Unified command means a method by which local, state and federal agencies will work with the incident commander."

Comment (U.S. Coast Guard)

On page 4, spills into U.S. waters should include EPA's role on inland spills.

Response

EPA's role in inland spills is recognized in other parts of the plan (see pages 17 & 24).

ISSUE 4: ROLES AND RESPONSIBILITIES

Comment (Ramberg)

The plan identifies some activities that local jurisdictions may not be able to perform, such as taking initial measurements of spilled materials.

Response

It is stated clearly in the plan that it does not carry the weight of law. Responsibilities are not mandated nor are responders expected to perform functions they are not trained or equipped to do. The idea behind a cooperative approach is that qualified people have been identified who can be called in. No changes needed.

Comment (State Health Division)

The roles of the State Health Division and the Poison Control Center should be clarified.

Response

The Health Division has provided specific wording for this change and it has been incorporated into the plan (see pages 13 & 19).

Comment (Di Paolo)

The plan indicates that state and local health agencies have the prime responsibility for evacuation and shelter, but, in fact, the American Red Cross is better prepared to provide shelter during evacuation.

Response

That is correct, but the Red Cross would be activated at the request of the local or state health departments. No changes needed.

Comment (State Fire Marshal's Office)

Responsibilities of the Fire Marshal need elaboration.

Response

Proposed wording from the State Fire Marshal has been added to clarify the Fire Marshal's role (see page 21).

Comment (Morrison)

The state plan should be amended to account for the preparedness and expertise of industry employees in responding to on-site emergencies.

Response

The language changes suggested has been incorporated into the plan (see page 27).

Comment (Hess)

Private industry in some cases has developed the capability and expertise to handle cleanup, but the plan suggests that the state will assume this role on page 4 in paragraph 4.

Response

The plan is not proposing any changes from the roles that the state and industry currently play. The state will oversee cleanup, but it is industry's responsibility to do the cleanup. In those incidents when no identifiable spiller exists, the state may, subject to available funds, assume the responsibility for hiring a contractor to do cleanup. No changes necessary.

Comment (Hess)

Figure 2 on page 15 indicates that industry plays only a support role in most response situations. Shouldn't they be identified as having a prime role in such things as notification, investigation, problem recognition, hazardous evaluation, spill containment, site security, etc.?

Response

The matrix is supposed to give an overview of the coordinated government response system. On a case-by-case basis, industry may, in fact, perform some of those functions but it is our intent to show that local, state, or federal government still has the ultimate responsibility to see that the functions are carried out to protect the health and well being of all citizens and to protect the environment. No changes needed.

Comment (Hess)

On pages 16 and 17, paragraph C, the Department of Environmental Quality is designated the lead state agency for oil and chemically hazardous materials and will coordinate state assistance during spills. This should be modified to allow industry to conduct activities such as monitoring for cleanup and restoration.

Response

The plan does not alleviate industry's responsibilities to perform these functions if they are capable. What we are trying to indicate is that the DEQ is ultimately responsible to the citizens of the state to see that these activities are performed regardless of whether industry does them or

the state does them. This would likewise pertain to page 24, paragraph F. No changes needed.

ISSUE 5: APPENDICES

Comment (State Fire Marshal) (Ramberg)

During the planning process, a number of appendices were proposed to be included in the plan. These included initial responder checklists; a concept paper on regional haz-mat teams; committee reports on planning, training, and equipment; agency mandates; etc. Will they be part of the final plan?

Response

The materials identified will be mailed out with the final plan and will be considered resource materials to the plan. The only exception will be the county resource information which was too fragmentary to be of any value.

Comment (State Fire Marshal, Ramberg)

It would be helpful to have a list of all important phone numbers with appropriate blanks for locals to fill in.

Comment

A resource phone list has been included in the Example Procedure Guidelines as part of the resource material to the plan.

ISSUE 6: DEFINITIONS

Comment (State Fire Marshal)

The definitions in Section II should include emergency service and emergency service agencies.

Response

The Department has reviewed the definitions and agrees that a definition of emergency service is appropriate. Wording for the definition provided by the State Fire Marshal has been included (see page 6). The definition of emergency service agency, however, is not used in the plan, and therefore it does need to be defined under Section II.

Comment (Morrison)

The state plan provides a broad definition of hazardous materials and is therefore inconsistent with the provisions of the federal Superfund Reauthorization Act which applies only to substances that are listed in accordance with the federal act.

Response

The definition of hazardous materials in the plan is meant to be broad so that any incident that may involve an emergency response is included. Incidents involving materials not listed in the Federal Act may still require an emergency response by local and state agencies. The notification system scheme described in the plan is meant to ensure that a response does occur. Industry requirements for reporting are not affected by or inconsistent with this system. No change necessary.

Comment (Black)

No definition of emergency phase has been provided and a clear definition of unified command is needed.

Response

Appropriate descriptions have been added (see pages 10 & 11).

ISSUE 7: EQUIPMENT

Comment (State Fire Marshal's Office)

In Section 3C, some mention should be made of equipping the hazardous materials response teams.

Response

The Technical Advisory Committee's Final Report provides extensive detail, and it is our opinion that the information is more appropriately placed in the report rather than the plan itself. No changes needed.

ISSUE 8: INFORMATION

Comment (State Fire Marshal's Office)

More information should be provided on the hazardous materials call-up system and community right to know legislation being administered by the State Fire Marshal.

Response

The Department has included additional language provided by the State Fire Marshal's Office (see pages 9 & 13).

Comment (Grice, Black, Dravich)

The credibility of the plan is based on having accurate information about materials that are located in and transported through a community. There should be prior notification to local officials involved in emergency response regarding materials transported through a community.

Response

Information about materials stored in a community is being addressed by the State Fire Marshal's community right to know program. Methods for obtaining and/or requiring better information on hazardous material being transported on the highways is being studied by the Oregon Department of Transportation and the Public Utility Commission. Information on materials transported by rail can currently be obtained from the PUC. In addition, the Department of Transportation has just completed a plan for regulating the transport of hazardous materials. No changes necessary.

ISSUE 9: CLEANUP

Comment (State Fire Marshal's Office)

On page 10, section IIIA, the wording of the last sentence should be changed to say "command could remain at the local level during the cleanup phase" with the proviso that fire service does not do cleanup.

Response

A part of the proposed wording changes have been added (see page 11). The Department contends, however, that fire service does do clean up under certain circumstances, i.e., washing gasoline off the roadway. The provision has therefore not been added.

Comment (State Fire Marshal, Hess)

The diagram in section VIIA does not indicate who does cleanup during minor incidents.

Response

An additional box has been added to the diagram (see page 32) to show that command will be at the local or state level. In the absence of a responsible party, it is expected the Department will use money from the Oil & Hazardous Material Emergency Response fund to contract for cleanup. (ORS 466.675)

Comment (State Fire Marshal)

Further language to clarify clean up responsibilities is needed in Section VII B.

Response

Part of the suggested language offered by the Fire Marshal has been included in the plan (see pages 34, 35 & 37).

Comment (Hess)

During cleanup and restoration command will shift to the state. Is this a change from the criteria established in OAR 340 Division 108?

Response

The plan is not proposing any change.

ISSUE 10: SPILL CLASSIFICATION

Comment (U.S. Coast Guard)

The federal government classifies spills by the gallonage spilled, i.e., minor spills are those less than 1,000 gallons in the inland zone and less than 10,000 gallons in the coastal zone.

Response

Federal criteria are not necessarily applicable to the Oregon situation. By federal definition, almost all of Oregon's spills would be classified as minor and therefore would not activate the state system. The reality is that a spill of 1,000 gallons would probably elicit a major state response depending on its location. We have chosen, therefore, to define the severity of the spill more by its effects and location rather than by the actual gallonage of material spilled. No changes needed.

Comment (Hess)

The amount of material spilled that would constitute a small spill is not defined on page 25, paragraph B.

Response

The designated amount is deliberately not defined because of the tremendous variability of hazardous materials. The categories are defined not by the amount of material so much as by the kind of response that is elicited. No changes needed.



ISSUE 11: TITLE III

Comment (Morrison)

The state plan must reflect the obligations imposed on the state and industry by Title III of the 1986 Superfund Reauthorization Act amendments and be consistent with those provisions.

Response

The Department does not see any inconsistency between the state plan and the requirements of Title III. The community right to know program as administered by the State Fire Marshal is recognized in the plan and is broader in scope than that required by Title III. The plan was reviewed by the Interagency Hazard Communication Council and developed by statewide technical committees. The plan in no way removes the obligation of local government and local jurisdictions to have emergency plans as contemplated by Title III. The state suggests that local plans be consistent with the state plan at the same time that the local plans satisfy Title III requirements. No changes needed.

ISSUE 12: PLANNING

Comment (Morrison)

The state plan in order to provide guidance to local planning committees established under Title III of the federal act must be identical with the provisions of Title III in wording and effect.

Response

The Department does not see any inconsistency with the federal act and the plan as it is written that will mislead local planning committees. The main difference is that local plan needs to include additional detail that are not appropriately included in a general state plan. No changes necessary.

Comment (Morrison)

The state plan in order to provide policy guidance to state agencies in developing agency procedures for emergency response must be consistent with Title III as well.

Response

Again, the Department does not see any inconsistency between the state plan and Title III requirements. The notification requirements are the same. A call to 9-1-1 notifies community emergency coordinators and a call to OARS

notifies the state emergency coordinators. Private industry is required by law to notify OARS and in some instances the Federal Response Center. No changes needed.

Comment (Morrison)

The plan may not be an emergency response plan, but in fact a policy guideline for the benefit of local agencies and state agencies. If this is the case, shouldn't the title be amended to reflect that it is not a plan but a guideline?

Response

The Department considers this to be the state plan. It may also serve as a guideline for others planning to develop their own agency specific plan. No changes needed.

ISSUE 13: FINANCIAL RESPONSIBILITY

Comment (Grice)

Who is going to pay to outfit the agencies' haz-mat teams and pay for response expenses?

Response

The state approach to providing financial help to local governments is detailed in a resource document entitled, "Regional Hazardous Materials Response Teams." Very briefly, the DEQ is proposing to the legislature that financial assistance be provided to train and equip regional haz-mat teams. Please refer to that document for further details.

ISSUE 14: LIABILITY

Comment (Black)

Does responding to an incident increase a party's liability exposure?

Response

Although not included in the plan, the Department was concerned about the liability assumed by agencies that perform the activities designated in the plan. The Department asked for an Attorney General's opinion on this. The Attorney General's opinion is that the plan should not significantly effect tort liability of the state or local governments. At the advice of the Attorney General, a disclaimer to this effect has been added to the plan (see page 1).

ISSUE 15: REPRESENTATION

Comment (Petrosek, Bobst)

The plan lacks recognition of local health departments. Local health officials may have to respond, particularly if a spill enters public waters that are used for domestic water supplies. A notification procedure for local health departments should be identified in the plan.

Response

Local health departments were included on our mailing list and had been provided with information relative to our planning process and its progress. In addition, one local health official did participate regularly on our planning committee.

We agree that local health departments may play a key role in hazardous materials incidents. The plan is a state plan, however, and cannot detail on a county-by-county basis what role local health departments will play. That issue must be resolved in local plans. The matrix provided in the plan, Figure 2, depicts the general role of county health departments. No changes needed.

Comment (Ramberg)

The plan has not had sufficient contribution from rural and volunteer fire departments. Approximately 70% of all the fire fighters in Oregon are volunteers and will be expected to respond to incidents, but volunteers have not had an adequate opportunity to participate in the process because all of the meetings were held during the day in Salem. The large, paid fire departments such as Salem, Portland and Eugene have been able to send people to all the meetings, but they do not represent the needs of the local areas. The plan will not work for rural jurisdictions.

Response

Extensive efforts were made to obtain fair representation on our committees. Of the 70 persons who regularly attended the Technical Advisory Committee meetings, 25 represented various parts of the fire service. The Oregon Fire Chiefs Association, the State Fire Marshal's Office, the Oregon Fire Medical Administrators Association, the Oregon Fire Instructors Association, the Oregon Fire Fighters Association, and numerous fire departments sent representatives to the meetings. We also mailed informational bulletins to all the fire departments in the state and held meetings in July with fire service representatives from all 36 counties.

It is the Department's position that the fire service was well represented and that the plan does reflect their needs as evidenced by the support we have received by all those who participated in the process.

Comment (Webster)

The Indian Nations in Oregon have sovereign governmental powers within their federally recognized reservation. It appears that they have been neglected in the plan. These tribes and their roles and responsibilities should be treated as a unique category in Section V.

Response

During the plan development, representatives from Umatilla and Warm Springs Reservations were participants on our Technical Advisory Committee. They appeared to be satisfied with the plan, however, the comment is valid and a separate heading for the Indian Nations has been included (see page 26).

B Sutherland:b  
229-6047  
December 17, 1986  
ZB6308

Attachment IX  
Agenda Item D  
1/23/87, EQC Meeting

RESOURCE MATERIALS TO THE OIL AND HAZARDOUS MATERIALS  
EMERGENCY RESPONSE PLAN

STATE AGENCY AUTHORITIES AND RESPONSE CAPABILITIES

Oregon Department of Environmental Quality  
January 1987

The following material provides detailed descriptions of the operating authorities of all the state agencies who might be involved in a hazardous materials incident. Information on each agencies response capabilities, its chain-of-command and appropriate phone numbers is also included. For more detailed contingency plans, contact the individual agency. The phone numbers are for use during regular working hours to obtain general information. For emergency response to a spill or other emergency, call the 24-hour OARS response line at 1-800-452-0311.

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## STATE AGENCY AUTHORITIES AND RESPONSE CAPABILITIES

### A. Oregon State Police

#### 1. Administrative Response Authority

The mission of the Oregon State Police is to protect persons and their property and provide for the orderly flow of traffic at the scene of any hazardous material accident or incident. State Police will assume responsibility for control of the scene if first to arrive or will assist any other agency with scene control upon request.

Upon determination that a hazardous incident has occurred, State Police will ensure that the scene is secure and notify Emergency Management Division. Local emergency respondents will be dispatched as the need dictates.

Statutory provisions of the Department of State Police are contained in ORS 181.101 to 181.410. State Police provides sufficient manpower to control and protect the scene. If the incident is major, the procedures as established by the Department and explained in Chapter I, 6 H & J, pages 1-8 through 1-11, of the Administrative Handbook will be followed.

#### 2. Incidents

Oregon State Police will respond to any report of an accident or incident involving hazardous material or oil that might affect persons or property.

#### 3. Chain of Command and Response

Upon notification, State Police will view the incident scene. Once verification has been made that an incident has occurred, the State Police secure the scene, provide public protection and notify the Emergency Management Division.

The Station Commander is responsible for any emergency in one patrol station's area that may be contained without State Police aid from the outside. Every assistance will be extended to city or county authorities when the operation is under local control.

The District Commander is responsible for any operation confined within district boundaries but of sufficient magnitude to require participation of personnel from more than one station.

The General Headquarters staff directs any operation that requires participation of personnel from more than one district; the combined force is commanded by the Superintendent or a designated staff member.

4. Response Offices

General Headquarters  
107 Public Service Building  
Salem, Oregon 97310  
378-3720

District III  
2700 N. Pacific Highway 97  
Medford, Oregon 97501  
776-6114

District I  
3700 SE 92nd Avenue  
Portland, Oregon 97266  
238-8440

District IV  
1050 Bridge Street  
Baker, Oregon 97814  
523-5848

District II  
2960 State Street  
Salem, Oregon 97310  
378-2110

District V  
63055 N. Highway 97  
Bend, Oregon 97701  
388-6303

5. State Police Contingency Plan

Oregon State Police emergency operation plans are on file at General Headquarters, District Headquarters and Patrol Stations. These public documents are available for review upon request.

B. Emergency Management Division

1. Statutory Authority

The Emergency Management Division (EMD) of the Executive Department operates under the authority of ORS Chapter 401.

2. Incidents

EMD will respond to any man-made or natural event that causes (or threatens to cause) damage to property or people (ORS 401.025(4)).

3. Chain of Command

During regular office hours, emergency incident reports are called in to an EMD staff member who completes an incident/spill report, classifies the incident and coordinates the response. The Operations Officer reviews the completed incident/spill report for monitoring and/or followup. Depending upon the severity and magnitude of the incident, the Operations Officer briefs the Administrator on the incident, actions taken, and current status of the operation. After evaluating the situation and the potential for developing into a major emergency, the Administrator activates the EMD Emergency Operations Center and notifies the Governor's Office and the appropriate state and/or federal agencies.

On weekends, holidays and after normal duty hours, the Oregon State Police Communications Division answers EMD telephones. The State Police obtains preliminary information from the reporting party and relays the information to a designated EMD Staff Duty Officer, who contacts the reporting party and obtains complete incident information. Depending on the type, severity, and magnitude of the



reported incident, the Staff Duty Officer notifies an EMD Agency Representative of the emergency and recommends further actions. The Staff Duty Officer carries out all required emergency notifications, and the Agency Representative performs the same duties after hours as the Administrator performs during regular hours.

#### 4. Resources

EMD provides technical assistance to other agencies through the Operations Officer, Communications Officer, and Search and Rescue Coordinator.

EMD also provides communications systems:

- o National Warning System (NAWAS)
- o Emergency Broadcast System (EBS)
- o Law Enforcement Data System (LEDS) Teletype
- o Oregon State Highway Division Teletype
- o Emergency Operations Center Radio Communication Systems.

#### 5. Response Offices

1-800-452-0311  
(24-hour, toll-free, incident reporting number)  
Emergency Management Division  
Administrative Offices  
Room 43  
State Capitol Building  
Salem, OR 97310  
378-4124  
(24-hour local incident reporting number)

If major emergency, the call is forwarded to:

Emergency Operations Center  
Room 50  
State Capitol Building  
Salem, OR 97310

#### 6. EMD Contingency Plans

Plans listed below are available from the EMD Operations Officer and/or have been distributed to state agencies, local governments and federal agencies:

- o EMD Standard Operating Procedures
- o EOC Standard Operating Procedures
- o EMD Emergency Information Center (EIC) Standard Operating Procedures
- o Umatilla Depot Chemical Emergency Response Plan (UCERP)
- o Volcanic Emergency Response Plan
- o Emergency Operations Plan (EOP), Parts II and III.

C. Department of Environmental Quality

1. Statutory and Administrative Response Authority

The Oregon State Legislature declared that oil will not be discharged into waters or on land when there is a substantial likelihood that it will enter public waters. Also, no release of hazardous substances (including hazardous wastes) into surface water, groundwater, air or land will be allowed.

Oil Spills

The Department of Environmental Quality's (DEQ) emergency response authority for oil is contained in ORS 468.780 to 468.815 and OAR Chapter 340 Divisions 47 and 108, which requires the person owning or having control over the oil to immediately collect and remove the oil. The person is strictly liable for damages to persons or property. If a spill occurs, the spiller is required to:

- (a) immediately notify OARS, (b) immediately stop spill,
- (c) immediately contain, (d) collect and remove oil,
- (e) immediately proceed to correct the cause of spill and
- (f) submit a report within seven days describing all aspects of the spill and steps taken to prevent a recurrence.

Failure to immediately clean up the spilled oil and restore the environment is subject to a civil penalty of up to \$10,000. Anyone intentionally spilling oil is subjected to a civil penalty of up to \$20,000. Each day that pollution of public waters continues is considered a separate offense. If the spiller does not cleanup oil, the Department may, either directly or by contract. The Department may recover its actual costs, or three times its costs where a good faith effort was not made to clean up.

Hazardous Materials Spills

The Department's emergency response authority for hazardous material spills (including hazardous waste) is covered in ORS 466.205; ORS 466.605 to 466.690 and OAR Chapter 340 Division 108. Persons who own or have control over hazardous materials are strictly liable for cleanup. The responsible person(s) must collect, remove or treat the hazardous material immediately, under the direction of DEQ. If necessary, DEQ may contract to have the spill cleaned up and seek to recover its costs through court action.

The Department has authority to conduct studies and investigations pertaining to the containment, collection, removal or cleanup of hazardous materials. The DEQ will also advise, consult and participate with other agencies in all matters pertaining to emergency responses, or cleanup and hazardous material. The spiller must immediately notify OARS if the spill or release is above the reportable quantity and to immediately stop, contain and cleanup the spill or release under the direction of DEQ. The spiller will be held strictly liable without regard to fault for the spill or release. Failure to report or immediately clean up or report a spill or release

is subject to a civil penalty of up to \$10,000 or a criminal penalty of \$10,000 and/or one year in jail. Each day of violation is considered a separate offense (ORS 466.880). In addition if a person required to clean up a spill fails to do so, that person shall be responsible for the reasonable expenses incurred by the Department to ensure cleanup. Liability to the Department for damages shall not exceed three times the amount of all expenses incurred if a good faith effort to cleanup was not made.

## 2. Incidents

Spilled materials that trigger DEQ's response include (a) oil, such as gasoline, crude oil, diesel oil; (b) hazardous materials, such as flammables, acids, bases, reactives, oxidizers, pesticides, chlorinated hydrocarbons and phenols, polychlorinated biphenyls (PCBs), heavy metals and carcinogens; and (c) hazardous wastes, (i.e., a material that has already been used and is intended for disposal), such as flammables, acids, bases, reactives, oxidizers, pesticides, chlorinated hydrocarbons and phenols, PCBs, heavy metals and carcinogens.

DEQ responds to spills that occur in state waters, including surface water and groundwater, released into the air or spilled or released onto land.

## 3. Chain of Command

During regular daytime office hours, all spills called in to the Emergency Management Division are forwarded to the appropriate DEQ regional offices. Regional staff will provide on-scene response if appropriate and will contact headquarters who will arrange additional agency or interagency support if necessary.

After regular working hours and on weekends, the regional staff are notified directly based on a 24-hour call list provided to the Emergency Management Division.

NOTE: Because of overlapping jurisdiction with the U.S. Coast Guard, DEQ does not usually respond in areas of U.S. Coast Guard jurisdiction (i.e., Columbia River to Bonneville, Willamette River to Oregon City, and Pacific Ocean shore), unless requested by the Coast Guard.

## 4. Response and Resources

During the emergency phase of an incident, DEQ is the lead state agency for oil and hazardous material incidents. As lead state agency, DEQ is responsible for the effective deployment and use of state agency resources and is the state's consultant or advisor responsible for evaluating the environmental implications of a spill. Advice may be provided to (a) local police, fire and public works agencies; (b) other state agencies such as the State Police, Department of Fish and Wildlife, Health Division and Department of Agriculture; (c) spiller or responsible party; (d) cleanup contractor, if one has been hired; (e) media who may wish to report on incident and (f) public who wish to know the apparent public health or environmental risks.

DEQ can collect and analyze water, soil, vegetation or tissue samples to assist in interpreting public health or environmental implications of spill. Emergency samples are given priority status.

During the cleanup of an incident involving oil or hazardous materials, DEQ is the agency responsible for directing the cleanup. DEQ may also provide the incident commander, the single person in charge of directing all cleanup efforts. However, DEQ staff do not do hands-on cleanup.

#### 5. Response Offices

Headquarters Office  
Hazardous Materials Section  
811 S.W. Sixth Avenue  
Portland, OR 97204  
229-5759

Roseburg Branch Office  
1937 W Harvard Blvd.  
Roseburg, OR 97470  
440-3338

Northwest Region Office  
811 S.W. Sixth Avenue  
Portland, OR 97204  
229-5209

Central Region Office  
2150 NE Studio Road  
Bend, OR 97701  
388-6146

Willamette Valley Region Office  
895 Summer St. NE  
Salem, OR 97310  
378-8240

Eastern Region Office  
700 SE Emigrant  
Suite 330  
Pendleton, OR 97801  
276-4063

Southwest Region Office  
201 W Main St., Rm. 202  
Medford, OR 97501  
776-6010

Laboratory & Applied Research  
1712 SW 11th Avenue  
Portland, OR 97201  
229-5983

Coos Bay Branch Office  
490 N. 2nd  
Coos Bay, OR 97420  
269-2721

#### 6. DEQ Contingency Plan

Single copies of the "Contingency Plan for Spills of Oil and Hazardous Substances" can be obtained by writing Hazardous Materials Section, Oregon Department of Environmental Quality, 811 S.W. Sixth, Portland, OR 97204, or calling 229-5759, 229-5774 or toll-free 1-800-452-4011.

#### D. Health Division

##### 1. Statutory and Administrative Response Authority

The Health Division's emergency response authority stems from the statutory charge to administer state policy regarding public health in Oregon, and is contained in ORS 184.830 and ORS 431.

Division staff responds to incidents endangering the public's health or safety at the request of the Emergency Management Division or a local public health agency.

### Release of Hazardous Substances

The Division's response authority for hazardous substances release is contained in ORS 453.105, which gives the assistant director for health the authority to have such substances removed from commerce if sufficient threat to the public health and safety exists. Under ORS 622.180, the Division has the responsibility to ensure the cleanliness and sanitation of waters used for commercial shellfish raising.

### Accidents Involving Radioactive Materials

The Division is the lead State Radiation Control Agency under ORS 453.635, and is an agreement agency to the U.S. Nuclear Regulatory Commission. Quantities of radioactive material of public health significance are possessed in Oregon only under the authority of a license issued by the Division unless the material is in transport or under exclusive federal jurisdiction. In case of a transportation accident involving radioactive material, ORS 469.611 designates the Division as the on-scene accident coordinator.

### Accidents Affecting or Potentially Affecting a Drinking Water Source

Under ORS 448.150 and 448.250, the Health Division maintains the state drinking water quality program to ensure that drinking water systems do not pose a threat to the public's health.

The Division maintains records of water supply locations and sources so that in the event of an accident, action may be quickly taken to protect the population served by the affected supply. The Division's health and engineering staff will respond to an incident to give guidance to responders, and to take administrative control of the water supply if necessary.

## 2. Incidents

The Division responds to any accident or spill that involves (a) the spread of communicable disease, (b) hazardous substances affecting the public, (c) radioactive materials or wastes or (d) any substance affecting the quality of a drinking water supply or any commercial shellfish bed.

## 3. Chain of Command

During regular working hours, incidents involving materials or substances under the authority of the Health Division are called into the section manager responsible for the type of reported incident.

Off-hours notification for incidents are made to the Health Division through a 24-hour emergency phone at 229-5599.

#### 4. Response and Resources

The Health Division's role is the state's consultant or coordinator for assessing protective measures for public health in response to an incident. All responses are made and directed from the Portland office, and are coordinated with Division field staff, The Oregon Poison Control Center and local public health agencies. The Division can provide field staff for sample collection and analytical capability for all radioactive isotopes in any media. Although the Division is not equipped to provide actual cleanup services, the staff could direct such operations and assess when site recovery is complete.

#### 5. Response Office

Health Division  
1400 S.W. 5th  
P.O. Box 231  
Portland, OR 97207  
229-5032

#### 6. Health Division Contingency Plan

Single copies of the "Health Division Emergency Response Plan" can be obtained by calling or writing to the Portland office of the Health Division.

### E. Oregon Department of Energy

#### 1. Statutory and Administrative Response Authority

State law requires that Oregon Department of Energy (ODOE) "shall coordinate emergency response planning with appropriate agencies of government at the local, state, and national levels to assure that the response to a radioactive material transportation accident is swift and appropriate . . . ." (ORS 469.611)

ODOE issues permits to carriers of radioactive materials. The permit program allows screening of carriers to assure they are safe and insured. The permit requirements are found in Oregon Administrative Rules, Chapter 345, Division 60.

ODOE's emergency preparedness program includes:

- training for first responders and regional specialists.
- radiation detection equipment distributed along primary routes.
- plans and procedures outlining general responsibilities and specific jobs on-scene.
- drills and exercises that test the response system.

This program is closely coordinated with the State Health Division, Radiation Control Section.

2. Incidents

State law requires that OARS be notified of any accident of a vehicle carrying RAM. Notice is required regardless if the material is damaged or dispersed (OAR 345-60-030). ODOE will be notified of any reported incident.

3. Chain of Command

ODOE is the lead state agency for accidents involving radioactive materials in transport. The call will be sent from the State Police (OSP) or Emergency Management Division (EMD) Duty Officer to the ODOE Duty Officer. Two ODOE Duty Officers are on-call at all times. All Duty Officers are trained for transport accidents. The OSP or EMD Duty Officer will also immediately notify the State Health Division field response team.

The Administrator of the ODOE Siting and Regulation Division, or Manager of Radioactive Materials Programs becomes the lead ODOE Coordinator. Depending on the severity of the incident, he or she will appoint a support team. The support team will operate from an Emergency Operations Center in the basement of the State Capital.

4. Response and Resources

ODOE's role is to help those on-scene until state or federal help arrives. A nuclear engineer or health physicist will guide first responders to assess the hazard and protect people. ODOE will coordinate state and federal off-scene help to on-scene responders. ODOE will coordinate the public information with all involved parties.

The State Health Division provides the state on-scene coordinator. The Health Division representatives will be in close contact with ODOE officials through completion of clean up.

Regional Radiological Technical Assistants (RRTA) are trained in each county along main routes. The RRTA's have more training for on-scene response than most first responders. They will be the states eyes and ears, and help local crews pending arrival of state or federal teams.

5. Response Offices

Oregon Department of Energy  
625 Marion Street, N.E.  
Salem, OR 97310  
(800) 221-8035  
(502) 378-4040

## 6. Contingency Plans

Multiple copies of procedures for on-scene response are available from ODOE. Single copies of internal agency procedures are also available from ODOE.

## F. Oregon State Highway Division

### 1. Administrative Response Authority

The Maintenance Section of the Highway Division is responsible for the safety of the traveling public on the State Highway System and the protection of its facility. The Highway Division responds to any incident that jeopardizes this charge.

### 2. Incidents

In the event that any hazardous materials are spilled on or near a state highway, a Highway Maintenance Supervisor or maintenance worker may be the first employee on the scene.

### 3. Chain of Command and Response

The Highway Maintenance Supervisor and assistant of each Maintenance Section crew have received training in the recognition of hazardous materials.

The first response would be to ensure the safety of traffic and adjacent property and to work with police and other officials on the scene.

The Highway Maintenance Supervisor will contact the District Maintenance Supervisor with the details on the situation, including (a) location, nature and extent of closure; (b) steps taken to remedy situation; (c) provisions made to handle traffic; (d) type of chemical or hazard, if identifiable and (e) bill of freight information, or driver information.

If necessary, the District Maintenance Supervisor will contact the Region Engineer, Maintenance Engineer and State Highway Engineer, reporting in detail the facts of the incident.

The District Maintenance Supervisor or his designee will go to the scene to assist in the protection and routing of traffic. The cleanup of the spill and restoration of the highway facility will then be determined.

The protection of traffic may involve a detour or bypass of traffic. The Highway Division has barricade materials, manpower and ability to set up and operate such facilities.

The Highway Division has mobile and base radios for quick communications. Although State Police and Highway Division radio systems are on different frequencies, a system of mutual monitoring of base stations permits a quick interchange of information via radio.



4. Response Offices

State Highway Engineer's Office  
140 Transportation Building  
Salem, Oregon 97310  
378-6516

Region 1  
9002 SE McLoughlin Boulevard  
Milwaukie, Oregon 97222  
653-3090

Maintenance Section Office  
885 Airport Road  
Salem, Oregon 97310  
378-6528

Region 2  
205 E. Salem Highway  
State Street  
Salem, Oregon 97310  
378-2626

Region 3  
1523 SE Cobb  
Roseburg, Oregon 97470  
440-3399

Region 5  
2111 Adams Avenue  
La Grande, Oregon 97850  
963-3177

Region 4  
63055 N. The Dalles-California Hwy.  
Bend, Oregon 97701  
388-6180

G. Oregon State Parks and Recreation Division

1. Statutory and Administrative Response Authority

The State Parks and Recreation Division is responsible for the acquisition, improvement, maintenance, operation and protection of state parks under ORS 390. Also the Division manages the ocean shore, eight scenic waterways and the Willamette River Greenway.

2. Incidents

The State Parks' role in natural or man-caused hazards or disaster incidents is to protect all the state parks, ocean shore, waterways, greenway and the public visiting the area.

3. Chain of Command and Response

The State Parks Administrator directs the parks system via a headquarters staff in Salem and five Region State Park Supervisors stationed throughout the state.

When a disaster or hazard occurs at state park lands or waters, the Region State Park Supervisor in the affected area is the first to be contacted. If the supervisor cannot be reached, then the District Park Manager should be notified. The Region State Park Supervisor or Park Manager notifies other officials in the division.

State Parks personnel assist other agency officials in crowd and/or traffic control, and provide information, equipment and facilities as possible. Responding agencies should consult the appropriate Region State Park Supervisor or District Park Manager for proper access across or to state park lands or waters.

4. Response Offices

REGION I (Willamette Valley and Portland Metro/Counties)

Region State Park Supervisor  
3554 S.E. 82nd  
Portland, OR 97266  
238-7491 or 238-7492

District Park Headquarters

Tryon Creek 636-4550	Silver Falls 873-8682
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Armitage 343-7812	Champoeg 678-1251
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Rooster Rock  
695-2261

REGION II (North Coast from Columbia River to Yachats)

Region State Park Supervisor  
3600 E. Third Street  
Tillamook, OR 97141  
842-5501

District Park Headquarters

Beverly Beach 265-9278	Cape Lookout 842-4981
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Fort Stevens 861-3170	South Beach 867-7451
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REGION III (South Coast from Yachats to California Border)

Region State Park Supervisor  
1155 S. Fifth Street  
PO Box 1265  
Coos Bay, OR 97420  
269-9410

District Park Headquarters

Umpqua Lighthouse 271-4118	J.M. Honeyman 997-3851
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Cape Blanco 332-6774	Harris Beach 469-2021
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Bullards Beach 347-2209	Sunset Bay 888-4902
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REGION IV (Central and Southern Oregon)

Region State Park Supervisor  
63055 N. Hwy. 97, P.O. Box 5309  
Bend, OR 97701  
388-6211

District Park Headquarters

The Cove Palisades 546-3412	Collier Memorial 783-2471
Prineville Reservoir 447-4363	Valley of the Rogue 582-1118
Robert Sawyer 388-2601	The Gorge District 296-2215 (Message)

REGION V (Eastern Oregon)

Region State Park Supervisor  
2111 Adams Avenue, P.O. Box 850  
La Grande, OR 97850  
963-6444

District Park Headquarters

Emigrant Springs 983-2277	Farewell Bend 869-2365
Wallowa Lake 432-4180	Catherine Creek 963-4227
Hat Rock 567-5032	Clyde Holliday 575-0163

5. State Parks Contingency Plan

State Parks and Recreation Division emergency operations plans are on file and available from State Parks Headquarters, 525 Trade Street SE, Salem, OR 97310, 378-5020.

H. Department of Forestry

1. Statutory Authority

The Department of Forestry (DOF) has authority through ORS 527.630 to enforce Forest Practice Rules dealing with the application of chemicals on forest lands. These rules require certain practices that prevent contamination of waters of the state, and also require reporting of spills to the State Forester.

On state-owned lands, DOF will act as the landowner contracting with the chemical application operator and will direct initial action and cleanup by the operator.

## 2. Incidents

Usually DOF personnel will be first on the scene in incidents on or adjacent to forest lands if the activity is related to forest operations.

The Forestry Department will ensure that operators take initial remedial action on spills, if the spill occurs on forest lands regulated under the Oregon Forest Practice Act, and will communicate to operators subsequent cleanup direction as provided by the Department of Environmental Quality. DOF looks to the Department of Environmental Quality to provide expertise on the spill cleanup actions needed.

The DOF is capable of rapidly mobilizing a substantial response organization including complete radio systems, dispatch and command center trailers, public information personnel, state and privately owned equipment, and support services for on-site personnel if needed.

The DOF responds with available people and equipment to any incident connected to an operation on forest land or forest land related, and to a request from any agency in the OARS.

## 3. Chain of Command

Forest Practice Foresters generally are the first DOF personnel dispatched to the scene of an incident. They will advise the operator to take prompt action to minimize resource damage.

Reports are communicated to district offices. District offices immediately notify area offices, the Forest Practice Section, Protection Division Chief and the State Forester. The Forest Practice Section notifies the Emergency Management Division who contacts other agencies involved at the administrative level. Districts notify involved agencies locally.

## 4. Response and Resources

DOF personnel designate an on-scene coordinator to direct initial remedial action or to act in the interim until personnel from the responsible agency are on the scene and in control.

If the Department of Environmental Quality or other agency provides an on-scene coordinator to carry out their responsibilities, the DOF maintain a liaison person to provide coordination of DOF forces at the scene until no longer needed.

All incidents on forest land are investigated by a DOF investigator, and an investigation report is filed with the DOF Forest Practices Director.

Reports from the first Forestry Department person on the scene include: (a) type of incident, present situation, chemicals involved; (b) location of the incident; (c) name of the operators; (d) resources

involved or threatened; (e) personnel on the scene and person in charge; (f) most direct communication link to the site; (g) most direct travel route to the site and (h) assistance needed.

5. Response Offices

NORTHWEST OREGON AREA

Area Director  
State Forestry Office  
801 Gales Creek Road  
Forest Grove, OR 97116  
357-2191

District Headquarters

Forest Grove District Forester  
801 Gales Creek Road  
Forest Grove, OR 97116  
357-2191

Astoria District Forester  
Route 1, Box 950  
Astoria, OR 97103  
325-5451

West Oregon District Forester  
Star Route 2, Box 18  
Philomath, OR 97370  
929-2283

Clackamas-Marion District Forester  
14955 S. Highway 211  
Mollala, OR 97038  
829-2216

Tillamook District Forester  
4907 E. Third Street  
Tillamook, OR 97141  
842-2545

EASTERN OREGON AREA

Area Director  
State Forestry Office  
Route 2, Box 357  
Prineville, OR 97754  
447-5658

District Headquarters

N.E. Oregon Dist. Forester  
East Adams at 20th  
La Grande, OR 97850  
963-3168

Klamath-Lake Dist. Forester  
Box 400  
Klamath Falls, OR 97601  
883-5681

Central Oregon District Forester  
Route 2, Box 357  
Prineville, OR 97754  
447-5658

Walker Range Patrol Assn.  
District Supervisor  
P.O. Box 665  
Gilchrist, OR 97737  
433-2451

SOUTHERN OREGON AREA

Area Director  
State Forestry Office  
1785 N.E. Airport Road  
Roseburg, OR 97470  
440-3412

District Headquarters

S.W. Oregon Dist. Forester  
5286 Table Rock Road  
Central Point, OR 97502  
664-3328

Coos FPA Dist. Supervisor  
300 Fifth Street, Bay Park  
Coos Bay, OR 97420  
267-3161

Elliott State Forest Manager  
300 Fifth Street, Bay Park  
Coos Bay, OR 97420  
267-4136

Douglas FPA Dist. Supervisor  
1758 N.E. Airport Road  
Roseburg, OR 97470  
672-6507

D.L. Phipps St. Forest Nursery Mgr.  
Route 3, Box 193  
Elkton, OR 97436  
584-2214

Eastern Lane Dist. Forester  
3150 Main Street  
Springfield, OR 97477  
726-3588

Western Lane Dist. Forester  
P.O. Box 157  
Veneta, OR 97487  
935-2283

Linn District Forester  
4690 Highway 20  
Sweet Home, OR 97386  
367-6108

I. Accident Prevention Division

1. Statutory and Administrative Response Authority

The Accident Prevention Division (APD) in the Workers' Compensation Department has the authority and responsibility to investigate fatalities and catastrophes that involve employe(s) at most Oregon workplaces, according to ORS 654 and OAR 436-46-055(2).

2. Incidents

Employers are responsible for reporting to APD any employe(s) fatalities or catastrophes within 48 hours of the occurrence. Reports to any office of APD are routed to the central office where a log is maintained to document the notification. Phone calls to notify, confirm, or to provide additional information should be directed to 378-3272 (Administrative Secretary) from 8:00 a.m. - 5:00 p.m. weekdays.

APD evaluates incidents and may respond to workplace-related fatalities, or catastrophes that involve: (a) an accident in which two or more employes are fatally injured or five or more employes are each sent to, go to, and/or are admitted to a hospital or equivalent medical facility; (b) accidents of significant publicity; or (c) accidents or events of a

national importance that involve extensive property damage and could have involved two deaths or injuries requiring hospitalization to five or more employees.

### 3. Chain of Command

The overall program is commanded through the Accident Prevention Division administrator, assistant administrator for field operations, and regional managers in Portland, Salem, Eugene, Medford, and Bend, Oregon.

The APD administrator has overall responsibility for the division's response, and has established guidelines for receipt, evaluation, and assignment of responders.

The assistant administrator for field operations directs and coordinates the investigation, and acts to ensure the regional manager investigates accidents. All pertinent information is promptly related to the director of the Workers' Compensation Department as it is received from the regional managers when a catastrophe has occurred.

The assistant administrator for field operations provides assistance and advice to the occupational safety/health specialist and team members of other federal or state agencies or organizations participating in the investigation. The Workers' Compensation Department Information Section is responsible for the release of information and necessary news releases, providing additional information concerning the investigation as available. The information office official goes to the scene to handle publicity when directed by the director of the Workers' Compensation Department.

### 4. Response and Resources

APD responds to workplace fatalities and catastrophies at fixed and mobile work sites to conduct an investigation regarding occupational aspects of the incident. Hazards to the general public are not under APD jurisdiction.

APD has no authority to direct rescue operations, which is primarily the responsibility of the employer and/or local political subdivisions or state agencies. APD has, however, the authority to monitor and inspect the working conditions of employes engaged in rescue operations to make certain that all necessary procedures are being taken to protect the lives of the rescuers.

Based on the technical knowledge of APD personnel at the scene, advice may be given concerning the safety implications of the proposed rescue operations.

The occupational safety/health specialist has authority to warn the employer(s) of persons involved in the rescue operation that a citation, red warning notice, or injunctive procedure may be issued if the employer intends to use a rescue procedure that may violate a rule or general duty clause, or constitute an imminent danger when less hazardous procedures are available.

5. Response Offices

Region 1 (West Multnomah, Washington, and Columbia Counties)  
Mountain Park Plaza, Suite 100  
11830 S.W. Kerr Parkway  
Portland, OR 97034  
Phone: 229-5910

Region 2 (East Multnomah and Clackamas Counties)  
1245 S.E. 122nd Avenue  
Portland, OR 97233  
Phone: 257-4302

Region 3 (Marion, Polk, Yamhill, Lincoln, Tillamook, and  
Clatsop Counties)  
3867 Wolverine N.E. Suite 26  
Salem, OR 97301  
Phone: 378-3274

Region 4 (Benton, Linn, and Lane Counties)  
2677 Willakenzie Suite 6  
Eugene, OR 97401  
Phone: 686-7562

Region 5 (Deschutes, Klamath, Lake, Harney, Malheur, Baker, Grant,  
Crook, Wheeler, Jefferson, Wasco, Sherman, Gilliam, Morrow, Umatilla,  
Union, and Wallowa Counties)  
2150 S.E. Studio Road  
Bend, OR 97701  
Phone: 388-6066

Region 6 (Douglas, Coos, Curry, Josephine, and Jackson Counties)  
625 Franquette Suite B  
Medford, OR 97501-7899  
Phone 776-6030

Administrative Office  
Accident Prevention Division  
204 Labor and Industries Bldg.  
Salem, OR 97310  
Phone: 378-3272

Occupational Health Laboratory  
1007 State Office Building  
Portland, OR 97201  
Phone: 229-6286

6. Expert Assistance

The assistant administrator for field operations maintains a current list of safety and health professionals within APD who are experts in their fields. The experts are available for investigations of fatalities and catastrophies, and for testifying in any subsequent legal proceedings.



The advice of an attorney may be necessary at a very early stage of the investigation. The division has legal services available through the office of the Attorney General.

7. APD Contingency Plan

The complete agency contingency plan is available by request from the Workers' Compensation Department, Accident Prevention Division, Labor and Industries Building, Room 204, Salem, OR 97310, phone: 378-3272.

J. Department of Fish and Wildlife

1. Statutory and Administrative Response Authority

The Department of Fish and Wildlife (DFW) operates under the authority of ORS 496, which provides for management, maintenance and enhancement of Oregon wildlife. -

2. Incidents

The Department of Fish & Wildlife responds to any spill or discharge of petroleum product, chemical or other material that could degrade land or water to the point that fish or wildlife would be adversely affected or killed, or their habitat degraded or destroyed.

3. Chain of Command and Response

The Emergency Management Division or Department of Environmental Quality contacts DFW if the spill affects or potentially affects fish or wildlife resources. Also, DFW may be informed directly by the U.S. Coast Guard or U.S. Environmental Protection Agency.

DFW evaluates the reported information, initiates calls to appropriate agency personnel who can provide any needed response, and contacts other concerned state and federal agencies to coordinate response efforts.

Primary interacting DFW entities are Habitat Conservation and Planning Division, Regional Offices and District Fish and District Wildlife Biologists. All should be kept informed of developments during a spill incident.

When responding to a spill, the DFW field representative evaluates potential and actual damage to fish and wildlife resources, and provides advice, counsel and logistic support as may be necessary. In case of extensive damage to fish or wildlife, it may be necessary to request additional help from available DFW staff from the involved Region, adjoining Regions or the Portland office to assist in documentation of damages.

4. Response Offices

Chemical and Oil Spills

Habitat Conservation & Planning Div. 506 S.W. Mill Street Portland, OR 97201 229-5683, 229-5679 or 229-5433	Southwest Region 3140 N.E. Stephens Street Roseburg, OR 97470 440-3353
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Marine Region  
Marine Science Drive  
Building #3  
Newport, OR 97365  
867-4741

Northeast Region  
201 20th Street  
La Grande, OR 97850  
963-2138

Columbia Region  
17330 S.E. Evelyn Street  
Clackamas, OR 97015  
657-2137

Southeast Region  
Box 8  
Hines, OR 97738  
573-6582

Northwest Region  
Rt. 5, Box 325  
Corvallis, OR 97330  
757-4186

Central Region  
61374 Parrell Road  
Bend, OR 97702  
388-6363

General Situations

Fish Division  
506 S.W. Mill Street  
Portland, OR 97201  
229-5440

Operations Section  
506 S.W. Mill Street  
Portland, OR 97201  
229-5442

Wildlife Division  
506 S.W. Mill Street  
Portland, OR 97201  
229-5456

5. DFW Contingency Plan

Copies of the "Contingency Plan for Spills of Oil and Hazardous Substances" are available from the Department of Fish and Wildlife, 506 S.W. Mill Street, Portland, Oregon 97201, 229-5683.

K. Public Utility Commissioner (Motor Carrier and Rail-Air Programs)

1. Statutory and Administrative Authority

Concerning motor carrier transportation of hazardous materials, no specific statutes charge the PUC with accident/incident response. But ORS 767.020(1), (2) and (2)(a) promote safe, adequate, economical and efficient service, and conservation of energy. The primary thrust of the program is to prevent accidents by maintaining high safety

standards for railroads, highways, equipment and operations. In addition, ORS 756.075 gives right of entry for examination of equipment, records and employees.

Transportation of hazardous materials and wastes by rail as well as penalty provisions are covered in ORS 761.370, 761.380, 761.395, 761.400, 761.405, 761.415, 761.900, 761.990(5) and (6), and 761.994. The Public Utility Commissioner (PUC) must be notified before class A explosives and poison gas are transported into the state by railroad. Rules on railroad transportation of hazardous materials were adopted through the listed statutes which became effective March 1, 1979.

Both programs enforce statutes and rules designed to help deter accidents involving hazardous materials, to enforce federal standards for rail and highway safety, and to analyze potential problems.

## 2. Incidents

The Public Utility Commissioner's on-site response is usually triggered when a major accident occurs on the highway or railroad involving hazardous materials. The response usually involves investigation of major derailments or incidents or commercial motor vehicle accidents after the threat to human life or health, property or environment is contained. Basically, PUC is interested in investigating the cause of the accident.

## 3. Chain of Command

Initial contact for highway accidents of hazardous materials should be made in the following order: Motor Investigations Division Administrator, Motor Safety Section Supervisor and Senior Motor Safety Specialist.

For railroad derailments or other incidents, contact in order the following people: Emergency Management Division Administrator, Rail/Air Program Executive Assistant, Rail Safety Division Administrator, and Rail/Air Program Assistant Commissioner.

## 4. Response and Resources

The Public Utility Commissioner provides 24-hour response for major accidents involving hazardous materials. The PUC will determine the (a) driver's qualifications, (b) hours of service, (c) mechanical condition of equipment, (d) cargo loading and securement and (e) compliance with applicable hazardous materials and waste regulations.

On-site investigative activities will take place after the primary task of removing or arresting the hazard(s) to life, property and the environment.

Acting in the role of consultant or advisor, the PUC determines if proper contact and notification procedures have been initiated to Emergency Management Division, local emergency response agency, Department of Environmental Quality, and Coast Guard.

5. Response Offices

PUC Motor Carrier Program  
Labor & Industries Building  
Salem, Oregon 97310

Investigations Division  
Administrator - 378-6736

Senior Motor Safety  
Specialist - 378-4602

Motor Safety Section  
Supervisor - 378-4355

Rail-Air Program  
Labor & Industries Building  
Salem, Oregon 97310

Emergency Management Division  
Administrator - 378-4124\*

Rail Safety Division  
Administrator - 378-6217

Rail/Air Program Executive  
Assistant - 378-6204

Rail/Air Program Assistant  
Commissioner - 378-6351

\* 24 hours

6. PUC Contingency Plan

Copies of the "PUC Contingency Plan" are available at the Labor & Industries Building, Salem, Oregon, 97310.

L. Department of Agriculture

1. Statutory and Administrative Authority

The Oregon Department of Agriculture (ODA) administers several statutes and administrative rules that pertain to agricultural chemicals (pesticides, fertilizers, and food and animal feed additives). The Plant Division administers the licensing of pesticide applicators, registration and labeling of agricultural chemicals. The Laboratory Services Division performs residue analysis on food and animal feed, and if requested, on water, soil and foliage samples. The Food and Dairy Division is responsible for determining if there is contamination and adulteration of foods, including raw and processed foods.

2. Incidents

ODA responds to fertilizer or agricultural chemical spills with technical assistance, sampling and/or monitoring.

3. Response and Resources

The Plant Division provides technical assistance to the agency. Assistance can include information concerning the material spilled, methods of spill containment, procedures for decontamination and treatments for exposure to the spilled material. The Plant Division

may also conduct sampling relevant to an agricultural chemical spill. Sampling may be of the material spilled and of soil, water or other material possibly contaminated by the spilled material.

Laboratory Services Division analyzes the samples taken in response to the spill.

The Plant Division or Food and Dairy Division, in association with the United States Food and Drug Administration (FDA), monitors food and animal feed for contamination from a chemical spill.

If additional technical assistance relevant to an agricultural chemical spill is needed, ODA contacts one or more of the following: the manufacturer of the agricultural chemical spilled, CHEMTREC (1-800-424-9300), National Agricultural Chemicals Association Action Response Team and United States Environmental Protection Agency (EPA).

#### 4. Response Offices

Plant Division  
Oregon Dept. of Agriculture  
Agriculture Building, Room 110  
Salem, OR 97310-0110  
378-3776

Laboratory Services Division  
Oregon Dept. of Agriculture  
Agriculture Building, Room 214  
Salem, OR 97310-0110  
378-3793

#### 5. ODA Contingency Plan

The Contingency Plan for Spills of Fertilizers and Pesticides can be obtained by calling or writing the Department of Agriculture, Agriculture Building, Salem, Oregon, 97310-0110, 378-3776 or 378-3793.

### M. Office of State Fire Marshal

#### 1. Statutory and Administrative Authority

The State Fire Marshal operates under the authority of ORS 476.515, Other Office Authorized to Act When the Governor is Unavailable and under the Emergency Conflagration Act.

In addition, under ORS 453.317 to 453.337, the State Fire Marshal is authorized to distribute a hazardous substance survey to employers in this state. The survey information shall include:

- a) The identity and hazard classification of the hazardous substance as listed on material safety data sheet;
- b) The approximate amount and location of the hazardous substance;
- c) The name and telephone number of personnel qualified to give technical on-site information about hazardous substances.
- d) Any emergency procedures established by the employer.

The survey shall be updated once every 12 months and retained by the Fire Marshal for 5 years.

The Fire Marshall shall provide copies of the information to each local public health authority, fire district and any public or private safety agency administering an emergency phone system. Upon request, the information may be provided to state agencies and to the public.

Under ORS 453.342 any fire department, emergency service personnel or law enforcement agency responding to an incident of injury to a human, wildlife, domestic animal or property resulting from a hazardous substance emergency shall make a report of the incident to the State Fire Marshal. The State Fire Marshal will make annual summaries of all incidents reported.

The State Fire Marshal under ORS 453.347 is authorized to assist with emergency response planning by appropriate agencies of government at the local, state and federal level for hazardous substances.

## 2. Incidents

The State Fire Marshal responds to fire situations that develop beyond the capabilities of local fire suppression authority.

## 3. Chain of Command and Response

During regular working hours, the State Fire Marshal's office or Fire Department Dispatch Center can be contacted at their offices through the Emergency Management Division. On weekends, holidays and after regular working hours, the Emergency Management Division notifies Dispatch Centers or the State Fire Marshal at home.

When a fire emergency develops beyond the capabilities of local fire suppression resources, the Local Fire Chief notifies the County Fire Chief that mutual aid or, if not sufficient, mobile support is needed. The County Fire Chief informs the District Fire Chief and State Fire Marshal of the situation.

When the local and county fire suppression resources are unable to control the fire emergency, the District Fire Chief reports the conditions to the State Fire Marshal, who verifies the need and requests authorization of the Governor or authorized alternate to implement the Emergency Conflagration Act.

The State Fire Marshal and staff set up the Control Center in the State Fire Marshal's office, contact the Governor or line of successors for authorization to implement the Act, and follow interoffice standard operating procedures until the fire emergency has ended.

4. Response Offices

Fire Marshal's Office  
3000 Market Street N.E.  
Suite 534  
Salem, OR 97310  
(contacted in the following order)

- |   |   |
|---|---|
| (1) State Fire Marshal<br>378-FIRE                      | (4) Institutional/Codes<br>Manager - 378-4917 |
| (2) Chief Deputy<br>373-1276                            | (5) Lead Deputy<br>378-4917                   |
| (3) Fire Prevention/Investigation<br>Manager - 378-4917 |   |

Fire Department Dispatch Centers

Salem Fire Department  
588-6111

Marion County Fire District #1  
588-6251

A list of county fire chiefs is available from the State Fire Marshal's office.

5. State Fire Marshal Contingency Plan

Copies of the contingency plan are available from the State Fire Marshal Office, 3000 Market Street N.E., Suite 534, Salem, OR 97310, or call 378-4917.

N. Military Department

1. Statutory and Administrative Response

The Oregon National Guard, under direction of the Military Department, State of Oregon, provides assistance to civilian authorities when a state of emergency is declared by the Governor. Organization, training, administration and operation of the Oregon National Guard are described in ORS 396 and 399.

2. Incidents

The Oregon National Guard is capable of providing assistance in almost any emergency or disaster, whether natural or man-caused. The type of incident that could generate a need for National Guard assistance includes floods, forest fires, wind and snow storms, earthquake/volcanic activity, civil disturbance (riots), war and nuclear incidents (including war).

3. Chain of Command

The Military Department is structured to direct and control National Guard emergency support through the military chain-of-command.

The standard emergency assistance request is generated by a local community, through the County Emergency Services Coordinator/Director, to the State Emergency Management Division. Commitment of the National Guard is held in temporary inactivity until the capacity of local assistance has been exhausted or when the nature of the incident will likely exceed the capabilities of local control.

The State Emergency Services Director evaluates each request and, if appropriate, refers the matter to the Military Department for action.

The Military Department maintains a variety of plans for emergency operations. The Director of Military Support to Civil Authorities at the Military Department maintains continuous liaison with the Emergency Services Division. Potential emergency situations are monitored by the Military Department in preparation for National Guard involvement.

When directed by the Governor (through the Emergency Services Division) or the Adjutant General, the Oregon National Guard is placed in a state active duty status. The State of Oregon becomes financially involved for the pay, fuel and equipment maintenance of the committed forces. When fully committed, the Oregon National Guard is organized in a task force configuration. The State Area Command (STARC) is divided into five subarea commands as follows:

(a) Subarea I Command (Portland) - Commander, 41st Infantry Brigade;  
(b) Subarea II Command (Salem) - Commander, 1249th Engineer Battalion;  
(c) Subarea III Command (Cottage Grove) - Commander, 2nd Battalion 162nd Infantry; (d) Subarea IV Command (Ashland) - Commander, 1st Battalion 186th Infantry and (e) Subarea V Command (La Grande) - Commander, 3rd Squadron 116th Armored Cavalry.

Emergency operations most frequently demand the commitment of less than a total state mobilization of the National Guard. The policy of the Governor and the Adjutant General is to mobilize only those resources necessary to control, contain, or recover from the emergency situation. When resource commitment is less than a full subarea command (as is usually the case), operational control is retained by the Military Department (Director of Military Support to Civil Authorities).

#### 4. Response and Resources

The Oregon National Guard, Army and Air, is composed of nearly 9,500 people in 91 separate units, located in 44 armories (including three aviation facilities) in 40 communities around the State.

General capabilities of the Oregon National Guard in emergency operations are (a) clearing debris and repairing streets, highways, rail centers, dock facilities, airports, and other areas, as necessary, to permit rescue or movement of people and to provide access and recovery of vital resources, (b) repairing facilities of a minor nature, usually damages that delay recovery operations, (c) administering first aid for casualties and (d) securing and protecting vital facilities and resources.



Also, the Guard is involved in (a) maintaining law and order in support of local and State law enforcement officials, (b) controlling traffic, (c) providing support activities for fire fighting and (d) recovering, collecting, safeguarding and distributing food and other critical supplies.

Specialized capabilities of the Guard include: providing limited supply of potable water from water purification units and 400-gallon water trailers, transporting and installing packaged disaster hospitals, providing limited source of electrical power from portable generators, and rescuing disaster victims through ground and aerial efforts.

Other specialized capabilities are providing people and equipment for mass feeding of disaster victims, establishing communications networks with fixed and mobile radios and/or support civil authorities with qualified radio operators, providing aerial surveillance of disaster area, and assisting in the recovery, identification and disposition of the deceased.

#### 5. Response Offices

Director, Military Support  
to Civil Authorities  
2150 Fairgrounds Rd. NE  
Salem, Oregon 97303  
378-3903

Chief of Staff  
2150 Fairgrounds Rd. NE  
Salem, Oregon 97303  
378-3989

Director, Operations & Training  
2150 Fairgrounds Rd. NE  
Salem, Oregon 97303  
378-3903

The Adjutant General  
2150 Fairgrounds Rd. NE  
Salem, Oregon 97303  
378-3981

Deputy Chief of Staff  
2150 Fairgrounds Rd. NE  
Salem, Oregon 97303  
378-3985

A Staff Duty Officer is available during off-duty hours. The Duty Officer may be reached through the Military Department answering service by calling 378-3980.

#### 6. Military Department Contingency Plan

Instructions for activation of the Military Department for the State of Oregon emergency operations are contained in the Oregon National Guard Pamphlet 350-7 (ORNG Pam 500-1). A current copy of the pamphlet is available through the Emergency Management Division. Contingency plans at the Military Department include: (a) Alert and Mobilization Plan (for official use only) for limited or general war; (b) Civil Disturbances Operations Plan -- special training is conducted annually by task organization; (c) Emergency Operations Plan, Oregon National Guard, which is designed for application in any state emergency and

(d) the Fire Mobilization Plan of the State Forestry Department is maintained with a special agreement between Forestry and Military because of the urgency and frequency of support activities.

The Director of Military Support to Civil Authorities at the Military Department maintains emergency operations plans from other agencies, both state and federal, and from adjacent states.

0. Oregon State University

1. Response Authority

The purpose of Oregon State University (OSU) is educational, but within the faculty and staff exists a wide variety and depth of expertise, which could be called upon to offer assistance in times of hazardous substances emergencies.

2. Incidents

While no structure or responsibility exists requiring emergency response of the type envisioned by the Hazardous Material Emergency Response Plan, the professionals will respond as university faculty and good citizens.

3. Chain of Command and Response

Campus Specialists can be contacted for information, directly or for access to specific information.

4. Response Offices

Entomologist  
Cordley 2055  
Oregon State University  
Corvallis, OR 97331  
754-3151

Extension Agent Engineering  
Gilmore 240  
Oregon State University  
Corvallis, OR 97331  
754-4021

Toxicologist & Chemist  
Weniger 341  
Oregon State University  
Corvallis, OR 97331  
754-3791

Toxicology Chemist  
Weniger 237  
Oregon State University  
Corvallis, OR 97331  
754-2906

Since sites of emergencies are unpredictable, Oregon State University has knowledgeable faculty members in the extension offices at 36 locations in Oregon, who can be called up in emergencies.

Baker County  
523-6414, ext. 230

Gilliam County  
384-2271

Benton County  
757-6750

Grant County  
575-1911

Clackamas County  
655-8631

Harney County  
573-2506

Clatsop County  
325-8625

Hood River County  
386-3343

Columbia County  
397-3462

Jackson County  
776-7371

Coos County  
396-3121, ext. 240

Jefferson County  
475-3808

Crook County  
447-6228

Josephine County  
476-6613

Curry County  
247-7011, ext. 281

Klamath County  
883-7131

Deschutes County  
548-6088

Lake County  
947-2279

Douglas County  
672-4461

Lane County  
687-4243

Lincoln County  
265-6611, ext. 207

Tillamook County  
842-5511, ext. 372

Linn County  
967-3871

Umatilla County  
276-7111, ext. 235

Malheur County  
881-1417

Union County  
963-1010

Marion County  
588-5301

Wallowa County  
426-3143

Morrow County  
676-9642

Wasco County  
296-5494

Multnomah County  
254-1500

Washington County  
648-8771

Polk County  
623-8395

Wheeler County  
763-4115

Sherman County  
565-3230

Yamhill County  
472-9371, ext. 559

P. Oregon Department of Justice

1. Statutory and Administrative Response Authority

The elected Oregon Attorney General, who is the administrative head of the Oregon Department of Justice, is directed by the Legislature to "perform all legal services for the state or any department or officer of the state," ORS 180.060(5), upon request. Additionally, the Attorney General "shall . . . direct the district attorneys in all criminal . . . matters relating to state affairs . . .," ORS

180.060(4), and may "take full charge of any investigation or prosecution of violation of law," ORS 180.070(1), at the direction of the Governor. The Attorney General provides his services through assigned counsel to each agency (Assistant Attorneys General) who "have full authority under the direction of the Attorney General to perform any duty required by law to be performed by the Attorney General" ORS 180.140(1).

## 2. Incidents

The Oregon Department of Justice responds to all incidents (a) at the request of the state agency having jurisdiction, (b) at the request of the Governor or (c) upon the Attorney General's own motion.

## 3. Chain of Command and Response

The Oregon Department of Justice is headed by the Attorney General. The Attorney General has one Deputy Attorney General, who is authorized to act in his absence. The Department of Justice is divided into six divisions, each headed by a Division Administrator. The Trial Division provides trial attorneys for most of the State's trial court appearances. The General Counsel Division provides attorneys to most of the state agencies. The General Counsel Division is subdivided into nine sections, each headed by an Attorney-in-Charge.

Regarding response to an incident, ordinarily each affected state agency will contact its assigned counsel (or that counsel's assistants) after an investigation has been commenced but before it is completed. The agency's counsel then would provide legal advice and assistance, and would obtain the aid of a Trial Division attorney, if necessary. It is also possible that a request for legal assistance could come down the chain of command to counsel assigned to an agency from the Attorney General upon his own motion or at the request of the Governor. In addition, the Department of Justice through its appointed member of the Hazardous Materials Council, or substitute, could be directly requested by the Emergency Management Division to give legal assistance in which case appropriate agency counsel, and trial counsel if necessary, would be contacted and would respond. Once contacted, agency counsel would be responsible for (a) arranging any necessary assistance from the Trial Division and other appropriate General Counsel or other Division attorneys, and (b) coordination of legal efforts with local and federal agencies.

## 4. Response Offices

### General Counsel Division

Justice Building  
100 Justice Building  
Salem, OR 97310  
378-4620

Education Section representing:  
Department of Higher Education  
Oregon State University, Department of Entomology

Finance and Government Section representing:  
Executive Department, Emergency Management Division  
Military Department  
Public Utility Commissioner

Licensing and Regulatory Law Section representing:  
Department of Commerce, Fire Marshall Division

Natural Resources Section representing:  
Department of Agriculture  
Department of Energy  
Energy Facility Siting Council  
Department of Forestry

Transportation Section representing:  
Transportation Department  
Highway Division  
Parks and Recreation Division  
Traffic Safety Commission

Criminal Justice Division  
Salem Office  
100 Justice Building  
1162 Court Street  
Salem, OR 97310  
378-6347  
Representing Department of State Police

Trial Division  
Justice Building  
1162 Court Street  
Salem, OR 97310  
378-6313

Business/Labor/Consumer Affairs Division  
Workers Compensation Unit  
201 Labor & Industries Building  
Capitol Mall  
Salem, OR 97310  
378-3341  
Representing Accident Prevention Division

Oregon Department of Justice  
500 Pacific Building  
520 SW Yamhill  
Portland, OR 97204  
229-5725

Natural Resources Section representing:  
Department of Environmental Quality  
Department of Fish and Wildlife

Health and Human Services Section representing:  
Health Division

Q. Oregon Traffic Safety Commission

1. Response Authority

The Oregon Traffic Safety Commission (OTSC) is not a first responder in emergencies. The Commission makes sure that the statutes and resources are available on the public streets and roads of Oregon to respond in an emergency.

2. Response

The OTSC has played a vital role in developing ambulance services, emergency management training, radio communication systems, police training, etc.

3. Response Office

Oregon Traffic Safety Commission  
4th Floor  
State Library Building  
Salem, OR 97310  
378-3668

RESOURCE MATERIALS TO THE OIL AND HAZARDOUS MATERIALS  
EMERGENCY RESPONSE PLAN

REGIONAL AND STATE HAZARDOUS MATERIALS  
RESPONSE TEAMS (Concept Paper)

Oregon Department of Environmental Quality  
January 1987

The following paper describes a system of regional haz-mat teams and a state haz-mat team. It is for discussion purposes only. The concepts are by no means totally refined. As you will note, certain areas are targeted for possible state funding to establish Tier 2 and Tier 3 regional response teams. These areas are not fixed at the present time. Also, please note that first response is still a local function.

A number of factors will influence final decisions on the placement of the teams. First, a jurisdiction must meet a set of criteria which are outlined in general form in the paper. Second, there must be an appropriate level of risk to the population. The data and the criteria we have used to make this first cut need more refinement.

It is our intention, should the legislature approve funding for a regional system of teams, that a committee representing all levels of government be established to review the criteria, the spill data and entertain proposals from local jurisdictions interested in housing a haz-mat team.

## REGIONAL HAZARDOUS MATERIALS RESPONSE TEAMS

### Background

Hazardous materials incidents are occurring with increasing frequency around the state. (See Table 1). Local emergency response agencies such as fire and police departments are usually first on-scene and are expected to provide the necessary trained personnel, skills and specialized equipment to deal with the initial emergency. Important first actions include hazard recognition, life saving, fire suppression and spill containment and control. Hazardous materials incidents present unique problems for responders due to the complexity and diversity of the materials and their potentially dangerous character. Emergency responders need a high degree of training and very specialized equipment to deal appropriately and safely with such incidents. The cost of the equipment can be very high. It is estimated that a fully equipped hazardous material vehicle for use in an urban/industrialized area would cost \$150,000 excluding personnel costs.

In most parts of Oregon, specially trained and equipped haz-mat teams are 4-6 hours away. At present the alternative for many local response agencies and state agencies is to either not respond to a haz-mat incident and leave the public at risk until an appropriately equipped team arrives, or to respond with inadequate protection and put their own personnel at risk. Usually they choose the latter alternative in spite of the risks. The growing concern over this issue, however, is causing many jurisdictions to look at options for improving local response capability through the acquisition of hazardous material equipment and increased training for their personnel.

A logical approach to this issue because of the expense involved is to devise some sort of regional capability and to thus share the personnel requirements and specialized equipment among several jurisdictions. This approach is not unlike the mutual aid agreements currently used by the fire service to fight major urban fires and the Forestry Department to fight wild fires. Emergency medical service providers also use a similar system. A regional system makes particular sense when we consider that a transportation-related incident involving the interstate movement of oil or hazardous materials represents one of the most likely threats to many communities. At present few individual jurisdictions can arrange the personnel and equipment resources that it would take to field an adequately prepared and equipped hazardous material response team, so that they can respond to such incidents.

### Alternative Approaches

The following section outlines 2 proposals for providing improved response capabilities to local areas and a 3rd alternative which considers the status quo. In all cases local fire and police are expected to provide the initial response and at a minimum establish a secure perimeter at the scene and attempt to identify the hazard.



TABLE 1: Reported Spills (1981-1985)

<u>1981</u>	<u>Northwest Region</u>	<u>Willamette Valley Region</u>	<u>Southwest Region</u>	<u>Central Region</u>	<u>Eastern Region</u>	<u>STATEWIDE TOTALS</u>
Petroleum Products	97	21	33	16	20	187
Chemical/Hazardous Waste	<u>22</u>	<u>6</u>	<u>7</u>	<u>5</u>	<u>7</u>	<u>47</u>
Total Spills	119	27	40	21	27	234
<u>1982</u>						
Petroleum Products	84	39	26	20	24	193
Chemical/Hazardous Waste	<u>39</u>	<u>12</u>	<u>5</u>	<u>7</u>	<u>7</u>	<u>70</u>
Total Spills	123	51	31	27	31	263
<u>1983</u>						
Petroleum Products	131	59	31	27	27	275
Chemical/Hazardous Waste	<u>47</u>	<u>22</u>	<u>9</u>	<u>8</u>	<u>11</u>	<u>97</u>
Total Spills	178	81	40	35	38	372
<u>1984</u>						
Petroleum Products	118	60	77	10	24	289
Chemical/Hazardous Waste	<u>31</u>	<u>18</u>	<u>19</u>	<u>8</u>	<u>1</u>	<u>78</u>
Total Spills	149	78	96	18	25	367
<u>1985</u>						
Petroleum Products	97	52	50	18	22	239
Chemical/Hazardous Waste	<u>53</u>	<u>24</u>	<u>20</u>	<u>5</u>	<u>15</u>	<u>117</u>
Total Spills	150	76	70	23	37	356

The first proposal is built on the premise that any area of the state should be within one hour's response time of an equipped hazardous material response team and that major population centers should be within one-half hour's response time.

The proposal calls for the establishment of regional hazardous materials response teams that could be called into service during any hazardous materials incident where technical expertise and/or specialized training and equipment are needed to deal with a situation. All teams would receive comparable levels of training and equipment. It is a two-tiered approach with the regional hazardous material team (second tier) expected to provide assistance to the local first responder (first tier) during the containment and control phase of an emergency response.

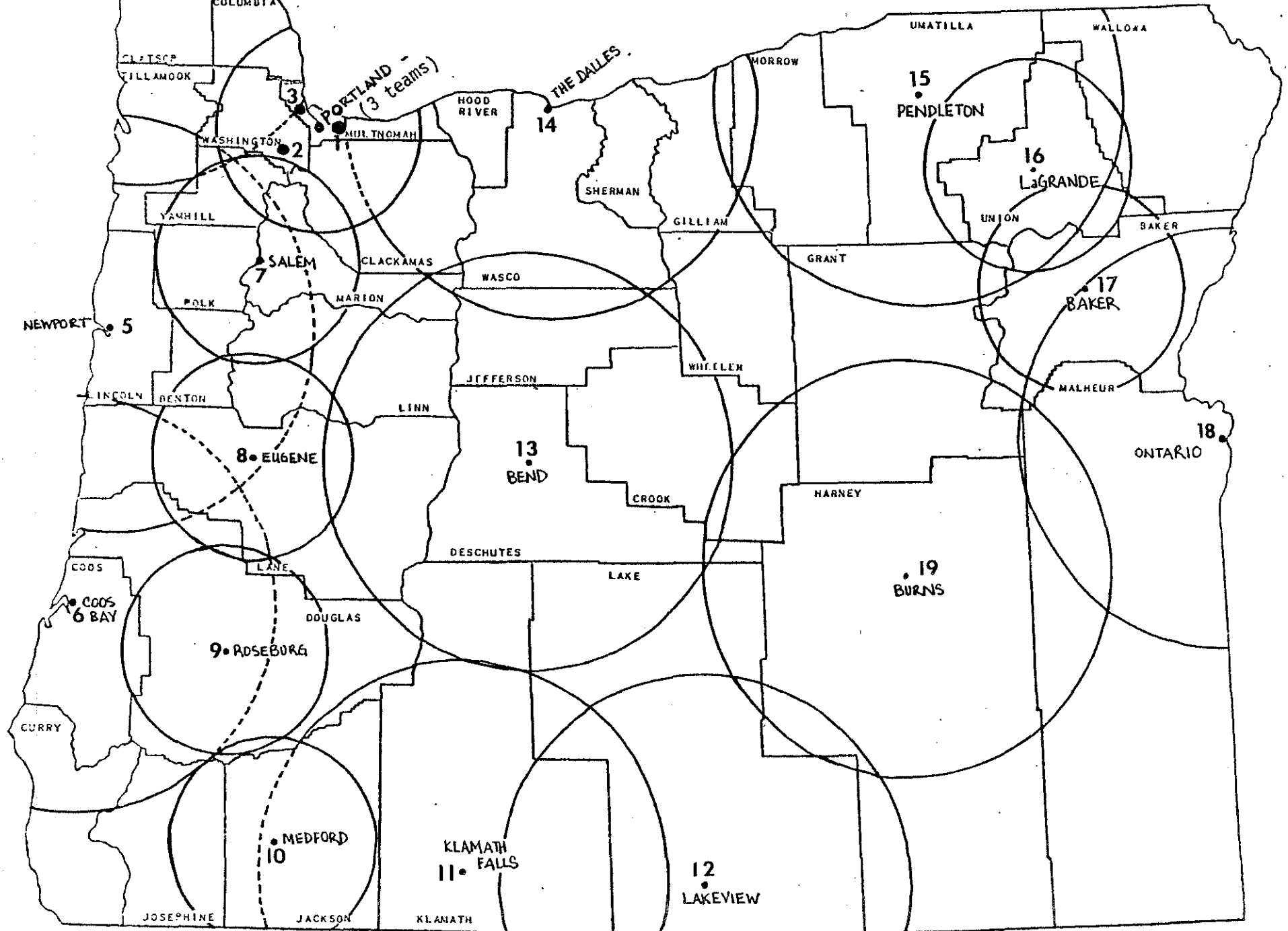
If the above approach was used in Oregon, it would result in the establishment of 19 regional hazardous material response teams around the state (see Figure 1) with a one-half hours's response time to any place west of the Cascade Mountains where the major population centers are located and a one-hour's response time to any place east of the Cascade Mountains and along the Oregon Coast. The exception would be northeast Oregon along I-84 where a relatively high transportation accident risk exists due to severe winter weather conditions and mountain passes. A 30-minute response capability is assumed in this area.

The advantages of the system described above would be that it would provide the best possible protection to the citizens of the state by ensuring a quick and comprehensive response effort to all locales. Second, the system would provide the most protection to local emergency responders (the first tier) who have to deal with the initial response by allowing them to rely on haz-mat teams who have the best possible equipment and training. Third, the system would provide the best protection for the environment of the state by ensuring a quick and thorough response to any emergency. Fourth, an appropriate response by a well-trained team can greatly reduce the cost of cleanup. The main disadvantage to the above approach would be its high initial cost. A further possible disadvantage would be that response teams in some areas of the state where the risk is low would have very few responses and consequently may have difficulty maintaining an adequate state of readiness.

The second proposal would be to develop a three-tiered approach. Six teams (the third tier) would be equipped and trained to handle any risk posed by a hazardous materials incident. They would be strategically placed to provide response to any place in the state in under 4 hours. Nine other strategic locations would be provided with equipped and trained teams (the second tier) that would have enough of the basic gear to handle most incidents or protect the area until a Tier 3 team could arrive. Local first responders would still provide the first tier response. The disadvantage of this approach is that the response time for a Tier 3 emergency would be increased in those areas that are remote from Tier 3 teams. The advantage of this approach would be that the total initial system cost would be less while the highest risk areas would still be fully covered. In addition the coverage of all areas in the state to some higher level of protection would be accomplished in a shorter time period. Finally, as the state industrial base develops, the system could be upgraded at a later date so that some or all of the teams around the state could be brought up to Tier 3 capabilities as actual experience and

Figure 1: First proposal- 19 teams

STATE OF OREGON



potential for risk occurs. The system is flexible enough that local government could also upgrade a Tier 2 team at their own expense if they believed the risks were sufficient to justify the extra expense.

A final alternative would be to continue with the status quo. As discussed earlier, many jurisdictions out of concern for their employees and constituents are looking at available options for improving their hazardous materials response capabilities. In those areas that have the financial resources (generally the more urban areas), improvement in response capabilities will occur, but for other locales, the costs will be prohibitive and the present piece meal response system will continue.

The advantage to this approach is that all the responsibility remains at the local level. Many jurisdictions will eventually improve their ability to respond. A major disadvantage would be that without central or regional coordination, much duplication and inefficiency will probably occur. In addition, the costs will be borne by the local taxpayers, and because of the high costs, many areas of the state will remain unprotected with a resulting risk to the affected communities and individuals. Mutual aid agreements will probably not help these unprotected areas since they will have no resources to share mutually with a haz-mat team from another area.

#### Discussion

Of the three proposals, the second proposal calling for a three-tiered approach appears to be most acceptable at this time. It provides improved statewide protection within a reasonable response time and requires less initial money to implement. The following section provides more details on how the system is envisioned.

#### Initial Response

All agency people who could potentially be first on scene at an incident would be provided with Basic Haz-Mat Awareness training and would be able to size up a potentially dangerous situation, protect themselves from the hazard and know who to call for help. The call would go to the local emergency response number (9-1-1 if available) and a local response would be initiated.

#### Tier 1 Response

Tier 1 response would consist of local fire, police or any other emergency unit who at a minimum would be able to establish a secure perimeter at the scene, attempt to identify the hazard and protect the public until more specialized help arrives on scene.

#### Tier 2 Haz-Mat Teams

The Tier 2 hazardous material response teams would consist of at least four well-trained individuals per shift, 12 total who could respond to any haz-mat incident and be able to undertake life-saving tasks, control the less complex situations and secure the area if the situation called for the services of an advanced capability team. The main difference between the Tier 2 and Tier 3 teams would be the amount of response equipment. All members of the team would be required to have certification to at least a Haz-Mat Tech II level. The team would have a response vehicle and

sufficient equipment to do the jobs described above, but they would not have fully encapsulated suits.

### Tier 3 Haz-Mat Teams

The Tier 3 hazardous materials response teams would consist of a team of highly trained experts composed of at least five individuals on call during any work shift. At least 12 trained members would be available to cover all shifts. This team would be trained and equipped to respond to any haz-mat incident to stabilize and control the situation and assure public safety and well being. The captain of each unit would be required to have certification as an advanced haz-mat responder (Haz-Mat Tech III). This would require the completion of the proposed three levels of haz-mat training. Other members of the team would be required to have certification to at least Haz-Mat Tech II. The team would have a larger vehicle and a variety of encapsulated suits enabling them to handle any spill. They would have a wide variety of reference material and access to a computerized data base. It is expected that most team members for Tier 2 and Tier 3 teams would come from a full-time paid fire department but some jurisdictions have successfully integrated other disciplines into a team including law enforcement, emergency management, public works and health departments.

### Location of the Teams

The appropriate locations for the Tier 2 and Tier 3 haz-mat teams would be determined by the following criteria.

1. Level of Risk
  - a. Number of reported incidence in the area.
  - b. Variety and complexity of hazardous materials in the area.
  - c. The volume of hazardous materials transported and/or stored or utilized in the area.
  - d. The number of potentially affected people.
2. Response Time
  - a. Protection of public health.
  - b. Protection of the environment.
3. Resource Commitments
  - o Utilization of existing resources.

The actual placement of the haz-mat teams would also be dependent on:

1. Mutual aid agreements with all jurisdictions in a region and a commitment to provide maximum protection to all citizens.
2. Haz-mat plans that are consistent with all the local jurisdictions and the state plan.

3. Enough personnel to man a team on a 24-hour basis.
4. A commitment to Haz-Mat Technician II level training for all team members.
5. A location near the population center of a regional area.
6. Secure housing for haz-mat equipment.

Any entity within a regional area which met these criteria could apply to the state for a grant to establish a hazardous materials response team. In most cases, fire departments appear to be the logical applicants. They have trained and equipped personnel who are on-call 24-hours a day. They already respond to hazardous material incidents. Other local agencies or cooperative groups would not be excluded, however. Particularly in rural areas where no paid fire departments exist, it may take a cooperative effort from a number of agencies to maintain a hazardous materials response team.

#### Level of Risk

Based on available information, the main risk areas in Oregon are the major transportation corridors along I-5, I-84, and US-97 and the rail lines that follows these highways. The DEQ's spill report data (See Table 1 & Figures 2 & 3) indicate that the largest number of spill incidents, both chemical and petroleum, occur in the Portland metropolitan area followed by the Willamette Valley and the I-5 corridor from Eugene south. The I-84 and highway 101 corridors follow next with US-97 having the fewest reported spills. The eastern interior had very few incidents. Not surprisingly the number of spills roughly corresponds to the major centers of population, suggesting that those areas with the most population have the greatest risk of spills.

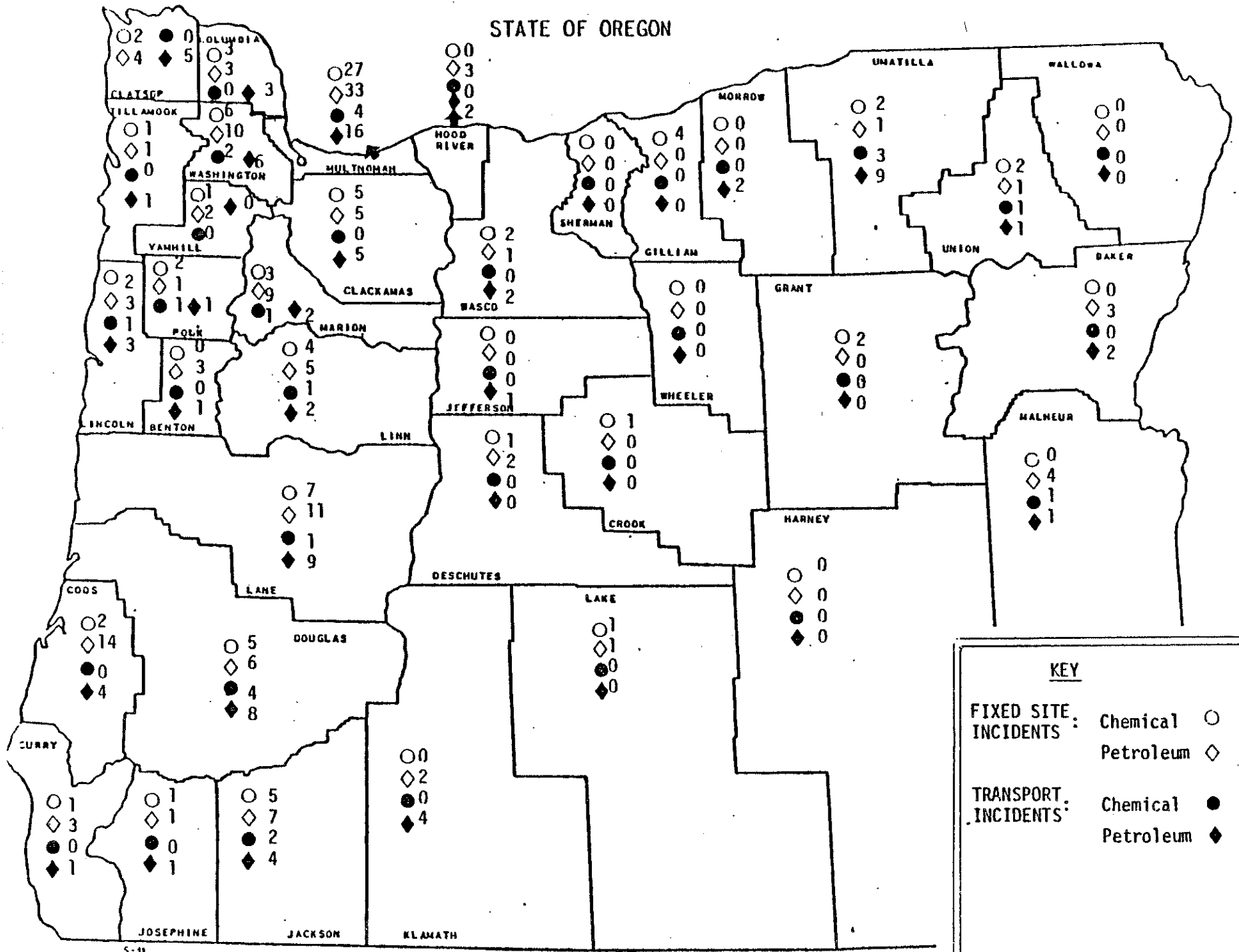
Table 2 analyzes the spill data from 1985 with respect to the type of product spilled and whether it is a fixed site or transportation related. As can be seen, fixed site incidents account for 2/3 of the reported spills. Petroleum products likewise account for about 2/3 of the total products spilled. Figure 2 depicts this breakdown on a county-by-county basis. Figure 3 shows actual location of spills. The 1981-85 data (Table 1) indicate the percentage of chemical products spilled has increased, which suggests that the risk from chemical spills is likewise increasing.

Risk can also be examined by the volume, variety and complexity of materials that can potentially be spilled. Using this criteria, the major industrial areas present a high risk as do the major transportation routes for rail and truck. Lesser risks in terms of variety and volume of materials would be encountered in areas such as, the eastern interior and the coast where petroleum products, pesticides and fertilizers are the major hazardous materials utilized and transported. Data currently being collected by the State Fire Marshal (Hazardous Substance Survey) and proposed to be collected by the Public Utility Commission (Transportation Survey) will assist in a better analysis of the risks.

#### Response Time

The second criteria, response time, is also a key element. All of the state must be adequately protected. If we use the three-tier approach as

FIGURE 2: 1985 Incident Data by County



-8-

**KEY**

FIXED SITE INCIDENTS: Chemical ○  
 Petroleum ◇

TRANSPORT INCIDENTS: Chemical ●  
 Petroleum ◆





TABLE 2: ANALYSIS OF DEQ's 1985 SPILL DATA

<u>Type of Spill or Release</u>	<u>Number</u>	<u>Percentage</u>
Petroleum	239	67
Gasoline	42/239	17.5
Chemical	117	33
PCB	35/117	33
Total	356	100
Transportation	123	34.5
Fixed Site	233	65.5
Total	356	100
Highway Related	112/123	91
Railroad Related	11/123	9
Petroleum		
Primary State Highway	45/100	45
Other Highways	55/100	55
Chemical		
Primary State Highway	12/ 23	52
Other Highways	11/ 23	48

described, the Tier 3 teams must be able to cover the high risk areas in a timely manner, but the other areas of the state must have timely Tier 2 coverage, which can provide protection and support the initial responders (Tier 1) until an advanced team arrives. The three-tier approach makes having an hour to two hours response time to most places in the state still appear to be a valid criteria.

### Existing Resources

The final criteria is to build on already existing resources if possible. This provides two-fold benefits: first, initial costs can be minimized and secondly, it may be possible to speed up implementation since varying amounts of the planning, training and equipment procurement have already been done. Further, total initial costs are less thus allowing more areas of the state to benefit from fewer dollars. At present, two haz-mat teams exist in the Portland area, while other areas of the state including Eugene, Roseburg and Redmond have partly equipped haz-mat teams. Various aspects of haz-mat planning and implementation are occurring in other areas as well.

### Discussion

The three criteria when taken as a whole suggests that advanced teams with the most highly trained and equipped responders would have to be located near the highest risk areas so as to provide the shortest response time and the best capabilities. The Portland metro area and I-5 corridor appear to need the best coverage. The I-84, Hwy 101, and US-97 corridors need good coverage as well, but the number of incidents, and smaller population base suggests that a longer response time may be acceptable. The eastern interior of the state appears to need the least amount of protection.

This evaluation suggests an approach as depicted in figure 4 which shows the boundaries and home base for six (6) Tier 3 haz-mat teams. The boundaries are not absolute and it is expected that adjacent haz-mat teams would assist each other through mutual aid agreements. Team number 1 in East Portland, (City of Gresham/Multnomah County Team), would cover the eastside of Portland from S.E. 122nd east to The Dalles, south to Salem, southeast to Mt. Hood and to the north end of US-97. Team number 2 in North Portland (City of Portland Team) would cover the North Portland industrial area, the city west of S.E. 122nd, the coast to Astoria and Lincoln City and go south to Salem as a backup to the first team. Team number 3 in Eugene (City of Eugene's Team which exists in part) would cover north to Salem, west to the coast including Reedsport and Newport, east to the Cascades summit and south to Cottage Grove. Team number 4 in Medford (which does not exist) would cover north to Cottage Grove, the coast from Coos Bay to Brookings, south to Ashland and east to the Cascade summit. Team 5 in the Bend/Redmond area (City of Redmond which exists in part) would cover north along US-97, south to Klamath Falls, west of the Cascade crest and east to the Burns and Lakeview area. The 6th team in Pendleton (which does not exist) would cover east to Ontario, west along I-84, south to Burns and north to the Washington border.

Figure 5 depicts the establishment of nine (9) Tier 2 teams to cover areas that are distant from advanced teams and provide backup to the advanced teams. These teams include: Tualatin, Newport, Coos Bay, Salem, Roseburg, Klamath Falls, The Dalles, LaGrande and Ontario. All of these locations have paid fire departments and some have response mechanisms and training already established. Most notable of these is the Winston/Dillard Fire Department for Douglas County.

Figure 4: Location of 6 Tier-3 Teams

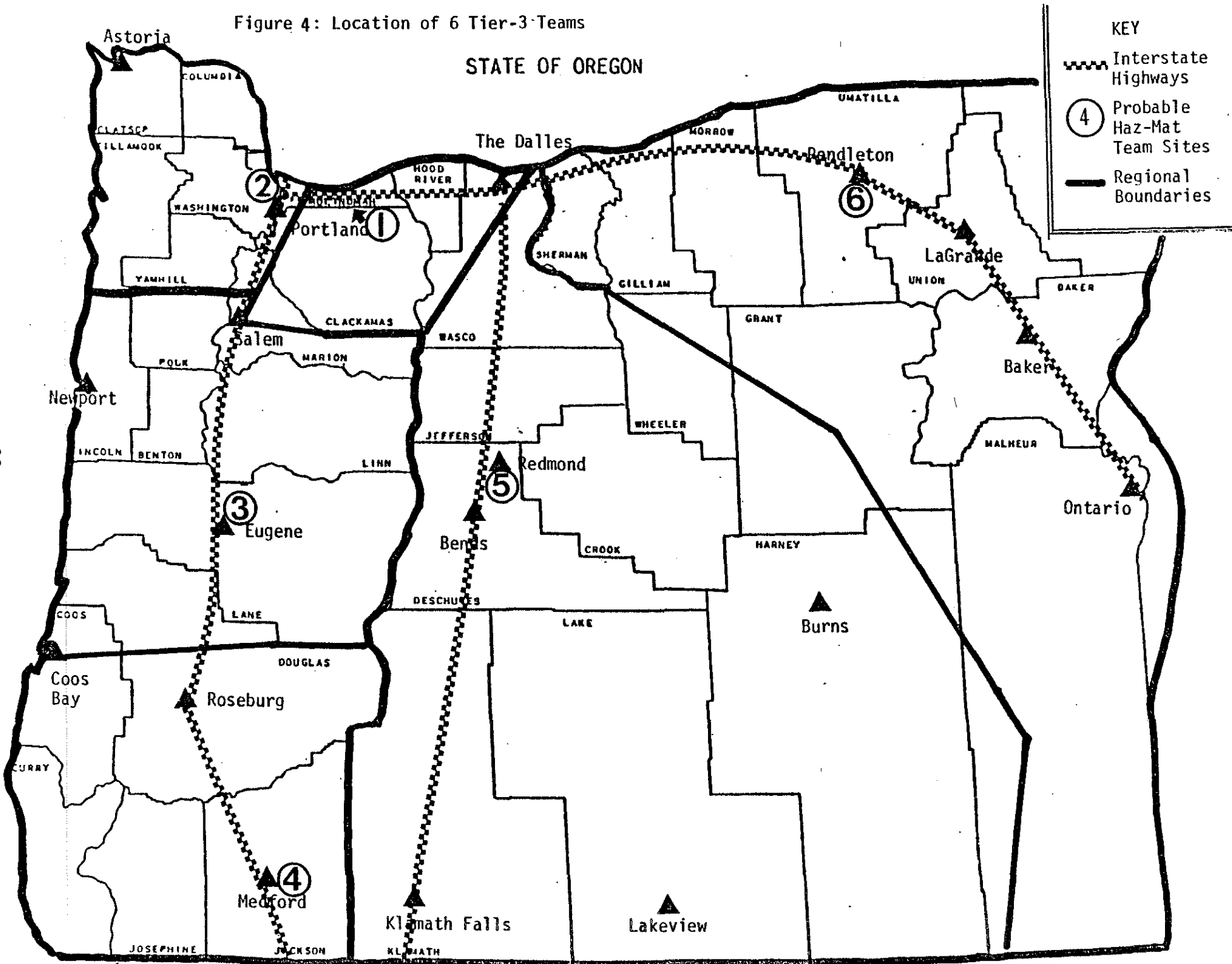



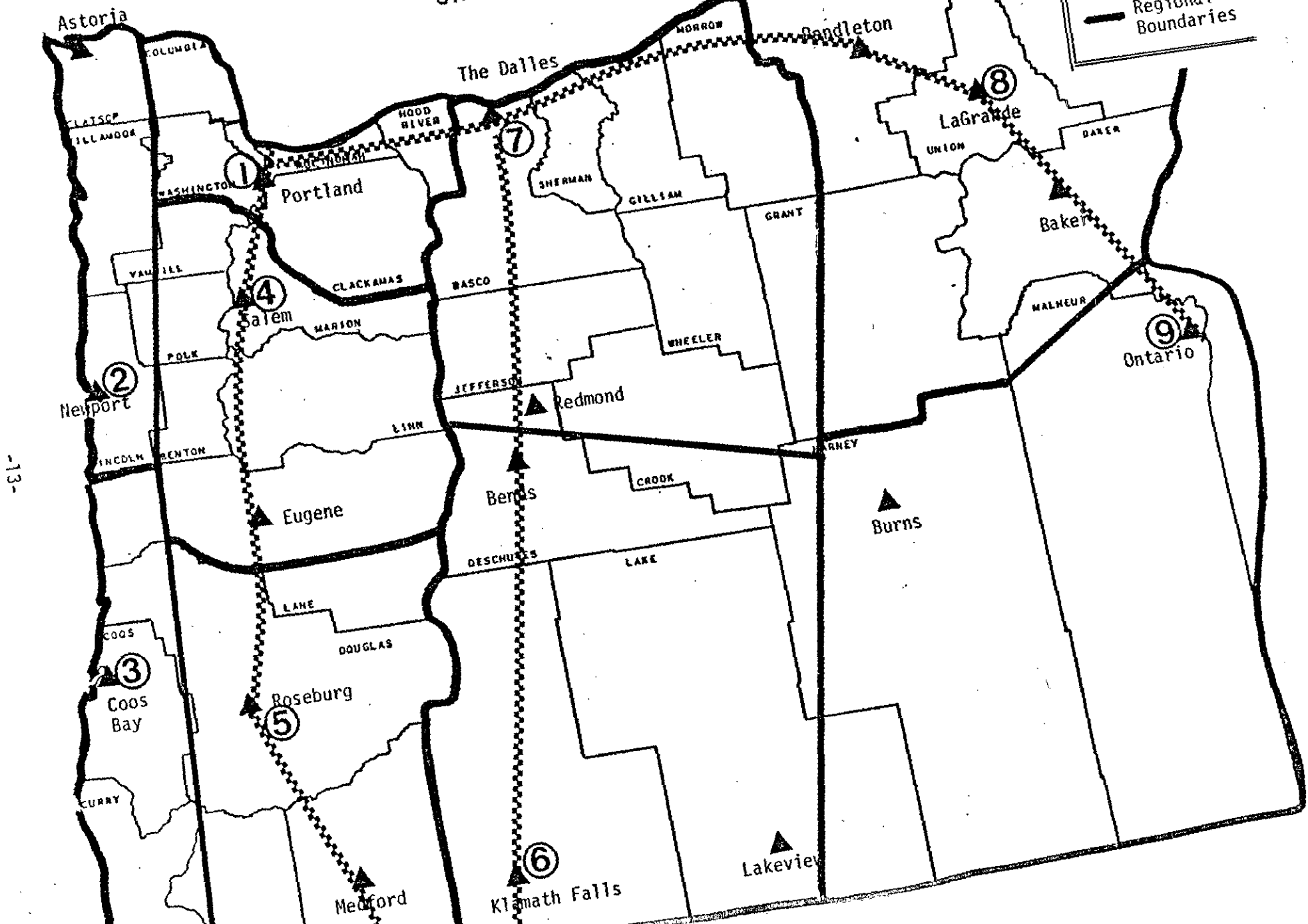


Figure 5: Location of 9 Tier-2 Teams

- KEY
-  Interstate Highways
  -  Probable Haz-Mat Team Sites
  -  Regional Boundaries



Using this format, most places west of the mountains would be within two hours response time of a Tier 3 haz-mat team or an hours time of any response team. Areas east of the mountains would be within 3 hours of a Tier 3 team and within 2 hours response time from a haz-mat team. The areas with the highest number of reported incidents would all be within one hours response time.

### Team Composition

Although team composition may be largely fire service personnel, we also recommend the inclusion of auxiliary members such as public works, law enforcement, environmental services and health. These individuals would also receive Haz-Mat Tech II training and could provide backup members to the team as well as respond with the team when the situation required their specialized expertise.

If all members of both the Tier 2 and Tier 3 teams had at least a Haz-Mat Tech II training, then it would be possible for there to be an interchange of members, thus, for example, a Tier 3 team responding from Medford to Roseburg could actually pick up some of its team members from the Tier 2 team housed in Roseburg. There might likewise be a sharing of equipment. This would mean that fewer people and less equipment would have to be called out from the Medford area, with a corresponding decrease in the amount of resources tied up out of jurisdiction.

Another role of haz-mat team members may be to act as trainers for first responders. This would not only increase the pool of first responder trainers but would also build communications between the teams and the regional area they serve.

### Costs

Earlier reference was made to the similarity between this regional concept and mutual aid agreements that already exist. The difference is that interagency costs may balance over time in mutual aid situations whereas haz-mat response will largely be one way because of the specialized training and equipment required. Since all citizens of the state will benefit by a regional program, it is proposed that the state financially support the capitol expenditures part of the program as well as to arrange for a statewide training program.

Thus, most of the cost of training and equipping the teams and providing for equipment replacement would be borne by the state. Costs for response outside a Department's jurisdictional boundaries would also be covered by the state, including the overtime cost for temporarily replacing people who are called out. The state, when possible, would try to recover response costs through actions against the spiller. As mandated by the legislature the cost of cleanup will be borne by the state through the existing Oil and Hazardous Material Emergency Response and Remedial Action Fund. Local jurisdictions, on the other hand, will be expected to cover the cost of employees salaries, insurance and equipment upkeep.

Table 3 on the following page provides our best estimates on the actual costs of equipping and operating Tier 2 and Tier 3 teams. The information comes from the Redmond Haz-Mat Team and the Gresham Haz-Mat Team who currently field Tier 2 and Tier 3 teams respectively. The figures are for discussion purposes only, further refinements will be necessary as the system comes closer to implementation.

Table 4 on page 18 compares the total costs of Proposal 1 versus Proposal 2. As can be seen, the initial cost of Proposal 1 is estimated to be \$2,850,000 compared to \$1,350,000 for Proposal 2.

TABLE 3

ESTIMATED HAZ-MAT TEAM EXPENSES

	Tier 2 <u>Intermediate Team</u> (i.e., Redmond FD)	Tier 3 <u>Advanced Team</u> (i.e., Gresham FD)
1. Team Members	6 full-time paid volunteers	12 full-time paid
2. Present Equipment Costs	\$45,000 - includes \$5,000 for used van, \$40,000 for other equipment plus 4 encapsulated suits.	\$250,000 - includes van and equipment plus 8 encapsulated suits, an on-board computer, a radio phone, extensive reference library.
3. Response Fees	\$125/hr. - van \$ 75 hr. - back up \$ 10 hr./person no mileage	\$150/hr. van \$150/hr. back up \$ 30/hr./man @ 1 1/2 time no mileage
4. Estimated Cost of Response	Minor incidents \$200-400 Major " \$1,500-4,000 (based on 3 major incidents)	Minor \$300-500 Major \$1,000-3,000
5. No. of Responses 1985	2 major numerous minor which did not require haz-mat van	30-40 major 15 minor

ESTIMATED COST OF STATE FUNDED TEAMS

1. Intermediate Team: \$50,000 includes van and equipment but no encapsulated suits.
2. Advanced Team: \$150,000 includes van and equipment and 4 encapsulated suits, limited reference library, and no on-board computer initially.
3. Equipment Repair: \$5,000/team/year
4. Response Expenses: Estimated

A. Intermediate Team:

\$2,000 X 10 major incidents = \$20,000  
 \$300 X 20 minor incidents = \$ 6,000  
 Total: \$26,000

TABLE 3 (cont'd)

B. Advanced Team:

\$2,000 X 10 major incidents	=	\$20,000
\$400 X 20 minor incidents	=	<u>8,000</u>
Total:		\$28,000

5. Replacement Schedule (depends on use)

\$150,000/team every 10-15 years

6. Upgrades of Equipment

Every 5 years \$20,000/upgrade



TABLE 4

TOTAL COSTS OF ALTERNATE PROPOSALS

● Proposal 1: 19 Tier 3 - Advanced Capability Teams

Initial  
Capitol Outlay

Outfitting Teams 19 teams @ \$150,000/team = \$2,850,000

Ongoing  
Expenditures

Equipment Repair \$ 5,000/team/yr. = \$ 95,000  
Response Expenses \$28,000/team/yr. = \$532,000  
Equipment Upgrade \$20,000/team/5 yrs. = \$ 76,000

TOTAL: \$703,000 yearly

Long-Term Expenditures

Replacement Schedule \$150,000/team/10-15 years

● Proposal 2: 9 Tier 2 Teams & 6 Tier 3 Teams

Initial  
Capitol Outlay

Tier 2 Teams

Tier 3 Teams

Outfitting Teams 9 teams @ \$50,000/team = \$450,000  
6 teams @ \$150,000/team = \$900,000

TOTAL: \$1,350,000

Ongoing  
Expenditures

Equipment Repair \$ 5,000/team/yr. = \$ 45,000 \$ 5,000/team/yr. = \$ 30,000  
Response Expenses \$26,000/team/yr. = \$234,000 \$28,000/team/yr. = \$168,000  
Equipment Upgrade \$20,000/team/5 yrs. = \$ 36,000 \$20,000/team/5 yrs. = \$ 20,000  
\$315,000 \$218,000

TOTAL: \$533,000 yearly

Long-Term Expenditures

Replacement Schedule \$50,000/team/10-15 yrs.

\$150,000/team/10-15 years

## Funding

At the present time, the Department of Environmental Quality is proposing the funding of a regional haz-mat team system through a series of fees on all businesses who manufacture, use, store and transport hazardous materials. Should the proposed funding methods be approved, the DEQ will establish a committee composed of representatives from all levels of government which would review the proposed criteria, the spill data, evaluate the risk and make final decisions on where state financed haz-mat teams would be located.

## Summary & Conclusions

Hazardous materials incidents are occurring with increasing frequency around the state. Local emergency responders are expected to provide the initial response to such incidents but in most cases they are not adequately trained or equipped to handle the complex and potentially dangerous situations. Trained and equipped haz-mat teams may be several hours away.

Because of the high costs involved in putting together a haz-mat team, the state is proposing to assist funding a statewide system of trained and equipped haz-mat teams which would provide support to local responders. The proposed system would consist of three tiers of response. The first tier would be the existing local emergency responders such as fire and police. The second tier would be composed of nine strategically located teams that could respond to an incident to undertake life saving tasks, control the less complex situations and secure the area if the situation called for the services of the advanced capability team. The third tier would consist of six teams located in the highest risk areas of the state that would be trained and equipped to handle any situation.

The location and composition of the teams would be determined by the level of risk, the time of response, available resources and local commitment. Costs of training and equipping the teams would be borne by the state as would the actual response costs involved in responding out of jurisdiction. Local government would cover the costs of maintaining the team. Funding for the program is being pursued through a series of fees on businesses which manufacture, use, store and transport hazardous materials.

## Resolution

The DEQ's HB 2146 Policy Advisory Committee approved by a unanimous vote the concept of a three-tiered regional haz-mat team system. The committee also approved by unanimous vote the recommendations that the entire 15-team system be funded in the 1987-89 biennium.

## STATE HAZARDOUS MATERIALS RESPONSE TEAM

### Background

Regional hazardous materials response teams would be called into service during any hazardous materials incident where technical expertise and/or specialized training and equipment are needed to deal with an emergency situation. The regional hazardous material team would be expected to provide assistance to local emergency response crews during the containment and control phase of the response as well as during short-term, minor cleanups (8 hours or less).

For incidents requiring long-term cleanup to assure stabilization and restoration (days or weeks), a different response is needed. It is unrealistic to expect the regional hazardous material team to remain on-scene once the emergency aspects of the incident are under control. To continue to stay on-scene lessens the level of protection these teams provide to their local jurisdictions and the regional area. It also escalates costs to local government. Lastly, different technical expertise in a variety of disciplines may be needed to assure proper restoration of the site and the environment.

### Proposal

For this reason, a state hazardous materials response team is also needed. It would be composed of one or more technical experts from each of the state agencies most closely involved in hazardous materials. The team members should represent multiple disciplines such as biology, fisheries and wildlife, chemistry, geology, hydrology, public health, fire, explosion, and radiation. Agencies represented on the team should include: Environmental Quality, Fish and Wildlife, Health, Agriculture, Fire Marshal, Oregon State Police, Forestry, and PUC. Depending on the type of situation, one or more of the agencies and disciplines could be involved in a cleanup response.

Since the team would still be dealing with a potentially hazardous situation, all members would have to be trained and equipped to the Haz-Mat Tech II level. A vehicle would be specifically assigned to this group that would be capable of carrying all potentially needed personal safety and other equipment. It would be housed in Portland and maintained on-call 24 hours a day by a designated agency. The team would generally respond only during major emergencies or upon request.

### Costs

Using the information from Table III, the cost of purchasing and equipping a haz-mat response team for the state would be \$150,000. Employee wages and training expenses would be borne by the participating agencies.

### Conclusions

At present the state cannot field an interagency haz-mat team. The expertise exists, but there is no coordinated training, specialized equipment or a vehicle available for those who might be responders. Several incidents in the past few years could have been handled better if a state team had been in existence. To complement the statewide system of regional response teams, a state hazardous material team should be established to handle the cleanup and site restoration phase of an emergency. The team should periodically exercise and train with regional response teams to ensure effective cooperation between teams.

Attachment XI  
Agenda Item D  
1/23/87, EQC Meeting

RESOURCE MATERIAL TO THE OIL AND HAZARDOUS MATERIALS  
EMERGENCY RESPONSE PLAN

THE HAZARDOUS MATERIALS TECHNICAL ADVISORY COMMITTEES  
FINAL REPORTS

Oregon Department of Environmental Quality  
January 1987

The following report summarizes the work of the three technical advisory committees established by the DEQ to provide input into the hazardous materials planning process. The planning committees task was to advise on the adoption of a master plan and to determine local hazardous material planning needs. The training committee's task was to advise DEQ and others on the training needs of various emergency responders and to propose a statewide training program. The equipment committee's task was to determine presently available hazardous material response equipment and to propose a series of minimum equipment standards for all responders. The conclusions and recommendations of each committee are of particular importance.

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THE HAZARDOUS MATERIALS TECHNICAL ADVISORY COMMITTEES  
FINAL REPORTS

SECTION I. Background

The accidental release of oil and hazardous materials into the environment is a continual threat to the health, safety and well being of all Oregonians. Public concern of this issue prompted the 1985 Oregon Legislature to pass a number of bills relating to hazardous materials. Among those was Oregon Revised Statutes (ORS) 466.605 to 466.690 which:

- o Requires the Department of Environmental Quality to develop a statewide Oil and Hazardous Material Emergency Response Master Plan in cooperation with other state agencies, local government and industry;
- o Establishes an oil and hazardous material emergency response fund to clean up spills which are not handled in an appropriate and timely manner by the responsible party. Authority to seek recovery of these costs is also provided.

To initially identify the issues which should be addressed by the plan, DEQ staff reviewed planning documents and interviewed a cross-section of the Oregon emergency response community. As a result of this review/interview process, it was determined that the plan must:

- o Define the roles and responsibilities of local, state, federal and industry response personnel;
- o Establish the procedures necessary at the local, state, federal and industrial level to carry out the plan;
- o Outline the training needs for response personnel and identify ways it can be provided;
- o Outline equipment needs including personal safety equipment for response personnel and ways that it can be provided;
- o Describe the planning need at all levels to assure adequate and prompt response and ways to achieve it; and
- o Attempt to incorporate the Department of Energy radiation response plan into the hazardous materials plan.

To accomplish these tasks, three technical advisory committees were established to advise the DEQ on the master plan development and evaluate the planning, training and equipment needs of the Oregon emergency response community and make recommendations for improving the spill response system.

Extensive efforts were made to involve all interested parties by requesting their participation on the technical advisory committees. Industry, volunteer organizations, local emergency agencies (fire, police, public works), emergency managers (county and city), county health, state and federal agencies were all encouraged to send representatives. Public hearings on the plan were held in Portland, Eugene, Medford, Bend and Pendleton in early December. Final adoption of the plan by the Environmental Quality Commission is expected on January 23, 1987.

## SECTION II. Hazardous Materials Planning Committee

The membership of the Planning Committee is shown on pages 5 and 6. To assure that the experience of other state agencies was utilized and that they were closely involved in the process, the DEQ asked the Emergency Management Division (the state's emergency planning agency) to chair this committee. The chair also became a part of the four-agency steering committee made up of the DEQ, State Fire Marshal, Department of Energy, and Emergency Management Division, which met on a twice-monthly basis to oversee the activities of the various technical committees:

### A. Goals and Objectives

Prior to the first meeting of the planning committee, DEQ staff developed a list of goals and objectives for the committee members. The two main goals for the committee were:

1. To work with the DEQ to develop a draft master plan that accurately describes how the state system works and what the roles and responsibilities of all responders are, and
2. To identify what planning activities are currently underway or have been completed around the state, and what are the planning needs of the various response groups.

### B. Process

The process for attaining these goals focused on obtaining the most representative groups of committee members and meeting with them monthly to solicit their input, guidance and consensus on the draft plan (Goal 1) as it progressed through the various stages of development. The first meeting of the full planning committee was in February. It has met on a monthly basis since that time. The emphasis on representation resulted in a committee whose active membership averaged around 35 attendees per meeting. Because of its size, small subcommittees were occasionally formed to look into specific issues.

The work on a draft plan began by reviewing the Department of Energy plan for radiation incidents and making slight modifications to see how it fit for hazardous materials. Over a period of time, this document was revised and modified into the draft hazardous materials plan. The concept and overall format of the radiation plan remained, but radioactive materials became one of the hazardous materials covered by the plan.

Goal 2 called for an evaluation of hazardous material planning activities around the state. The committee began by evaluating existing plans but early on agreed that a questionnaire was probably the best way to obtain this information. A subcommittee was formed to draft a planning questionnaire which was then approved by the entire committee. The planning questionnaire (see Figure 1) was later combined with similar questionnaires developed by the training and equipment committees and mailed out on the 1st of August to 800 agencies and industries.

Another aspect of the planning process focused on the development of a number of resource materials to the master plan. The authorities and references section was reviewed and approved by the Oregon Accident Response System Council. The proposal for the formation of regional hazardous material response teams was formulated by the DEQ staff and approved by its policy advisory committee. Model first responder guidelines were reviewed by the planning committee. The committee reports were prepared by the DEQ and the committee chairperson and approved by the committee.

#### C. Conclusions

The Oil and Hazardous Material Emergency Response Plan in its final form details how the statewide Emergency Response System is supposed to function. It is a consensus document having been derived through extensive participation from all levels of the response community. Its successful implementation is dependent on a continued spirit of cooperation and communication between all parties. A key factor in assuring its workability is providing hazardous material training so that all responders understand their role and responsibility and how to safely perform their respective functions. Maintaining the viability of the system is likewise dependent on an adequate funding source to provide necessary training to responders on an ongoing basis.

The committee generally felt that there was a need for more planning and planning assistance for hazardous materials incidents at the local level. The questionnaire, which has not been completely evaluated at the time of writing, is expected to provide more verification of this need.

#### D. Recommendations

In order to assure the viability of state Hazardous Materials Response System, the Hazardous Material Planning committee recommends that:

1. State Legislature approve DEQ's request to establish fees to maintain the master plan and to assure its implementation by providing assistance to local jurisdictions to train and equip emergency responders to carry out the responsibilities outlined in the plan.
2. State Legislature approve the fee requests of the State Fire Marshal's office and consider the funding request of the Emergency Management Division to carry out their planning authorities for hazardous materials under ORS 453 and 401.
3. State agencies, local government and private industry review the plan to ensure their understanding of the system and their responsibilities as well as to ensure the consistency of their plans with the statewide plan.
4. Local governments work with their emergency manager, fire defense board, and others to: a) predesignate by geographic areas and hazard the lead local emergency response agencies throughout their jurisdiction, b) identify



these agencies in their emergency operations plan, and  
c) develop mutual aid contracts to provide first response to hazardous materials incidents in areas otherwise unprotected.

5. Local governments make use of the State Fire Marshal's Hazardous Substance Survey Data Base in developing local response plans.
6. DEQ utilize questionnaire results to assist in the process of determining priority areas in need of hazardous materials planning assistance.
7. A mechanism be established to coordinate hazardous materials planning assistance offered by various state agencies.
8. Planning assistance serve as a vehicle for implementation of the State Plan: a) by providing information to local government on "What the Plan says" (expects from/offers to local government), and b) by encouraging the process addressed in #4 above.
9. State Legislature adopt the concept of regional hazardous materials response teams as an effective use of limited state resources, and begin to fund these teams through the DEQ's fee requests during the next biennium.
10. State Legislature approve the hazardous materials communications network proposed by the Interagency Hazard Communications Council.

HB 2146 HAZARDOUS MATERIALS  
PLANNING COMMITTEE  
MEMBERSHIP

State Agencies

1. Joseph Murray - Chairperson  
2146 Steering Committee  
Emergency Mgmt. Division
2. Bruce Sutherland - Proj. Coordinator  
2146 Steering Committee  
Dept. of Environmental Quality
3. Rich Reiter, Proj. Manager, DEQ  
- 2146 Steering Committee  
- Dept. of Environmental Quality
4. Bob Robison  
2146 Steering Committee  
Dept. of Energy
5. Virginia Honeywell/Mike Boyce  
2146 Steering Committee  
State Fire Marshal
6. Nick Goevlinger/Bob Crosby  
Health Division
7. Dan Shults  
Dept. of Forestry
8. Paul Henry  
Public Utility Comm.
9. Rob Edgar  
Dept. of Transportation
10. Major Richard Verbeck  
Oregon State Police
11. Irving Jones  
Ore. Dept. of Fish & Wildlife

Federal Agencies

1. Gordon Goff  
Environmental Protection Agency
2. Gary Rundell  
Bureau of Land Management
3. Lt. Ivan Nance  
U.S. Coast Guard

Industry

1. Trucking  
  
Bruce Leonard  
ANR Freight

Industry (Cont'd.)

2. Railroads  
  
Michael Eyer  
Bureau of Explosives
3. Chemical Manufacturers  
  
Lewis Weidewitsch  
Pennwalt Corp.
4. Mark Warkington  
Tektronix Corp.

Emergency Groups

1. Oregon Fire Chiefs' Assn.  
Sid Boddy - Medford FD  
Duke Groff - Charleston FD
2. Alvin Allen  
Ore. Assn. of Chiefs of Police
3. Casey Marley  
Emergency Mgmt. Assn.
4. John Graham  
Douglas County Health
5. Frank Divers  
Oregon Fire Instructors Assn.

Emergency Medical

1. Mary McGettingan  
Oregon Fire Medical Adm. Assn.
2. Chuck Harris  
Emergency Medical Tech. Assn.

Indian Nations

1. Dale Parker  
Warm Springs

Other Participants

1. Maurice Thompson  
Portland Fire Bureau
2. Mark Walkley  
Portland Fire Bureau
3. Tom Almond  
Portland Fire Bureau
4. Steve Ramberg  
Coos Bay Fire Dept.

Other Participants (cont'd.)

- |     |   |     |  |
|-----|---|-----|--|
| 5.  | Bill Belding<br>Winston-Dillard Fire Dept.        | 12. | Tom Thompson<br>Tualatin Fire Dist.          |
| 6.  | Gary Rose<br>Douglas Co. Fire Dist. #2            | 13. | Paul Sunset<br>Mt. Hood Comm. College        |
| 7.  | Frank Oulman<br>City of Beaverton Emergency Mgmt. | 14. | Colleen King<br>Umatilla Co. Emergency Mgmt. |
| 8.  | Mike Lander<br>Portland Emergency Mgmt.           | 15. | Mitch Wang<br>State Fire Marshal             |
| 9.  | James Hill<br>Salem Fire Dept.                    | 16. | Dan Loomis<br>State Health Division          |
| 10. | Jim Corcoran<br>City of Salem, Pollution Control  | 17. | Dave Yandell<br>Emergency Mgmt. Div.         |
| 11. | Al McMahan<br>Marion Co. Fire Dist #1             |     |  |

Figure 1:

Agency Name \_\_\_\_\_ Name of Person \_\_\_\_\_  
Who Filled Out \_\_\_\_\_  
Address \_\_\_\_\_ Form and Phone # \_\_\_\_\_  
\_\_\_\_\_

PART I - Planning [Please check the appropriate boxes]

1. Does your agency have a written disaster plan? A. \_\_\_\_\_ Yes  
B. \_\_\_\_\_ No
2. Does your agency have a written hazardous materials emergency response plan?
- A. \_\_\_\_\_ Yes, it is part of our basic disaster plan.  
B. \_\_\_\_\_ Yes, we have a specific plan for hazardous materials emergencies.  
C. \_\_\_\_\_ No, but we are in the process of developing a plan.  
D. \_\_\_\_\_ No.

If your response was either C or D, please skip to the training section of this questionnaire.

3. Does your agency's plan outline functional responsibilities of the following groups? Please indicate yes or no for each.

_____ a. Fire	_____ g. Dispatch
_____ b. Law Enforcement	_____ h. Local Emergency Management
_____ c. Public Works	_____ i. Industry
_____ d. Health	_____ j. State Agencies
_____ e. Ambulance	_____ k. Federal Agencies
_____ f. Hospitals	

4. Does your agency have agreements or procedures with each of the agencies you have checked in question #3? (indicate by letter)
- A. \_\_\_\_\_ Yes, we have verbal agreements with \_\_\_\_\_.  
B. \_\_\_\_\_ Yes, we have written agreements with \_\_\_\_\_.  
C. \_\_\_\_\_ No.
5. Do you meet regularly with the agencies checked in question #3? (indicate letter)
- A. \_\_\_\_\_ Yes, yearly with \_\_\_\_\_.  
B. \_\_\_\_\_ Yes, monthly with \_\_\_\_\_.  
C. \_\_\_\_\_ Yes, occasionally with \_\_\_\_\_.  
D. \_\_\_\_\_ No.
6. Has your agency ever implemented your hazardous materials emergency response plan?
- A. \_\_\_\_\_ Yes, during interagency exercises.  
B. \_\_\_\_\_ Yes, during internal exercises.  
C. \_\_\_\_\_ Yes, during emergencies.  
D. \_\_\_\_\_ No.
7. Does your plan address incident management responsibilities (who is in charge) for various types of hazardous material incidents?
- A. \_\_\_\_\_ Yes, for all agencies party to the plan.  
B. \_\_\_\_\_ Yes, for our agency only.  
C. \_\_\_\_\_ No.

Figure 1 (cont'd.)

8. Do you feel your agency's hazardous material emergency response plan is adequate?
- A. \_\_\_\_\_ Yes.
  - B. \_\_\_\_\_ No, but we are in process of improving it.
  - C. \_\_\_\_\_ No, we would like to have assistance from the state.
  - D. \_\_\_\_\_ No.

### SECTION III. Hazardous Materials Training Committee

The membership of the Training Committee is shown on pages 11 and 12. To assure that the experience of other state agencies was utilized and that they were closely involved in the process, the DEQ asked the Oregon Department of Energy (ODOE) to chair this committee. ODOE coordinates emergency preparedness, including training for radioactive materials. The chair also became a part of the four-agency steering committee made up of the DEQ, State Fire Marshal, Department of Energy, and Emergency Management Division, which met on a twice-monthly basis to oversee the activities of the various technical committees:

#### A. Goals and Objectives

Prior to the first meeting of the Training Committee, DEQ staff developed a list of goals and objectives for the committee members. The goals for the committee were:

1. To identify all the hazardous materials training courses that are presently available to emergency responders in Oregon.
2. To identify the training needs of all individuals who might be involved in a hazardous materials incident.
3. To develop a series of standardized hazardous material training courses for the individuals and groups identified as needing training.
4. To use the standards as a basis for evaluating the training which is presently available.
5. To propose the establishment of new courses where they are needed.
6. To propose an approach for delivering the courses.

#### B. Process

The process for attaining these goals focused on obtaining the most representative groups of committee members and meeting with them monthly to solicit their input, and guidance in designing a training plan. The first meeting of the full Training Committee was in February. It met on a monthly basis through October. The emphasis on representation resulted in a committee whose active membership averaged around 30 attendees per meeting.

The work began by attempting to obtain descriptions of all the hazardous material training courses presently available around the U.S. As this list was formulated, the committee worked on developing a questionnaire which would assess what hazardous material training potential responders presently have and what they feel they need to adequately and safely perform their specific responsibilities.

The training questionnaire which finally evolved (see Figure 2) was later combined with similar questionnaires developed by the planning and equipment committees and mailed out on the 1st of August.

A major aspect of the committee tasks focused on the identification of the various groups that need hazardous material training and developing a plan to train each group. To do this a number of subcommittees were formed composed of individuals with knowledge about the specific disciplines. The amount of detail each work group accomplished varied depending on staff time. Most of the plans include draft skills and competencies and some other course materials. Their recommendations were then presented to the whole Training Committee for review and approval. A summary of the plans is found in Section E below. More detailed information is available from the listed lead agencies.

### C. Conclusions

The following groups of responders were identified as needing training in hazardous materials:

- public health
- public works employees,
- law enforcement,
- emergency medical personnel,
- fire fighters,
- emergency managers,
- state technical assistants,
- incident commanders,
- hazardous material team members, and
- any other potential first on-scene responders.

There was a general consensus among the committee members that most of the above groups need more training. The questionnaire results, which are still being evaluated, are expected to bear out this need.

Due to time constraints, the committee decided that an evaluation of the training courses presently available, with respect to the proposed training standards, was not possible. Such an evaluation needs to be undertaken, however, before a specific training program is implemented.

HB 2146 HAZARDOUS MATERIALS  
TRAINING COMMITTEE  
MEMBERSHIP

State Agencies

1. Bob Robison - Chairperson  
2146 Steering Committee  
Dept. of Energy
2. Bruce Sutherland - Proj. Coord.  
2146 Steering Committee  
Dept. of Environmental Quality
3. Rich Reiter - Project Mgr.  
2146 Steering Committee  
Dept. of Environmental Quality
4. Joseph Murray  
2146 Steering Committee  
Emergency Management Division
5. Le Ann Janusch/Virginia Honeywell  
2146 Steering Committee  
State Fire Marshal
6. Nancy Clarke  
Health Division
7. Dan Shults  
Dept. of Forestry
8. Dale Rhodes  
Accident Prevention Division
9. Dave White  
Dept. of Transportation
10. Howard Brock  
Dept. of Education
11. Jim Stewart  
Brd. of Police Standards & Trng.
12. Lt. Richard Bouie  
Oregon State Police

Federal Agencies

1. Gordon Goff  
Environmental Protection Agency
2. Gary Rundall  
Bureau of Land Management

Industry

1. Trucking  
Carol Fuller  
Widing Transportation

2. Railroads  
Rick Sloan  
Southern Pacific Railroad  
Michael Eyer  
Bureau of Explosives
3. Chemical Manufacturers  
Lewis Weidewitsch  
CMA - Pennwalt Corp.

Local Emergency Groups

1. Rick Hopkins  
Oregon Fire Chiefs' Assn.
2. Dave Rouse  
Ore. Assn. of Chiefs of Police
3. Penny Malmquist  
Emergency Management Assn.
4. Joe Reeves/Harold Halleck  
Ore. State Fire Fighters Council
5. Oregon State Sheriffs' Assn.

Community Colleges

1. Bill Henle  
Portland Community College
2. Brian Bay  
Chemeketa Community College

Emergency Medical

1. Chuck Harris  
Emergency Medical Tech. Assn.
2. Charles Fish  
Emergency Nurses' Assn.

Indian Nations

1. Jerry Huff  
Warm Springs Fire Dept.

Other Participants

1. Steve Ramberg  
Coos Bay Fire Dept.



Other Participants (cont'd.)

- |    |   |     |  |
|----|---|-----|--|
| 2. | Michael Sherman<br>La Grande Fire Dept.   | 9.  | Jeff Johnson<br>Douglas Co. Haz Mat Team |
| 3. | Al McMahan<br>Marion County Fire Dist. #1 | 10. | Ronald Tobias<br>Tualatin Fire Dist.     |
| 4. | Mark Walkley<br>Portland Fire Bureau      | 11. | Tom Thompson<br>Tualatin Fire Dist.      |
| 5. | Tom Almond<br>Portland Fire Bureau        | 12. | George McCoy<br>State Fire Marshal       |
| 6. | Maurice Thompson<br>Portland Fire Bureau  | 13. | Mike Boyce<br>State Fire Marshal         |
| 7. | Larry Van Moss<br>Eugene Fire Dept.       | 14. | Bob Crosby<br>State Health Division      |
| 8. | Jim Corcoran<br>Salem Pollution Control   | 15. | Joann Bassett<br>Media Resources Inc.    |

Figure 2.

PART II - Training [Please fill in the blanks that apply to your agency or unit]

1. Indicate the number of people in your agency or unit who might respond to a hazardous materials incident \_\_\_\_ . # of Paid Employees \_\_\_\_ # of volunteers \_\_\_\_
2. Of the individuals identified in #1, how many have received basic training in each of the following areas of hazardous material response?
  - A. Basic Awareness
    - \_\_\_ recognition                      \_\_\_ health hazards                      \_\_\_ notification
    - \_\_\_ identification                      \_\_\_ self protection                      \_\_\_ emergency systems
  - B. How many have received specialized in-depth training in the following?
    - \_\_\_ incident analysis                      \_\_\_ medical treatment for exposure                      \_\_\_ planning for haz. mat.
    - \_\_\_ chemistry of haz. mat.                      \_\_\_ toxicology                      \_\_\_ interagency coordination
    - \_\_\_ tactics & strategies                      \_\_\_ decontamination                      \_\_\_ incident command
    - \_\_\_ radioactive materials                      \_\_\_ equipment usage                      \_\_\_ cleanup procedures
3. Of the individuals identified in #1, how many need training in each of the following areas of hazardous material response?
  - A. Basic Awareness
    - \_\_\_ recognition                      \_\_\_ health hazards                      \_\_\_ notification
    - \_\_\_ identification                      \_\_\_ self protection                      \_\_\_ emergency systems
  - B. How many need specialized in-depth training in the following?
    - \_\_\_ incident analysis                      \_\_\_ medical treatment for exposure                      \_\_\_ planning for haz. mat.
    - \_\_\_ chemistry of haz. mat.                      \_\_\_ toxicology                      \_\_\_ interagency coordination
    - \_\_\_ tactics & strategies                      \_\_\_ decontamination                      \_\_\_ incident command
    - \_\_\_ radioactive materials                      \_\_\_ equipment usage                      \_\_\_ cleanup procedures
4. What is the best format for delivering training to your personnel?  
[Prioritize by number, 1 most preferred, 8 least preferred]
  - \_\_\_ slides and tape                      \_\_\_ written lesson plans
  - \_\_\_ slides and instructor                      \_\_\_ written lesson plans w/instructor
  - \_\_\_ video                      \_\_\_ educational institutions (comm. colleges, universities)
  - \_\_\_ video and instructor                      \_\_\_ specialized training schools (BPST, Nat. Fire Acad.)

#### D. Recommendations

1. Based on the conclusion that there are large numbers of potential emergency responders who need training in hazardous materials, the Training Committee recommends the development of the courses listed in Section E below. A schematic of the system is depicted in Figure 3. That system will include training for all public employees who might become involved in a haz-mat incident with a mandatory course in Basic Awareness and specialized courses for specific disciplines (See Table I).
2. To ensure that the development and implementation of that system occurs in a timely and coordinated manner, the Training Committee further recommends that:
  - a) The DEQ coordinate the overall training program to ensure that appropriate training courses are available to any potential hazardous materials emergency responder. This is consistent with ORS 466.620. DEQ's activities will include:
    - Identify groups that need training.
    - Identify courses for each group.
    - See that training is available to all potential responders.
    - Give out information about courses.
    - Provide funds for training.
  - b) The State Fire Marshal's office (SFM) facilitate the delivery of the Haz-Mat Technician and Basic Awareness courses. To accomplish this, the SFM will convene a Hazardous Materials Standards and Training work group to refine the training standards developed to date. The work group will first focus on the Basic Awareness and Haz-Mat Technician courses.

The Basic Awareness and Technician courses will provide a structure for refinement of other courses. Each lead agency responsible for a discipline specific course shall develop the detailed standards for that course. The lead agencies have the expertise to develop the teaching materials. The lead agencies will submit the standards for their course to the SFM for work group consistency review.

The Standards and Training Work Group will help assure that the information taught in all the courses (Haz-Mat Technician and specialized courses - see Figure 3) is not unnecessarily duplicative. Also, that the courses do not teach inconsistent information.

Certificates shall be available from the SFM for all students who successfully complete a haz-mat course that the SFM has accredited.

- c) The responsibilities of other agencies are as follows:
- o Standards for fire service personnel shall be adopted by the Fire Standards and Accreditation Board. Standards for non-fire service personnel will be adopted by the State Fire Marshal.
  - o Standards for law enforcement officers shall be adopted by the Board of Police Standards and Training and the Oregon State Police.
  - o Standards for Emergency Medical Technicians and hospital personnel shall be adopted by the Oregon State Health Division and the Board of Medical Examiners.
  - o Standards for Emergency Managers shall be developed by the Emergency Management Division.
  - o Standards for Public Works Supervisors and staff will be developed by the Department of Environmental Quality and the State Health Division.
3. All standards shall include retraining needs, as well as initial training.
  4. Training should build on existing courses as much as possible.
  5. Training for radioactive materials should be integrated into each of the proposed courses (radioactive materials are just one class of hazardous materials). The Oregon State Health Division (OSHD), Oregon Department of Energy (ODE) and Oregon State University (OSU) should continue to provide specialized training as needed. ODOE and OSHD should see that the special characteristics of radioactive materials are covered in all courses.
  6. Training should be developed in "modules" or short units. The materials should be in a format that makes delivery easy, especially to volunteers. This includes self-taught written materials, video tapes, and use of train-the-trainers.
  7. Whenever possible, people who will work together in an emergency should train together. Training should be delivered in each community to encourage this.
  8. Private firms that contract for cleanup of hazardous materials spills shall be required to have at least one supervisor on site who has completed the Hazardous Materials Technician series.

E. Description of Proposed Haz-Mat Courses

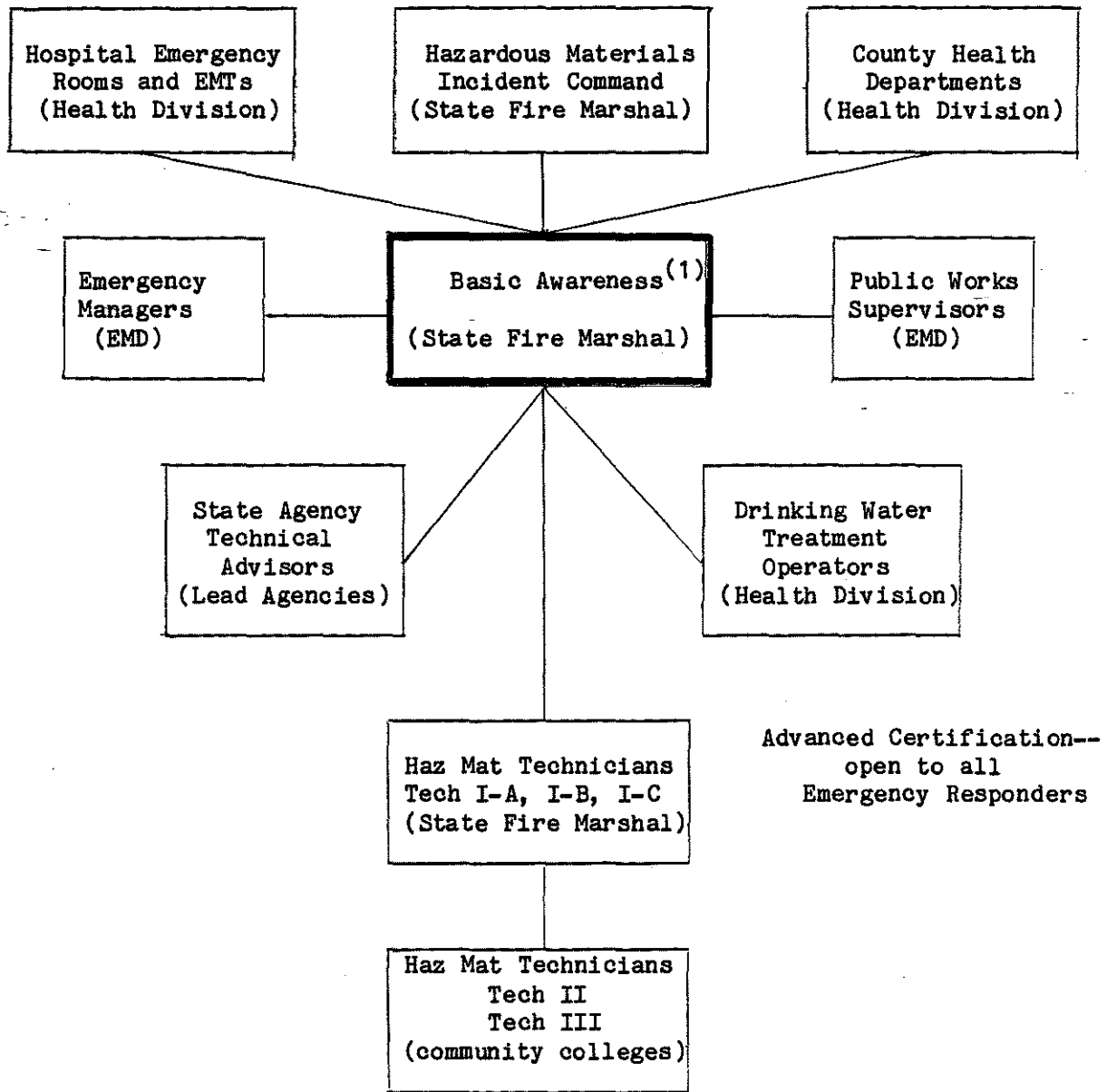
Courses are proposed below which will address the special needs of all public employees who may respond. Most are now in some stage of development. For further information about the courses, contact the people listed below in each lead agency:

- Oregon State Fire Marshal's Office  
Elaine Day, phone 378-2885

- Oregon Emergency Management Division  
Joseph Murray, phone 378-3194
- Oregon State Health Division  
Nancy Clarke, phone 229-6365
- Oregon Department of Environmental Quality  
Rich Reiter, phone 229-5774

The course descriptions that follow may change, as the lead agencies develop and test the courses.

Figure 3 - Oregon Hazardous Materials Training System (overview)



- (1) Special Modules Developed for:
- emergency dispatchers
  - police officers investigating illicit drug labs
  - others as determined necessary

Table 1: Overview of training needs

RESPONSE AGENCY TRAINING NEEDS

- Expected Participation
- Recommended Participation

HAZARDOUS MATERIALS TRAINING COURSES	CITY GOVERNMENT & FIRE DISTRICTS				OTHER MEDIC SERV.	COUNTY GOVERNMENT	STATE GOVERNMENT											FEDERAL GOVERNMENT																			
	POLICE	FIRE	DISPATCH	EMERG. MEDICAL	CITY OFFICIALS	AMBULANCE	HOSPITAL	ROAD DEPT.	HEALTH	EMERG.	REGIONAL HAZ	OS	SP	DEQ	HEALTH	EMD	DOT	FW	FORESTRY	RUC	APD	AGRICULTURE	MILITARY	STATE HAZ	COAST GUARD	EPA	FEMA	BLM	USFS	DEFENSE	USF&W	ENERGY	PACIFIC STRIKE TEAM	INDUSTRIAL	CONTRACTORS	VOLUNTEER AGENCIES	
BASIC AWARENESS (recognition, identification, health hazards, self-protection, notification, emergency systems)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
HAZARDOUS MATERIALS FOR PUBLIC WORKS PERSONNEL				●			●										●											○	○								
HAZARDOUS MATERIALS FOR DRINKING WATER SYSTEMS OPERATORS				●			●								●																						
HAZARDOUS MATERIALS FOR EMERGENCY MEDICAL PERSONNEL				●		●	●		●	●				●																							
HAZARDOUS MATERIALS FOR PUBLIC HEALTH PERSONNEL				○		○	○		●						●																						○
HAZARDOUS MATERIALS EMERGENCY PLANNING AND OFF-SCENE SUPPORT	○	○	●		○	○		○	○	○	●		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
ON-SCENE INCIDENT COMMAND	●	●		○			●	○			●	●	●	○	●			○	○	○		○	○	●	●	●		○	○					●			
CERTIFICATION FOR HAZARDOUS MATERIALS RESPONDERS																																					
a) Tech 1 (basic tactics)	○	●					○	○			●	○	○	○	○		○	○	○		○			●	●	○	○		○	○				●	●	●	
b) Tech 2 (intermediate response)		○									●													●	●									●	○	●	
c) Tech 3 (advanced response)											●													●	●									●	○	●	
HAZARDOUS MATERIALS FOR STATE TECHNICAL ADVISORS													●	●	●	○	○	○	○	○	○	○		●	○	○	○		○	○				○			

1. Basic Awareness/Hazardous Materials Technician

Audience: All public employees who may become involved in an incident. This course is a prerequisite for all other courses.

Special modules will be developed for certain audiences such as; emergency dispatchers and police officers who investigate illicit drug labs.

Lead Agency: Oregon State Fire Marshal's office for on-scene responders.

Oregon Emergency Management Division for off-scene support people.

Course Delivery: a) Fire Marshal's Field Training Officers, (3 proposed new positions), and b) EMD Training Officer. c) "Train the Trainer" volunteers.

Funding: Delivery of the course is contingent on a request of \$493,500 from the State Fire Marshal.

When Implemented: July 1, 1987, if funds made available.

NOTES:

A roughly equivalent course is now available on a limited basis through the State Fire Marshal and several private organizations.

2. Haz Mat Technician I-A, I-B, I-C

Audiences:

I-A: Responder who needs advanced Basic Awareness.

I-B: Responder who has access to a fire department pumper and regular protective clothing.

I-C: Aimed at officers and supervisors, but open to others who have completed I-A and I-B. Should have access to some special equipment and protective clothing.

Lead Agency: Oregon State Fire Marshal's Office

Course Delivery: a) Fire Marshal's Field Training Officers (3 proposed new positions)  
b) Other agencies and community colleges may also teach this course.

Funding: Delivery of the courses are contingent on a request of \$493,500 from the State Fire Marshal.

When Implemented: July 1, 1987 if funds made available.



Notes: These courses are targeted for fire fighters who are not haz-mat specialists, but want more than basic awareness. The course outline and materials will be reviewed by the SFM standards and

Training Work group. They may change.

3. Hazardous Materials Technician II and III

Audience:

Technician II: Hazardous Materials Response Team member and others who are interested.

Technician III: Hazardous Materials Response Team supervisor and others who are interested.

Lead Agency: Coordinated by the Oregon State Fire Marshal's office.

Course Delivery: Courses developed and delivered by specialists, including:

- a. Community colleges
- b. Oregon State University (radioactive materials)
- c. Multnomah County/City of Gresham (Chemistry of Hazardous Materials)
- d. Others

Funding: Program coordination contingent on funding a Hazardous Materials Training Coordinator with the State Fire Marshal's office.

Development of some special courses contingent on funding of \$255,000 to Department of Environmental Quality for training development.

When Implemented: Some courses available now. Full system depends on funding.

4. Hazardous Materials Incident Command

Audience: Emergency responders who may act as on-scene Incident Commanders. This includes senior command officers who may not fully complete the Haz Mat Technician Series.

Lead Agency: Coordinated by the Oregon State Fire Marshal's office.

Course Delivery: Oregon State Fire Marshal's office, Oregon State Police, Oregon Police Academy, and others.

Funding: Development of course contingent on a request of \$493,500, from the State Fire Marshal.

When Implemented: August 1, 1987, if funds made available.

5. Hospital and Pre-Hospital Medical Response for Hazardous Materials Exposure
- Audience: EMT I(s) through IV(s), physicians and nurses in emergency rooms
- Lead Agency: State Health Division, Emergency Medical Services Section
- Course Delivery: Health Division staff
- Funding: 1987-89 - \$51,600<sup>\*</sup>; Ongoing - \$ 7,000/biennium
- When Implemented: As funds available.
6. Drinking Water Systems Preparedness for Hazardous Materials Emergencies
- Audience: System operators and public health environmental specialists.
- Lead Agency: Oregon State Health Division, Drinking Water Section.
- Course Delivery: Health Division staff.
- Funding: 1987-89 - \$30,000<sup>\*</sup>
- When Implemented: As funds available.
- Proposal from the Health Division, Drinking Water Section.
7. Community Health Protection in Hazardous Materials Emergencies
- Audience: County health department staff and health members of special teams.
- Lead Agency: Oregon State Health Division
- Course Delivery: Oregon State Health Division
- Funding: 1987-89 - \$8,000<sup>\*</sup>
- When Implemented: As funds available.
8. Hazardous Materials Emergency Planning and Off-Scene Support to On-Scene Operations
- Audience: Emergency program managers. Modules will be available for all who may serve at an emergency operations center, including elected officials and heads of departments.

<sup>\*</sup>Budget figures assume full funding for additional staff and resources in the Health Division's Agency Request (#328) and in the IHCC budget request.

Lead Agency: Emergency Management Division (EMD)

Course Delivery: EMD

Funding: Funds requested by EMD

When Implemented: To be determined.

9. Hazardous Materials Response for State Agency Technical Advisors

Lead Agencies:

Department of Environmental Quality (oil and chemically hazardous materials)

State Health Division (radioactive materials at fixed sites)

Department of Energy (radioactive materials in transportation)

Course Delivery: In-service training for employees.

Funding: Existing resources available.

Implementation Schedule: Ongoing.

Notes: Training now exists. More training is needed. "Standards" or skills and competencies need to be developed to assure that training is adequate and comprehensive.

10. Hazardous Materials Emergencies for Public Works Supervisors  
(see Attachment 13).

Audience: wastewater treatment plant operators; parks program supervisors; building, health, and utilities inspectors; highway maintenance supervisors

Lead Agency: Dept. of Environmental Quality/Emergency Management Div.

Course Delivery: To be determined.

Funding: As part of DEQ's request for \$200,000.

When Implemented: To be determined.

Notes: Considerable work is needed here.

## SECTION IV. Hazardous Materials Equipment Committee

The membership of the Equipment Committee is shown on page 25. To assure that the experience other state agencies was utilized and that they were closely involved in the process, the DEQ asked the State Fire Marshal's office to chair this committee. The chair also became a part of the four-agency steering committee made up of the DEQ, State Fire Marshal, Department of Energy, and Emergency Management Division, which met on a twice-monthly basis to oversee the activities of the various technical committees:

### A. Goals and Objectives

Prior to the first meeting of the equipment committee, DEQ staff developed a list of goals and objectives for the committee members. The main goals for the committee were:

1. To work with the DEQ to identify the hazardous materials response equipment presently available to emergency responders in Oregon.
2. To evaluate the hazardous materials response equipment needed to provide adequate protection statewide.
3. To propose standards for minimum levels of equipment needed to perform certain response tasks.
4. To assure that the equipment standards are consistent with the proposed training program developed by the Training Committee.

### B. Process

The process for attaining these goals focused on obtaining the most representative groups of committee members and meeting with them monthly to solicit their input, guidance and consensus during the development process. The first meeting of the full equipment committee was in February. It has met on a monthly basis since that time. The emphasis on representation resulted in a committee whose active membership averaged around 25 attendees per meeting.

The work began by attempting to list and categorize all the hazardous material equipment that responders might need. As the list was formulated, the committee worked on developing an equipment questionnaire to assess presently available hazardous material response equipment around the state. Numerous revisions finally resulted in an agreed upon questionnaire (see Figure 4) which was then combined with similar questionnaires developed by the Training and Planning Committees. The combined form was mailed out on the 1st of August.

Another aspect of the planning process focused on the equipment needs of different kinds of responders. The committee utilized the responders targeted for training by the Training Committee and identified the minimum amount of equipment each of these

targeted groups would need to adequately protect themselves and perform their respective tasks.

C. Conclusions

Based on the findings of the Training Committee, the following groups of responders were identified as needing training: public works employees, dispatchers, law enforcement, emergency medical personnel, fire fighters, emergency managers, state technical assistants, incident commanders, haz-mat team members, and any other potential first on-scene individuals. The equipment committee agreed that each of these groups need to have a certain level of equipment to perform the tasks they have been trained to do.

It was the general concensus of the committee that many of the above groups do not presently have even the basic equipment. The questionnaire which is still being evaluated is expected to confirm this observation.

The committee concluded that standards should be adopted that identify the bare minimum amount of equipment a responder should have for self-protection and to perform necessary tasks. The committee further determined that a detailed list of equipment should be drawn up for an advanced capability (Tier 3) haz-mat team. Pending approval of the DEQ budget request by the State Legislature, further refinement of the haz-mat team equipment list be necessary to differentiate between Tier 2 and Tier 3 teams.

HB 2146 HAZARDOUS MATERIALS  
EQUIPMENT COMMITTEE  
MEMBERSHIP

State Agencies

1. Mike Boyce - Chairperson  
2146 Steering Committee  
State Fire Marshal
2. Bruce Sutherland - Proj. Coord.  
2146 Steering Committee - DEQ  
  
Rich Reiter - Proj. Manager - DEQ  
2146 Steering Committee
3. Bob Robison  
2146 Steering Committee  
Dept. of Energy
4. Joseph Murray  
2146 Steering Committee  
Emergency Management Div.
5. Bob Crosby  
Health Division
6. Dan Shults  
State Forestry
7. Curt Shaw  
Accident Prevention Div.
8. Jim Stevenson  
Oregon State Police
9. Bill James  
Dept. of Transportation

Federal Agencies

1. Gordon Goff  
Environmental Protection Agency

Industry

1. Trucking  
  
Bruce Johnson  
Speeds Towing
2. Railroads  
  
Rick Sloan  
Southern Pacific
3. Clean-up Contractors  
  
Bob Keesee  
Riedel Environmental Services

Industry (cont'd.)

4. Equipment  
  
Robert Rucinski  
Mine Safety Appliances
5. Chemical Manufacturers  
  
Lewis Wiedewitsch  
Pennwalt Corp.

Emergency Groups

1. Len Malmquist  
Oregon Fire Chiefs' Assn.
2. Joe Reeves/Harold Kalleck  
Oregon State Fire Fighters Council

Indian Nations

1. Jerry Huff  
Warm Springs Fire Department

Other Participants

1. Jim Corcoran  
Salem Pollution Control
2. Alan McMahan  
Marion County Fire District #1
3. Larry Von Moos  
Eugene Fire Department
4. Gary Rose  
Douglas County Fire District #2
5. Jeff Johnson  
Douglas County Haz Mat Team
6. Mark Walkley  
Portland Fire Bureau
7. Tom Almond  
Portland Fire Bureau
8. Penny Malmquist  
Multnomah Co. Emerg. Mgmt.

Figure 4.

**PART III - Existing Equipment Survey** [Please check the ones that apply to your agency and list amount where indicated] [If an equipment inventory is available, please attach]

**1. Basic Hazardous Material Recognition Equipment**

- A. \_\_\_ DOT guidebooks # \_\_\_\_\_
- B. \_\_\_ Other reference guides # \_\_\_\_\_
- C. \_\_\_ Field glasses # \_\_\_\_\_
- D. \_\_\_ Barrier ribbon/tape/cones # \_\_\_\_\_
- E. \_\_\_ Warning signs # \_\_\_\_\_
- F. \_\_\_ Other basic HAZ-MAT equip. (Attach) (List) # \_\_\_\_\_

**2. Respiratory Equipment**

- |        |                                    |         |        |
|--------|------------------------------------|---------|--------|
|        |                                    |         | AGE    |
|        |                                    |         | (AVG.) |
| A. ___ | Positive press B/A                 | # _____ | _____  |
| B. ___ | Demand B/A                         | # _____ | _____  |
| C. ___ | Spare air bottles                  | # _____ | _____  |
| D. ___ | Refill capability (Grade "D" air)? | # _____ | _____  |
| E. ___ | Cascade system                     | # _____ | _____  |
| F. ___ | Mobile cascade                     | # _____ | _____  |
| G. ___ | Stationary cascade                 | # _____ | _____  |

**3. Body Protection**

- A. \_\_\_ Turnouts (bunkers) # \_\_\_\_\_
- B. \_\_\_ Gloves - leather # \_\_\_ rubber # \_\_\_\_\_
- C. \_\_\_ Boots # \_\_\_\_\_
- D. \_\_\_ Helmets # \_\_\_\_\_
- E. \_\_\_ Chemical protective suits # \_\_\_\_\_
- F. \_\_\_ Encapsulated suits # \_\_\_\_\_
- G. \_\_\_ Splash suits # \_\_\_\_\_
- H. \_\_\_ Proximity suits # \_\_\_\_\_

**4. Communication Equipment**

- A. \_\_\_ Vehicle radio # \_\_\_\_\_
- B. \_\_\_ Hand-held radio (portable) # \_\_\_\_\_  
# of channels on radios \_\_\_\_\_  
frequency range mhz \_\_\_\_\_
- C. \_\_\_ Headset - voice actuated (for inside suits) # \_\_\_\_\_
- D. \_\_\_ Mobile telephone # \_\_\_\_\_
- E. \_\_\_ Cellular telephone # \_\_\_\_\_
- F. \_\_\_ Computer equipment -  
Hardware \_\_\_\_\_  
Software \_\_\_\_\_
- G. \_\_\_ Phone patch capability
- H. \_\_\_ Cross channel re-broadcast
- I. \_\_\_ Pagers (Plectron) # \_\_\_\_\_
- J. \_\_\_ Microwave radio capability
- K. \_\_\_ Highway advisory radio/  
message system

**4. Communication Equipment (Cont.)**

- L. \_\_\_ Does your agency have radio communication capabilities with agencies listed in Question #3 of Part One [List Letters] \_\_\_\_\_

**5. Vehicle**

- A. \_\_\_ Dedicated HAZ-MAT apparatus
- B. \_\_\_ Combination apparatus
- C. \_\_\_ Base location \_\_\_\_\_
- D. \_\_\_ Primary use area \_\_\_\_\_

**6. Detection Equipment**

- A. \_\_\_ Oxygen monitors # \_\_\_\_\_
- B. \_\_\_ Combustible gas detector # \_\_\_\_\_
- C. \_\_\_ pH meter # \_\_\_\_\_
- D. \_\_\_ Radiation equipment # \_\_\_\_\_
- E. \_\_\_ Colorimetric indicators # \_\_\_\_\_
- F. \_\_\_ HAZ MAT ID kits # \_\_\_\_\_
- G. \_\_\_ PCB detectors # \_\_\_\_\_
- H. \_\_\_ Infra red detectors # \_\_\_\_\_
- I. \_\_\_ Vapor detectors # \_\_\_\_\_

**7. Containment/Repair**

- A. \_\_\_ Absorbents # \_\_\_\_\_
- B. \_\_\_ Drums (overpack) # \_\_\_\_\_
- C. \_\_\_ Foam # \_\_\_\_\_
- D. \_\_\_ Foam generator
- E. \_\_\_ Plugs # \_\_\_\_\_
- F. \_\_\_ Diking material
- G. \_\_\_ Non-sparking tools
- H. \_\_\_ Transfer pumps # \_\_\_\_\_
- I. \_\_\_ Containment boom # of ft. \_\_\_\_\_
- J. \_\_\_ Absorbent boom # of ft. \_\_\_\_\_
- K. \_\_\_ Patching materials

**8. Decontamination Equipment**

- A. \_\_\_ Solution
- B. \_\_\_ Showers
- C. \_\_\_ Neutralizers
- D. \_\_\_ Plastic
- E. \_\_\_ Catch basin and soap
- F. \_\_\_ Disposable bags

**9. Specialized Locally Available Resources (Attach list)**

#### D. Recommendations

Based on the conclusions above, the Equipment Committee recommends that the state adopt the following minimum equipment standards for the recognition and identification of hazardous materials.\* The committee further recommends that the State Fire Marshal's fire equipment advisory committee be reconvened to review, refine and update these standards as necessary.

1. Public Works - DOT Guidebook; communication capabilities such as a mobile radio, binoculars; list of equipment that is available for use; rubber gloves; plastic liners to line dump body of truck; traffic cones; sewer map; water supply and distribution maps and containment booms.
2. Dispatchers - DOT Guidebook and at least one other resource such as CHRIS Manual, Firefighters Guide or B.O.E. Emergency Handling of Hazardous Materials in Transportation; communication equipment; checklist of important notifications and telephone numbers (i.e., OARS, CHEMTREC, etc.); detailed maps for county, city and state.
3. Emergency Medical Personnel (Ambulances) - DOT Guidebook; gloves; decontamination procedures; binoculars; disposable garments/suits; first aid manual for chemical accidents; soap and plastic sheathing.
4. Law Enforcement Personnel - DOT Guidebook; barrier tape; field glasses.
5. Fire Service Personnel - DOT Guidebook; flares; barrier ribbon; field glasses; one other resource manual as listed above for dispatchers. (It is assumed that SCBA, protective clothing and other equipment required by National Standards is on the response apparatus.)
6. Emergency Managers - An up-to-date Emergency Operations Plan which includes resource and call lists, reference materials, a designated Emergency Operations Center and access to communications equipment compatible with that of on-scene responders.
7. State Technical Assistants - DOT Guidebooks; binoculars; communication equipment; list of reference numbers, agency forms, checklists; Emergency Operations Plan; standard operating guidelines for hazardous materials incidents.
8. Hazardous Materials Response Team - There are varying perceptions as to what constitutes a hazardous materials response team. At present there are no established minimum equipment standards. The following list compiled by members of the Equipment Committee represents what they believe to be the minimum equipment needed to form a Tier 3 advanced capability haz-mat team.



(a) Library

1. N.F.P.A. Fire Protection Guide on Hazardous Materials
2. Chemical Dictionary
3. DOT Guidebook
4. GATX Tank Car Manual
5. B.O.E. Emergency Handling of Hazardous Materials in Surface Transportation
6. Farm Chemical Handbook
7. CHRIS Response Methods Handbook
8. Firefighters Guide to Hazardous Materials
9. Emergency Action Guide
10. Bureau of Explosives
11. SAX Manual
12. NIOSH (TLVS) Manual
13. ACGIH Guidebook (Manual)
14. Report forms
15. Matheson Gas Book & First Aid
16. Radiological Health Handbook

(b) Hazardous Material Emergency Response Vehicle

1. On-board generator
2. Exterior quartz-halogen lights
3. Emergency lights/siren
4. Tire chains

NOTE: It is not feasible to assign the amount of equipment needed to respond to a hazardous material incident to an existing piece of fire equipment. Mitigating hazardous material incidents over large response areas will require special apparatus designed to be highly mobile and completely self-contained. When a final minimum equipment list is determined, the basic inventory can be measured to determine the size, weight and capacity of vehicle needed to provide proper storage and easy access. Specifications and plans could then be developed.

(c) Maps & Miscellaneous Equipment

1. Binoculars and spotting scope
2. Large district map, topographical (USGS) (Oregon Highway Map) City
3. Various office supplies (pens, markers, paper, tags)
4. Phone list ("Books")
5. Locked antidote drug box
6. First aid kit
7. Wheel chocks
8. Traffic cones
9. Disposable cytle lights, "No ignition source"
10. Extra batteries
11. Hand cleaner
12. Fuel credit cards
13. Portable radios
14. Mobile telephone
15. Resuscitation/Ambu Bag

16. Powder for acid suits
17. Plastic bags
18. One bull horn and portable loud speaker
19. Scanner
20. Vehicle radio w/State Emergency Net, Police
21. Hi-energy food and instant hot beverages
22. Response Plan
23. Barricade tape
24. Camera
25. Hazardous material labels/placards (assorted)
26. Computer
27. Explosion proof flashlight
28. C.B. radio
29. Suit-to-suit communication system
30. Drinking water container
31. Weather station
32. 1/2" and 3/4" rope
33. Hand truck
34. Audio timing device
35. Tire pump
36. Warning signs
37. Shaving equipment
38. Sterno stove and coffee pot
39. Pagers

(d) Protective Equipment

1. Assorted selection encapsulated suits (nondisposable)
2. Proximity suits
3. Splash suits, rain coats (one type)
4. Encapsulated suits (disposable)
5. Gloves (Neo, Nitrile, Butyl, Viton, disposable, leather, surgical)
6. Helmets and hard hats
7. Safety glasses w/side shields
8. SCBA (No filter masks so there will be no chance of a mistaken filter) 60 minute duration
9. Shoe covers
10. Boots (various assorted types)
11. Coveralls (disposable)
12. Earplugs
13. Face shield
14. Eye wash equipment
15. Nomex hoods
16. High visibility vests
17. Spare SCBA bottles and full assortment of refill adapters
18. Emergency showers
19. In-suit cooling and air lines for extended use
20. Garden hose for light rinse down
21. Personnel wash down kit
22. Full fire turnouts

(e) Leak Control Equipment

1. Chlorine kit "A"
2. Chlorine kit "B" ) BASED ON LOCATION AND NEED
3. Chlorine kit "C" )
4. Absorbent booms, bag sheets
5. Plugging and diking equipment (Petro-seal, aqua seal, "no mixing," "no dryout")
6. Extra pails
7. Patching kits
8. Epoxy kits
9. Air bag system
10. PVC pipe of misc. size and length for underflow and overflow dams
11. Dome covers

(f) Suppression Equipment

1. Foam - all types and minimum 100 gallons of AFFF
2. CO<sub>2</sub> extinguishers
3. Class D extinguishers
4. ABC dry chemical extinguishers
5. Foam eductor
6. Foam generator
7. Foam application nozzles
8. Halon 1211 extinguishers
9. Emulsifier

(g) Repair Equipment\*

1. Assorted plugs
2. Fiberglass fabric basic
3. Assorted pipe unions, fittings, caps and couplings
4. Clamps
5. Tape - all types
6. Silicone, caulk, plastic steel and rubber adhesive
7. O rings, nuts and bolts
8. Lead wool (sheet lead)

\*Some kits on the market, review as per specific need/cost.

(h) Tools

1. Assortment of non-sparking tools
2. Assortment of basic sockets, wrenches, hammers, pliers, screwdrivers, brushes, drill bits, saws, etc.
3. Miscellaneous air tools (chisels, drill, cutters, jaws, hole saws)
4. Hack saw
5. Scissors
6. Shovels
7. Measuring tape
8. Extra air hose
9. Grounding equipment
10. Web strapping (won't rust, less maintenance)

11. Pulaski
12. Axes
13. Pry bars
14. Bolt cutters
15. Rake
16. Funnels
17. Crowbars
18. Comalong
19. Chain saw

(i) Detection Equipment

1. Flammable vapor monitor
2. Radiological monitors
3. Detection tubes
4. Heat scanner
5. Thermometers
6. CO indicators
7. Organic vapor monitors
8. Ammonia and dispenser
9. pH paper
10. PCB test kits
11. Assortment of sampling containers (plastic and glass)

(j) Containment Equipment

1. Small quantities of neutralizer
2. Sponges
3. Drum liners
4. Brooms and dust pans (plastic, non-sparking)
5. Vacuum (wet/dry type)
6. Leak bandage kits
7. Gas leak kits
8. Plug rug patch kits
9. Rolled Visqueen/plastic
10. One set of steel recovery drums (1-80, 1-55, 1-30, to fit inside the 80 gallon) - BASED ON NEED
11. Truck bed liners
12. Dry absorbant

(k) Decontamination Equipment

1. Solution ingredients (assorted)
2. Brushes
3. Towels and rags
4. Disposable bags (assorted sizes)
5. Containment pool (as salvage covers draped over sorbant booms offer more of a work area and containment)
6. Shower
7. Decon kits
8. Compressed air sprayer
9. Body bags

(1) Special Equipment

1. Small polycarbonate board with diving grease pencils or waterproof markers
2. Magnifying glass
3. Siphon pump - chemical compatible (barrel transfer)
4. Ladder
5. Helmet lights (explosion proof)
6. Extension cords
7. Trouble light and flood lights
8. Plotting board
9. Color smoke bombs
10. Ultraviolet light
11. Explosion resistant tool box
12. Sewer cover
13. Explosion proof fan
14. Body harness (w/local responder discretion)
15. Hydraulic jack
16. Cribbing blocks
17. Salvage covers
18. Rain fly and tent
19. Tracing dye (solid and liquid)
20. Small revolving light
21. Portable cutting torch
22. Manhole cover tools
23. Sleeping bags
24. Depending on area, protection from weather may be needed as shelters, tents, etc.
25. Calculator

\*NOTE: All equipment shall comply with any and all Oregon Occupational Safety regulations and/or personal protective equipment apparel and respirator protection requirements.

Resource Materials to the Oil and Hazardous Materials Emergency  
Response Plan

**EXAMPLE PROCEDURAL GUIDELINES FOR EMERGENCY RESPONDERS**

The following example guidelines and resource information for first responders are provided to help local jurisdictions develop hazardous materials emergency response plans. They are only examples and will need modifications to meet the needs of each individual area.

January 1987  
EXAMPLE PROCEDURAL GUIDELINES\*

Initial Responders  
(fire, police, public works, others)

Size-up/Identification

- o Approach from upwind and upgrade.
- o Observe from safe distance.
- o Use binoculars if necessary.
- o Examine shipping papers or I.D. numbers
- o Examine placards/labels.
- o Interview driver, conductors, dock manager, etc.
- o Refer to DOT Guidebook or Fire Fighters' Handbook of Hazardous Materials

Isolate Area - Avoid contact with materials, fumes, dust, etc.

- o Eliminate or avoid ignition sources (no smoking or use of highway flares)
- o Determine if larger evacuation necessary to keep people away from chemicals
- o Establish control line at safe distance

Rescue Injured Person if Prudent

- o Identify all people who might have been injured or exposed.

Notification and Technical Help

- o Alert Dispatch Operators  
or 9-1-1 to begin notifications
- o State Agencies: OARS (1-800-452-0311)
- o Federal Agencies: NRC (1-800-424-8802)
- o Industry: CHEMTREC (1-800-424-9300)
- o Emergency Medical Advice: Poison Control Center (1-800-452-7165)  
or  
(225-8968)

Useful Information

- o Your name, agency, location and call back number
- o Type of material involved, amount spilled, when spilled, how spilled
- o Hazard involved (health, environment)
- o Actions underway
- o Injuries, contamination, exposure
- o Responsible party

Establish Incident Command

- o Determine who is the incident commander
- o Set up field command post at safe location
- o Tell dispatcher exact location of command post
- o Establish communications with off-scene help
- o Pass command as appropriate
- o Brief new commander

\* Subject to change based on user input

January 1987  
EXAMPLE PROCEDURAL GUIDELINES \*

Incident Commander

Establish Incident Command

- o Clearly identify yourself as commander
- o Make sure command post is at a safe location.
- o Establish unified command, if appropriate, with agencies on scene
- o Identify lead state agency, if any.

Determine the Hazard

- o Check placards, shipping, etc.
- o Use reference books and off-scene help (i.e. OARS & CHEMTREC).
- o Determine downwind, downstream and downslope exposures.
- o Identify ignition sources
- o Determine winds speed and direction
- o Use available detection equipment

Notification and Technical Help

- o State agencies: OARS (1-800-452-0311)
- o Federal agencies: NRC (1-800-424-8802)
- o Industry: CHEMTREC (1-800-424-9300)
- o Emergency medical advice: (Poison Control Center (1-800-452-7165))

Assign Team Responsibilities

- o Evacuation
- o Rescue
- o Traffic and crowd control
- o Containment
- o Fire suppression
- o Public information
- o Communications
- o Safety officer
- o Emergency medical

Evaluate Control Line and Revise if Necessary

- o Use tape, rope, fire-hose, etc.
- o Leave a margin of error.

Decontamination

- o Assign decontamination team and officer
- o Check people and equipment
- o Set up decon procedures.

Establish Staging Area for Medical Treatment



January 1987  
EXAMPLE PROCEDURAL GUIDELINES\*

Evacuation/Shelter

Determine Danger Area

- o Determine size of spill
- o Determine plume direction
- o Identify people and facilities in danger area

Decide Between Evacuation or Shelter -- What will best Reduce Exposure

Begin warning and/or evacuation procedures for those nearest the spill site. Work outwards from spill site.

- o Inform evacuees to lock doors, take small valuables and necessary medication
- o Provide information on safest evacuation route

Notify Those Who need to Know

- o Law enforcement agencies
- o Emergency Management (city, county, state)
- o Red Cross
- o County Health Officer
- o Local T.V. and Radio
- o Dispatchers
- o Other Emergency Relief Organizations
- o Transportation Companies

\* Subject to change based on user input

January 1987  
EXAMPLE PROCEDURAL GUIDELINES\*

Traffic Control and Law Enforcement Officers

1. Obtain guidance from the Incident Commander on the need for an exclusion perimeter, and the distances.
  2. Establish perimeter, using rope, barricades, vehicles, etc. (avoid flares if any indication that combustible/flammable chemicals are present.)
  3. Reroute pedestrians and vehicles around perimeter -- keep onlookers, news media and others from excluded area.
  4. Request additional assistance as needed.
  5. Be prepared, at the request of the Incident Commander, to remove persons hindering emergency operations.
- \* Subject to change based on user input

January 1987  
EXAMPLE PROCEDURAL GUIDELINES\*

Local On-Scene Public Information Officer (PIO)

What to Do First

1. Report to field command post. Find Incident Commander. Work with Incident Commander on press statements.
2. Set up press briefing area away from command post. Issue public information from press area only. Do not talk to reporters away from press area.

Work with State PIO

1. Communicate with the PIO from the lead state agency. Agree with State PIO before issuing updates. The State PIO will help provide information about health effects, environmental effects, state resources, etc.
2. Set times for updates with State PIO and with on-scene press.

What to Tell Reporters

1. They want to know:

Who had the accident  
Who has been injured  
Who is the Incident Commander  
(name, rank, who he/she works for, etc.)

What is the material involved  
What are the public safety or health hazards  
What is estimated loss  
Where did the accident occur  
When did it occur  
How did it occur

2. Describe response actions. (Work with State PIO on health effects).
3. Do not tell more than you know. Do not try to keep things from the press. (Except, of course, names of injured or dead before notification of families).
4. Take notes about response actions and who you told what. The notes will help you later.

NOTE: The media may be helpful in issuing emergency public announcements.

\* Subject to change based on user input

January 1987  
EXAMPLE PROCEDURAL GUIDELINES\*

Medical Services/Health Officer

1. At incident scene:
    - a. Be aware of dangers.
    - b. Take proper precautions to protect yourself when handling casualties.
    - c. Coordinate actions with the incident commander.
    - d. Coordinate support activities as required with response agencies present.
  2. Confirm health hazard.
  3. Investigate toxic levels of materials involved.
  4. Seek antidote options.
  5. Confirm evacuation area perimeters (includes establishment of triage areas as required).
  6. Coordinate with hospitals involved.
  7. Ensure no etiological agents involved.
  8. Coordinate with Reception and Care Coordinator regarding medical services required by evacuees.
  9. Decontaminate personnel/equipment as required.
    - a. Hospital
    - b. Ambulance
  10. Help question/examine responding personnel on state of health. Treat as required.
  11. Work with State Health Division and Department of Environmental Quality to address environmental health/sanitation impacts.
  12. Note: News releases are to be made by an authorized public information officer. Check with incident commander.
- \* Subject to change based on user input

EXAMPLE PROCEDURAL GUIDELINES

EMERGENCY NOTIFICATION LIST

Oregon Accident Response System (OARS) (for state assistance)	1-800-452-0311 or 503-378-4124
Federal National Response Center (for federal assistance)	1-800-424-8802
CHEMTREC (for industry assistance)	1-800-424-9300
Poison Control Center (24 hrs) (for emergency medical information)	1-800-452-7165 or 503-225-8968
Local Fire	_____
Local Police	_____
Local Ambulance	_____
County Sheriff	_____
State Police	_____
Local Hospital	_____
County Health	_____
Local Emergency Services	_____
Local Public Works	_____
Regional Haz-Mat Team	_____
State Haz-Mat Team	_____

ZB6335

January, 1987

EXAMPLE PROCEDURAL GUIDELINES

Resource Information List  
(non-emergency) (numbers subject to change)

State Agencies

Oregon Department of Environmental Quality	1-800-452-4011
Haz-Mat Section - Portland	229-5759
Local area D.E.Q. Regional Office	_____
Oregon Department of Energy -	1-800-221-8035
Siting & Regulation Division - Salem	378-6469
Oregon State Health Division - Portland	229-5999
Radiological Fixed Site Incidents	
Communicable Disease Agents	
Radiation Emergency Response Team	
Oregon State Highway Division - Salem	378-6570
Local Regional Office	_____
Oregon State Fire Marshal	
Hazardous Materials Section	378-2885
Local Field Deputy	_____
Military Department - Salem	378-3903
State Forestry Department-Salem	378-2560
Local Headquarters	_____
Oregon Public Utilities Commission - Salem	378-5849
Oregon Dept. of Fish & Wildlife - Portland	229-5683
Local Office	_____

Federal Agencies

U.S. Coast Guard Command Center (Wash, DC)	1-202-426-1830
U.S. Coast Guard Seattle (RRT) (Seattle)	1-206-442-5233
U.S. Coast Guard (Portland)	240-9300
Local Coast Guard Station	_____
Environmental Protection Agency (Seattle)	1-206-442-1196
U.S. Forest Service (Portland)	503-221-2931
National Oceanic & Atmospheric Administration (Seattle)	1-206-526-6343

U.S. Army Corps of Engineers (Portland)	221-2193
Dept. of Health & Human Services (Seattle) NIOSH	1-206-442-0530
U.S. Dept. of Energy (Richland)	1-509-376-2603
U.S. Dept. of Interior (Portland)	231-6157
U.S. Fish & Wildlife Service (Portland)	231-6154
FEMA (Seattle)	1-206-403-7243
Agency of Toxic Substance & Disease Registry (Atlanta)	241-6200
U.S. Army Explosive & Ordinance Disposal (Maryland)	1-301-677-5770
U.S. Nuclear Regulatory Commission (Maryland)	1-301-492-7000
National Weather Service (Portland) (Salem)	281-1911 363-7863 363-4131
	Tape Local
Center for Disease Control-Night Emergency (Georgia)	1-404-633-5313
Bombing Investigations & Terrorist Bombing (FBI) (Wash, DC)	1-202-324-4664
Classification of Explosives Military Board (Wash, DC)	1-202-325-0891
Destruction of Explosives & Destructive Devices (Wash, DC) (AIF) 24 hrs.	1-202-566-7087
Bureau of Alcohol and Firearms (Wash, DC)	1-202-566-7395
Explosives Unit Laboratory (FBI) (Wash, DC)	1-202-324-2696
Federal Aviation Administration Information (Wash, DC)	1-202-426-4817
<u>Industry Information Sources</u> (the numbers below need verification)	
American Petroleum Institute (API) Washington, D.C.	1-202-682-8134
Association of American Railroads (AAR) Portland, OR	1-800-826-4662
Dow Chemical Company Midland, MI	1-517-636-4400
DuPont Company Wilmington, DE	1-302-774-7500

Institute of Makers of Explosives  
Wash, DC

1-202-429-9280

American Gas Association \_\_\_\_\_

Southern Pacific Railroad Dispatch 220-4424

Union Pacific Railroad Dispatch 249-2711

Burlington Northern Railroad Dispatch 1-206-625-6246

Tank Truck Defuelers Companies \_\_\_\_\_

L.P.G. Companies \_\_\_\_\_

Waste Disposal Companies \_\_\_\_\_

Tow Truck Companies \_\_\_\_\_

Cranes & Heavy Equipment \_\_\_\_\_

Pennwalt "Chlorine Team" 228-7655  
Portland, OR

Major Oil Company Rapid Action Teams  
Shell Oil (24 hrs) - Portland 224-0319

Gas Companies \_\_\_\_\_

Volunteer Organizations

Volunteer Organizations

Salvation Army \_\_\_\_\_

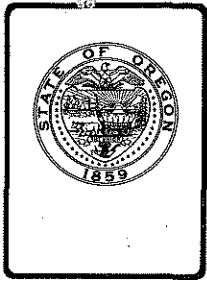
American Red Cross \_\_\_\_\_

Radio Operators \_\_\_\_\_

Explorer Scouts \_\_\_\_\_

Search & Rescue \_\_\_\_\_





## Environmental Quality Commission

~~Mailing Address BOX 1760 PORTLAND, OR 97207~~

~~522 SOUTHWEST 5TH AVENUE, PORTLAND, OR 97204~~ PHONE (503) 229-5696  
811 SW Sixth Avenue, Portland, Oregon 97204

### MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item E, January 23, 1987, EQC Meeting

Informational Report: Oregon's Recycling Opportunity Act:  
Report on Implementation to the 1987 Oregon Legislative  
Assembly

### Background

The Recycling Opportunity Act requires the Commission to review department reports on compliance with and implementation of the 1983 Act, and to submit a report to each regular session of the Legislative Assembly regarding compliance with and implementation of the Act (ORS 459.168). A report has been prepared by the Department and is attached to this staff report (Attachment I).

### Director's Recommendation:

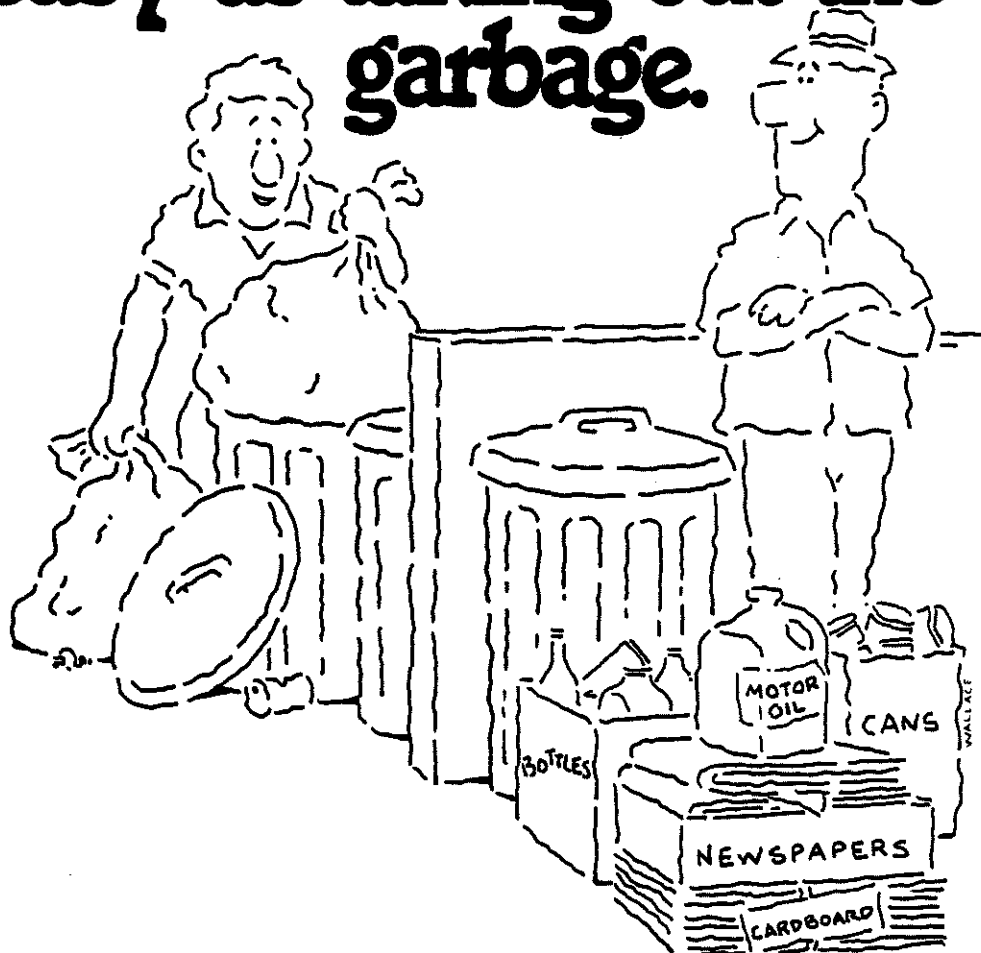
It is recommended that the Commission review the attached report on compliance with and implementation of the Recycling Opportunity Act and submit the report to the 1987 Oregon Legislative Assembly.

Fred Hansen

Attachment: Oregon's Recycling Opportunity Act: Report on Implementation  
to the 1987 Oregon Legislative Assembly

Marianne Fitzgerald  
SM717  
229-5060  
January 2, 1987

# Recycling. Now it's as easy as taking out the garbage.



## Oregon's Recycling Opportunity Act

Report on Implementation to the  
1987 Oregon Legislative Assembly

Oregon Department of Environmental Quality  
Hazardous and Solid Waste Division

January 1987

## OREGON'S RECYCLING OPPORTUNITY ACT

### A Success Story ...

Today there are curbside recycling collection programs in 100 Oregon cities. In 1982, there were only fourteen such programs. Cities and counties have found unique ways to implement their recycling programs - ways that fit their own community's needs. For example:

- o West Linn provides weekly collection of recyclable materials to all single and multi-family dwellings as well as commercial accounts. The city has set up and operates a yard debris collection and processing site which has diverted from the landfill over 50% of the total amount of yard debris generated in the city. A solid waste advisory committee helps to plan the city's recycling programs, and numerous volunteers promote recycling in the neighborhoods. The city has dedicated staff and money to promote recycling in the community, in the schools, and in numerous other ongoing activities which publicize recycling opportunities and encourage people to recycle. Fifty percent of West Linn households regularly participate in on-route recycling collection, and approximately 34 tons of waste is diverted from the landfill each month.
- o Astoria has set up a recycling program which is characterized by colorful recycling storage containers built by the local sheltered workshop and bearing the logo "Astoria Curbside Recycling". The colorful containers can easily be seen every other Monday when the recyclable materials are collected. An active public education and promotion program and strong community support have resulted in over 500 households regularly recycling in this community of 9,800 people.
- o In Baker, Baker Sanitary Service collects recyclable materials from households once a month and donates the materials to Step Forward, a local sheltered workshop. Step Forward's handicapped employees sort, bale and otherwise prepare the materials for marketing. The community participates in the recycling program because it knows the materials will be used to provide jobs and income to a disadvantaged segment of their community.

- o In Bend, the solid waste collectors provide monthly recycling collection service while the nonprofit Bend Recycling Team operates a depot at the nearby landfill. Bend Recycling Team has been hired by Deschutes County to set up a countywide education and promotion program to encourage people to recycle. Bend Recycling Team has developed brochures and a video presentation, provided information to local media (monthly recycling volumes are published in The Bulletin), and made numerous presentations to schools and community groups. Since the program began, recycling volumes have increased approximately 35% over a similar period in 1985, with 15% of the increase attributed to the on-route collection program, and the remainder dropped off at recycling depots.

#### But Not a Total Success ...

The City of Portland has not met the requirements of the Recycling Opportunity Act. In 1985 the city convened a technical advisory committee and hired a consultant to make recommendations on the city's recycling program options. In June, 1986, the City Council chose a program of monthly collection of recyclable materials at the curb by contracted recyclers and weekly collection of newspaper at the can by garbage haulers. The city would be divided into six areas and the city would contract for monthly recycling service in each area. The city would also set up a recycling education and promotion program. The Environmental Quality Commission granted the city an extension of time to January 31, 1987 to implement the program adopted in June. However, the City Council has twice delayed authorizing staff to issue the bids for recycling collection in the contract areas. The Environmental Quality Commission recently warned the city that if it did not move forward to implement an acceptable program, the Commission would have no choice but to begin the steps required by law to ensure that the opportunity to recycle is provided to all citizens in Portland.

Milton-Freewater, LaGrande, Pendleton and Hermiston are the only other cities who have not yet provided the required curbside recycling programs.

## OREGON'S RECYCLING OPPORTUNITY ACT

### Introduction

Oregon's Recycling Opportunity Act emphasizes recycling as a solid waste management method. Recycling is viewed both as an aid in solving problems of waste disposal and as a means of conserving valuable natural resources. The Act is designed to make participation in recycling easy and to reclaim recyclable items where they are generated: in homes, businesses, and industries.

With the enactment of the Recycling Opportunity Act by the 1983 Oregon Legislative Assembly, Oregon has embarked on a unique, comprehensive, statewide recycling program. The Act does not require that every Oregonian recycle, but does require that every person in the state must be provided the "opportunity to recycle." "Opportunity to recycle" requires at a minimum:

- (1) A recycling depot at every landfill and transfer station;
- (2) Monthly curbside collection of source separated materials in cities of more than 4,000 population and within the urban growth boundary of the Metropolitan Service District; and
- (3) A public education and promotion program which encourages people to recycle.

The Act also set priorities for solid waste management: first, to reduce the amount of solid waste generated; second, to reuse material for the purpose for which it was originally intended; third, to recycle material that cannot be reused; fourth, to recover energy from material which cannot be recycled or reused, and fifth, to dispose of solid waste that cannot be recycled or reused or from which energy cannot be recovered, by landfilling or other method approved by the Department.

Recyclable material is defined as "any material or group of materials which can be collected and sold for recycling at a net cost equal to or less than the cost of collection and disposal of the same materials." This flexible definition of recyclable material allows for market fluctuations, recognizes new markets, and takes into account regional differences in access to recycling markets.

There are seventy cities in Oregon in which curbside recycling service is required. For the most part, the service is provided by franchised garbage haulers. Local public education and promotion programs range from slick, advertising agency produced multi-media campaigns to volunteer-produced brochures delivered door-to-door by Cub Scouts. In addition to curbside service in the larger cities, recycling drop-off depots are open at nearly every public disposal site in the state.

Local governments, recyclers, garbage haulers and landfill operators share responsibility for providing the recycling opportunities by July 1, 1986. They must report their method of implementation to the Oregon Department of Environmental Quality, who will decide whether the local recycling programs are adequate.

The Oregon Recycling Opportunity Act has the potential to institutionalize recycling alongside garbage collection and disposal. If that happens, it will serve as an important demonstration to the rest of the nation of the potential to voluntarily change old habits and attitudes and to become a conserving rather than a throw-away society. Oregonians, who already recycle 90% of their beer and soft drink containers and 70% of their newspaper, ought to be able to make recycling work if anybody can.

#### State Role

The Department of Environmental Quality's governing board, the Environmental Quality Commission, was required to adopt rules necessary to carry out the Act. This was accomplished in December, 1984. The rules divide the state into wastesheds for reporting purposes, identify the principal recyclable materials within each wasteshed, and specify the criteria for acceptable alternative methods for providing the opportunity to recycle. The rules also set the standards for the recycling report to be submitted to the Department of Environmental Quality, and explain education and notice requirements. Finally, the rules outline the boundaries of a fair market value exemption and the consideration to be accorded existing recyclers and garbage haulers before a recycling franchise can be granted. By rule, the Environmental Quality Commission has also assessed a fee on disposal site permittees to raise part of the money necessary for administration of the Act.

A wasteshed is "an area of the state having a common solid waste disposal system or designated by the Commission as an appropriate area of the state within which to develop a common recycling program". The Environmental Quality Commission generally followed county boundaries for determining wastesheds. However, Oregon's largest city, Portland, was itself designated a wasteshed, as were the cities of West Linn and Milton-Freewater.

Once the Environmental Quality Commission divided the state into wastesheds, the Department of Environmental Quality notified each city and county and known garbage haulers, recyclers and landfill operators of their inclusion within a particular wasteshed. By the July 1, 1986 implementation date, the wastesheds were required to submit a recycling report to the Department of Environmental Quality explaining how the opportunity to recycle is being provided within the wasteshed. The Department in turn has the responsibility to review each recycling report to determine whether the opportunity to recycle is adequately provided. If it is not, the Department may grant a variance or extension of time for correcting deficiencies. If the deficiencies are not corrected within a reasonable period of time, then the Environmental Quality Commission must be notified of the failure.

The Commission, after a public hearing within the affected area, can order the opportunity to recycle to be provided. The order may specify the materials to be recycled, designate who is to provide specified services, and establish a schedule for implementation. The Commission may also order a city or county to franchise collection service in order to provide the recycling program.

The Recycling Opportunity Act requires that every person in Oregon be provided the opportunity to recycle. It does not require them to participate. Each person is thus given the chance to voluntarily help solve the state's solid waste problems. But if a large percentage of persons do not recycle voluntarily once the opportunity to do so is provided, the Environmental Quality Commission can mandate participation in recycling programs.

The Department's rules currently require submittal of only one report, due July 1, 1986, to report on the methods being used to implement recycling service. The rules do not require submittal of data which indicate how successfully the programs are operating. The Department is proposing to amend OAR 340-60-045 to require annual submittal of data on volumes of material recycled, generator recycling setout rates, any changes in the collection system, and education and promotion efforts. This information would enable the Department to monitor ongoing compliance with the rules and statutes and to evaluate the effectiveness of the recycling programs.

#### Technical Assistance

From the time the Recycling Opportunity Act was enacted, the Department has been providing technical assistance to local government officials and recyclers to help them set up the recycling programs required by law.

A generic statewide education and promotion program was designed which could be personalized by local governments and recyclers. DEQ produced camera-ready flyers and doorhangers, a radio public service announcement, and a newspaper advertisement graphically illustrating the curbside recycling program.

A bimonthly newsletter serves as a clearinghouse for education and promotion ideas and activities. DEQ co-sponsored a recycling education and promotion conference in April, 1986, with hands-on workshops to help local government officials, recycling collectors and educators learn how to set up an effective recycling promotion program.

The July 1, 1986 deadline became a catalyst for recycling promotion activities. The week of June 29 to July 5 was declared "Recycling Awareness Week" by Governor Victor Atiyeh. DEQ delivered suggestions for kick-off events and promotion ideas to community representatives and volunteers, and drafted a model news release. Media response was good. The Department also placed newspaper feature articles and encouraged industries using recycled material to place their own ads. Finally, the Department arranged a media event with the Governor and his wife recycling

at home to illustrate the ease of curbside recycling. Local governments arranged similar media events in their cities.

The DEQ distributed recycling report forms to wastesheds in the fall of 1985, and held workshops throughout the state to explain the responsibilities of each wasteshed in meeting the provisions of the Act. DEQ also prepared a variety of informational materials explaining the new law and how recycling markets work.

The Department is currently preparing a recycling education curriculum for grades K-12. The curriculum will explain Oregon's solid waste management policy and encourage families to reduce waste and recycle. The material is expected to be ready for distribution to schools throughout the state by the beginning of the 1987/88 school year.

### Compliance

As of December 31, 1986, DEQ has received recycling reports from thirty of the thirty-eight wastesheds. The Department has notified the remaining wastesheds that their reports are delinquent.

The Department has approved four recycling reports to date: Marion, Deschutes, West Linn and Clackamas. Other reports are being reviewed or have been reviewed and the Department has made suggestions for improvement which will bring the programs into compliance with the law.

All of the 125 disposal site permits have been amended to include provisions for recycling depots. The depots are located either at the site or at a more convenient location. Exemptions have been granted for small rural sites, although these sites are still required to notify the users of the site of the closest recycling opportunities available.

As of December 31, sixty-five out of seventy cities have provided on-route recycling collection service. The only cities who have not yet implemented their recycling programs are Portland, Milton-Freewater, La Grande, Pendleton and Hermiston. The Department is working with these cities to develop programs which comply with the law. The city of Portland has been granted an extension to January 31, 1987, and the city of Milton-Freewater has been granted an extension to April 30, 1987, for providing on-route collection service.

Many smaller cities and haulers in rural areas have chosen to voluntarily provide on-route recycling collection. These include most of the cities in Marion, Clackamas, Lane and Yamhill counties, as well as Tillamook and the rural areas around Roseburg.

Alternative methods for providing the opportunity to recycle have been approved for the cities of Stayton, Roseburg, and Ontario, and for a portion of the Grants Pass urban growth boundary.



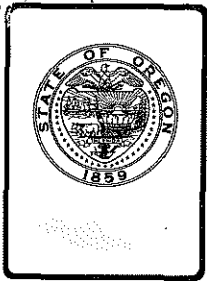
Oregon is fortunate to have strong markets for recyclable materials. Old newspaper is recycled at Smurfit Newsprint Co. in Oregon City and Newberg; old corrugated cardboard is recycled at three mills in North Bend, Albany and Toledo; tin cans are recycled at a de-tinning plant in Seattle; glass is recycled at Owens-Illinois in Portland; high-grade office paper is sold locally or exported overseas; and scrap metal is recycled at local steel mills or exported.

State government has participated actively in encouraging demand for secondary materials since 1973. Tax credits encourage retrofitting manufacturing plants to use secondary material; credits are also available for purchase or construction of recycling equipment.

Earlier concerns about the effect of increased supplies of materials on market prices have not materialized, and in fact, prices for some materials have increased over the last year. Newspaper has declined to \$58 per ton compared to \$62 per ton in 1983, but cardboard is now \$80 per ton compared to \$70 per ton in 1983. The price for green glass recently increased from \$30 to \$40 per ton, and is now the same price as for the other colors of glass. Scrap metal prices remain stable, although recent restrictions on the types of materials which will be accepted for recycling may affect market prices for scrap metals. Used oil prices have fallen proportionately with virgin oil prices to approximately 40 cents per gallon compared to a year ago, so commercial customers are now charged 15 cents a gallon to recycle their motor oil. Most used oil collectors have agreed to accept used oil from residential recycling programs and disposal site depots at no charge. End-market users of recycled materials claim that while the supplies of materials in 1986 have increased over 1985, the markets have not reached capacity and they continue to encourage more people to recycle.

### Conclusion

In looking back, the Recycling Opportunity Act has caused a tremendous growth in the recycling opportunities available to Oregonians. In 1982 only 14 cities offered residential recycling collection service, all of them west of the Cascades. Today, nearly 100 cities have the service. In 1982 only 27 disposal sites had recycling depots, while today approximately 130 sites offer multi-material recycling collection. Recycling promotion and education programs have been or are being introduced in local communities throughout the state to heighten people's awareness of the need to recycle and reduce waste. Though it is still too early to tell if each of these local programs will be successful, a system for recycling collection and marketing has been integrated into the solid waste collection system statewide.



## *Environmental Quality Commission*

Main Address: BOX X760, PORTLAND, OR 97207

522 SOUTHWEST 5TH AVENUE, PORTLAND, OR 97204 X PHONE (503) 229-5696  
811 SW Sixth Avenue, Portland, Oregon 97204

### MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item (E, January 23, 1987, EQC Meeting

Informational Report: The Status of Implementation of the  
Metro Waste Reduction Program

### Background

On June 27, 1986, when the Environmental Quality Commission approved the Metro Waste Reduction Program, the Commission asked Metro to make a status report on program implementation at the January EQC meeting. Metro has provided that Report as requested (see attachment).

Senate Bill 662, which gave the EQC the authority to approve or disapprove Metro's Waste Reduction Program, did not give the EQC or the Department any role in monitoring compliance with the approved program. A copy of the approved waste reduction program is required to be submitted to the Sixty-fourth Legislative Assembly not later than February 1, 1987 (SB 662 B Engrossed, Section 8(5)).

### Department Analysis:

The Metro Waste Reduction Program has two main elements. First, a recycling program which is more comprehensive than that required by the Recycling Opportunity Act must be established. Second, alternative technology must be built to process and/or recover energy from the fraction of the waste that cannot be recycled.

For the most part, Metro has accomplished the tasks it committed to undertake in the time period from July 1 to December 31, 1986 to begin to establish these programs.

To establish the comprehensive region-wide recycling system, Metro has done the following:

- (1) A visible, well-planned promotional campaign. The chosen theme, "Together we can get out of the dumps," will, however, make DEQ's landfill siting efforts more difficult because the Department will be selling the public a "state-of-the-art landfill" at the same time that Metro advertisements are showing a litter-strewn "dump".

- (2) A successful marketing and technical assistance program for yard debris. Metro's attempt to process yard debris collected at the St. Johns Landfill has been less productive. The disc screen purchased to process the contaminated stockpile of yard debris has not operated successfully.
- (3) Contracting for a waste stream composition study. The first of four "sorts" was completed in November. Adoption of waste reduction performance goals will be delayed six months until completion of the composition study in July.
- (4) Deviated from the Waste Reduction Program's plan for establishing a certification program for local collection services. Instead of establishing certification units and using rate incentives to encourage compliance with the Recycling Opportunity Act and other as yet to be established certification standards, at the request of a garbage haulers' organization, Metro is now pursuing an approach of "voluntary cooperation." Metro is also exploring an alternative method of enforcement, legally untested, in which Metro would require all local governments to operate garbage collection and recycling programs consistent with the Metro Waste Reduction Program.

To begin the process for choosing and siting an alternative technology, Metro has issued a request for qualifications and a subsequent request for proposals for alternative technologies. Response to the RFP is due January 30, 1987, ahead of the schedule anticipated in the Work Plan.

It is still too early to tell whether Metro's Waste Reduction Program is successful. Most of the work carried out in the last six months has been planning or tasks preparatory to implementing the various components of the Program which will actually accomplish the desired waste reduction.

#### Director's Recommendation

It is recommended that the Commission direct the Department to submit to the 1987 Legislative Assembly Metro's Waste Reduction Program Status Report and this Informational Report along with the approved Metro Waste Reduction Program and June 27, 1986 DEQ staff report.



Fred Hansen

Attachment: Metro Waste Reduction Program Status Report and letter from Executive Officer Rick Gustafson, December 24, 1986

Lorie Parker  
SM716  
229-5826  
January 7, 1987



# METRO

2000 S.W. First Avenue  
Portland, OR 97201-5398  
503/221-1646

ATTACHMENT  
Agenda Item F  
1/23/87, EQC Meeting

December 24, 1986

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
**RECEIVED**  
DEC 29 1986

OFFICE OF THE DIRECTOR

Mr. Fred Hansen, Director  
Department of Environmental Quality  
Executive Building  
811 S. W. Sixth Avenue  
Portland, OR 97203

Dear Fred:

**Metro Council**

Richard Waker  
Presiding Officer  
District 2

Jim Gardner  
Deputy Presiding  
Officer  
District 3

Bob Oleson  
District 1

Corky Kirkpatrick  
District 4

Tom DeJardin  
District 5

George Van Bergen  
District 6

Sharon Kelley  
District 7

John Frewing  
District 8

Tanya Collier  
District 9

Larry Cooper  
District 10

Marge Kafoury  
District 11

Gary Hansen  
District 12

Executive Officer  
Rick Gustafson

With the adoption of its Solid Waste Reduction Program by the Environmental Quality Commission at their June 27, 1986, meeting, Metro agreed to provide a status report on its implementation to the Department of Environmental Quality in January of 1987.

The report to meet that commitment is attached. It will reflect that a substantial amount of the program has been addressed and the structure for the long-term effort is in place. It will also show that 10 of the 11 subprograms are on or ahead of schedule.

Time and efforts over the past 18 months have been invested in project designs, task development, staff hiring and training, public involvement, and program implementation. What is required now to fulfill the long-term goals and objectives of the Solid Waste Reduction Program is experience, data and the continued involvement of all affected interests. Metro is committed to rapid action on ambitious goals but continued adjustments to the program schedule and design are also expected to be made because of these factors. Our success will be determined then on the results we derive from these judgments.

Notable accomplishments that should be reviewed in this report include the Public Information Education and Promotion work, Alternative Technologies, Yard Debris Markets Development, System Measurement, Material Recovery and Rates.

It also needs to be pointed out here that the original DEQ directive on the necessary components of the Waste Reduction Program included hazardous waste. In return for a commitment from Metro staff to develop a Hazardous Waste Program separately, the requirement was waived. DEQ has

a copy of the plan which was developed and subsequently adopted by the Metro Council.

The first phase of implementing this plan has enjoyed very favorable reception and results. Household hazardous waste collection days were very successful. A final report on this Metro coordinated effort will be issued in early January. The next phase will also begin in January. Recommendations and a work plan will be developed for non-regulated hazardous wastes and a document on alternatives for household hazardous wastes will be designed and published.

It was necessary to make some modifications to the Work Program in this first phase. What follows is a brief summary of four subprograms whose original schedules and/or action elements were modified.

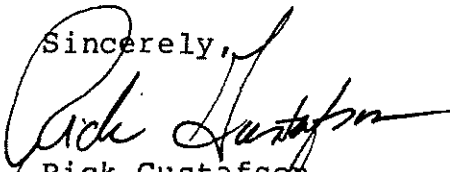
- The Certification subprogram was modified to address new legal understandings and the vigorous involvement of local governments and collectors. As a result, we are not meeting our schedule at this point in time, but expect to be by January 1988. Metro received a responsible alternative proposal for the cooperative development of the certification program from the tri-county association of haulers. Metro intends to work with them and local governments to make this approach successful. This is not to imply that Metro has abandoned the use of other methods for achieving its goals. If this arrangement fails Metro will apply an appropriate enforcement mechanism to the circumstances at that time. The concerns of affected interests notwithstanding, rate differentials could still be implemented. Research also shows that there is adequate, albeit untested legal authority for Metro to apply if the situation warrants it. It should be noted that the amount of the differential was not put into the rates. The framework and authority for using it was adopted into the Code, but the dollar figure will not be set until the specific conditions and circumstances are evaluated for an appropriate amount. (See discussion in certification section of report.)
- The Rate Program was also modified on legal grounds. Metro is required by law to base its rate structures on the cost of providing the service, not what it takes to bring about the behavior change. Metro is also limited, by law, in providing grants and loans to private businesses.

The rate study will not take effect until April 1, 1987. This three-month delay was due to the massive restructuring it took to build in cost and revenue data for waste reduction which includes multi-million dollar capital construction projects and a long-term financial study. This work required a commensurate amount of time for public involvement and input, but the delay is still within Metro's schedule commitment.

- Materials Market Assistance has been a notable success. Yard Debris Market sales increases have been dramatic. Sales during the peak annual sales period (May) increased 100 percent from 1985 to 1986. On an annual basis, compost sales in 1986 (through August) are running 96 percent ahead of 1985. Metro's experience in yard debris markets has led it to redesign the overall markets program elements which extended the schedule for campaigns on other materials.
- We are ahead of schedule in the Alternative Technologies subprogram. A problem area is in the siting of a facility(s) once a decision on price and technology type is made. Metro's functional planning authority found in ORS 268 does provide a structure for siting, but lacks the certainty implied in the laws directing the development of the Solid Waste Reduction Program. It therefore seems appropriate to request an amendment to Metro's enabling legislation that will allow certainty in public involvement, final site selection and facility development.

I trust you will be as pleased with the results of our efforts as we are. Thank you for your ongoing support and cooperation.

Sincerely,



Rick Gustafson  
Executive Officer

RG/DM/gl  
6689C/D2

Enclosure

## WASTE REDUCTION PROGRAM STATUS REPORT

SUBPROGRAM	RATING	ACTION ELEMENTS
Promotion, Education and Public Involvement	●	Market research
	●	Theme and graphic look
	●	Multi-year campaign look
	●	Specific campaigns
	●	Recycling Information Center
	◐	Support for local jurisdictions
	◐	Public Involvement
Reduce and Reuse Programs	●	Plastics reduction task force
	◐	Packaging reduction
	◐	Salvageable building materials
	FA <sup>1</sup>	Waste exchange
Recycle — 405 Materials	◐	Technical Assistance
	◐	Recycling Information Center
	◐	Regional promotion and education
	FA <sup>1</sup>	Source separation technology
	FA <sup>1</sup>	Grants and loans
Recycle yard debris	◐	Material recovery centers
	◐	Materials markets assistance
	FA <sup>1</sup>	Credits, loans and grants analysis
	◐	Technical assistance
	◐	Promotion and education
	●	Principle recyclable analysis
	◐	Rate incentives
	FA <sup>1</sup>	Ban on disposal

SUBPROGRAM	RATING	ACTION ELEMENTS
Post-Collection Recycling Materials Recovery	◐	Material recovery centers
	◐	Transfer stations
	FA <sup>1</sup>	Auditing and consulting
Legislative Program	◐	Develop legislation for waste reduction
Certification for Local Collection Services	○	Develop standards, measurements and process
Rate Incentives	◐	Post-collection recycling/materials recovery
	◐	Certification
	◐	Program funding
Materials Markets <sup>3</sup> Assistance Program	FA <sup>1</sup>	Markets assistance plan
	◐	Yard debris markets plan
System Measurement	◐	Compostion study
	◐	Resource recovery study
	FA <sup>1</sup>	Waste reduction performance goals
	FA <sup>1</sup>	System performance measurement
Alternative Technologies <sup>2</sup>	◐	Select technologies
	◐	Issue RFP to vendors
	◐	Select vendors

KEY    ●    COMPLETED    FA<sup>1</sup>    SCHEDULED FOR FUTURE ACTION  
          ◐    ON SCHEDULE        2    AHEAD OF SCHEDULE  
          ○    BEHIND SCHEDULE      3    PROGRAM REDESIGNED

PROGRAM NAME: PROMOTION, EDUCATION AND PUBLIC INVOLVEMENT

Purpose To develop a comprehensive program to reach the general public and special interest groups with information and other opportunities to increase their awareness of the participation in waste reduction activities.

Action Elements:

A. Market Research: Promotion and education activities will be designed in light of market research findings to reach selected target populations with information they are most likely to respond to. Market surveys will be taken at regular intervals so we can evaluate the effectiveness of the promotion and education activities we undertake.

- \* The Columbia Research opinion poll survey was completed in September, 1985.  
The Opinion Leader survey was completed September, 1985  
Metro used the compilation of results for guidelines for the advertising agency. The guidelines were written out in the scope of work for the advertising agency in the Request for Proposals.  
A market survey will be conducted in December, 1986, to evaluate the effectiveness of the promotion and education activities to date. Request for written bids out on November 18. Due on November 24.  
Final report January 9, 1987.  
Other surveys will be conducted as needed. (Following each major campaign or as needed.)

B. Theme and Graphic Look: A professionally developed theme, or slogan, and graphic look will tie together all elements of Metro's waste reduction promotion and education.

- \* Metro's theme was developed in conjunction with the basic principles of the entire Waste Reduction campaign, "To reduce the amount of waste entering the regional landfills." April, 1986.  
A tag line was developed to promote the theme, "To gether we can get out of the dumps," April, 1986.  
Three in-house meetings and two meetings with local - governments/interested parties were held in March and April, 1986.

C. Multi-Year Campaign Plan: This will provide a detailed plan, schedule and budget to assure coordination of all Metro waste reduction promotion and education activities. The initial plan will cover a three-year period, focusing on the first year's effort. The plan will be updated and



revised yearly.

- \* Phase I Report prepared by Coates Advertising Agency, April 15, 1986 Ordinance No. 86-200. Phase I Report included information on the theme and a full outline of the first year campaign. The second and third year were left open for the topic to "be announced" to provide for implementation of projects within the Waste Reduction Plan. .

**D. Specific Campaigns:** Two major promotions will be undertaken every year. Each will utilize a broad range of information outlets -- including such measures as newspaper and magazine articles and advertising; billboards and transit advertising; radio ads; radio and television public service announcements and station promotions; and various direct contact approaches such as direct mail. In addition, Metro staff will carry out at least eight promotions in the community each year such as exhibits and displays in trade shows and shopping centers.

- \* The two major promotions developed by the Coates Advertising Agency

1. Where will the Children Play. The campaign utilized radio, television and newsprint. The campaign ran for three weeks June '86.
2. Save the Earth with a Brown Paper Bag. The campaign utilized radio, newsprint, grocery bags and a traveling exhibit. The campaign ran for three weeks in the months of July, August, September and October, 1986.

**E. Recycling Information Center:** The RIC, with adequate paid staff, will continue to be the main point of public contact for inquiries on recycling and waste reduction.

- \* RIC now has a staff of three. One full-time program coordinator, a full time program assistant and a half-time office assistant. The number of phone calls received continue to run between 40-50% higher than last year. (See Recycle - 405 Program)

**F. Support for Local Jurisdictions:** Metro's promotion and education activities are intended to supplement those of the local governments. Metro will use primarily regional outlets and will cover topics and themes of interest across the region. Local jurisdictions will take the lead in

providing educational information with specifics about pick up, schedules and requirements. Metro will offer support by (1) compiling and distributing a monthly calendar of events, (2) developing, upon request, ready-to-print promotional materials incorporating Metro's overall logo and theme; and (3) providing general information and assistance on how to work with the media, also upon request from local governments.

- \* Bi-monthly calendar of events for recyclers, local governments and interested parties, included in the Recycling Information Center Monthly Report, October, 1986. This calendar is in the testing phase to monitor the needs and information availability from local governments and recyclers.

Recycling Information Center/Lions Recycling Flier for the telephone book recycling campaign, November, 1986.

A flier was made available to United Chippers (Consortium of mobile yard debris processors) in August, 1986.

Information and assistance is available at all times on how to work with the media. Media lists were made available to United Chippers.

- G. Public Involvement: Several elements of the Waste Reduction Program require ongoing efforts to involve the public and special interest groups from the metropolitan area. Examples include scheduling public meetings to review alternative technology proposals, and arranging meetings with local governments and private business to arrive at workable recycling goals. These public involvement activities are referenced in the Work Plans for each program area. They will be planned, coordinated and carried out as part of this promotion, education and public involvement work program.

- \* Public involvement meetings were held in March/April, 1986 on the Coates advertising theme development.

Public involvement meeting was held on August 9, 1986, to discuss regional recycling awareness week.

Regular attendance at local government task force meetings and the Association of Oregon Recyclers.

Coordinated with local governments on Recycling Awareness Day.

Coordinated with recycling industries on Recycling Industries Day and Recycling Awareness Day.

The compilation of the office recycling handbook will involve input from local governments and private businesses who are involved with office recycling.

Design of a curriculum implementation plan will involve meetings with individuals (teachers, curriculum specialists) and groups. Material developed by the DEQ will be distributed in spring and summer 1987 for fall 1987 use.

Attachment for Promotion/Education

- Eight Metro staff produced promotions

Spring Yard Debris Campaign, March/April/May, 1986

Home recycling exhibit in coordination with local governments to county fairs. July/August, 1986

Curbside Recycling exhibit to shopping malls, July/August/-September, 1986.

Curbside recycling brochure, July, 1986. Reprints, October, 1986.

Recycling Teacher In-Service (not held due to limited registration)

Recycling Recognition Awards, October, 1986

Recycling Industries Day, October, 1986

Recycling Awareness Day at the Washington Park Zoo, October, 1986.

Far West Agricultural Show, August, 1986

National Recycling Congress Conference display, September, 1986.

Fall yard debris recycling campaign October to December, 1986.

- Upcoming events

Christmas Tree recycling campaign, December, 1986

Office Paper Recycling Campaign, February, 1987

Spring Yard Debris Campaign, April, 1987

Coates campaign, "Where will the Children Plan." Tentative, February, 1987.

Planning for new Coates campaign (Year 2), April/May, 1987.

**PROGRAM NAME: REDUCE AND REUSE PROGRAMS**

**Purpose: Develop programs to achieve the maximum feasible reduction of materials that eventually become waste; and the salvage and use of reusable products retrievable from the waste stream.**

**Action Elements:**

1. **Plastics Reduction Task Force: Participate in a statewide or regional task force to research strategies for reducing plastic material in the waste stream.**
  - \* During the period June, 1986, through November, 1986, the Waste Reduction Manager served as Metro's representative on DEQ's Plastics Task Force. The Task Force's conclusions and DEQ's recommendations will be available in December, 1986. Any proposed legislation will be brought to the Metro Executive Officer and Council for action. Results of the Waste Characterization study (See System Measurement Program) which included plastics, will be shared with appropriate legislative committees.
  
2. **Packaging Reduction: Promote consumer attention to packaging issues, develop legislative action to address degree of packaging-type waste in waste stream. (See Promotion & Education and Legislative Action Work Plans.)**
  - \*
    - 1) Slide show includes packaging information (developed, August, 1986).
    - 2) Poster Distribution (ongoing) deals with Buyer Beware.
    - 3) Distribution of curriculum materials (ongoing) that deal with buyer awareness of packaging.
    - 4) Topic will be under consideration for future Coates Campaigns and in-house promotions.
    - 5) Investigating videos and written material for library.
    - 6) Flier available - will be updated FY '87 (after legislative session) with any revisions
    - 7) Purchasing Policy being written - complete, January, 1987.
  
3. **Salvageable Building Materials and Items: Metro will examine the need and feasibility of programs to promote reuse of building and other materials before disposal, and develop salvage capability at disposal facilities. The RIC will expand and promote the use of salvageable material**

database and hot line to encourage the reclaiming and reuse of salvageable materials before they are discarded as waste.

\* (See Promotion and Education and Post-Collection Processing - Materials Recovery Work Plans.)

4. Waste Exchange: Metro will fully explore the utility and feasibility of expanding its current waste exchange activities to develop information clearinghouse for industrial and manufacturing waste.

\* Waste Exchange is a work element under reduce and reuse programs. Background research on other existing waste exchanges has been completed and a library developed. Staff attended 3rd National Conference on Waste Exchange last March. Staff is considering how to establish a Northwest coalition to attend the 4th National Conference on Waste Exchange in March '87. Additionally, an exempt/small quantity generator task force will be started in January/February. This task force will be developing a survey of what types of industrial wastes are being produced. Some of these may be recyclable. This will be valuable information for the Industrial Waste Exchange Program. Initiation of a feasibility study for an Industrial Waste Exchange program is anticipated to begin in February when DEQ has hired new personnel.

Changes in Tasks Schedule

Initiate Study - February-May, 1987

Develop Proposal - June, 1987

Survey recycling and industry - July-August, 1987

Develop final program - September, 1987

Council deliberation - October, 1987

PROGRAM NAME RECYCLE -- 405 MATERIALS

Purpose: Establish and aggressively promote a variety of programs to assist local governments and other parties in developing curbside collection programs as required under the Oregon Opportunity to Recycle Act; to meet standards developed by the Department of Environmental Quality; and to achieve maximum feasible reduction through those programs.

Action Elements:

- A. Technical Assistance: A program to provide technical assistance services to local governments in developing single and multi-family curbside collection programs and effective promotion and education campaigns in accordance with SB 405.
- \* This program works in concert with the certification program. Involvement with local governments in setting up certification will provide information to make assessment of relevant services to offer. Local governments verification of appropriate services will then be budgeted. Initial services will be in 1987-88 budget recommendations.
- B. Recycling Information Center Enhancement: A program to facilitate the development of recycling habits, attitudes and awareness in the general public; and to upgrade the information services of the RIC in response to the development of curbside collection programs. Specific activities include:
- Computer Capability: Develop a computerized information storage and retrieval system to manage the resources of the center.
- \* Computer program developed for retrieval of information on markets, drop-off centers and pick-up services, i.e. curbside. Program can be revised to include recycling information on education curriculum, waste exchange, and report generation. A second computer will be added in January, 1987, to assist in handling ever increasing number of calls.

**Public Education Materials:** Develop a series of educational flyers and handbooks on waste reduction and recycling issues for distribution to the general public.

- \* Office Recycling handbook - final print in January for dispersal at Office Products Show in February. Looking to update Art of Composting to include information on markets. Looking at doing a series on chemical hazards in the home that talks about what is hazardous, why it is, precautions and alternatives. Update packaging flier after legislative session.

Other publications issued in 1986:

Art of Composting handbook  
Curbside recycling brochure (By County)  
Fact sheet on the Recycling Information Center  
Trim, Prune, Clip and Recycle brochure  
Yard debris compost brochure  
Grocery bags/Save the Earth and Tin Bin, Glass Stash and Paper Pouch.  
Poster distribution  
Fact sheet distribution  
Curriculum and educational materials distribution

**Library Development:** Develop a library of audio-visual and printed materials on recycling and waste reduction issues for use by the general public.

- \* Existing in-house material cataloged August, 1986. Regional assessment to be completed by April, 1987. Additional material list to be developed by May, 1987 and purchasing begun. 1987-88 budget will include funding for ongoing material purchasing.

**Volunteer Development:** Develop volunteer and/or internship program to provide opportunity for volunteers to learn community information management techniques and awareness of recycling yard debris compost habits, attitudes and issues.

- \* Contacts with potential volunteers will be made in February. They will be put to work by April answering phones, working with neighborhood groups and providing back-up for information booths at fairs, conferences, etc.



**Community Recycling Projects:** Develop active partnerships with community groups and citizens to develop small-scale, neighborhood-based community recycling projects such as neighborhood clean-ups and compost programs, workshops, speakers bureau and others. Extend networking capabilities with community organizations.

- \* - Yard Debris Workshops Fall of 1986 - 3 each  
Spring of 1986 - 8 each
- Environmental Education Association of Oregon  
Presentation, October 19
- Speakers Bureau updated & mailed to other  
jurisdictions, November, 1986
- Neighborhood Clean-Ups - N.E. Portland & Gresham  
in 1986. Will do more in Spring of 1987.  
Coordinate with the help of volunteers.
- Composting workshops April to June, 1986/coord-  
inated by Metro and development of Posters  
and fliers to advertise them
- RIC operates a speakers bureau for all recycling  
information
- Recycling presentations made by staff to  
community groups. Average is three per  
month.
- Beaverton Good Neighbor Days/Recycling exhibit  
September, 1986.
- Home recycling exhibit at the Clackamas County  
Fair and the Multnomah County Fair -  
staff volunteered to staff booths.

**Salvageable Materials and Waste Exchange:** Appropriate functions related to waste exchange and salvageable material database and hot line will be expanded.

- \* If it proves feasible to set up such a program (See Reduce and Reuse Program), RIC will incorporate a special sub-section in our computer program to retain necessary information and facilitate reclamation of materials.

- C. **Local Collection Service Certification:** A program to assure that curbside collection programs are optimally effective.

\* (See Local Collection Service Certification Work Plan.)

- D. **Regional Promotion and Education:** A multi-year regional recycling promotion campaign. (See Promotion and Education Work Plan.)

\* Where will the Children Play campaign (June '86) - news print, television, radio

Save the Earth with a Brown Paper Bag (July, August, September and October, 1986 - newsprint, radio, grocery bags, exhibit.

Trim, Prune, Clip and Recycle (April, May, 1986) - transit ads and newsprint.

Fall Yard Debris Campaign (October, 1986) - newsprint, media coverage

Upcoming Campaigns:

Christmas tree recycling (Dec. '86)

Office Products Show (Feb. '87)

Spring Yard Debris (April, '87)

Coates Advertising Campaign (June-Oct. '87), est.

Optional Action Elements:

- E. **Source Separation Technology Development:** The development and distribution of home or office recycling containers.

\* An analysis of this system will be completed by February, 1987. If appropriate, funds and a program will be recommended in 1987-88 budget.

- F. **Grants and Loans:** Targeted to local governments, businesses and/or recyclers to support waste reduction and recycling programs.

\* An analysis of this approach will be completed by February, 1987. If appropriate, funds and a program will be recommended for inclusion in 1987-88 budget.

PROGRAM NAME: RECYCLE -- YARD DEBRIS

Purpose: To achieve maximum feasible reduction of yard debris currently being landfilled through the use of regional processing facilities and on-route collection of source-separated yard debris.

Action Elements:

- A. Material Recovery Centers: Metro will establish a yard debris processing facility at the St. Johns Landfill capable of processing up to 200,000 cu. yds. of materials annually. Fees for source-separated yard debris will be based on program costs, consistent with Metro's policy for the handling of recyclables.
- \* Metro has acquired a disc screen to begin processing of stockpiled material, and has contracted for operation of the equipment. The stockpile of contaminated material has not been completely cleaned due to technical problems, and this has delayed the development of an on-site grinding/processing operation as scheduled. A RFP for the full scale processing center will be developed during the first quarter of 1987, to include an option for transferring of material to a private firm. The existing site is being used for stockpiling of incoming, uncontaminated material collected from both private individuals and commercial haulers. This material is being attracted at the projected levels through the use of rate incentives established in October of 1986 (see rate incentives).
- B. Materials Markets Assistance: Encourage the purchase of recycled yard debris products through the use of the RIC referral system, annual yard debris composting campaign, and institutional purchasing policies.
- \* (See Materials' Markets Assistance Program.)
- C. Diversion Credits, Loans and Grants: Metro may use diversion credits (payments for yard debris which is processed) to private sector processors to encourage the processing of materials and market substitution. (See also the Rate Incentive Work Plan.) In limited circumstances loan or grant monies may be given to processing of source-separated yard debris.
- \* Metro will examine the cost effectiveness of diversion credits to private processors of yard debris during FY 87-88. If these methods are shown to be necessary and

cost effective, they would be implemented during FY 88-89. Metro is limited in providing grants or loans to businesses by state law.

- D. **Technical Assistance:** Share information from other states and countries with local processors, haulers, and municipalities for the collection and processing of source-separated yard debris.

(See Certification and Markets Assistance Program)

- E. **Promotion and Education:** Use to promote home composting, source separation, and market development. (See Promotion, Education and Public Involvement Work Plan and Markets Assistance Work Plan.)

- \* - Spring Garden and Landscape Show - April, 1986 (Yard debris compost display)
- Developed Trip, Prune, Clip Brochure, April, 1986. Reprint August, 1986.
- Trim, Prune, Clip and Recycle Advertising Campaign - transit signs and newsprint.
- Developed Yard Debris Compost brochure, April, 1986, Reprint August, 1986.
- Reprint and new cover for the Art of Compost Handbook.
- Workshops coordinated by Metro. Eight workshops from April to June, 1986.
- Yard Debris Compost displays developed for Grimm's Fuel and McFarlane's.
- Far West Agricultural Show. August, 1986.
- Yard Debris Recycling and Compost information provided at all community outreach activities (shopping malls, fairs)

- F. **Provide Analysis for the Placement of Yard Debris on the list of "Principle Recyclables":** Staff will present an analysis to the EQC regarding the placement of yard debris on the list of "principle recyclables."

- \* In its March, 1986 testimony to the Environmental Quality Commission, Metro submitted technical analysis of curbside collection costs for yard debris. Based on subsequent information from program experience, Metro

is updating its analysis and will provide the Department of Environmental Quality with its findings in January, 1987.

G. **Rate Incentives:** Metro will adjust fees at its processing and transfer points downward to encourage recycling as outlined above.

- \* Metro adopted an interim rate reduction for source-separated commercial and public loads at its St. Johns facility on October 6, 1986. Rates were reduced by approximately 50% for commercial loads and 66% for public loads. In its current rate study, staff is recommending the adoption of source-separated yard debris rates which are lower than for mixed loads. The recommended yard debris rates which would be effective April 1, 1987 are 56-57% of mixed loads.

Metro will be incorporating a yard debris high-grading point at its West Transfer and Recycling Center which is scheduled for completion in the spring of 1988. This facility would have reduced rates for source-separated material.

Metro will also be analyzing the need to retrofit its Clackamas Transfer and Recycling Center to accept yard debris. Rates would be reduced if this option is pursued and would occur in early 1988. The results of the composition study will be used to determine this.

H. **Local Collection Service Certification:** Metro will develop standards for yard debris recycling by jurisdiction. Higher disposal rates may be assessed to local jurisdictions which do not implement adequate yard debris collection and/or processing systems.

- \* (See local Collection Service Certification Work Plan.)

I. **Bans on Disposal:** Metro will ban disposal of source-separated yard debris from landfills under its control by January, 1989.

- \* Metro will institute such a ban if its reduction goals are not met.

PROGRAM NAME: POST-COLLECTION RECYCLING/MATERIALS RECOVERY

Purpose: To recover recyclable materials and reusable items from the waste stream through facilities which process waste which contains a high percentage of economically recoverable material. The mechanical processing of waste to produce compost, fuel or other by-products is considered Materials Recovery until it is looked at through the process outlined in Alternative Technologies.

Action Elements:

- A. Material Recovery Centers: Private, franchised or public facilities will be established for waste substream which contain material or items which it is technically and economically feasible to recovery.

\* Metro currently has four private, franchised material recovery facilities operating in the region. The largest is the Oregon Processing and Recovery Center (OPRC). In addition to being a full-line buy-back center, they accept high-grade loads of cardboard and office paper. Metro, with OPRC, has provided spotters at St. Johns to identify potential high-grade loads and divert them to the OPRC facility. East County Recycling received a franchise in August, 1986, to establish a processing center at N.E. 122nd and San Rafael to accept loads of waste from primarily private citizens. They are hand sorting the recyclable products and processing yard debris. East County is also hand sorting some commercially generated waste paper loads.

After several months of operation of Oregon Processing Center OPRC, it became clear that it would be economically prohibitive for waste collectors to deliver high-grade loads directly to OPRC from Clackamas and Washington Counties. As a result, several methods were tested to reload high-grade material at CTRC and deliver it to OPRC in larger trucks. In July a proposal was developed to modify CTRC by installing a stationery compactor to improve the efficiency of hauling high-grade corrugated loads. In September, 1986, K-B Recycling Company informed Metro of their intention to apply for a franchise to add a high-grade corrugated picking line to their new recycling plant at the intersection of I-205 and Highway 224 in Milwaukie, Oregon. While Metro has not received the application, it has delayed the modification to CTRC

- B. Use of Transfer Stations: To maximize waste substream differentiation, salvage programs and post-collection separation of recyclables. CTRC will be redesigned, and WTRC designed to meet this objective.

\* WTRC has been designed to allow segregation of several substances of the waste. The design allows for four materials to be stored and transported separate from the general solid waste stream. The different materials will be compacted for efficient transport to existing processing centers. Metro anticipates shipping corrugated loads and office paper to facilities such as OPRC or K-B Recycling, yard debris to facilities such as Grimms or McFarlanes and construction/demolition to limited-use landfills such as KFD or Lakeside Disposal.

Marine Drop Box Company operates a processing center which primarily deals with the marine shipping and repair industry. They hand-sort loads from the various docks and terminals. Their major reclaimed products include shipping dunnage, cables, ropes and other materials. Sunflower Recycling operates a very small composting operation under a franchise from Metro.

K-B Recycling has proposed adding a paper sorting operation to their new buy-back center at Hwy 224 and I-205.

- C. Waste Auditing and Consulting Service: Advise and assist or conduct audits and design programs for waste generators in cooperation with collectors to assist in the generation of high-grade loads.

(See Materials Markets Assistance Program)

PROGRAM NAME: ALTERNATIVE TECHNOLOGIES

Purpose: To recover material and/or energy from the implementation of Alternative Technologies

Action Elements:

Solicit proposals for Alternative Technologies that process up to 48% of the waste stream. Specific processes to recover material will be evaluated through a RFQ/RFP process including material recovery technologies, composting, refuse-derived fuel (RDF) and Mass Burn.

\* In January, 1986, a Request for Proposals (RFP) was issued to secure management and technical consulting services. In February, the firm Gershman, Brickner and Bratton, Inc., was hired to work in this capacity.

In March, 1986, a Request for Qualification and Information (RFQ/I) was issued to systems contractors who provide waste processing techniques including composting, refuse-derived fuel (RDF) and mass burn. Thirteen responses were received, out of which six were selected for receipt of the RFP.

The six firms selected to continue in Metro's procurement process for resource recovery systems contractors include American Ref-Fuel, Combustion-Engineering, Fluor Engineers, Schnitzer-Ogden, and two compost technology firms, Riedel-DANO and Reuter-Buhler/Miag. These firms were notified of their selection and eligibility to receive Metro's RFP in late July. In addition, decisions were made on the potential waste allocation for each technology, and acceptable costs for inclusion of alternative technology(ies) in the solid waste disposal system.

Firms utilizing incineration technologies, RDF and mass burn, have been requested to propose 250,000 TPY, 350,000 TPY and 450,000 TPY volume size projects (800 TPD, 1,130 TPD and 1,450 TPD respectively).

Firms utilizing compost technologies have been requested to propose 100,000 TPY and 200,000 TPY volume size projects (320 TPD and 640 TPD respectively).

The Metro Council also concluded that any project or projects selected for procurement should not increase the total system disposal cost 20%. If costs



presented do exceed 120% of the system cost, the Council will evaluate the relative merits of including the project despite the increase in cost, so long as other necessary criteria are met.

Site information included in the RFQ/I responses was not transmitted to DEQ for inclusion in their waste disposal siting efforts. A joint decision was made by DEQ and Metro that preliminary site information supplied by the six systems contractors in July, 1986, would not provide adequate information in time for conducting a legally acceptable siting process. The siting process in SB 662 was not appropriate for Alternative Technologies, also

The RFP for mass burn/RDF technologies was issued October 8, 1986. The RFP for compost technologies was issued October 24, 1986. All proposals are due on January 30, 1987.

Responses will be evaluated from February through March, 1987, at which time Metro will enter into a Memorandum of Understanding (MOU) with the top ranked firm(s). The MOU(s) will be negotiated by August 1, 1987, at which time Metro Staff will recommend to Council which firm(s) is most appropriate with which to enter formal negotiation of a long-term service contract. This schedule varies from that printed in Metro's Work Plan, wherein the final selection would be made in April, 1987.

In addition, the contract is now scheduled to be signed in December, 1987, with financial arrangements to be finalized the month thereafter, ground breaking and construction to ensue the next month, February, 1988. These dates are heavily dependent upon the success with which the selected contractor secures a site and their willingness and/or ability to negotiate expeditiously. The dates in the original work plan assumed commercial operations to begin in December, 1990. Though still progressing through a schedule wherein operation could be feasible in early 1991, given likely constraints in the siting process, a more realistic date for achievement of commercial operation is July, 1991.

An evaluation is currently being done on methods to add certainty to the siting process through legal amendments to Metro's current authority. These conclusions to this assessment will be included in the 1987 legislative package.

PROGRAM TITLE: LEGISLATIVE PROGRAM

Purpose: Develop and pursue a legislative action package to facilitate the implementation of the Waste Reduction Program and achieve certain recycling and waste reduction goals.

Action Elements:

Legislative Program: Present packaging, plastics, effective public purchasing policies, and other proposals for legislative action.

- \* The Metro Council reviewed and adopted legislative principles at their November 20, 1986 meeting. Specific bills that will be worked on, as a result of this action, include expansion of the Container Deposit Laws, State Purchasing Policies, Packaging Restrictions, Extension of Tax Credits for Recycled Plastic Manufacturing Processes, Solid Waste Facility Siting Authority, Hazardous Waste Disposal System Development, Letter of Credit Authority for Metro in siting Solid Waste Facilities.

PROGRAM NAME: CERTIFICATION FOR LOCAL COLLECTION SERVICES

Purpose: To assure participation of local jurisdictions and the collection industry in waste reduction efforts to accomplish maximum feasible reduction through those programs which require changes in the collection system.

Action Elements:

Certification for Local Collection Services: Local jurisdictions, which have exclusive regulatory control over solid waste collection, will be encouraged to participate fully in waste reduction effort through Metro certification.

Standards and measurements will be developed to assure effective local collection programs which meet source separation goals for principle recyclable materials, remove yard debris from the waste stream, and provide high-grade loads of mixed waste.

The program will begin with the DEQ's standards to meet SB 405 requirements. The standards for the second year will address collection systems for yard debris and, if appropriate, the generation of high-grade loads. Each year in this phase new requirements for certification may be added depending on results of previous programs.

\* I. Program Set-up

Tasks Completed:

The Solid Waste Policy Advisory Committee has been reorganized to address the certification program, the Local Government Advisory Committee on Certification has been formed and begun meeting, and the Tri-County Council is actively providing advice and assistance.

Future Tasks:

The three advisory committees will continue to serve as a resource for developing the program.

II. 1986 Standards

Tasks Completed:

DEQ has reported to SWPAC that the review of wasteshed reports is not completed, therefore, Metro is unable to

proceed with certifying jurisdictions.

Future Tasks:

When reviews of wasteshed reports have been completed by DEQ, Metro will certify jurisdictions accordingly (See Section III).

III. 1987 Standards

Tasks Completed:

The certification goal of developing collection systems for yard debris was adopted by Council as a part of the Waste Reduction Program. Options for yard debris collection systems were defined in November and a cost evaluation of all options completed in January.

Future Tasks:

Certification standards are proposed to be adopted in February. Notification to local jurisdictions and development criteria will follow in February and March. Local jurisdictions will be encouraged and assisted to develop programs which meet those standards. Several methods are being considered, for example, technical assistance services and grants and loans.

Each jurisdiction will submit a report by July '87 which details the programs which will be implemented to meet the standards. Metro will evaluate those reports and certify jurisdictions which meet the standards. Program implementation will begin in January '88.

IV. Enforcement Mechanisms

Tasks Completed:

Methods to gain compliance from reluctant jurisdictions have evolved. Originally it was proposed that higher disposal rates would be paid by haulers from non-certified jurisdictions. It was determined, through the public involvement process, that this approach would be less effective and efficient than originally expected.

Rate differentials could not be implemented in an equitable manner, especially in unfranchised Portland and Multnomah County. Haulers would be in a position of collecting a fee for service they did not provide or

control the quality of. In franchised areas, local governments must give the haulers permission to increase their fees. If a government chose not to provide a Metro-required service through the franchise, a hauler would have to either pay the increased tipping fee or offer the service at their expense.

The rate differential could penalize the hauler rather than deal directly with the local government that has the primary authority to assure compliance with certification program standards.

As a result of these findings, the rate differential ordinance adopted in December, 1986, will be applied only if other efforts prove unproductive or inappropriate. An alternative approach has been implemented which is predicated on voluntary cooperation. In exchange for not implementing a rate differential, the representatives of the hauling industry have signed a pledge of cooperation and are actively participating in the development of program standards for yard debris collection. Local jurisdictions also have a direct voice in the design of the program and are cooperating in its implementation through the Local Government Advisory Committee on Certification.

There are other alternatives being pursued to assist Metro in meeting the Waste Reduction Program commitments. Metro's legal authorities (ORS 459.100 and .095) require that waste collection programs be consistent with the regional waste reduction program. If they fail to do so, Metro has recourse to legal channels. See accompanying memorandum titled "Certification Enforcement." The efficacy of this method is being assessed on and will be applied if necessary and/or appropriate.

The Metro Council also adopted the rate differential ordinance without setting a specific fee. This action was taken because it is impossible to set a fee ahead of time to apply in all cases. The fee will vary according to the type of program required and the circumstances of that situation.

#### Future Tasks:

The success of this cooperative approach will be monitored continuously. In October, 1987, a thorough review of the ability of the program to meet its purposes will be made and recommendations offered concerning actions on the rate differential in the 1988 rate study.

### Causes for Delay in Completing Program Tasks

The original time frame predicted that 1987 certification standards would be adopted in July '86. However, some delay has occurred. This was due to three reasons:

- Staffing vacancies - this included hiring new staff (4) to take on the additional work committed to in the Waste Reduction Program and replacing those who resigned (5) in the last 18 months.
- Schedule overruns in other programs, e.g. Washington County Transfer Station.
- Public Involvement - the unanticipated amount of time it took to involve and gain the cooperation of the collectors and local governments.

In spite of this, the submission deadline for local jurisdictions is expected to remain July '87, with the requirement for implementation of programs to begin in January '88.

**PROGRAM NAME: RATE INCENTIVES**

**Purpose:** To establish a variety of rate incentives to achieve the goals and objectives of the Waste Reduction Program.

**Status:** Work scheduled in Action items A, B and C will be completed with the adoption of the 1987 rates. Due primarily to the review process required for the development of rate incentive programs, completion of the Rate Study was delayed three months.

**Action Elements:**

**A. Incentives for Post-Collection Recycling/Materials Recovery**  
Specific changes will be made in the Metro Disposal Franchise Ordinance, Rate Ordinance and Rate Policies by July 1, 1986, to provide economic incentives for the Post-Collection Recycling/Materials Recovery features of the Framework Plan.

\* Ordinance changes exempting waste received at materials processing and recycling facilities from Metro User Fees and Regional Transfer Charges are to be adopted in December, 1986. Additionally, Metro will be evaluating the rate differential between materials processing operations and Metro facilities to determine its effectiveness in diverting wastes. The differential which has existed during 1986 will more than double following the implementation of Metro's 1987 rates. Changes in waste flows at processing centers following this increase will be compared with data from the System Measurement Study to determine targeted goals for the high-grading of waste.

If it is found that the differential produced by the Metro rate increase in 1987 or future years is not effective in optimizing high-grade load generation, then processing facility operations will be evaluated to determine the best method of increasing their waste flows or improving efficiencies so that their tipping fees are kept low relative to land disposal rates. Rate regulations or assistance will be considered for these operations as appropriate.

**B. Rate Incentives to Assure Compliance by Local Collection Services with the Standards of the Certification Program**  
Rate incentives which assure compliance with the Standards of the Certification of local collection service program will be developed. A variety of options will be examined and a specific program of rate structure modification will be developed for implementation by January 1, 1987.

- \* An authorization for using a certification non-compliance fee (rate differential) was adopted by ordinance in the 1987 Rate Study. The amount of the fee for a non-certified jurisdiction was not selected and an alternative cooperative method is being successfully used in lieu of implementing the differential at this time. (See discussion in Certification Program and Rate Study.)

C. Funding of Work Plan Commitments Through User Fee Rates  
Commitments made in the Work Plans for specific actions or programs will be assured of necessary funding through modification of Metro user fee rates as appropriate. A rate study incorporating these needs will be conducted prior to January 1, 1987.

- \* 1987 disposal rates to be adopted in December, 1986, provide an increased level of support for waste reduction programs. The amount of the user fee will increase from \$2.04 per ton to \$3.20 per ton and will generate about \$1 million more than in the past year. The majority of this increase is required to fund new waste reduction programs committed to in the plan which was submitted to DEQ, such as: Alternative technology, system measurement, yard debris, recycling and marketing, recycling promotion and education as well as certification and materials recovery programs.



PROGRAM NAME: MATERIALS' MARKETS ASSISTANCE PROGRAM

Purpose: To develop programs and services designed to stimulate demand for certain recyclable materials to meet expected increased supply of those materials generated through the implementation of SB 405 and Waste Reduction Program; to develop an annual information base on market conditions from which to evaluate market assistance programs.

Action Element:

The following projects are proposed as potential elements of the Materials' Markets Assistance Program:

- A. Annual Market Analysis
- B. Annual Market Survey
- C. Annual Supply Profile
- D. Recycled Products Survey
- E. Consumer Education
- F. Institutional Purchasing
- G. Legislative Action
- H. Grants and Loans: Research and Development
- I. Grants and Loans: User Assistance
- J. Materials Brokerage

\* The Yard Debris Marketing Program is a successful public-private venture. (See attached description, Yard Debris Program, Certification Program and Rates Program.) Action items A, B, C, E, F, and G were all applied in its development.

Metro began a yard debris compost marketing program during March of 1986. In April of 1986, sales increased dramatically at both commercial compost processors; in fact, sales of composted yard debris during the peak annual sales period (May) increased by 100% from 1985 to 1986. On an annual basis compost sales in 1986 (through August) are running 96% ahead of 1985.

This experience and recommendations from private

industry has caused some changes in the Markets Assistance Program design and methodology. The new program strategy will include a recommendation to hire a full-time staff person with experience and training in markets by July, 1987. This position will be responsible for:

- Designing and implementing a long-term plan for a Materials' Market Assistance Program.
- Develop and manage the audit consulting program.

An existing staff position is assigned to manage the yard debris markets element in FY 86-87.

A budget will be developed for FY 87-88 that includes funding for the staff increase, data for a task force and promotion of the program.

A market assistance task force will be appointed to help identify problem areas and design an appropriate long-term program. The task force, composed of leaders in materials markets, will address the following tasks and time frame.

- Appoint task force members, establish operating rules, September, 1987.
- First task force meeting; priorities and research needs identified, September, 1987
- Preliminary conclusions drafted and general structure of program designed, November, 1987.
- Present long-term program design to Metro Council, December, 1987.

In addition, Metro is analyzing its use of paper products and will produce an Office Paper Recycling and Purchasing Policy Handbook to be distributed to other organizations. Target dates are January for draft and Council adoption of policy and distribution of Handbook in February.

#### MARKETING PROGRAM - YARD DEBRIS

During 1986, Metro aggressively implemented a short-term yard debris marketing program which serves as a foundation for a long-term (through 1991) task-specific marketing plan. In brief, the short term program has included the following activities:

- Workshops for the general public are being conducted to explain what compost is, how to use it and where to obtain it.
- Providing a booth at the following regional product and trade shows which promoted applications of composted yard debris. (Metro has already signed up for these same shows, or their equivalents, during 1987)
  - Far West Regional Trade Show (August, 1986)
  - Spring Landscape and Garden Show (March, 1986)
  - American Society of Landscape Architects Product Show (October, 1986)
- Set up a regular, periodic program of testing yard debris compost for the following general qualities: herbicide residuals, weed seeds, nutrients and toxicity. Technical reports have been prepared which describe the results of laboratory tests; two are complete and two other will be ready by the Spring of 1987.
- Displays of compost products have been set up at two commercial compost processing businesses.
- Compost sales trends are being recorded as a means of measuring progress toward goals and to identify flow problems.
- A 1,000 piece mail-out of selected informational literature has been made to target market industries.
- Promotional literature, in the form of pamphlets, glossary of terms relating to compost, etc., have been prepared and disseminated during the Spring and Fall Yard Debris Campaigns.
- Technical use specifications have been prepared: compost is now a formally specified product in Oregon Department of Transportation landscaping regulations and is nearing completion for both the Port of Portland and the City of Portland. This action fulfills the "institutional purchasing" policy goal of the Waste Reduction Plan and will have an extremely broad impact on the marketing of compost because hundreds of smaller users of landscape products "copy cat" the specifications prepared by these large institutional users. However, additional, specifically tailored

specification devices have also been prepared for landscape architects and landscapers and are being circulated for comments by experts in this field.

- Other marketing efforts include participation on radio talk shows, presentations to the local chapter of the American Society of Landscape Architects and direct communication with target market industries.

#### LONG-TERM MARKETING PLAN

Based upon the experience of the short-term marketing program, Metro is preparing a long-term plan for marketing yard debris compost. That plan, to be implemented in February of 1987, will guide Metro's efforts in pursuing its yard debris waste reduction goal through 1991 and contains the following elements.

- A comprehensive survey of market conditions for yard debris compost. The survey, completed in September, showed that through aggressive marketing efforts, all of the yard debris, slated for recycling under the Waste Reduction Plan (75%), could be successfully marketed as new products;
- A task specific marketing plan for guiding Metro's actions during the 1986-91 period;
- Recommended business plan strategies for use by private compost processors in doing their part to market products made from yard debris.

PROGRAM NAME    **SYSTEM MEASUREMENT**

Purpose:    To establish a system, based on analyses of waste compositions, for determining which programs and projects will obtain the maximum economically and technically feasible waste reduction through each level of the hierarchy.

Action Elements:

A.    Waste Sub-stream Composition Study:

This study will survey the volumes, composition and places of origin of waste generated by distinct generator types.

- \*    Four full waste stream "sorts" to determine volumes and composition, will be completed by July, 1987. The first sort was completed on November 20, 1986. 180 samples ranging from 200 to 300 pounds were sorted into 27 categories. Three other sorts will occur in 1987 (February, April and July). Information on places of origin will be available January 2, 1987 (See B below). Information to make decisions on high-grade facilities, waste reduction goal setting, CTFC redesign and certification standards will be available within the Waste Reduction Program's six month limits.

B.    Sub-stream Resource Recovery Study:

Based on the composition study, a set of waste sub-streams will be selected for a study of methods for the recovery of resources from those waste sub-streams.

- \*    A planning meeting will be held on December 15, 1986 to review the fall sort results and discuss test methods for reviewing resources from specific waste sub-streams. A program will be drafted in January and finalized in February, 1987. Results will be available in April and May.

C.    Set Waste Reduction Performance Goals:

Specific performance goals for waste reduction will be defined as percentages of individual waste sub-streams. These will be based on an analysis of the material composition of each sub-stream and the feasibility to recover that material. They will be reexamined periodically to assure that they are feasible. The Waste Reduction Program's effectiveness will be measured by the sub-stream percentage goals.

- \*    Goals will be adopted upon completion of the four seasonal sorts and the results of the sub-stream study

in 1987. Some goals and/or decisions will be made on specific sub-streams as data is produced by the study. These will be reviewed and adjusted as necessary, based on subsequent data. A draft of performance goals based on the first sort will be available by March 1, 1987.

- D. Establish Ongoing Measurement of System Performance:  
An ongoing system for the measurement of the effectiveness of the program in diverting waste from landfilling will be established, based on the Waste Sub-stream Composition Study and technical and economic feasibility.

\* Personnel are currently being trained to enable Metro to conduct continuing system measurement analyses at the conclusion of the current contractual study. This program will be included in the FY 87-88 budget.



**METRO**

2415 W. First Avenue  
Portland, OR 97201-5398  
503 221-1646

# Memorandum

Date: November 21, 1986  
To: Wayne Rifer, Analyst  
From: Eleanore S. Baxendale, General Counsel *S&P*  
Regarding: CERTIFICATION ENFORCEMENT

Metro's adopted Solid Waste Reduction Program (SWRP) has a component on certification of local government recycling programs and on rate incentives to encourage the adoption of appropriate programs. You have asked me whether Metro has other methods to require the adoption of certification programs.

Three possibilities are discussed below: ORS 459.200, ORS 459.095 and ORS 268.360.

## ORS 459.200

Whenever local jurisdictions exercise the collection authority described in ORS 459.200, this exercise is predicated on "carrying out" the state solid waste management plan and waste reduction programs. ORS 459.200(4)(c) and (d). For Clackamas, Multnomah and Washington counties, Metro's Solid Waste Management Plan (SWMP) and the SWRP are the applicable plans.

"Carrying out" these plans means the local jurisdictions' activities must be consistent with these plans. If the activities are not, then the local jurisdictions are acting outside their authority.

If this occurs, Metro or Metro and DEQ can go to court for an injunction to stop these inconsistent activities (268.360) and seek a mandamus to require consistent ones.

## ORS 459.095

This statute prohibits local governments from adopting an "ordinance, order, regulation or contract affecting solid waste disposal if such [document]...conflicts...with a solid waste management plan or program adopted by a metropolitan service district and approved by the department [of

environmental quality] or any ordinances or regulations adopted pursuant to such plan or program." This includes both the SWMP and the SWRP.

A local government document can conflict with a SWMP if the document is inconsistent with the SWMP or SWRP. If the document does not specifically conflict with the SWMP/SWRP, but fails to include required provisions, or if the local government fails to adopt a document required by the SWMP/SWRP, then the omission may create a conflict, especially if the local government then takes an action which the SWMP/SWRP intended to be taken in reliance on the policies omitted. Each case would be evaluated in light of the SWMP/SWRP language and the local government action.

If there is a violation, Metro can seek either an injunction to stop an action (268.360) or a declaratory judgment that the document is invalid.

### Civil Penalties and Fines

Under ORS 268.360 any person who violates any Metro ordinance or order is subject to a civil penalty not to exceed \$500 per day for each day of violation. Metro would proceed in the manner described in ORS 468.090, which refers to ORS 183.310 to 183.55: administrative agencies contested case rules. ORS 268.990 also authorizes a criminal penalty and up to 30 days in jail. Person, as defined in ORS 268.020(6), includes "local government units."

Such penalties apply only to those ordinance requirements that Metro is authorized to require. Clearly, Metro is authorized to regulate acts directly related to disposal, such as the type of material or the manner of transport. Metro also has authority to adopt a SWMP which includes general collection management. Although Metro cannot award collection franchises, local governments collection actions must be consistent with the SWMP, ORS 459.200. Therefore, failure to follow SWMP ordinances would probably subject the local government to the civil penalty provision.

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**METRO**

# Memorandum

2000 S.W. First Avenue  
Portland, OR 97201-5398  
503/221-1646

Date: April 10., 1986  
To: Metro Council  
From: Eleanore S. Baxendale, General Counsel  
Regarding: SOLID WASTE CERTIFICATION AUTHORITY

Representatives of the garbage collection have asserted that Metro's certification program "repeals the cities' and counties' authority over collection provided in ORS 459.015 to 459.200 under SB 405." They also claim Metro lacks legislative authority to regulate certain collection activities through the certification program or to establish disposal rates based on the certification program. This position is supported by an opinion from an attorney representing a union involved in the hauling industry.

The above assertions are incorrect. Metro's authority to implement the certification program is derived from its designation as Solid Waste Management Planning agency for Clackamas, Multnomah and Washington counties, as part of the state's solid waste management plan, from ORS 268 and 459 and from SB 662.

Although Metro does not have authority to franchise collection service, ORS 459.200(4)(c) and (d) clearly states that cities and counties exercise their collection service franchising authority subject to waste reduction programs and the state solid waste management plan. This means that local government collection franchise activities are subject to restrictions in addition to those expressly set out in ORS 459.200 (which incorporates SB 405). Furthermore, ORS 459.200(10) states that in establishing service areas local governments shall consider approved regional solid waste management plans and approved waste reduction plans. In fact, cities and counties are barred from adopting ordinances or entering into contracts which conflict with Metro's solid waste management plan ORS 459.095.

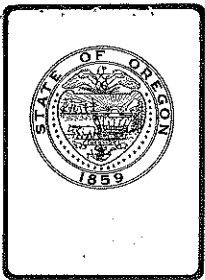
Solid waste management includes management of collection. ORS 459.005(19). Under ORS 459.015(2) and by SB 662 (1985 Or Laws, ch. 679, section 8), this planning authority is specifically channeled into planning to reduce waste delivered to landfills. Therefore, Metro's Solid Waste Management Plan and

Solid Waste Reduction Program appropriately consider collection factors to reduce disposal of waste at landfills. The issuance of specific collection franchises is left to the cities and counties as required by statute.

Under ORS 268.317(6) and 268.515, Metro may establish rates for disposal service to recover system costs. In addition, under SB 662, Metro can use rate structures to reduce the volume of waste going to landfills. It is appropriate, therefore, to charge higher rates for wastes which have been collected in a manner which tends to increase rather than minimize the volume going to the landfill.

In conclusion, Metro is appropriately exercising its planning and rate-making authority.

ESB/gl  
5466C/D2



## Environmental Quality Commission

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### MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item G, January 23, 1987 EQC Meeting

Proposed Adoption of Temporary Rule that would Revise "Definitions" OAR 340-108-002(9)(b); "Subdivision B: Reportable Quantities" OAR 340-108-010(1)(d) and (2) and Repeal OAR 340 - Division 108 Appendix I

### Background

On September 12, 1986, the staff recommended major revisions to OAR Chapter 340 - Division 108 as a result of the passage of HB 2146 (now ORS 466.605 - 466.690). One of the recommended changes was to revise the level at which spills and releases of hazardous wastes need to be reported.

In addition to revising the levels for hazardous wastes, approximately 300 additional hazardous materials were added so that the state's list would be comparable to the federal hazardous substances list under the Federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund).

In determining an appropriate state reporting level, the staff spent considerable effort researching EPA's basis for their reportable quantity levels which range from 1 pound to 5,000 pounds. Staff reviewed the preamble discussions to the following Federal Register Notices, as well as, three technical background documents:

1. Notification Requirements; Reportable Quantity Adjustments; Final Rule and Proposed Rule - April 4, 1985
2. Notification Requirements; Reportable Quantity Adjustments; Proposed Rule and Designation of Additional Hazardous Substances; Advanced Notice of Proposed Rulemaking - May 25, 1983.
3. Definitions, Designations, Revocation of Regulations, Proposed Expansion of Criteria of Designation and Proposed Determination of Reportable Quantities - February 16, 1979
4. Hazardous Substance - March 13, 1978
5. Technical Background Document to Support Rulemaking Pursuant to CERCLA Section 102: Volumes 1, 2 and 3 - March, 1985.

In the staff's opinion, EPA selected their numbers to distinguish between the relative hazards that substances present, to recognize their limited ability to respond with staff from distant locations and on the potential threat to public health and the environment if a spill or release of that quantity occurred. They caution repeatedly in the preambles, however, that "the reportable quantities do not themselves represent any determination that releases of a particular quantity are actually harmful to public health or welfare or the environment" (F.R. April 4, 1985 - Page 13459).

One pound was picked to represent small containers normally used in commerce. 5,000 pounds was picked to represent bulk shipments of hazardous materials. Three intermediate categories of 10, 100 and 1,000 pounds are also used.

Substances at the 1 pound level tend to present primarily acute or chronic toxicity problems (certain pesticide products, industrial solvents and other manufacturing chemicals) while substances at the 5,000 pound level present primarily handling problems (combustible or flammable products, strong acids, strong bases). EPA also expected that local and state agencies would be responding to smaller spills that are less likely to need federal involvement or assistance.

After evaluating EPA's rationale for levels at which they require reporting, interviewing EPA's author of the reportable quantity rule and discussing levels with DEQ field responders, the Department concluded that the federal program had merit as to determining the relative hazards between substance but that the values of 10, 100, 1,000 and 5,000 pounds were too high for a state response program. Staff recommended a level of one-tenth the federal values or 1, 10, 100 and 500 pounds. No change to the federal 1 pound level was recommended.

The principal criteria the staff used in selecting lower values were:

1. When people report, we have the opportunity to review and determine that appropriate cleanup methods and levels will be used. From experience we knew some companies interpret the rules to mean that spills below the reportable quantity level do not have to be cleaned up because EPA has already determined (by setting the RQ level) that no hazard exists.
2. For many companies, including many transporters, spills are a rare enough occurrence that DEQ's technical assistance and involvement is needed to arrive at cleanup methods and levels.
3. Other state agencies and local government look to DEQ to provide timely response and oversight of spill cleanup activities.
4. With our regional and branch offices, we are in a substantially better position than EPA in arranging technical assistance and response in time for it to make a difference.

5. A toll-free call was not a major economic burden on the regulated community yet allowed us to be involved early in spill containment and cleanup decisions.

Of all the rules proposed on September 12, 1986, the reportable quantity levels prompted the greatest concern. The expressed concerns were and remain:

1. The federal levels are fully protective of public health and the environment.
2. The confusion to be created by two different levels far outweigh the benefits to public health and environment by lower levels.
3. DEQ had shown no basis in public health or environmental protection to support the lower levels, particularly at the 10 pound level which includes such substances as PCB and chlorine.
4. DEQ staff would not be able to respond to all the additional reports that would be called in.
5. It is not the call that is difficult to comply with, rather it's the burden of preparing clear enough instructions for the production employee, utility lineman or truck driver that is burdensome. Each difference between federal and state rules requires additional instructions to employees.
6. Companies that normally will comply will continue to try and comply even given the added complexity. Companies who don't currently comply with the federal program are unlikely to comply with the state's more stringent requirement.

Although the Commission adopted the staff recommendation, the Commission requested a report on the impact of the reportable quantity rules within 90 days. This report is responsive to that request and covers spills and releases that were reported between October 1, 1986 and December 19, 1986. It must be noted for the record that copies of the rules were not mailed out until early December due to delays in getting printed copies back from the state printer.

### Discussion

Between October 1, 1986 and December 19, 1986, 84 spills or releases involving 88 products were reported to DEQ (see summary in Table 1). Based on reports forwarded to the Hazardous Materials Section, the analyses described in Table 2 were prepared. Some general observations are as follows:

1. On an annual basis, 88 product spills or releases in 80 days correlates to 401 spills or releases. Table 3 summarizes the reported spills for 1981 through 1985. There is no

significant increase over the reported spills or releases for the last three years (372, 367 and 356 respectively).

2. Three general classes of products were spilled or released; oil (primarily gasoline, deisel and other), listed hazardous material (acids, bases, solvents and pesticides) and non-listed materials (organic acids, nitrogen fertilizer and pesticides). Not surprisingly, 62% of the spills represented petroleum products. Hazardous materials represented 28% and others represented 10%.
3. Of all products spilled or released, 40% involved transportation accidents while 60% occurred at a fixed location. These percentages were fairly consistent between the three product categories.
4. Of all spills reported, DEQ went to the scene in 33% of the cases (29 of 88). It is more likely that DEQ will respond in the field on a transportation spill than a fixed site spill (40% vs. 28%). It is also more likely that DEQ will respond in the field to a fixed site spill of oil than hazardous material (42% vs. 7%). This can principally be explained because hazardous materials spills normally involve smaller quantities of product (See Table 4). Furthermore, personnel at fixed locations are more likely to know how to clean-up spills than are truck drivers. Also, personnel at fixed sites are more likely to have equipment to contain and clean up a spill or release.
5. Table 3 shows that historically DEQ responded in the field to more spills than currently as follows:

1981	-	109	of	234	=	47%
1982	-	118	of	263	=	45%
1983	-	170	of	372	=	46%
1984	-	181	of	367	=	49%

This can principally be explained because more recently DEQ field staff have consciously attempted to provide technical assistance over the telephone to the responsible party and/or local government at the scene. We have also relied more heavily on local government to report to us on the quality of cleanup and only respond when local government is unable to represent our interests.

6. Of all spills or releases reported, only 34% are initially reported by the responsible party. By group of products, responsible parties reported 29% of oil spills, 38% of hazardous material spills and 55% of other spills. From the data analyzed, no conclusion can be drawn relative to compliance with legal reporting requirement since the report only records the first call received.

7. Of all spills reported, the following breakdown occurs relative to reportable quantities (RQ):

	<u>Percent</u>	<u>Number</u>
Greater than federal/state RQ	23	20
Less than fed RQ but greater than state RQ	4	3
Less than state/fed RQ	16	14
No fed RQ but greater than state RQ*	19	17
Unknown quantity at time of spill	28	25
Not regulated material	<u>10</u>	<u>9</u>
Total Products Spilled	100%	88

\*Note: For oil spills on land there is no federal reportable quantity at this time. The state reportable quantity is 42 gallons. Seventeen spills or 31% of all petroleum spills fell into the category. These same 17 spills represents 19% of all spills).

It is important to note that only 3 spills fell into the middle ground between the federal and state reportable quantity level and all those were initially reported by someone other than the responsible party.

It is also important to note that more than half of all spills probably didn't have to be reported: less than state RQ, unknown quantity at time of spill or not a regulated material (48 of 88 or 55%). Oil and hazardous materials were similar (27% of 55 = 49%, 12 of 24 = 50% respectively) to the overall percentage. One other way of looking at these numbers shows that 14 of the 48 or 29% were reported by responsible parties while 34 of 48 or 71% were reported by others.

Because copies of spill rules were not available throughout this entire period, we also analyzed the data against the previous state reporting requirement in OAR 340 - Division 108 (see Attachment 1). In this case, the state 42 gallon level for oil spills on land did not exist so these spills are included in the not regulated category. The results are as follows:

	<u>Percent</u>	<u>Number</u>
Greater than federal and state RQ	19	17
Less than federal RQ but greater than state RQ	5	4
Less than state and federal RQ	8	7
Unknown quantity at time of spill	29	25
Not a regulated material	<u>39</u>	<u>35</u>
Total Products Spilled	100%	88

Because of the dominate influence of oil spills and unknown quantity at time of spills, we also analyzed separately that data that involved hazardous chemicals involving a known quantity of products. The results are as follows:

	<u>Percent</u>	<u>Number</u>
Greater than federal and state RQ	42	8
Less than federal RQ but greater than state RQ	16	3
Less than state and federal RQ	<u>42</u>	<u>8</u>
Total Products Spilled	100%	19

One other related issue is emerging that will complicate Oregon's attempts to maintain lower RQ values - the frequency with which EPA may evaluate and change their RQ values. On September 29, 1986, EPA evaluated the values for 102 substances on the RQ list. The results involved raising the RQ's for 31 chemicals, lowering the RQ's for 30 chemicals and leaving at their original level 34 chemicals. In addition, seven (7) hazardous waste streams had their RQ values raised. These changes became effective December 29, 1986 thereby changing 68 federal RQ entries on our Appendix I list which we just mailed out. In the same Federal Register of September 29, 1986, EPA indicated that they were concluding a potential carcinogenicity and/or chronic toxicity evaluation on an additional 275 chemicals. A notice of proposed rulemaking will apparently appear in a January Federal Register. EPA's List is also subject to future changes as a result of the new emergency planning and community right-to-know requirements of the recently reauthorized Superfund program.

#### Alternatives and Evaluation

The Department initially intended this to be an information report as requested by the Commission at its September 12, 1986 meeting. As the Department continued to evaluate the data, however, a significantly different action appeared called for.

Before starting its analysis, the Department felt that our lower values should have resulted in a significant number of additional calls than Within the next six months, the Department would hold hearings to make the rule final, analyze all of 1986's data to see if this 80 day sample is representative and complete its work on establishing RQ values for communicable disease agents and radioactive materials regulated by the health division.

#### Summary

1. No significant increase in the number of reported spills or releases has occurred between October 1 and December 19, 1986.
2. More than half (55%) of all reported spills and releases probably involved amounts less than even the state's lower reportable quantity level. Another 23% represented spills in quantities greater than the

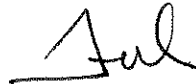


higher federal levels. Only 4% involved spills between the federal and state RQ level. Even the most conservative analysis shows only 16% of spills and releases falling between the state and federal value.

3. Persons other than the responsible party initially report nearly two-thirds of all spills and releases. Most often these are local government agencies looking to DEQ for technical assistance/advice on proper containment, control and cleanup methods. Even though DEQ responds to the scene in only 33% of the reported spills, technical assistance/advice is given in almost all cases by telephone with a person on the scene.
4. EPA adjusted 68 federal RQ values on December 29, 1986. EPA plans further changes to up to 275 additional substances in early 1987. Continuous review of the federal list is planned as EPA receives additional technical data. Each change at the federal level will affect the accuracy of DEQ's Appendix I listing of federal reportable quantities.
5. Dual RQ values do make it significantly more difficult for industry to give accurate instructions/procedures to its employees. Confusing instructions make it less likely that employees will take the proper actions that are required when a spill or release occurs.
6. Adopting existing federal RQ values for reporting spills or releases to the Department will have little, if any, adverse impact on public health or the environment.

#### Director's Recommendation

Based on the above report, it is recommended that the Commission adopt proposed revisions to "Definitions" OAR 340-108-002(9)(b); "Subdivision B: Reportable Quantities" OAR 340-108-010(1)(d) and (2) and repeal in its entirety Appendix I of OAR 340 -Division 108.



Fred Hansen

- Attachment I: OAR 340 - Division 108 - effective prior to September 12, 1986
- II: Proposed Temporary Rule
  - III: 40 CFR - Table 302.4 as amended
  - IV: Statement of Need for Proposed Temporary Rule and Fiscal and Economic Statement
  - V: Land Use Consistency Statement
  - VI: Public Notice of Proposed Rulemaking

Richard P. Reiter  
SM710.C  
229-5774  
January 9, 1987

Table 1

## Oil &amp; Hazardous Materials Spills and Releases

Month October

Incident Number	Reported By Responsible Party	Product Spilled	Quantity If Known	State* RQ	Federal* RQ
1	yes	oil	15 gallons	42 gallons	--
2	yes	vinegar	50 gallons	--	--
3	yes	oil	10 gallons	any amount	any amount
4	yes	diesel	1,200 gallons	42 gallons	--
5	no	gasoline	?	42 gallons	--
6	no	Dinoseb	8 pounds	100 pounds	1,000 pounds
7	no	diesel	?	42 gallons	--
8	no	Pentachloro-nitrobenzene	200 pounds	1 pound	1 pound
9	yes	kerosene	1/4 gallon	42 gallons	--
10	no	diesel	30 gallons	42 gallons	--
11	no	gasoline	433 gallons	42 gallons	--
12	no	Nitrogen Fertilizer	300 gallons	--	--
13	no	Pontamine Dye in Potassium Hydroxide	450 pounds	10 pounds	100 pounds
14	no	oil	?	any amount	any amount
15	no	gasoline	5 gallons	any amount	any amount
16	yes	diesel	1,000 gallons	42 gallons	--
17	yes	Sodium Hydroxide	25 pounds	100 pounds	1,000 pounds
18	no	oil	275 gallons	42 gallons	--
19	yes	corrosive	8 pounds	10 pounds	100 pounds
20	yes	paint	10 gallons	--	--
21	no	oil	5 gallons	any amount	any amount
22	no	1, 3 dichloro-propene	166 pounds	500 pounds	5,000 pounds
23	yes	diesel	2,000 gallons	42 gallons	--
24	no	oil	?	any amount	any amount
25	no	Methyl ethyl ketone peroxide	33 pounds	1 pound	10 pounds
26	yes	oil	50 gallons	42 gallons	--
27	no	gasoline	?	42 gallons	--
28	yes	Ammonia gas	?	10 pounds	100 pounds
29	no	gasoline	?	42 gallons	--
30	no	diesel	?	any amount	any amount
31	no	PCB oil	?	1 pound	10 pounds
32	no	gasoline	20 gallons	42 gallons	--
33	no	diesel	125 gallons	42 gallons	--
34	no	Paraquat	?	--	--
35	no	Lamp black	25 pounds	--	--
36	yes	Battery acid	500 pounds	10 pounds	100 pounds
37	no	oil	?	any amount	any amount
38	no	diesel	150 gallons	42 gallons	--
39	yes	gasoline	?	42 gallons	--
40	no	Malathion	?	10 pounds	100 pounds
41	no	diesel	150 gallons	any amount	any amount
42	yes	PCB	17 pounds	1 pound	10 pounds
43	no	gasoline	50 gallons	42 gallons	--

\* Oil spilled into public water is reportable to both the state and federal government at any amount. Oil spilled on land is reportable to the state at 42 gallons. There is no comparable federal requirement.

Table 1

## Oil and Hazardous Materials Spills and Releases

Month November

Incident Number	Reported By Responsible Party	Product Spilled	Quantity If Known	State RQ	Federal RQ
1	yes	Bromoxynil heptanate	8 pounds	--	--
		Bromoxynil bnterate	6 pounds	--	--
		Toluene	12 pounds	100 pounds	1,000 pounds
		Xylene	7 pounds	100 pounds	1,000 pounds
2	no	diesel	100 gallons	42 gallons	--
3	no	chlorine	2-1/4 pounds	1 pound	10 pounds
4	yes	diesel	1,000 gallons	42 gallons	--
5	yes	diesel	50 gallons	42 gallons	--
6	no	oil	?	any amount	any amount
7	yes	diesel	200 gallons	any amount	any amount
8	no	diesel	?	any amount	any amount
9	no	oil	?	any amount	any amount
10	yes	diesel	1 gallon	any amount	any amount
11	no	gasoline	?	any amount	any amount
12	no	oil	20 gallons	42 gallons	--
13	no	Propane	?	10 pounds	100 pounds
14	no	diesel	?	any amount	any amount
15	yes	organic acids	1/4 gallon	--	--
16	no	Methanol	?	500 pounds	5,000 pounds
17	yes	PCB oil	0.000049 pounds	1 pound	10 pounds
18	no	diesel	100 gallons	any amount	any amount
19	no	gasoline	?	any amount	any amount
20	no	gasoline	?	any amount	any amount
21	yes	oil	1 gallon	any amount	any amount

Table 1

## Oil and Hazardous Materials Spills and Releases

Month December

Incident Number	Reported By Responsible Party	Product Spilled	Quantity If Known	State RQ	Federal RQ
1	no	Radioactive waste	1 drum	any amount	any amount
2	no	paint/paint sludge	2,750 pounds	10 pounds	100 pounds
3	no	diesel	55 gallons	42 gallons	--
4	no	diesel	50 gallons	42 gallons	--
5	no	diesel	50 gallons	any amount	any amount
6	no	diesel	25 gallons	42 gallons	--
7	no	diesel	?	42 gallons	--
8	no	gasoline	2,200 gallons	any amount	any amount
9	no	gasoline	?	42 gallons	--
10	no	oil	?	any amount	any amount
11	yes	diesel	200 gallons	42 gallons	--
12	no	fatty acid	?	--	--
13	no	Phosphoric acid	4,170 pounds	500 pounds	5,000 pounds
14	no	diesel	?	any amount	any amount
15	yes	diesel	200 gallons	42 gallons	--
16	no	acid solution	40 pounds	10 pounds	100 pounds
	no	lime	100 pounds	10 pounds	100 pounds
17	yes	gasoline	400 gallons	42 gallons	--
18	no	gasoline	15 gallons	any amount	any amount
19	no	diesel	10 gallons	42 gallons	--
20	yes	Methyl Amine	8 pounds	10 pounds	100 pounds

Table 2

NOTE: Table 2 is an analysis of spill reports logged in by the Hazardous Materials Section for the period October 1 through December 19, 1986. Eighty-four (84) spill incidents occurred involving eighty-eight (88) products.

ALL SPILLS - 84: ALL PRODUCTS SPILLED - 88

Total All Product Spills - 88 (100%)

Reported by Responsible Party - 30 (30 of 88 = 34%)  
Reported by Governmental Agency - 45 (45 of 88 = 51%)  
Reported by Other Person - 13 (13 of 88 = 15%)

Transportation Spills - 35 (35 of 88 = 40%)

DEQ field response - 14 (14 of 35 = 40%)  
No DEQ field response - 21 (21 of 35 = 60%)

Fixed Site Spills - 53 (53 of 88 = 60%)

DEQ field response - 15 (15 of 53 = 28%)  
No DEQ field response - 38 (38 of 53 = 72%)

Reported by Responsible Party - 30 (30 of 88 = 34%)

Greater than fed/state RQ - 7 (7 of 30 = 23%)  
Less than fed RQ - greater than state RQ - 0 (0%)  
No fed RQ - greater than state RQ - 9 (9 of 30 = 30%)  
Less than state/fed RQ - 7 (7 of 30 = 23%)  
Unknown quantity - 2 (2 of 30 = 7%)  
Not regulated material - 5 (5 of 30 = 17%)

Reported by Other Party - 58 (58 of 88 = 66%)

Greater than fed/state RQ - 13 (13 of 58 = 22%)  
Less than fed RQ - greater than state RQ - 3 (3 of 58 = 5%)  
No fed RQ - greater than state RQ - 8 (8 of 58 = 14%)  
Less than state/fed RQ - 7 (7 of 58 = 12%)  
Unknown quantity - 23 (23 of 58 = 40%)  
Not regulated material - 4 (4 of 58 = 7%)

Table 2

OIL SPILLS -- 55: OIL PRODUCT SPILLS - 55

Total Oil Product Spills - 55 (55 of 88 = 62%)

Reported by responsible party - 16 (16 of 55 = 29%)

Reported by government agency - 30 (30 of 55 = 55%)

Reported by other person - 9 (9 of 55 = 16%)

Transportation Spills - 22 (22 of 55 = 40%)

DEQ field response - 8 (8 of 22 = 36%)

No DEQ field response - 14 (14 of 22) = 64%

Fixed Site Spills - 33 of 55 = 60%)

DEQ field response - 14 (14 of 33 = 42%)

No DEQ field response - 19 (19 of 33) = 58%

Reported by Responsible Party - 16 (16 of 55 = 29%)

Greater than fed/state RQ - 4 (4 of 16 = 25%)

No Fed RQ - greater than state RQ - 9 (9 of 16 = 56%)

Less than state/fed RQ - 2 (2 of 16 = 13%)

Unknown quantity spilled - 1 (1 of 16 = 6%)

Reported by Non-responsible Party - 39 (39 of 55 = 71%)

Greater than fed/state RQ - 7 (7 of 39 = 18%)

No Fed RQ - greater than state RQ - 8 (8 of 39 = 20%)

Less than state/fed RQ - 5 (5 of 39 = 13%)

Unknown quantity spilled - 19 (19 of 39 = 49%)

Table 2

HAZARDOUS MATERIAL SPILLS - 22: HAZARDOUS MATERIAL PRODUCT SPILLS - 24

Total Hazardous Material Product Spills - 24 (24 of 88) = 27%

Reported by responsible party - 9 (9 of 24 = 38%)  
Reported by government agency - 12 (12 of 24 = 50%)  
Reported by other person - 3 (3 of 24 = 12%)

Transportation Spills - 10 (10 of 24 = 42%)

DEQ field response - 4 (4 of 10 = 40%)  
No DEQ field response - 6 (6 of 10 = 60%)

Fixed Site Spills - 14 (14 of 24 = 58%)

DEQ field response - 1 (1 of 14 = 7%)  
No DEQ field response - 13 (13 of 14 = 93%)

Reported by Responsible Party - 9 (9 of 24 = 38%)

Greater than fed/state RQ - 3 (3 of 9 = 33%)  
Less than fed RQ - greater than state RQ - 0 (0%)  
Less than state/fed RQ - 5 (5 of 9 = 56%)  
Unknown quantity - 1 (1 of 9 = 11%)

Reported by Other Party - 15 (15 of 24 = 62%)

Greater than fed/state RQ - 6 (6 of 15 = 40%)  
Less than fed RQ - greater than state RQ - 3 (3 of 15 = 20%)  
Less than state/fed RQ - 2 (2 of 15 = 13%)  
Unknown quantity - 4 (4 of 15 = 27%)

Table 2

OTHER SPILLS - 7: OTHER PRODUCT SPILLS - 9

Total Other Product Spills - 9 (9 of 88 = 10%)

Reported by responsible party - 5 (5 of 9 = 56%)

Reported by government agency - 3 (3 of 9 = 33%)

\*Reported by other person - 1 (1 of 9 = 11%)

Transportation Spills - 3 (3 of 9 = 33%)

DEQ field response - 2 (2 of 3 = 67%)

No DEQ field response - 1 (1 of 3 = 33%)

Fixed Site Spills - 6 (6 of 9 = 67%)

DEQ field response - 0 (0 of 6 = 0%)

No DEQ field response - 6 (6 of 6 = 100%)

Reported by Responsible Party - 5 (5 of 9 = 55%)

Reported by Other Party - 4 (4 of 9 = 44%)



TABLE 3: Reported Spills (1981-1985)

<u>1981</u>	<u>Northwest Region</u>	<u>Willamette Valley Region</u>	<u>Southwest Region</u>	<u>Central Region</u>	<u>Eastern Region</u>	<u>STATEWIDE TOTALS</u>
Petroleum Products	97	21	33	16	20	187
Chemical/Hazardous Waste	<u>22</u>	<u>6</u>	<u>7</u>	<u>5</u>	<u>7</u>	<u>47</u>
Total Spills	119	27	40	21	27	234
DEQ Field Response	30	18	33	9	19	109
<u>1982</u>						
Petroleum Products	84	39	26	20	24	193
Chemical/Hazardous Waste	<u>39</u>	<u>12</u>	<u>5</u>	<u>7</u>	<u>7</u>	<u>70</u>
Total Spills	123	51	31	27	31	263
DEQ Field Response	39	40	20	11	8	118
<u>1983</u>						
Petroleum Products	131	59	31	27	27	275
Chemical/Hazardous Waste	<u>47</u>	<u>22</u>	<u>9</u>	<u>8</u>	<u>11</u>	<u>97</u>
Total Spills	178	81	40	35	38	372
DEQ Field Response	65	48	31	15	11	170
<u>1984</u>						
Petroleum Products	118	60	77	10	24	289
Chemical/Hazardous Waste	<u>31</u>	<u>18</u>	<u>19</u>	<u>8</u>	<u>1</u>	<u>78</u>
Total Spills	149	78	96	18	25	367
DEQ Field Response	48	40	75	7	12	181
<u>1985</u>						
Petroleum Products	97	52	50	18	22	239
Chemical/Hazardous Waste	<u>53</u>	<u>24</u>	<u>20</u>	<u>5</u>	<u>15</u>	<u>117</u>
Total Spills	150	76	70	23	37	356

TABLE 4  
 SIZE OF SPILL BY PRODUCT CATEGORY\*

	OIL	HAZ-MAT	OTHER
Lowest Quantity Spilled	2 lbs.	2 lbs.	2.25 lbs.
Mean Average Spilled	2427 lbs.	475 lbs.	433 lbs.
Median Spilled	417 lbs.	33 lbs.	25 lbs.
Highest Quantity Spilled	18,348 lbs.	4170 lbs.	2502 lbs.
Total Spilled	85,026 lbs.	8551 lbs.	3044 lbs.
Number of Spills	35	18	7

\* Of all reported spills, the initial quantity spilled was known in only 68% of the cases (60 of 88).

SM710.I

January 23, 1987

(c)(A) Report the spill or other incident to the Oregon Emergency Management Division (telephone 800-452-0311) if the amount of hazardous waste or hazardous substance exceeds the following reportable quantity (in the event a substance or waste falls into more than one category, the lower quantity shall be reported):

<u>Substance or Waste Type</u>	<u>Reportable Quantity (pounds)</u>
Ignitable, 40 CFR 261.21	200
Corrosive, 40 CFR 261.22	200
Reactive, 40 CFR 261.23	200
EP Toxic, 40 CFR 261.24	10
Listed, 40 CFR 261.31 and .32	10
Listed, 40 CFR 261.33(e)	2
Listed, 40 CRR 261.33(f)	10
Listed, rule 340-101-033	10
PCB, rule 340-110-001(2)	10

(Comment: "Ignitable" includes the DOT classifications "Flammable," "Oxidizer," and some "Combustible.")

(B) Transporters must report spills of any quantity that occur during transportation. Transporters must also report spills or other incidents to the National Response Center (800-424-8802) as required by 49 CFR 171.15, and, if a water transporter, as required by 33 CFR 153.203;

(C) The spill or other incident need not be reported if:

- (i) It occurs on private property and is known to the owner of the property (or his representative);
- (ii) It occurs on an impervious surface where it is fully contained; and
- (iii) It is completely cleaned up without further incident.

(Comment: For reporting purposes, quantity calculation involving hazardous waste shall be made independent of the concentrations of the hazardous components. For example, the table in this rule requires reporting a 10 pound spill of acrolein (a rule 340-101-033 waste). This shall be interpreted as requiring reporting a 10 pound spill of a waste containing acrolein whether the concentration of acrolein is 3, 30 or 100%.)

(d) Undertake, in the most practicable manner, the collection, removal or treatment of the hazardous substance or hazardous waste in accordance with the requirements of Divisions 100 to 110 and in a manner that will minimize damage to the environment. The Department may, in any case, evaluate the action taken and may require additional action to complete the cleanup and disposal.

#### Cleanup Report

340-108-021 The Department may require the person responsible for a spill or other incident to submit a written report within 15 days of the spill or other incident describing all aspects of the spill and steps taken to prevent a recurrence.

(Comment: Transporters are also required by the Public Utility Commissioner to file a Hazardous Materials Incident Report (DOT Form F5800.0) within 15 days after a spill. A copy of this report may be sent to the Department in lieu of the report required by this rule.)

**Definitions.**

340-108-002 As used in this Division unless otherwise specified:

(1) "Barrel" means 42 U.S. gallons of oil at 60 degrees Fahrenheit.

(2) "Cleanup" includes, but is not limited to, the containment, collection, removal, treatment or disposal of oil or hazardous material; site restoration; and any investigations, monitoring, surveys, testing and other information gathering required or conducted by the department.

(3) "Cleanup costs" means all costs associated with the cleanup of a spill or release or threatened spill or release incurred by the state, its political subdivision or any person with written approval from the department when implementing ORS 466.205, 466.605 to 466.690, 466.880 (3) and (4) and 466.995 (3) or 468.800.

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

(5) "Contingency plan" means a document setting out an organized, planned and coordinated course of action to be followed in case of a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment and is prepared pursuant to 40 CFR Part 264- Subpart D or Part 265- Subpart D.

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

(7) "Director" means the Director of the Department of Environmental Quality.

(8) "Having control over any oil or hazardous material" includes, but is not limited to, persons using, handling, processing, manufacturing, storing, treating, disposing or transporting oil or hazardous material.

(9) "Hazardous material" means:

(a) Radioactive waste and material as defined in ORS 469.300 and 469.530;

(b) Substances and wastes listed in [Appendix I of this Division.]

40 CFR - Table 302.4 (List of Hazardous Substances and Reportable Quantities) and amendments, promulgated prior to January 1, 1987.

(10) "Modified Spill Prevention Control and Countermeasure (SPCC) Plan" means the plan to prevent the spill of oil from a non-transportation-related facility that has been modified to include those hazardous substances and hazardous wastes handled at the facility.

(11) "Oil" includes gasoline, crude oil, fuel oil, diesel oil, lubricating oil, sludge, oil refuse and any other petroleum related product.

(12) "Person" includes, but is not limited to, an individual, trust, firm, joint stock company, corporation, partnership, association, municipal corporation, political subdivision, interstate body, the state and any agency or commission thereof and the Federal Government and any agency thereof.

(13) "Reportable quantity" is an amount of oil or hazardous material which if spilled or released, or threatens to spill or release, in quantities equal to or greater than those specified in OAR 340-108-010 must be reported pursuant to OAR 340-108-020.

(14) "SPCC" means Spill Prevention, Control and Countermeasures Plan prepared in accordance with Title 40 Code of Federal Regulations - Part 112 or Part 1510.

(15) "Spill or release" means the discharge, deposit, injection, dumping, spilling, emitting, releasing, leaking or placing of any oil or hazardous material into the air or into or on any land or waters of the state, as defined in ORS 468.700, except as authorized by a permit issued under ORS chapter 454, 459, 468 or 469, ORS 466.005 to 466.385, 466.880 (1) and (2), 466.890 and 466.995 (1) and (2) or federal law or while being stored or used for its intended purpose.

(16) "Threatened spill or release" means circumstances or events exist that indicate a spill or release of oil or hazardous material is likely and imminent.

(17) "Waters of the state" means lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters which do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the state or within its jurisdiction.

#### **Subdivision B: Reportable Quantities**

340-108-010 (1) Reportable quantity means:

(a) Any quantity of radioactive material, or radioactive waste;

(b) If spilled into waters of the state, or escape into waters of the state is likely, any quantity of oil that would produce a visible oily slick, oily solids, or coat aquatic life, habitat or property with oil, but excluding normal discharges from properly operating marine engines;

(c) If spilled on the surface of the land, any quantity of oil over one barrel (42 gallons); and

(d) An amount equal to or greater than the quantity listed [under the state reportable quantity column in Appendix I of this Division for substances and wastes.] in 40 CFR - Table 302.4 (List of Hazardous Substances and Reportable Quantities) and amendments promulgated prior to January 1, 1987.

(2) Spills or releases of mixtures or solutions containing any of the hazardous materials listed in [Appendix I of this Division] 40 CFR - Table 302.4 (List of Hazardous Substances and Reportable Quantities) and amendments promulgated prior to January 1, 1987 are subject to the reporting requirements of this rule if the total quantity of all the hazardous materials in the mixture or solution (in pounds) exceeds the lowest reportable quantity listed in [Appendix I] 40 CFR Table 302.4 for any one of the hazardous materials in the mixture or solution. A person may rely upon actual knowledge and readily available information such as material safety data sheets, shipping papers, hazardous waste manifests and container labels, to determine the presence and concentration of hazardous materials in a mixture or solution. (3) The quantity determination required by Section 1 of this rule shall be the quantity of oil or hazardous material spilled or released prior to contact or mixing with any other material or substance (i.e., with soil, water, sawdust, etc.). In the case of a threatened spill or release, it shall be the amount of oil or hazardous material in the container or tank from which a spill or release is likely and imminent.

#### **APPENDIX I LIST OF HAZARDOUS MATERIALS AND REPORTABLE QUANTITIES**

Repeal in its entirety Appendix I of OAR 340 - Division 108.

SM710.J

Attachment III

E.Q.C. Agenda Item G

January 23, 1987

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Acenaphthene .....	83320	.....	1*	2		X	1## (0.454)
Acenaphthylene .....	208968	.....	1*	2		X	1## (0.454)
Acetaldehyde .....	75070	Ethanal.....	1000	1,4	U001	C	1000 (454)
Acetaldehyde, chloro.....	107200	Chloroacetaldehyde.....	1*	4	P023	C	1000 (454)
Acetaldehyde, trichloro.....	75876	Chloral.....	1*	4	U034	X	1#(0.454)
Acetamide, N-(aminothioxomethyl)-	591082	1-Acetyl-2-thiourea .....	1*	4	P002	C	1000 (454)
Acetamide, N-(4-ethoxyphenyl)-	62442	Phenacetin.....	1*	4	U187	X	1# (0.454)
Acetamide, N-9H-fluoren-2-yl-	53963	2-Acetylaminofluorene .....	1*	4	U005	X	1# (0.454)
Acetamide, 2-fluoro.....	840197	Fluoroacetamide .....	1*	4	P057	B	100(45.4)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Acetic acid.....	64197		1000	1		D	5000 (2270)
Acetic acid, ethyl ester.....	141786	Ethyl acetate.....	1*	4	U112	D	5000 (2270)
Acetic acid, fluoro- sodium salt.....	62746	Fluoroacetic acid, sodium salt.....	1*	4	P058	A	10 (4.54)
Acetic acid, lead salt.....	301042	Lead acetate.....	5000	1,4	U144	D	5000# (2270)
Acetic acid, thallium(I) salt.....	563688	Thallium(I) acetate.....	1*	4	U214	X	1# (0.454)
Acetic anhydride.....	108247		1000	1		D	5000 (2270)
Acetimidic acid,N- [(methylcarbamoyl) oxy]thio-, methyl ester.....	16752775	Methomyl.....	1*	4	P066	B	100 (45.4)
Acetone.....	67641	2-Propanone.....	1*	4	U002	D	5000 (2270)
Acetone cyanohydrin.....	75865	2-Methylactonitrile..... Propanenitrile, 2-hy- droxy-2-methyl-	10	1,4	P069	A	10 (4.54)
Acetonitrile.....	75058	Ethanenitrile.....	1*	4	U003	D	5000 (2270)
3-(alpha-Acetylbenzyl)- 4- hydroxycoumarin and salts.....	61812	Warfarin.....	1*	4	P001	B	100 (45.4)
Acetophenone.....	98882	Ethanone, 1-phenyl.....	1*	4	U004	D	5000 (2270)
2-Acetylaminofluorene.....	53963	Acetamide, N-9H- fluoren-2-yl-	1*	4	U005	X	1# (0.454)
Acetyl bromide.....	506967		5000	1		D	5000 (2270)
Acetyl chloride.....	75365	Ethanoyl chloride.....	5000	1,4	U006	D	5000 (2270)
1-Acetyl-2-thiourea.....	591082	Acetamide, N-(aminoth- ioxomethyl)-	1*	4	P002	C	1000 (454)
Acrolein.....	107028	2-Propenal.....	1	1,2,4	P003	X	1 (0.454)
Acrylamide.....	79061	2-Propanamide.....	1*	4	U007	D	5000 (2270)
Acrylic acid.....	79107	2-Propenoic acid.....	1*	4	U008	D	5000 (2270)
Acrylonitrile.....	107131	2-Propanenitrile.....	100	1,2,4	U009	B	100# (45.4)
Adipic acid.....	124049		5000	1		D	5000 (2270)
Alanine, 3-[p-bis(2- chloroethyl)amino] phenyl-, L-.....	146823	Melphalan.....	1*	4	U150	X	1# (0.454)
Aldicarb.....	116063	Propanal, 2-methyl-2- (methylthio)-, O- [(methylamino) carbonyl]oxime.	1*	4	P070	X	1 (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Aldrin.....	309002	1,2,3,4,10-10- Hexachloro- 1,4,4a,5,8,8a- hexahydro- 1,4:5,8- endo, exo- dimethan- onaphthalene.	1	1,2,4	P004	X	1# (0.454)
Allyl alcohol.....	107186	2-Propen-1-ol.....	100	1,4	P005	B	100 (45.4)
Allyl chloride.....	107051		1000	1		C	1000 (454)
Aluminum phosphide.....	20859738		1*	4	P006	B	100 (45.4)
Aluminum sulfate.....	10043013		5000	1		D	5000 (2270)
5-(Aminomethyl)-3- isoxazolol.....	2763964	3(2H)-isoxazolone, 5- (aminomethyl)-	1*	4	P007	C	1000 (454)
4-Aminopyridine.....	504245	4-Pyridinamine.....	1*	4	P008	C	1000 (454)
Amitrole.....	61825	1H-1,2,4-Triazol-3-amine..	1*	4	U011	X	1# (0.454)
Ammonia.....	7664417		100	1		B	100## (45.4)
Ammonium acetate.....	631618		5000	1		D	5000 (2270)
Ammonium benzoate.....	1863634		5000	1		D	5000 (2270)
Ammonium bicarbonate.....	1066337		5000	1		D	5000 (2270)
Ammonium bichromate.....	7789095		1000	1		C	1000# (454)
Ammonium bifluoride.....	1341497		5000	1		D	5000## (2270)
Ammonium bisulfite.....	10182300		5000	1		D	5000 (2270)
Ammonium carbamate.....	1111780		5000	1		D	5000 (2270)
Ammonium carbonate.....	506876		5000	1		D	5000 (2270)
Ammonium chloride.....	12125029		5000	1		D	5000 (2270)
Ammonium chromate.....	7788999		1000	1		C	1000# (454)
Ammonium citrate, dibasic.....	3012655		5000	1		D	5000 (2270)
Ammonium fluoroborate.....	13828830		5000	1		D	5000 (2270)
Ammonium fluoride.....	12125018		5000	1		B	100 (45.4)
Ammonium hydroxide.....	1336216		1000	1		C	1000 (454)
Ammonium oxalate.....	6009707 5972736 14258492		5000	1		D	5000 (2270)
Ammonium picrate.....	131748	Phenol, 2,4,6-trinitro- ammonium salt.	1*	4	P009	A	10 (4.54)
Ammonium silicofluoride.....	16919190		1000	1		C	1000 (454)
Ammonium sulfamate.....	7773060		5000	1		D	5000 (2270)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—

Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Category	Pounds(Kg)
Ammonium sulfide.....	12135761		5000	1		B	100 (45.4)
Ammonium sulfite.....	10196040		5000	1		D	5000 (2270)
Ammonium tartrate.....	14307438 3164292		5000	1		D	5000 (2270)
Ammonium thiocyanate.....	1762954		5000	1		D	5000 (2270)
Ammonium thiosulfate.....	7783188		5000	1		D	5000 (2270)
Ammonium vanadate.....	7803556	Vanadic acid, ammonium salt.	1*	4	P119	C	1000 (454)
Amyl acetate.....	628637 123922 626380 625161		1000	1		D	5000 (2270)
Aniline.....	62533	Benzenamine.....	1000	1,4	U012	D	5000 (2270)
Anthracene.....	120127		1*	2		X	1# (0.454)
Antimony ††.....	7440360		1*	2		X	1# (0.454)
ANTIMONY AND COMPOUNDS.....			1*	2			**
Antimony pentachloride.....	7647189		1000	1		C	1000 (454)
Antimony potassium tartrate.....	28300745		1000	1		B	100 (45.4)
Antimony tribromide.....	7789619		1000	1		C	1000 (454)
Antimony trichloride.....	10025919		1000	1		C	1000(454)
Antimony trifluoride.....	7783564		1000	1		C	1000 (454)
Antimony trioxide.....	1309644		5000	1		C	1000 (454)
Aroclor 1016.....	12674112	Polychlorinated Biphenyls (PCBs).	10	1,2		A	10# (4.54)
Aroclor 1221.....	11104282	Polychlorinated Biphenyls (PCBs).	10	1,2		A	10# (4.54)
Aroclor 1232.....	11141165	Polychlorinated Biphenyls (PCBs).	10	1,2		A	10# (4.54)
Aroclor 1242.....	53469219	Polychlorinated Biphenyls (PCBs).	10	1,2		A	10# (4.54)
Aroclor 1248.....	12672296	Polychlorinated Biphenyls (PCBs).	10	1,2		A	10# (4.54)
Aroclor 1254.....	11097691	Polychlorinated Biphenyls (PCBs).	10	1,2		A	10# (4.54)
Aroclor 1260.....	11096825	Polychlorinated Biphenyls (PCBs).	10	1,2		A	10# (4.54)
Arsenic ††.....	7440382		1*	2,3		X	1#(0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—

Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Category	Pounds(Kg)
Arsenic acid.....	1327522 7778384		1*	4	P010	X	1# (0.454)
ARSENIC AND COMPOUNDS.....			1*	2			**
Arsenic disulfide.....	1303328		5000	1		D	5000# (2270)
Arsenic(III) oxide.....	1327533	Arsenic trioxide.....	5000	1,4	P012	D	5000# (2270)
Arsenic(V) oxide.....	1303282	Arsenic pentoxide.....	5000	1,4	P011	D	5000#(2270)
Arsenic pentoxide.....	1303282	Arsenic(V) oxide.....	5000	1,4	P011	D	5000# (2270)
Arsenic trichloride.....	7784341		5000	1		D	5000# (2270)
Arsenic trioxide.....	1327533	Arsenic(III) oxide.....	5000	1,4	P012	D	5000# (2270)
Arsenic trisulfide.....	1303339		5000	1		D	5000# (2270)
Arsine, diethyl.....	682422	Diethylarsine.....	1*	4	P038	X	1# (0.454)
Asbestos †††.....	1332214		1*	2,3		X	1# (0.454)
Auramine.....	482608	Benzenamine, 4,4'-carbonimidoylbis(N,N-dimethyl-.....	1*	4	U014	X	1# (0.454)
Azaserine.....	115026	L-Serine, diazoacetate (ester).	1*	4	U015	X	1# (0.454)
Azirdine.....	151564	Ethylenimine.....	1*	4	P054	X	1# (0.454)
Azirino(2',3':3,4)pyrrolo (1,2a)indole-4,7-dione, 6-amino-9-[[[aminocarboxy]oxy]methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-.....	50077	Mitomycin C.....	1*	4	U010	X	1# (0.454)
Barium cyanide.....	542621		10	1,4	P013	A	10 (4.54)
Benz[ <i>j</i> ]aceanthrylene, 1,2-dihydro-3-methyl-.....	56495	3-Methylcholanthrene.....	1*	4	U157	X	1# (0.454)
Benz[ <i>c</i> ]acridine.....	225514	3,4-Benzacridine.....	1*	4	U016	X	1# (0.454)
3,4-Benzacridine.....	225514	Benz[ <i>c</i> ]acridine.....	1*	4	U016	X	1# (0.454)
Benzal chloride.....	88873	Benzene, dichloromethyl-.....	1*	4	U017	D	5000 (2270)
Benz[ <i>a</i> ]anthracene.....	56553	1,2-Benzanthracene..... Benzo[ <i>a</i> ]anthracene.....	1*	2,4	U018	X	1# (0.454)
1,2-Benzanthracene.....	56553	Benz[ <i>a</i> ]anthracene..... Benzo[ <i>a</i> ]anthracene.....	1*	2,4	U018	X	1# (0.454)
1,2-Benzanthracene, 7,12-dimethyl-.....	57976	7,12-Dimethylbenz[ <i>a</i> ]anthracene.....	1*	4	U094	X	1# (0.454)
Benzenamine.....	62533	Aniline.....	1000	1,4	U012	D	5000 (2270)



TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Benzenamine, 4,4'-carbonimidoylbis(N,N-dimethyl-)	492808	Auramine.....	1*	4	U014	X	1# (0.454)
Benzenamine, 4-chloro	106478	p-Chloroaniline.....	1*	4	P024	C	1000 (454)
Benzenamine, 4-chloro-2-methyl-hydrochloride.	3165933	4-Chloro-o-toluidine, hydrochloride.	1*	4	U049	X	1# (0.454)
Benzenamine, N,N-dimethyl-4-phenylazo-	60117	Dimethylaminoazobenzene.	1*	4	U093	X	1# (0.454)
Benzenamine, 4,4'-methylenebis(2-chloro-	101144	4,4'-Methylenebis(2-chloroaniline).	1*	4	U158	X	1# (0.454)
Benzenamine, 2-methyl-hydrochloride.	636215	o-Toluidine hydrochloride.	1*	4	U222	X	1# (0.454)
Benzenamine, 2-methyl-5-nitro-	99558	5-Nitro-o-toluidine.....	1*	4	U181	X	1# (0.454)
Benzenamine, 4-nitro	100016	p-Nitroaniline.....	1*	4	P077	D	5000 (2270)
Benzene	71432		1000	1,2,3,4	U019	C	1000# (454)
Benzene, 1-bromo-4-phenoxy-	101553	4-Bromophenyl phenyl ether.	1*	2,4	U030	B	100 (45.4)
Benzene, chloro	108907	Chlorobenzene.....	100	1,2,4	U037	B	100 (45.4)
Benzene, chloromethyl-	100447	Benzyl chloride.....	100	1,4	P028	B	100# (45.4)
Benzene, 1,2-dichloro	95501	1,2-Dichlorobenzene o-Dichlorobenzene	100	1,2,4	U070	B	100 (45.4)
Benzene, 1,3-dichloro	541731	1,3-Dichlorobenzene m-Dichlorobenzene	1*	2,4	U071	B	100 (45.4)
Benzene, 1,4-dichloro	106467	1,4-Dichlorobenzene p-Dichlorobenzene	100	1,2,4	U072	B	100 (45.4)
Benzene, dichloromethyl-	98873	Benzal chloride.....	1*	4	U017	D	5000 (2270)
Benzene, 2,4-disocyanatomethyl-	584849	Toluene diisocyanate.....	1*	4	U223	B	100 (45.4)
	91087 26471625						
Benzene, dimethyl	1330207	Xylene.....	1000	1,4	U239	C	1000 (454)
m-	108383	m-					
o-	95476	o-					
p-	106423	p-					
Benzene, hexachloro	118741	Hexachlorobenzene.....	1*	2,4	U127	X	1# (0.454)
Benzene, hexahydro	110827	Cyclohexane.....	1000	1,4	U058	C	1000 (454)
Benzene, hydroxy	108952	Phenol.....	1000	1,2,4	U188	C	1000## (454)
Benzene, methyl-	108883	Toluene.....	1000	1,2,4	U220	C	1000 (454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Benzene, 1-methyl-2,4-dinitro-	121142	2,4-Dinitrotoluene.....	1000	1,2,4	U105	C	1000# (454)
Benzene, 1-methyl-2,6-dinitro-	606202	2,6-Dinitrotoluene.....	1000	1,2,4	U106	C	1000# (454)
Benzene, 1,2-methylenedioxy-4-allyl-	94597	Safrole.....	1*	4	U203	X	1# (0.454)
Benzene, 1,2-methylenedioxy-4-propenyl-	120581	Isosafrole.....	1*	4	U141	X	1# (0.454)
Benzene, 1,2-methylenedioxy-4-propyl-	94586	Dihydrosafrole.....	1*	4	U090	X	1# (0.454)
Benzene, 1-methylethyl-	98828	Cumene.....	1*	4	U055	D	5000 (2270)
Benzene, nitro	98953	Nitrobenzene.....	1000	1,2,4	U169	C	1000 (454)
Benzene, pentachloro	608935	Pentachlorobenzene.....	1*	4	U183	X	1## (0.454)
Benzene, pentachloronitro-	82688	Pentachloronitrobenzene..	1*	4	U185	X	1# (0.454)
Benzene, 1,2,4,5-tetrachloro-	95943	1,2,4,5-Tetrachlorobenzene.	1*	4	U207	D	5000 (2270)
Benzene, trichloromethyl-	98077	Benzotrichloride.....	1*	4	U023	X	1# (0.454)
Benzene, 1,3,5-trinitro	98354	sym-Trinitrobenzene.....	1*	4	U234	X	1## (0.454)
Benzenoacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester.	510156	Ethyl 4,4'-dichlorobenzilate.	1*	4	U038	X	1# (0.454)
1,2-Benzenedicarboxylic acid anhydride.	85449	Phthalic anhydride.....	1*	4	U190	D	5000 (2270)
1,2-Benzenedicarboxylic acid, [bis(2-ethylhexyl)] ester.	117817	Bis(2-ethylhexyl)phthalate.	1*	2,4	U028	X	1# (0.454)
1,2-Benzenedicarboxylic acid, dibutyl ester.	84742	n-Butyl phthalate.....	100	1,2,4	U069	A	10 (4.54)
		Dibutyl phthalate Di-n-butyl phthalate					
1,2-Benzenedicarboxylic acid, diethyl ester.	84662	Diethyl phthalate.....	1*	2,4	U088	C	1000 (454)
1,2-Benzenedicarboxylic acid, dimethyl ester.	131113	Dimethyl phthalate.....	1*	2,4	U102	D	5000 (2270)
1,2-Benzenedicarboxylic acid, di-n-octyl ester.	117840	Di-n-octyl phthalate.....	1*	2,4	U107	D	5000 (2270)
1,3-Benzenediol	108463	Resorcinol.....	1000	1,4	U201	D	5000 (2270)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
1,2-Benzenedio[4-(1-hydroxy-2-(methylamino)ethyl)]-	51434	Epinephrine.....	1*	4	P042	C	1000 (454)
Benzenesulfonic acid chloride.	98099	Benzenesulfonyl chloride..	1*	4	U020	B	100 (45.4)
Benzenesulfonyl chloride..	98099	Benzenesulfonic acid chloride.	1*	4	U020	B	100 (45.4)
Benzenethiol.....	108985	Thiophenol.....	1*	4	P014	B	100 (45.4)
Benzidine.....	92875	(1,1'-Biphenyl)-4,4'diamine.	1*	2,4	U021	X	1# (0.454)
1,2-Benzisothiazolin-3-one,1,1-dioxide, and salts.	81072	Saccharin and salts.....	1*	4	U202	X	1# (0.454)
Benzo[a]anthracene.....	56553	Benzo[a]anthracene..... 1,2-Benzanthracene	1*	2,4	U018	X	1# (0.454)
Benzo[b]fluoranthene.....	205992		1*	2		X	1# (0.454)
Benzo[k]fluoranthene.....	207089		1*	2		X	1# (0.454)
Benzo[j,k]fluorene.....	206440	Fluoranthene.....	1*	2,4	U120	X	1## (0.454)
Benzoic acid.....	65850		5000	1		D	5000 (2270)
Benzonitrile.....	100470		1000	1		D	5000 (2270)
Benzo[ghi]perylene.....	191242		1*	2		X	1## (0.454)
Benzo[a]pyrene.....	50328	3,4-Benzopyrene.....	1*	2,4	U022	X	1# (0.454)
3,4-Benzopyrene.....	50328	Benzo[a]pyrene.....	1*	2,4	U022	X	1# (0.454)
p-Benzoquinone.....	106514	1,4-Cyclohexadienedione..	1*	4	U197	X	1## (0.454)
Benzotrichloride.....	98077	Benzene, trichloromethyl-.	1*	4	U023	X	1# (0.454)
Benzoyl chloride.....	98884		1000	1		C	1000 (454)
1,2-Benzphenanthrene.....	218019	Chrysene.....	1*	2,4	U050	X	1# (0.454)
Benzyl chloride.....	100447	Benzene, chloromethyl-....	100	1,4	P028	B	100# (45.4)
Beryllium ††.....	7440417	Beryllium dust.....	1*	2,3,4	P015	X	1# (0.454)
BERYLLIUM AND COMPOUNDS.			1*	2			**
Beryllium chloride.....	7787475		5000	1		D	5000# (2270)
Beryllium dust.....	7440417	Beryllium.....	1*	2,3,4	P015	X	1# (0.454)
Beryllium fluoride.....	7787497		5000	1		D	5000# (2270)
Beryllium nitrate.....	13597994 7787555		5000	1		D	5000# (2270)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
alpha - BHC.....	319848		1*	2		X	1# (0.454)
beta - BHC.....	319857		1*	2		X	1# (0.454)
gamma - BHC.....	58899	Hexachlorocyclohexane (gamma isomer). Lindane	1	1,2,4	U129	X	1# (0.454)
delta - BHC.....	319888		1*	2		X	1## (0.454)
2,2'-Bioxtrane.....	1464535	1,2,3,4-Diepoxybutane.....	1*	4	U085	X	1# (0.454)
(1,1'-Biphenyl)-4,4'diamine.	92875	Benzidine.....	1*	2,4	U021	X	1# (0.454)
(1,1'-Biphenyl)-4,4'diamine,3,3'dichloro-	91841	3,3'-Dichlorobenzidine.....	1*	2,4	U073	X	1# (0.454)
(1,1'-Biphenyl)-4,4'diamine,3,3'dimethoxy-	118904	3,3'-Dimethoxybenzidine.....	1*	4	U091	X	1# (0.454)
(1,1'-Biphenyl)-4,4'-diamine,3,3'-dimethyl-	119837	3,3'-Dimethylbenzidine.....	1*	4	U085	X	1# (0.454)
Bis(2-chloroethoxy)methane.	111911	Ethane, 1,1'-[methylenebis(oxy)]bis(2-chloro-.	1*	2,4	U024	C	1000 (454)
Bis (2-chloroethyl) ether.....	111444	Dichloroethyl ether..... Ethane, 1,1'-oxybis[2-chloro-	1*	2,4	U025	X	1# (0.454)
Bis(2-chloroisopropyl) ether.....	108601	Propane, 2,2'-oxybis(2-chloro-.	1*	2,4	U027	C	1000 (454)
Bis(chloromethyl) ether.....	542881	Methane, oxybis(chloro-....	1*	4	P016	X	1# (0.454)
Bis(dimethylthiocarbamoyl) disulfide.	137268	Thiram.....	1*	4	U244	A	10 (4.54)
Bis(2-ethylhexyl)phthalate.	117817	1,2-Benzenedicarboxylic acid, [bis(2-ethylhexyl)] ester.	1*	2,4	U028	X	1# (0.454)
Bromine cyanide.....	506683	Cyanogen bromide.....	1*	4	U246	C	1000 (454)
Bromoacetone.....	598312	2-Propanone, 1-bromo.....	1*	4	P017	C	1000 (454)
Bromoform.....	75252	Methane, tribromo.....	1*	2,4	U225	B	100 (45.4)
4-Bromophenyl phenyl ether.....	101553	Benzene, 1-bromo-4-phenoxy-.	1*	2,4	U030	B	100 (45.4)
Brucine.....	357573	Strychnidin-10-one, 2,3-dimethoxy-.	1*	4	P018	B	100 (45.4)
1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	87683	Hexachlorobutadiene.....	1*	2,4	U128	X	1# (0.454)
1-Butanamine, N-butyl-N-nitroso-	924163	N-Nitrosodi-n-butylamine..	1*	4	U172	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Butanoic acid, 4-[bis(2-chloroethyl)amino]benzene-	305033	Chlorambucil.....	1*	4	U035	X	1# (0.454)
1-Butanol .....	71363	n-Butyl alcohol .....	1*	4	U031	D	5000 (2270)
2-Butanone .....	78933	Methyl ethyl ketone.....	1*	4	U159	D	5000 (2270)
2-Butanone peroxide.....	1338234	Methyl ethyl ketone peroxide.....	1*	4	U160	A	10 (4.54)
2-Butenal .....	123739 4170303	Crotonaldehyde.....	100	1,4	U053	B	100 (45.4)
2-Butene, 1,4-dichloro-	764410	1,4-Dichloro-2-butene.....	1*	4	U074	X	1 (0.454)
Butyl acetate iso- sec- tert-	123864 110190 105464 540885		5000	1		D	5000 (2270)
n-Butyl alcohol .....	71363	1-Butanol .....	1*	4	U031	D	5000 (2270)
Butylamine iso- sec- tert-	109739 78819 513495 13952846 75649		1000	1		C	1000 (454)
Butyl benzyl phthalate.....	85687		1*	2		B	100 (45.4)
n-Butyl phthalate.....	84742	1,2-Benzenedicarboxylic acid,dibutyl ester. Dibutyl phthalate Di-n-butyl phthalate	100	1,2,4	U069	A	10 (4.54)
Butyric acid..... iso-	107926 79312		5000	1		D	5000 (2270)
Cacodylic acid.....	75605	Hydroxydimethylarsine oxide.	1*	4	U136	X	1# (0.454)
Cadmium ††.....	7440439		1*	2		X	1# (0.454)
Cadmium acetate.....	543908		100	1		B	100# (45.4)
CADMIUM AND COMPOUNDS.			1*	2			**
Cadmium bromide .....	7789426		100	1		B	100# (45.4)
Cadmium chloride.....	10108642		100	1		B	100# (45.4)
Calcium arsenate.....	7778441		1000	1		C	1000# (454)
Calcium arsenite.....	52740166		1000	1		C	1000# (454)
Calcium carbide .....	75207		5000	1		A	10 (4.54)
Calcium chromate.....	13765190	Chromic acid, calcium salt.	1000	1,4	U032	C	1000# (454)
Calcium cyanide.....	592018		10	1,4	P021	A	10 (4.54)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Calcium dodecylbenzene sulfonate.	26264062		1000	1		C	1000 (454)
Calcium hypochlorite.....	7778543		100	1		A	10(4.54)
Camphene, octachloro-	8001352	Toxaphene.....	1	1,2,4	P123	X	1# (0.454)
Captan.....	133062		10	1		A	10## (4.54)
Carbamic acid, ethyl ester.	51798	Ethyl carbamate (Urethan).	1*	4	U238	X	1# (0.454)
Carbamic acid, methylnitroso,ethyl ester.	615532	N-Nitroso-N-methylurethane.	1*	4	U178	X	1# (0.454)
Carbamide, N-ethyl-N-nitroso.	758739	N-Nitroso-N-ethylurea.....	1*	4	U176	X	1# (0.454)
Carbamide, N-methyl-N-nitroso.	684935	N-Nitroso-N-methylurea .....	1*	4	U177	X	1# (0.454)
Carbamide, thio-	62566	Thiourea.....	1*	4	U219	X	1# (0.454)
Carbamidoselenonic acid.	630104	Selenourea .....	1*	4	P103	X	1## (0.454)
Carbamoyl chloride, dimethyl-	78447	Dimethylcarbamoyl chloride.	1*	4	U097	X	1# (0.454)
Carbaryl.....	63252		100	1		B	100 (45.4)
Carbofuran.....	1563662		10	1		A	10 (4.54)
Carbon bisulfide.....	75150	Carbon disulfide.....	5000	1,4	P022	D	5000## (2270)
Carbon disulfide.....	75150	Carbon bisulfide.....	5000	1,4	P022	D	5000## (2270)
Carbonic acid, dithallium (I) salt.	6533739	Thallium(I) carbonate .....	1*	4	U215	X	1## (0.454)
Carbonochloridic acid, methyl ester.	78221	Methyl chlorocarbonate ...	1*	4	U156	C	1000 (454)
Carbon oxyfluoride .....	353504	Carbonyl fluoride.....	1*	4	U033	C	1000 (454)
Carbon tetrachloride.....	58235	Methane, tetrachloro.....	5000	1,2,4	U211	D	5000# (2270)
Carbonyl chloride.....	75445	Phosgene.....	5000	1,4	P095	A	10 (4.54)
Carbonyl fluoride.....	353504	Carbon oxyfluoride .....	1*	4	U033	C	1000 (454)
Chloral.....	75876	Acetaldehyde, trichloro.....	1*	4	U034	X	1#(0.454)
Chlorambucil.....	305033	Butanoic acid, 4-[bis(2-chloroethyl)amino]benzene-	1*	4	U035	X	1# (0.454)
CHLORDANE (TECHNICAL MIXTURE AND METABOLITES).			1*	2			**

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Chlordane .....	57749	Chlordane, technical 4,7-Methanoindan, 1,2,4,5,6,7,8,8- octachloro- 3a,4,7,7a- tetrahydro-	1	1,2,4	U036	X	1# (0.454)
Chlordane, technical .....	57749	Chlordane 4,7-Methanoindan, 1,2,4,5,6,7,8,8- octachloro- 3a,4,7,7a- tetrahydro-	1	1,2,4	U036	X	1# (0.454)
CHLORINATED BENZENES.			1*	2			**
CHLORINATED ETHANES.			1*	2			**
CHLORINATED NAPHTHALENE.			1*	2			**
CHLORINATED PHENOLS.			1*	2			**
Chlorine .....	7782505		10	1		A	10 (4.54)
Chlorine cyanide .....	506774	Cyanogen chloride.....	10	1,4	P033	A	10 (4.54)
Chlornaphazine .....	494031	2-Naphthylamine, N,N- bis(2-chloroethyl)-.	1*	4	U028	X	1# (0.454)
Chloroacetaldehyde .....	107200	Acetaldehyde, chloro-.....	1*	4	P023	C	1000 (454)
CHLOROALKYL ETHERS.			1*	2			**
p-Chloroaniline .....	106478	Benzenamine, 4-chloro-.....	1*	4	P024	C	1000 (454)
Chlorobenzene .....	108907	Benzene, chloro-.....	100	1,2,4	U037	B	100 (45.4)
4-Chloro-m-cresol .....	59507	p-Chloro-m-cresol Phenol, 4-chloro-3- methyl-	1*	2,4	U039	D	5000 (2270)
p-Chloro-m-cresol .....	59507	4-Chloro-m-cresol Phenol, 4-chloro-3- methyl-	1*	2,4	U039	D	5000 (2270)
Chlorodibromomethane .....	124481		1*	2		B	100 (45.4)
1-Chloro-2,3- epoxypropane.	106898	Epichlorohydrin .....	1000	1,4	U041	C	1000# (454)
		Oxirane, 2-(chloro- methyl)-					
Chloroethane .....	75003		1*	2		X	1## (0.454)
2-Chloroethyl vinyl ether .....	110758	Ethene, 2-chloroethoxy-.....	1*	2,4	U042	C	1000 (454)
Chloroform .....	67663	Methane, trichloro-.....	5000	1,2,4	U044	D	5000# (2270)
Chloromethyl methyl ether.	107302	Methane, chlorometh- oxy-	1*	4	U046	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
beta-Chloronaphthalene .....	91587	2-Chloronaphthalene..... Naphthalene, 2-chloro-	1*	2,4	U047	D	5000 (2270)
2-Chloronaphthalene .....	91587	beta-Chloronaphthalene..... Naphthalene, 2-chloro-	1*	2,4	U047	D	5000 (2270)
2-Chlorophenol.....	95576	o-Chlorophenol..... Phenol, 2-chloro-	1*	2,4	U048	B	100 (45.4)
o-Chlorophenol.....	95578	2-Chlorophenol..... Phenol, 2-chloro-	1*	2,4	U048	B	100 (45.4)
4-Chlorophenyl phenyl ether.	7005723		1*	2		D	5000 (2270)
1-(o- Chlorophenyl)thiourea.	5344821	Thiourea, (2-chloro- phenyl)-.	1*	4	P026	B	100 (45.4)
3-Chloropropionitrile .....	542767	Propanenitrile, 3-chloro-.....	1*	4	P027	C	1000 (454)
Chlorosulfonic acid .....	7780945		1000	1		C	1000 (454)
4-Chloro-o-toluidine, hydrochloride.	3185933	Benzenamine, 4-chloro- 2-methyl- hydrochloride.	1*	4	U049	X	1# (0.454)
Chlorpyrifos .....	2921882		1	1		X	1 (0.454)
Chromic acetate .....	1066304		1000	1		C	1000## (454)
Chromic acid .....	11115745 7738945		1000	1		C	1000# (454)
Chromic acid, calcium salt.	13765190	Calcium chromate.....	1000	1,4	U032	C	1000# (454)
Chromic sulfate .....	10101538		1000	1		C	1000## (454)
Chromium trivalent .....	7440473		1*	2		X	1# (0.454)
CHROMIUM AND COMPOUNDS.			1*	2			**
Chromous chloride .....	10049055		1000	1		C	1000## (454)
Chrysene .....	218019	1,2-Benzphenanthrene.....	1*	2,4	U050	X	1# (0.454)
Cobaltous bromide .....	7789437		1000	1		C	1000(454)
Cobaltous formate .....	544183		1000	1		C	1000 (454)
Cobaltous sulfamate .....	14017415		1000	1		C	1000 (454)
Coke Oven Emissions .....	N.A.		1*	3		X	1# (0.454)
Copper trivalent .....	7440508		1*	2		X	1## (0.454)
COPPER AND COMPOUNDS.			1*	2			**
Copper cyanide .....	544923		1*	4	P029	A	10 (4.54)
Coumaphos .....	56724		10	1		A	10 (4.54)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Creosote	8001589		1*	4	U051	X	1# (0.454)
Cresol(s)	1319773	Cresylic acid	1000	1,4	U052	C	1000## (454)
m-	108394						
o-	95487						
p-	106445						
Cresylic acid	1319773	Cresol(s)	1000	1,4	U052	C	1000## (454)
m-	108394						
o-	95487						
p-	106445						
Crotonaldehyde	123739 4170303	2-Butenal	100	1,4	U053	B	100 (45.4)
Cumene	98828	Benzene, 1-methylethyl-	1*	4	U055	D	5000 (2270)
Cupric acetate	142712		100	1		B	100 (45.4)
Cupric acetoarsenite	12002038		100	1		B	100# (45.4)
Cupric chloride	7447394		10	1		A	10## (4.54)
Cupric nitrate	3251238		100	1		B	100 (45.4)
Cupric oxalate	5893663		100	1		B	100 (45.4)
Cupric sulfate	7758987		10	1		A	10## (4.54)
Cupric sulfate ammoniated	10380297		100	1		B	100 (45.4)
Cupric tartrate	815827		100	1		B	100## (45.4)
CYANIDES			1*	2			**
Cyanides (soluble cyanide salts), not elsewhere specified.	57125		1*	4	P030	A	10 (4.54)
Cyanogen	460195		1*	4	P031	B	100 (45.4)
Cyanogen bromide	506683	Bromine cyanide	1*	4	U246	C	1000 (454)
Cyanogen chloride	506774	Chlorine cyanide	10	1,4	P033	A	10 (4.54)
1,4-Cyclohexadienedione	106514	p-Benzoquinone	1*	4	U197	X	1## (0.454)
Cyclohexane	110827	Benzene, hexahydro-	1000	1,4	U056	C	1000(454)
Cyclohexanone	108941		1*	4	U057	D	5000 (2270)
1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-	77474	Hexachlorocyclopentadiene	1	1,2,4	U130	X	1# (0.454)
Cyclophosphamide	50180	2H-1,3,2-Oxazaphosphorine,2-[bis(2-chloroethyl)amino] tetrahydro-2-oxide	1*	4	U058	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
2,4-D Acid	94757	2,4-D, salts and esters 2,4-Dichlorophenoxyacetic acid, salts and esters	100	1,4	U240	B	100 (45.4)
2,4-D Esters	84111 94791 94804 1320189 1928387 1928616 1929733 2971382 25168267 53467111		100	1		B	100 (45.4)
2,4-D, salts and esters	94757	2,4-D Acid 2,4-Dichlorophenoxyacetic acid, salts and esters	100	1,4	U240	B	100 (45.4)
Daunomycin	20830813	5,12-Naphthacenedione, (8S-cis)-8-acetyl-10-[3-amino-2,3,8-trideoxy-alpha-L-lyxohexopyranosyl]oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-	1*	4	U059	X	1# (0.454)
DDD	72548	4,4' DDD Dichlorodiphenyl dichloroethane TDE	1	1,2,4	U060	X	1# (0.454)
4,4' DDD	72548	DDD Dichlorodiphenyl dichloroethane TDE	1	1,2,4	U060	X	1# (0.454)
DDE	72559	4,4' DDE	1*	2		X	1# (0.454)
4,4' DDE	72559	DDE	1*	2		X	1# (0.454)
DDT	50293	4,4' DDT Dichlorodiphenyl trichloroethane	1	1,2,4	U061	X	1# (0.454)
4,4' DDT	50293	DDT Dichlorodiphenyl trichloroethane	1	1,2,4	U061	X	1# (0.454)
DDT AND METABOLITES			1*	2			**
Decachlorooctahydro-1,3,4-metheno-2H-cyclobuta[c,d]-pentalen-2-one	143500	Kepona	1	1,4	U142	X	1# (0.454)
Diallate	2303164	S-(2,3-Dichloroallyl) diisopropylthiocarbamate	1*	4	U062	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Codet	RCRA Waste Number	Catego-ry	Pounds(Kg)
Diamine	302012	Hydrazine	1*	4	U133	X	1# (0.454)
Diaminotoluene	95807 25376458 496720 823405	Toluenediamine	1*	4	U221	X	1# (0.454)
Diazinon	5333415		1	1		X	1 (0.454)
Dibenz[a,h]anthracene	53703	1,2,5,6-Dibenzanthracene. Dibenzo[a,h]anthracene	1*	2,4	U063	X	1# (0.454)
1,2,5,6-Dibenzanthracene	53703	Dibenz[a,h]anthracene Dibenzo[a,h]anthracene	1*	2,4	U063	X	1# (0.454)
Dibenzo[a,h]anthracene	53703	Dibenz[a,h]anthracene 1,2,5,6-Dibenzanthracene	1*	2,4	U063	X	1# (0.454)
1,2,7,8-Dibenzopyrene	189559	Dibenz[a,i]pyrene	1*	4	U064	X	1# (0.454)
Dibenz[a,i]pyrene	189559	1,2,7,8-Dibenzopyrene	1*	4	U064	X	1#(0.454)
1,2-Dibromo-3-chloropropane	96128	Propane, 1,2-dibromo-3-chloro-	1*	4	U066	X	1# (0.454)
Dibutyl phthalate	84742	1,2-Benzenedicarboxylic acid,dibutyl ester. Di-n-butyl phthalate n-Butyl phthalate	100	1,2,4	U069	A	10 (4.54)
Di-n-butyl phthalate	84742	1,2-Benzenedicarboxylic acid,dibutyl ester. n-Butyl phthalate Dibutyl phthalate	100	1,2,4	U069	A	10 (4.54)
Dicamba	1918009		1000	1		C	1000 (454)
Dichtobenil	1194656		1000	1		B	100 (45.4)
Dichlone	117806		1	1		X	1 (0.454)
S-(2,3-Dichloroallyl) diisopropylthiocarbamate	2303164	Diallate	1*	4	U062	X	1# (0.454)
3,5-Dichloro-N-(1,1-dimethyl-2-propynyl)benzamide	23950585	Pronamide	1*	4	U192	D	5000 (2270)
Dichlorobenzene (mixed)	25321226		100	1		B	100 (45.4)
1,2-Dichlorobenzene	95501	Benzene, 1,2-dichloro- o-Dichlorobenzene	100	1,2,4	U070	B	100 (45.4)
1,3-Dichlorobenzene	541731	Benzene, 1,3-dichloro- m-Dichlorobenzene	1*	2,4	U071	B	100 (45.4)
1,4-Dichlorobenzene	106467	Benzene, 1,4-dichloro- p-Dichlorobenzene	100	1,2,4	U072	B	100 (45.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Codet	RCRA Waste Number	Catego-ry	Pounds(Kg)
m-Dichlorobenzene	541731	Benzene, 1,3-dichloro- 1,3-Dichlorobenzene	1*	2,4	U071	B	100 (45.4)
o-Dichlorobenzene	95501	Benzene, 1,2-dichloro- 1,2-Dichlorobenzene	100	1,2,4	U070	B	100 (45.4)
p-Dichlorobenzene	106467	Benzene, 1,4-dichloro- 1,4-Dichlorobenzene	100	1,2,4	U072	B	100 (45.4)
DICHLOROENZIDINE			1*	2			**
3,3'-Dichlorobenzidine	91841	(1,1'-Biphenyl)- 4,4'-diamine,3,3'dichloro-	1*	2,4	U073	X	1# (0.454)
Dichlorobromomethane	75274		1*	2		D	5000 (2270)
1,4-Dichloro-2-butene	764410	2-Butene, 1,4-dichloro-	1*	4	U074	X	1 (0.454)
Dichlorodifluoromethane	75718	Methane, dichlorodi- fluoro-	1*	4	U075	D	5000 (2270)
Dichlorodiphenyl dichloroethane	72548	DDD	1	1,2,4	U060	X	1# (0.454)
		4,4' DDD TDE					
Dichlorodiphenyl trichloroethane	50293	DDT	1	1,2,4	U061	X	1# (0.454)
		4,4' DDT					
1,1-Dichloroethane	75343	Ethane, 1,1-dichloro- Ethylidene dichloride	1*	2,4	U076	C	1000 (454)
1,2-Dichloroethane	107062	Ethane, 1,2-dichloro- Ethylene dichloride	5000	1,2,4	U077	D	5000# (2270)
1,1-Dichloroethylene	75354	Ethene, 1,1-dichloro- Vinylidene chloride	5000	1,2,4	U078	D	5000# (2270)
1,2-trans-Dichloroethylene	156605	Ethene, trans-1,2-dichloro-	1*	2,4	U079	C	1000 (454)
Dichloroethyl ether	111444	Bis (2-chloroethyl) ether Ethane, 1,1'-oxybis(2-chloro-	1*	2,4	U025	X	1# (0.454)
2,4-Dichlorophenol	120832	Phenol, 2,4-dichloro-	1*	2,4	U081	B	100 (45.4)
2,6-Dichlorophenol	87650	Phenol, 2,6-dichloro-	1*	4	U082	B	100 (45.4)
2,4-Dichlorophenoxyacetic acid, salts and esters	94757	2,4-D Acid	100	1,4	U240	B	100 (45.4)
		2,4-D, salts and esters					
Dichlorophenyarsine	696286	Phanyl dichloroarsine	1*	4	P036	X	1# (0.454)
Dichloropropane	26538197 78999 142289	1,1-Dichloropropane 1,3-Dichloropropane	5000	1		C	1000 (454)
1,2-Dichloropropane	78875	Propylene dichloride	5000	1,2,4	U083	C	1000 (454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Dichloropropane - Dichloropropene (mixture).	8003198		5000	1		D	5000## (2270)
Dichloropropene 2,3-Dichloropropene	26952238 78886		5000	1		D	5000## (2270)
1,3-Dichloropropene	542756	Propene, 1,3-dichloro-	5000	1,2,4	U084	D	5000## (2270)
2,2-Dichloropropionic acid.	75990		5000	1		D	5000 (2270)
Dichlorvos	62737		10	1		A	10 (4.54)
Dieldrin	60571	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo,exo-1,4,5,8-dimethanonaphthalene.	1	1,2,4	P037	X	1# (0.454)
1,2:3,4-Diepoxybutane	1464535	2,2'-Bioxirane	1*	4	U085	X	1# (0.454)
Diethylamine	109897		1000	1		C	1000## (454)
Diethylarsine	692422	Arsine, diethyl-	1*	4	P038	X	1# (0.454)
1,4-Diethylene dioxide	123911	1,4-Dioxane	1*	4	U108	X	1# (0.454)
N,N'-Diethylhydrazine	1615801	Hydrazine, 1,2-diethyl-	1*	4	U086	X	1# (0.454)
O,O-Diethyl S-[2-(ethylthio)ethyl]phosphorodithioate.	298044	Disulfoton	1	1,4	P039	X	1 (0.454)
O,O-Diethyl S-methyl dithiophosphate.	3288582	Phosphorodithioic acid, O,O-diethyl S-methyl-ester.	1*	4	U087	D	5000 (2270)
Diethyl-p-nitrophenyl phosphate.	311455	Phosphoric acid,diethyl p-nitrophenyl ester.	1*	4	P041	B	100 (45.4)
Diethyl phthalate	84662	1,2-Benzenedicarboxylic acid,diethyl ester.	1*	2,4	U088	C	1000 (454)
O,O-Diethyl O-pyrazinyl phosphorothioate.	297972	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester.	1*	4	P040	B	100 (45.4)
Diethylstilbestrol	56531	4,4'-Stilbenediol, alpha, alpha'-diethyl.	1*	4	U089	X	1# (0.454)
1,2-Dihydro-3,6-pyridazinedione.	123331	Maleic hydrazide	1*	4	U148	D	5000 (2270)
Dihydrosafrole	94586	Benzene, 1,2-methylene-dioxy-4-propyl-	1*	4	U090	X	1# (0.454)
Diisopropyl fluorophosphate.	55914	Phosphorofluoric acid,bis(1-methylethyl) ester.	1*	4	P043	B	100 (45.4)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Dimethoate	60515	Phosphorodithioic acid,O,O-dimethyl S-[2(methylamino)-2-oxoethyl] ester.	1*	4	P044	A	10 (4.54)
3,3'-Dimethoxybenzidine	119904	(1,1'-Biphenyl)-(4,4'diamino,3,3'dimethoxy-	1*	4	U091	X	1# (0.454)
Dimethylamine	124403	Methanamine, N-methyl-	1000	1,4	U092	C	1000## (454)
Dimethylaminosobenzene.	60117	Benzenamina, N,N-dimethyl-4-phenylazo-	1*	4	U093	X	1# (0.454)
7,12-Dimethylbenz(a)anthracene.	57976	1,2-Benzanthracene, 7,12-dimethyl-	1*	4	U094	X	1# (0.454)
3,3'-Dimethylbenzidine	119937	(1,1'-Biphenyl)-4,4'-diamino,3,3'-dimethyl-	1*	4	U095	X	1# (0.454)
alpha, alpha-Dimethylbenzylhydroperoxide.	80159	Hydroperoxide, 1-methyl-1-phenylethyl-	1*	4	U096	A	10 (4.54)
3,3-Dimethyl-1-(methylthio)-2-butanone, O-[(methylamino)carbonyl]oxime.	39196184	Thiofanox	1*	4	P045	B	100 (45.4)
Dimethylcarbamoyl chloride.	79447	Carbamoyl chloride, dimethyl-	1*	4	U097	X	1# (0.454)
1,1-Dimethylhydrazine	57147	Hydrazine, 1,1-dimethyl-	1*	4	U098	X	1# (0.454)
1,2-Dimethylhydrazine	540738	Hydrazine, 1,2-dimethyl-	1*	4	U099	X	1# (0.454)
O,O-Dimethyl O-p-nitrophenyl phosphorothioate.	298000	Methyl parathion	100	1,4	P071	B	100## (45.4)
Dimethylnitrosamine	62759	N-Nitrosodimethylamine	1*	2,4	P082	X	1# (0.454)
alpha, alpha-Dimethylphenethylamine.	122098	Ethanamine, 1,1-dimethyl-2-phenyl-	1*	4	P046	D	5000 (2270)
2,4-Dimethylphenol	105679	Phenol, 2,4-dimethyl-	1*	2,4	U101	B	100 (45.4)
Dimethyl phthalate	131113	1,2-Benzenedicarboxylic acid,dimethyl ester.	1*	2,4	U102	D	5000 (2270)
Dimethyl sulfate	77781	Sulfuric acid, dimethyl ester.	1*	4	U103	X	1# (0.454)
Dinitrobenzene (mixed) m-o-p-	25154545 99650 528280 100254		1000	1		B	100 (45.4)
4,6-Dinitro-o-cresol and salts.	534521	Phenol, 2,4-dinitro-6-methyl-, and salts.	1*	2,4	P047	A	10 (4.54)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
4,6-Dinitro-o-cyclohexylphenol	131895	Phenol, 2-cyclohexyl-4,6-dinitro-	1*	4	P034	B	100 (45.4)
Dinitrophenol 2,5- 2,6-	25550587 329715 573568		1000	1		A	10 (4.54)
2,4-Dinitrophenol	51285	Phenol, 2,4-dinitro-	1000	1,2,4	P048	A	10 (4.54)
Dinitrotoluene 3,4-Dinitrotoluene	25321146 810399		1000	1,2		C	1000# (454)
2,4-Dinitrotoluene	121142	Benzene, 1-methyl-2,4-dinitro-	1000	1,2,4	U105	C	1000# (454)
Dinoseb	88857	Phenol, 2,4-dinitro-6-(1-n-butylpropyl)-	1*	4	P020	C	1000 (454)
Di-n-octyl phthalate	117840	1,2-Benzenedicarboxylic acid, di-n-octyl ester	1*	2,4	U107	D	5000 (2270)
1,4-Dioxane	123911	1,4-Diethylene dioxide	1*	4	U108	X	1# (0.454)
DIPHENYLHYDRAZINE			1*	2			**
1,2-Diphenylhydrazine	122667	Hydrazine, 1,2-diphenyl-	1*	2,4	U109	X	1# (0.454)
Diphosphoramidate, octamethyl-	152169	Octamethylpyrophosphoramidate	1*	4	P085	B	100 (45.4)
Dipropylamine	142847	1-Propanamine, N-propyl-	1*	4	U110	D	5000 (2270)
Di-n-propylnitrosamine	621647	N-Nitrosodi-n-propylamine	1*	2,4	U111	X	1# (0.454)
Diquat	85007 2764728		1000	1		C	1000 (454)
Disulfoton	298044	O,O-Diethyl (ethylthio)ethyl phosphorodithioate	1	1,4	P039	X	1 (0.454)
2,4-Dithioburet	541537	Thioimidodicarbonic diamide	1*	4	P049	B	100 (45.4)
Dithiopyrophosphoric acid, tetraethyl ester	3689245	Tetraethylthiopyrophosphate	1*	4	P109	B	100 (45.4)
Diuron	330541		100	1		B	100 (45.4)
Dodecylbenzenesulfonic acid	27176870		1000	1		C	1000 (454)
Endosulfan	115297	5-Norbornene-2,3-dimethanol, 1,4,5,6,7,7-hexachloro, cyclic sulfite	1	1,2,4	P050	X	1 (0.454)
alpha - Endosulfan	959988		1*	2		X	1 (0.454)
beta - Endosulfan	33213659		1*	2		X	1 (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RO	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
ENDOSULFAN AND METABOLITES			1*	2			**
Endosulfan sulfate	1031078		1*	2		X	1 (0.454)
Endothall	145733	7-Oxabicyclo[2,2,1]heptane-2,3-dicarboxylic acid	1*	4	P088	C	1000 (454)
Endrin	72208	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo,endo-1,4:5,8-dimethanonaphthalene	1	1,2,4	P051	X	1 (0.454)
Endrin aldehyde	7421934		1*	2		X	1 (0.454)
ENDRIN AND METABOLITES			1*	2			**
Epichlorohydrin	106898	1-Chloro-2,3-epoxypropane, Oxirane, 2-(chloromethyl)-	1000	1,4	U041	C	1000# (454)
Epinephrine	51434	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-	1*	4	P042	C	1000 (454)
Ethanal	75070	Acetaldehyde	1000	1,4	U001	C	1000 (454)
Ethanamine, 1,1-dimethyl-2-phenyl-	122098	alpha,alpha-Dimethylphenethylamine	1*	4	P046	D	5000 (2270)
Ethanamine, N-ethyl-N-nitroso-	55185	N-Nitrosodiethylamine	1*	4	U174	X	1# (0.454)
Ethane, 1,2-dibromo-	106934	Ethylene dibromide	1000	1,4	U067	C	1000# (454)
Ethane, 1,1-dichloro-	75343	1,1-Dichloroethane Ethylene dichloride	1*	2,4	U076	C	1000 (454)
Ethane, 1,2-dichloro-	107062	1,2-Dichloroethane Ethylene dichloride	5000	1,2,4	U077	D	5000# (2270)
Ethane, 1,1,1,2,2,2-hexachloro-	67721	Hexachloroethane	1*	2,4	U131	X	1# (0.454)
Ethane, 1,1'-[methylenebis(oxy)]bis(2-chloro-	111911	Bis(2-chloroethoxy) methane	1*	2,4	U024	C	1000 (454)
Ethane, 1,1'-oxybis-	60297	Ethyl ether	1*	4	U117	B	100 (45.4)
Ethane, 1,1'-oxybis(2-chloro-	111444	Bis (2-chloroethyl) ether Dichloroethyl ether	1*	2,4	U025	X	1# (0.454)
Ethane, pentachloro-	76017	Pentachloroethane	1*	4	U184	X	1## (0.454)



TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Ethane, 1,1,1,2-tetrachloro-	630206	1,1,1,2-Tetrachloroethane.	1*	4	U208	X	1# (0.454)
Ethane, 1,1,2,2-tetrachloro-	79345	1,1,2,2-Tetrachloroethane.	1*	2,4	U209	X	1# (0.454)
Ethane, 1,1,2-trichloro-	79005	1,1,2-Trichloroethane	1*	2,4	U227	X	1# (0.454)
Ethane, 1,1,1-trichloro-2,2-bis(p-methoxyphenyl)-	72435	Methoxychlor	1	1,4	U247	X	1 (0.454)
1,2-Ethanedithiocarbamic acid.	111548	Ethylenedis(dithiocarbamic acid).	1*	4	U114	D	5000 (2270)
Ethanenitrile	75058	Acetonitrile	1*	4	U003	D	5000 (2270)
Ethanethioamide	62555	Thioacetamide	1*	4	U218	X	1# (0.454)
Ethanol, 2,2-(nitrosoimino)bis-	1116547	N-Nitrosodiethanolamine	1*	4	U173	X	1# (0.454)
Ethanone, 1-phenyl-	98862	Acetophenone	1*	4	U004	D	5000 (2270)
Ethanoyl chloride	75365	Acetyl chloride	5000	1,4	U006	D	5000 (2270)
Ethanamine, N-methyl-N-nitroso-	4549400	N-Nitrosomethylvinylamine.	1*	4	P084	X	1# (0.454)
Ethene, chloro-	75014	Vinyl chloride	1*	2,3,4	U043	X	1# (0.454)
Ethene, 2-chloroethoxy-	110758	2-Chloroethyl vinyl ether	1*	2,4	U042	C	1000 (454)
Ethene, 1,1-dichloro-	75354	1,1-Dichloroethylene Vinylidene chloride	5000	1,2,4	U078	D	5000# (2270)
Ethene, 1,1,2,2-tetrachloro-	127184	Tetrachloroethylene	1*	2,4	U210	X	1# (0.454)
Ethene, trans-1,2-dichloro-	158605	1,2-trans-Dichloroethylene.	1*	2,4	U079	C	1000 (454)
Ethion	563122		10	1		A	10## (4.54)
Ethyl acetate	141786	Acetic acid, ethyl ester	1*	4	U112	D	5000 (2270)
Ethyl acrylate	140885	2-Propenoic acid, ethyl ester.	1*	4	U113	C	1000 (454)
Ethylbenzene	100414		1000	1,2		C	1000 (454)
Ethyl carbamate (Urethan).	51796	Carbamic acid, ethyl ester.	1*	4	U236	X	1# (0.454)
Ethyl cyanide	107120	Propanenitrile	1*	4	P101	A	10 (4.54)
Ethyl 4,4'-dichlorobenzilate.	510156	Benzenecetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester.	1*	4	U038	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Ethylene dibromide	106934	Ethane, 1,2-dibromo-	1000	1,4	U067	C	1000# (454)
Ethylene dichloride	107062	1,2-Dichloroethane Ethane, 1,2-dichloro-	5000	1,2,4	U077	D	5000# (2270)
Ethylene oxide	75218	Oxirane	1*	4	U115	X	1# (0.454)
Ethylenedis(dithiocarbamic acid).	111546	1,2-Ethanedithiocarbamic acid.	1*	4	U114	D	5000 (2270)
Ethylenediamine	107153		1000	1		D	5000 (2270)
Ethylenediamine tetraacetic acid (EDTA).	60004		5000	1		D	5000 (2270)
Ethylenethiourea	96457	2-Imidazolidinethione	1*	4	U116	X	1# (0.454)
Ethylenimine	151564	Aziridine	1*	4	P054	X	1# (0.454)
Ethyl ether	60297	Ethane, 1,1'-oxybis-	1*	4	U117	B	100 (45.4)
Ethyldene dichloride	75343	1,1-Dichloroethane Ethane, 1,1-dichloro-	1*	2,4	U076	C	1000 (454)
Ethyl methacrylate	97632	2-Propenoic acid, 2-methyl-, ethyl ester.	1*	4	U118	C	1000 (454)
Ethyl methanesulfonate	62500	Methanesulfonic acid, ethyl ester.	1*	4	U119	X	1# (0.454)
Famphur	52857	Phosphorothioic acid, O,O-dimethyl-O-[p-(dimethylamino)sulfonyl]phenyl ester.	1*	4	P097	C	1000 (454)
Ferric ammonium citrate	1185575		1000	1		C	1000 (454)
Ferric ammonium oxalate	2944674		1000	1		C	1000 (454)
Ferric chloride	55486874						
Ferric chloride	7705080		1000	1		C	1000 (454)
Ferric dextran	9004664	Iron dextran	1*	4	U139	X	1## (0.454)
Ferric fluoride	7783508		100	1		B	100 (45.4)
Ferric nitrate	10421484		1000	1		C	1000 (454)
Ferric sulfate	10028225		1000	1		C	1000 (454)
Ferrous ammonium sulfate.	10045893		1000	1		C	1000 (454)
Ferrous chloride	7758943		100	1		B	100 (45.4)
Ferrous sulfate	7720787 7782630		1000	1		C	1000 (454)
Fluoroacetic acid, sodium salt.	62748	Acetic acid, fluoro-, sodium salt.	1*	4	P058	A	10 (4.54)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Fluoranthene	206440	Benzo[ <i>j,k</i> ]fluorene	1*	2,4	U120	X	1# (0.454)
Fluorene	86737		1*	2		X	1# (0.454)
Fluorine	7782414		1*	4	P058	A	10 (4.54)
Fluoroacetamide	640197	Acetamide, 2-fluoro	1*	4	P057	B	100 (45.4)
Formaldehyde	50000	Methylene oxide	1000	1,4	U122	C	1000# (454)
Formic acid	64186	Methanoic acid	5000	1,4	U123	D	5000 (2270)
Fulminic acid, mercury(II)salt	628864	Mercury fulminate	1*	4	P065	X	1# (0.454)
Fumaric acid	110178		5000	1		D	5000 (2270)
Furan	110008	Furfuran	1*	4	U124	B	100 (45.4)
Furan, tetrahydro	109889	Tetrahydrofuran	1*	4	U213	C	1000 (454)
2-Furancarboxaldehyde	98011	Furfural	1000	1,4	U125	D	5000 (2270)
2,5-Furandione	108316	Maleic anhydride	5000	1,4	U147	D	5000 (2270)
Furfural	98011	2-Furancarboxaldehyde	1000	1,4	U125	D	5000 (2270)
Furfuran	110009	Furan	1*	4	U124	B	100 (45.4)
D-Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-	18883684	Streptozotocin	1*	4	U206	X	1# (0.454)
Glycidaldehyde	765344	1-Propanal, 2,3-epoxy	1*	4	U126	X	1# (0.454)
Guanidine, N-nitroso-N-methyl-N'-nitro-	70257	N-Methyl-N'-nitro-N-nitrosoguanidine	1*	4	U163	X	1# (0.454)
Guthion	86500		1	1		X	1 (0.454)
HALOETHERS			1*	2			..
HALOMETHANES			1*	2			..
Heptachlor	76448	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-	1	1,2,4	P059	X	1#(0.454)
HEPTACHLOR AND METABOLITES			1*	2			..
Heptachlor epoxide	1024573		1*	2		X	1# (0.454)
Hexachlorobenzene	118741	Benzene, hexachloro	1*	2,4	U127	X	1# (0.454)
Hexachlorobutadiene	87683	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	1*	2,4	U128	X	1# (0.454)
HEXACHLOROCYCLO-HEXANE (all isomers)	608731		1*	2			..

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Hexachlorocyclohexane (gamma isomer)	58899	gamma - BHC	1	1,2,4	U129	X	1# (0.454)
Hexachlorocyclopentadiene	77474	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-	1	1,2,4	U130	X	1# (0.454)
1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo,endo-1,4,5,8-dimethanonaphthalene	72208	Endrin	1	1,2,4	P051	X	1 (0.454)
1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo,exo-1,4,5,8-dimethanonaphthalene	60571	Dieldrin	1	1,2,4	P037	X	1# (0.454)
Hexachloroethane	67721	Ethane, 1,1,1,2,2,2-hexachloro-	1*	2,4	U131	X	1# (0.454)
Hexachlorohexahydro-endo,endo-dimethanonaphthalene	465736	1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-endo,endo-dimethanonaphthalene	1*	4	P060	X	1 (0.454)
1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-endo,endo-dimethanonaphthalene	465736	Hexachlorohexahydro-endo,endo-dimethanonaphthalene	1*	4	P060	X	1 (0.454)
1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4,5,8-endo,exo-dimethanonaphthalene	309002	Aldrin	1	1,2,4	P004	X	1# (0.454)
Hexachlorophene	70304	2,2'-Methylenebis(3,4,6-trichlorophenol)	1*	4	U132	X	1# (0.454)
Hexachloropropene	1868717	1-Propene, 1,1,2,3,3,3-hexachloro-	1*	4	U243	C	1000 (454)
Hexaethyl tetraphosphate	757584	Tetraphosphoric acid, hexaethyl ester	1*	4	P062	B	100 (45.4)
Hydrazine	302012	Diamine	1*	4	U133	X	1# (0.454)
Hydrazine, 1,2-diethyl-	1815801	N,N'-Diethylhydrazine	1*	4	U086	X	1# (0.454)
Hydrazine, 1,1-dimethyl-	57147	1,1-Dimethylhydrazine	1*	4	U088	X	1# (0.454)
Hydrazine, 1,2-dimethyl-	540738	1,2-Dimethylhydrazine	1*	4	U099	X	1# (0.454)
Hydrazine, 1,2-diphenyl-	122667	1,2-Diphenylhydrazine	1*	2,4	U109	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Hydrazine, methyl.....	60344	Methyl hydrazine.....	1*	4	P068	A	10 (4.54)
Hydrazinecarbothioamide.....	79196	Thiosemicarbazide.....	1*	4	P116	B	100 (45.4)
Hydrochloric acid.....	7647010		5000	1		D	5000 (2270)
Hydrocyanic acid.....	74908	Hydrogen cyanide.....	10	1,4	P063	A	10 (4.54)
Hydrofluoric acid.....	7664393	Hydrogen fluoride.....	5000	1,4	U134	B	100 (45.4)
Hydrogen cyanide.....	74908	Hydrocyanic acid.....	10	1,4	P063	A	10 (4.54)
Hydrogen fluoride.....	7664393	Hydrofluoric acid.....	5000	1,4	U134	B	100 (45.4)
Hydrogen phosphide.....	7603512	Phosphine.....	1*	4	P096	B	100 (45.4)
Hydrogen sulfide.....	7783064	Hydrosulfuric acid..... Sulfur hydride	100	1,4	U135	B	100## (45.4)
Hydroperoxide, 1-methyl- 1-phenylethyl.....	80159	alpha, alpha-Dimethylbenzylhydro- peroxide.	1*	4	U096	A	10 (4.54)
Hydrosulfuric acid.....	7783064	Hydrogen sulfide..... Sulfur hydride	100	1,4	U135	B	100## (45.4)
Hydroxydimethylarsine oxide.....	75605	Cacodylic acid.....	1*	4	U136	X	1# (0.454)
2-Imidazolidinethione.....	96457	Ethylenethiourea.....	1*	4	U116	X	1# (0.454)
Indeno(1,2,3-cd)pyrene.....	193395	1,10-(1,2- Phenylene)pyrene.	1*	2,4	U137	X	1# (0.454)
Iron dextran.....	9004664	Ferri dextran.....	1*	4	U139	X	1## (0.454)
Isobutyl alcohol.....	78831	1-Propanol, 2-methyl.....	1*	4	U140	D	5000 (2270)
Isocyanic acid, methyl ester.....	624839	Methyl isocyanate.....	1*	4	P064	X	1###(0.454)
Isophorone.....	78591		1*	2		D	5000 (2270)
Isoprene.....	78795		1000	1		C	1000## (454)
Isopropanolamine dodecylbenzenesulfon- ate.....	42504461		1000	1		C	1000 (454)
Isosafrole.....	120581	Benzene, 1,2-methylene- dioxy-4-propenyl.....	1*	4	U141	X	1# (0.454)
3(2H)-Isoxazolone, 5- (aminomethyl)-.....	2763964	5-(Aminomethyl)-3- isoxazolol.	1*	4	P007	C	1000 (454)
Kalthane.....	115322		5000	1		A	10 (4.54)
Kepon.....	143500	Decachlorooctahydro- 1,3,4-metheno-2H- cyclobuta[c,d]-penta- len-2-one.	1	1,4	U142	X	1# (0.454)
Lasiocarpine.....	303344		1*	4	U143	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Lead ††.....	7439921		1*	2		X	1## (0.454)
Lead acetate.....	301042	Acetic acid, lead salt.....	5000	1,4	U144	D	5000# (2270)
LEAD AND COMPOUNDS.....			1*	2			..
Lead arsenate.....	7784409 7645252 10102484		5000	1		D	5000# (2270)
Lead chloride.....	7758954		5000	1		D	5000## (2270)
Lead fluoborate.....	13814965		5000	1		D	5000## (2270)
Lead fluoride.....	7783462		1000	1		C	1000## (454)
Lead iodide.....	10101630		5000	1		D	5000## (2270)
Lead nitrate.....	10099748		5000	1		D	5000## (2270)
Lead phosphate.....	7446277	Phosphoric acid, lead salt.	1*	4	U145	X	1# (0.454)
Lead stearate.....	7429480 1072351 56189094 52652592		5000	1		D	5000## (2270)
Lead subacetate.....	1335326		1*	4	U146	X	1# (0.454)
Lead sulfate.....	15739807 7446142		5000	1		D	5000## (2270)
Lead sulfide.....	1314870		5000	1		D	5000## (2270)
Lead thiocyanate.....	592870		5000	1		D	5000## (2270)
Lindane.....	58899	gamma - BHC Hexachlorocyclohexane (gamma isomer)	1	1,2,4	U129	X	1# (0.454)
Lithium chromate.....	14307358		1000	1		C	1000# (454)
Malathion.....	121755		10	1		B	100 (45.4)
Maleic acid.....	110167		5000	1		D	5000 (2270)
Maleic anhydride.....	108316	2,5-Furandione.....	5000	1,4	U147	D	5000 (2270)
Maleic hydrazide.....	123331	1,2-Dihydro-3,6- pyridazinedione.	1*	4	U148	D	5000 (2270)
Malononitrile.....	109773	Propanedinitrile.....	1*	4	U149	C	1000 (454)
Melphalan.....	148823	Alanine, 3-[p-bis(2- chloroethyl)amino]phenyl- L-.	1*	4	U150	X	1# (0.454)
Mercaptodimethur.....	2032657		100	1		A	10 (4.54)
Mercuric cyanide.....	592041		1	1		X	1 (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Category	Pounds(Kg)
Mercuric nitrate	10045940		10	1		A	10## (4.54)
Mercuric sulfate	7783359		10	1		A	10## (4.54)
Mercuric thiocyanate	592858		10	1		A	10## (4.54)
Mercurous nitrate	10415755 7782867		10	1		A	10## (4.54)
Mercury	7439978		1*	2,3,4	U151	X	1 (0.454)
MERCURY AND COMPOUNDS.			1*	2			**
Mercury, (acetato-O)phenyl-	62384	Phenylmercuric acetate	1*	4	P092	X	1##(0.454)
Mercury fulminate	628884	Fulminic acid, mercury(II)salt	1*	4	P085	X	1## (0.454)
Methacrylonitrile	126987	2-Propenenitrile, methyl-	1*	4	U152	C	1000 (454)
Methanamine, N-methyl-	124403	Dimethylamine	1000	1,4	U092	C	1000## (454)
Methane, bromo-	74839	Methyl bromide	1*	2,4	U029	C	1000 (454)
Methane, chloro-	74873	Methyl chloride	1*	2,4	U045	X	1## (0.454)
Methane, chloromethoxy-	107302	Chloromethyl methyl ether	1*	4	U048	X	1# (0.454)
Methane, dibromo-	74953	Methylene bromide	1*	4	U068	C	1000 (454)
Methane, dichloro-	75092	Methylene chloride	1*	2,4	U080	C	1000 (454)
Methane, dichlorodifluoro-	75718	Dichlorodifluoromethane	1*	4	U075	D	5000 (2270)
Methane, iodo-	74884	Methyl iodide	1*	4	U138	X	1# (0.454)
Methane, oxybis(chloro-	542881	Bis(chloromethyl) ether	1*	4	P016	X	1# (0.454)
Methane, tetrachloro-	56235	Carbon tetrachloride	5000	1,2,4	U211	D	5000# (2270)
Methane, tetranitro-	509148	Tetranitromethane	1*	4	P112	A	10 (4.54)
Methane, tribromo-	75252	Bromoform	1*	2,4	U225	B	100 (45.4)
Methane, trichloro-	67663	Chloroform	5000	1,2,4	U044	D	5000# (2270)
Methane, trichlorofluoro-	75694	Trichloromonofluoromethane	1*	4	U121	D	5000 (2270)
Methanesulfonic acid, ethyl ester.	62500	Ethyl methanesulfonate	1*	4	U119	X	1# (0.454)
Methanethiol	74931	Methylmercaptan Thiomethanol	100	1,4	U153	B	100 (45.4)
Methanesulfonyl chloride, trichloro-	594423	Trichloromethanesulfonyl chloride	1*	4	P118	B	100 (45.4)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Category	Pounds(Kg)
4,7-Methano-1H-indene,1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-	76448	Heptachlor	1	1,2,4	P059	X	1# (0.454)
Methanoic acid	64186	Formic acid	5000	1,4	U123	D	5000 (2270)
4,7-Methanoindan, 1,2,4,5,6,7,8,8-octachloro-3a,4,7,7a-tetrahydro-	57749	Chlordane Chlordane, technical	1	1,2,4	U036	X	1# (0.454)
Methanol	67561	Methyl alcohol	1*	4	U154	D	5000 (2270)
Methapyriene	91805	Pyridine, 2-[(2-(dimethylamino)ethyl)-2-thenylamino]-	1*	4	U155	D	5000 (2270)
Methomyl	16752775	Acetimidic acid, N-[(methylcarbamoyl)oxy]thio-, methyl ester.	1*	4	P068	B	100 (45.4)
Methoxychlor	72435	Ethane, 1,1,1-trichloro-2,2-bis(p-methoxyphenyl)-	1	1,4	U247	X	1 (0.454)
Methyl alcohol	67561	Methanol	1*	4	U154	D	5000 (2270)
2-Methylaziridine	75558	1,2-Propylenimine	1*	4	P067	X	1# (0.454)
Methyl bromide	74839	Methane, bromo-	1*	2,4	U029	C	1000 (454)
1-Methylbutadiene	504809	1,3-Pentadiene	1*	4	U186	B	100 (45.4)
Methyl chloride	74873	Methane, chloro-	1*	2,4	U045	X	1## (0.454)
Methyl chlorocarbonate	79221	Carbonochloridic acid, methyl ester.	1*	4	U156	C	1000 (454)
Methyl chloroform	71556	1,1,1-Trichloroethane	1*	2,4	U228	C	1000 (454)
4,4'-Methylenebis(2-chloroaniline)	101144	Benzenamine, 4,4'-methylenebis(2-chloro-	1*	4	U158	X	1# (0.454)
2,2'-Methylenebis(3,4,6-trichlorophenol)	70304	Hexachlorophene	1*	4	U132	X	1## (0.454)
3-Methylcholanthrene	56495	Benz[ <i>a</i> ]aceanthrylene, 1,2-dihydro-3-methyl-	1*	4	U157	X	1# (0.454)
Methylene bromide	74953	Methane, dibromo-	1*	4	U068	C	1000 (454)
Methylene chloride	75092	Methane, dichloro-	1*	2,4	U080	C	1000 (454)
Methylene oxide	50000	Formaldehyde	1000	1,4	U122	C	1000# (454)
Methyl ethyl ketone	78933	2-Butanone	1*	4	U159	D	5000 (2270)
Methyl ethyl ketone peroxide	1338234	2-Butanone peroxide	1*	4	U160	A	10 (4.54)
Methyl hydrazine	60344	Hydrazine, methyl-	1*	4	P068	A	10 (4.54)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Methyl iodide.....	74884	Methane, iodo.....	1*	4	U138	X	1# (0.454)
Methyl isobutyl ketone.....	108101	4-Methyl-2-pentanone.....	1*	4	U161	D	5000 (2270)
Methyl isocyanate.....	624839	Isocyanic acid, methyl ester.....	1*	4	P084	X	1###(0.454)
2-Methylacetonitrile.....	75865	Acetone cyanohydrin..... Propanenitrile, 2-hydroxy-2-methyl-	10	1,4	P069	A	10 (4.54)
Methylmercaptan.....	74931	Methanethiol..... Thiomethanol	100	1,4	U153	B	100 (45.4)
Methyl methacrylate.....	80626	2-Propenoic acid, 2-methyl-, methyl ester.....	5000	1,4	U182	C	1000 (454)
N-Methyl-N'-nitro-N-nitrosoguanidine.....	70257	Guanidine, N-nitroso-N-methyl-N'-nitro.....	1*	4	U163	X	1# (0.454)
Methyl parathion.....	298000	O,O-Dimethyl O-p-nitrophenyl phosphorothioate.....	100	1,4	P071	B	100## (45.4)
4-Methyl-2-pentanone.....	108101	Methyl isobutyl ketone.....	1*	4	U161	D	5000 (2270)
Methylthioureasil.....	56042	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo.....	1*	4	U184	X	1# (0.454)
Mevinphos.....	7786347		1	1		A	10 (4.54)
Mexacarbete.....	315184		1000	1		C	1000 (454)
Mitomycin C.....	50077	Azirino[2',3':3,4]pyrrolo-[1,2a]indole-4,7-dione, 6-amino-8-[[[aminocarbonyloxy)methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl]-.....	1*	4	U010	X	1# (0.454)
Monoethylamine.....	75047		1000	1		C	1000## (454)
Monomethylamine.....	74895		1000	1		B	100 (45.4)
Naled.....	300765		10	1		A	10 (4.54)
5,12-Naphthacenedione, (8S-cis)-8-acetyl-10-[3-amino-2,3,6-trideoxy-alpha-L-lyxo-hexopyranosyl]oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy.....	20830813	Daunomycin.....	1*	4	U059	X	1# (0.454)
Naphthalene.....	91203		5000	1,2,4	U165	B	100 (45.4)
Naphthalene, 2-chloro.....	91587	beta-Chloronaphthalene..... 2-Chloronaphthalene	1*	2,4	U047	D	5000 (2270)
1,4-Naphthalenedione.....	130154	1,4-Naphthoquinone.....	1*	4	U166	D	5000 (2270)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
2,7-Naphthalenedisulfonic acid,3,3'-(1,3,3'-dimethyl-1,1'-biphenyl)-4,4'-diyl)-bis(azo)bis(5-amino-4-hydroxy)-tetrasodium salt.....	72571	Trypan blue.....	1*	4	U236	X	1# (0.454)
Naphthenic acid.....	1338245		100	1		B	100 (45.4)
1,4-Naphthoquinone.....	130154	1,4-Naphthalenedione.....	1*	4	U166	D	5000 (2270)
1-Naphthylamine.....	134327	alpha-Naphthylamine.....	1*	4	U167	X	1# (0.454)
2-Naphthylamine.....	91598	beta-Naphthylamine.....	1*	4	U168	X	1# (0.454)
alpha-Naphthylamine.....	134327	1-Naphthylamine.....	1*	4	U167	X	1# (0.454)
beta-Naphthylamine.....	91598	2-Naphthylamine.....	1*	4	U168	X	1# (0.454)
2-Naphthylamine, N,N-bis(2-chloroethyl)-.....	494031	Chlomaphazine.....	1*	4	U026	X	1# (0.454)
alpha-Naphthylthiourea.....	86884	Thiourea, 1-naphthalenyl-.....	1*	4	P072	B	100 (45.4)
Nickel ††.....	7440020		1*	2		X	1# (0.454)
NICKEL AND COMPOUNDS.....			1*	2			**
Nickel ammonium sulfate.....	15899180		5000	1		D	5000# (2270)
Nickel carbonyl.....	13463393	Nickel tetracarbonyl.....	1*	4	P073	X	1# (0.454)
Nickel chloride.....	7718549 37211055		5000	1		D	5000# (2270)
Nickel cyanide.....	557197	Nickel(II) cyanide.....	1*	4	P074	X	1# (0.454)
Nickel(II) cyanide.....	557197	Nickel cyanide.....	1*	4	P074	X	1# (0.454)
Nickel hydroxide.....	12054487		1000	1		C	1000# (454)
Nickel nitrate.....	14216752		5000	1		D	5000# (2270)
Nickel sulfate.....	7786814		5000	1		D	5000# (2270)
Nickel tetracarbonyl.....	13463393	Nickel carbonyl.....	1*	4	P073	X	1# (0.454)
Nicotine and salts.....	54115	Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)-, and salts.....	1*	4	P075	B	100 (45.4)
Nitric acid.....	7697372		1000	1		C	1000 (454)
Nitric oxide.....	10102439	Nitrogen(II) oxide.....	1*	4	P076	A	10 (4.54)
p-Nitroaniline.....	100016	Benzenamine, 4-nitro.....	1*	4	P077	D	5000 (2270)
Nitrobenzene.....	98953	Benzene, nitro.....	1000	1,2,4	U169	C	1000 (454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Nitrogen dioxide.....	10102440 10544726	Nitrogen(IV) oxide.....	1000	1,4	P078	A	10 (4.54)
Nitrogen(II) oxide.....	10102439	Nitric oxide.....	1*	4	P078	A	10 (4.54)
Nitrogen(IV) oxide.....	10102440 10544726	Nitrogen dioxide.....	1000	1,4	P078	A	10 (4.54)
Nitroglycerine.....	55630	1,2,3-Propanetriol, trini- trate..	1*	4	P081	A	10 (4.54)
Nitrophenol (mixed) m- o- p-	25154556 554847 88755 100027	2-Nitrophenol 4-Nitrophenol Phenol, 4-nitro-	1000	1		B	100 (45.4)
p-Nitrophenol.....	100027	4-Nitrophenol..... Phenol, 4-nitro-	1000	1,2,4	U170	B	100 (45.4)
2-Nitrophenol.....	88755	o-Nitrophenol.....	1000	1,2		B	100 (45.4)
4-Nitrophenol.....	100027	p-Nitrophenol..... Phenol, 4-nitro-	1000	1,2,4	U170	B	100 (45.4)
NITROPHENOLS.....			1*	2			..
2-Nitropropane.....	79469	Propane, 2-nitro-	1*	4	U171	X	1# (0.454)
NITROSAMINES.....			1*	2			..
N-Nitrosodi-n-butylamine ..	924163	1-Butanamine, N-butyl- N-nitroso..	1*	4	U172	X	1# (0.454)
N-Nitrosodiethanolamine ..	1116547	Ethanol, 2,2'- (nitrosolmino)bis..	1*	4	U173	X	1# (0.454)
N-Nitrosodiethylamine.....	55185	Ethanamine, N-ethyl-N- nitroso..	1*	4	U174	X	1# (0.454)
N-Nitrosodimethylamine.....	62759	Dimethylnitrosamine.....	1*	2,4	P082	X	1# (0.464)
N-Nitrosodiphenylamine.....	86306		1*	2		B	100 (45.4)
N-Nitrosodi-n-propylamine.....	621647	Di-n-propylnitrosamine.....	1*	2,4	U111	X	1# (0.454)
N-Nitroso-N-ethylurea.....	759739	Carbamide, N-ethyl-N-ni- troso..	1*	4	U176	X	1# (0.454)
N-Nitroso-N-methylurea.....	684835	Carbamide, N-methyl-N- nitroso..	1*	4	U177	X	1# (0.454)
N-Nitroso-N-methylurethane.....	615532	Carbamic acid, methylni- troso,ethyl ester.	1*	4	U178	X	1# (0.454)
N-Nitrosomethylvinyl- amine.	4549400	Ethenamine, N-methyl- N-nitroso..	1*	4	P084	X	1# (0.454)
N-Nitrosopiperidine.....	100754	Pyridine, hexahydro-N-ni- troso..	1*	4	U178	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
N-Nitrosopyrrolidine.....	930552	Pyrrole, tetrahydro-N-ni- troso..	1*	4	U180	X	1# (0.454)
Nitrotoluene..... m- o- p-	1321126 99081 88722 99990		1000	1		C	1000 (454)
5-Nitro-o-toluidine.....	99558	Benzenamine, 2-methyl- 5-nitro..	1*	4	U181	X	1# (0.454)
5-Norbornene-2,3- dimethanol,1,4,5,6,7,7- hexachloro, cyclic sulfite.	115297	Endosulfan.....	1	1,2,4	P050	X	1 (0.454)
Octamethylpyrophos- phoramide.	152169	Diphosphoramide, octa- methyl..	1*	4	P085	B	100 (45.4)
Osmium oxide.....	20816120	Osmium tetroxide.....	1*	4	P087	C	1000 (454)
Osmium tetroxide.....	20816120	Osmium oxide.....	1*	4	P087	C	1000 (454)
7-Oxabicyclo[2,2,1]hep- tene-2,3-dicarboxylic acid.	145733	Endothall.....	1*	4	P088	C	1000 (454)
1,2-Oxathiolane, 2,2- dioxide.	1120714	1,3-Propane sulfone.....	1*	4	U193	X	1# (0.454)
2H-1,3,2- Oxazaphosphorine,2- [bis(2- chloroethyl)amino] tetrahydro-2-oxide.	50180	Cyclophosphamide.....	1*	4	U058	X	1# (0.454)
Odrane.....	75218	Ethyleneoxide.....	1*	4	U115	X	1# (0.454)
Oxirane, 2- (chloromethyl)-.	106898	1-Chloro-2,3- epoxypropane. Epichlorohydrin	1000	1,4	U041	C	1000# (454)
Paraformaldehyde.....	30525694		1000	1		C	1000 (454)
Paraldehyde.....	123637	1,3,5-Trioxane, 2,4,6-tri- methyl..	1*	4	U182	C	1000 (454)
Parathion.....	56382	Phosphorothioic acid,O,O-diethyl O-(p- nitrophenyl) ester.	1	1,4	P089	X	1# (0.454)
Pentachlorobenzene.....	608935	Benzene, pentachloro.....	1*	4	U183	X	1## (0.454)
Pentachloroethane.....	78017	Ethane, pentachloro.....	1*	4	U184	X	1## (0.454)
Pentachloronitrobenzene.....	82688	Benzene, pentachloroni- tro..	1*	4	U185	X	1# (0.454)
Pentachlorophenol.....	87865	Phenol, pentachloro.....	10	1,2,4	U242	A	10# (4.54)
1,3-Pentadiene.....	504609	1-Methylbutadiene.....	1*	4	U186	B	100 (45.4)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Phenacetin.....	62442	Acetamide, N-(4-ethoxy-phenyl)-.	1*	4	U187	X	1# (0.454)
Phenanthrene.....	85018		1*	2		X	1## (0.454)
Phenol.....	108952	Benzene, hydroxy.....	1000	1,2,4	U188	C	1000## (454)
Phenol, 2-chloro.....	95578	2-Chlorophenol..... o-Chlorophenol	1*	2,4	U048	B	100 (45.4)
Phenol, 4-chloro-3-methyl.....	59507	4-Chloro-m-cresol..... p-Chloro-m-cresol	1*	2,4	U039	D	5000 (2270)
Phenol, 2-cyclohexyl-4,6-dinitro.....	131895	4,6-Dinitro-o-cyclohexylphenol.	1*	4	P034	B	100 (45.4)
Phenol, 2,4-dichloro.....	120832	2,4-Dichlorophenol.....	1*	2,4	U081	B	100 (45.4)
Phenol, 2,6-dichloro.....	87650	2,6-Dichlorophenol.....	1*	4	U082	B	100 (45.4)
Phenol, 2,4-dimethyl.....	105679	2,4-Dimethylphenol.....	1*	2,4	U101	B	100 (45.4)
Phenol, 2,4-dinitro.....	51285	2,4-Dinitrophenol.....	1000	1,2,4	P048	A	10 (4.54)
Phenol, 2,4-dinitro-6-(1-methylpropyl)-.	88857	Dinoseb.....	1*	4	P020	C	1000 (454)
Phenol, 2,4-dinitro-6-methyl-, and salts.	534521	4,6-Dinitro-o-cresol and salts.	1*	2,4	P047	A	10 (4.54)
Phenol, 4-nitro.....	100027	p-Nitrophenol..... 4-Nitrophenol	1000	1,2,4	U170	B	100 (45.4)
Phenol, pentachloro.....	87885	Pentachlorophenol.....	10	1,2,4	U242	A	10# (4.54)
Phenol, 2,3,4,6-tetrachloro.....	58902	2,3,4,6-Tetrachlorophenol.	1*	4	U212	A	10 (4.54)
Phenol, 2,4,5-trichloro.....	95954	2,4,5-Trichlorophenol.....	10	1,4	U230	A	10# (4.54)
Phenol, 2,4,6-trichloro.....	88062	2,4,6-Trichlorophenol.....	10	1,2,4	U231	A	10# (4.54)
Phenol, 2,4,6-trinitro-, ammonium salt	131748	Ammonium picrate.....	1*	4	P009	A	10 (4.54)
Phenyl dichloroarsine.....	686286	Dichlorophenylarsine.....	1*	4	P036	X	1# (0.454)
1,10-(1,2-Phenylene)pyrene.	193395	Indeno(1,2,3-cd)pyrene.....	1*	2,4	U137	X	1# (0.454)
Phenylmercuric acetate.....	62384	Mercury, (acetato-O)phenyl-.	1*	4	P092	X	1## (0.454)
N-Phenylthiourea.....	103855	Thiourea, phenyl.....	1*	4	P093	B	100 (45.4)
Phorate.....	298022	Phosphorodithioic acid, O,O-diethyl S-(ethylthio), methyl ester.	1*	4	P094	X	1## (0.454)
Phosgene.....	75445	Carbonyl chloride.....	5000	1,4	P095	A	10 (4.54)
Phosphine.....	7803512	Hydrogen phosphide.....	1*	4	P096	B	100 (45.4)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Phosphoric acid.....	7664382		5000	1		D	5000 (2270)
Phosphoric acid, diethyl p-nitrophenyl ester.	311455	Diethyl-p-nitrophenyl phosphate.	1*	4	P041	B	100 (45.4)
Phosphoric acid, lead salt.	7446277	Lead phosphate.....	1*	4	U145	X	1# (0.454)
Phosphorodithioic acid, O,O-diethyl S-methyl dithiophosphate.	3288582	O,O-Diethyl S-methyl dithiophosphate.	1*	4	U087	D	5000 (2270)
Phosphorodithioic acid, O,O-diethyl S-(ethylthio), methyl ester.	298022	Phorate.....	1*	4	P094	X	1## (0.454)
Phosphorodithioic acid, O,O-dimethyl S-[2(methylamino)-2-oxoethyl] ester.	60515	Dimethoate.....	1*	4	P044	A	10 (4.54)
Phosphorofluoridic acid, bis(1-methylthio) ester.	55914	Diisopropyl fluorophosphate.	1*	4	P043	B	100 (45.4)
Phosphorothioic acid, O,O-diethyl O-(p-nitrophenyl) ester.	56382	Parathion.....	1	1,4	P089	X	1# (0.454)
Phosphorothioic acid, O,O-diethyl O-pyrazinyl phosphorothioate.	297872	O,O-Diethyl O-pyrazinyl phosphorothioate.	1*	4	P040	B	100 (45.4)
Phosphorothioic acid, O,O-dimethyl O-[p-[(dimethylamino)-sulfonyl]phenyl] ester.	52857	Famphur.....	1*	4	P097	C	1000 (454)
Phosphorus.....	7723140		1	1		X	1 (0.454)
Phosphorus oxychloride.....	10025873		5000	1		C	1000 (454)
Phosphorus pentasulfide.....	1314803	Phosphorus sulfide..... Sulfur phosphide	100	1,4	U189	B	100 (45.4)
Phosphorus sulfide.....	1314803	Phosphorus pentasulfide..... Sulfur phosphide	100	1,4	U189	B	100 (45.4)
Phosphorus trichloride.....	7719122		5000	1		C	1000 (454)
PHTHALATE ESTERS.....			1*	2			..
Phthalic anhydride.....	85449	1,2-Benzenedicarboxylic acid anhydride.	1*	4	U190	D	5000 (2270)
2-Picoline.....	109068	Pyridine, 2-methyl.....	1*	4	U191	D	5000 (2270)
Plumbane, tetraethyl.....	78002	Tetraethyl lead.....	100	1,4	P110	B	100## (45.4)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Category	Pounds(Kg)
POLYCHLORINATED BIPHENYLS (PCBs).	1336363	Aroclors.....	10	1,2		A	10# (4.54)
	12674112	Aroclor 1016					
	11104282	Aroclor 1221					
	11141165	Aroclor 1232					
	53469219	Aroclor 1242					
	12672286	Aroclor 1248					
	11097691	Aroclor 1254					
	11096825	Aroclor 1260					
POLYNUCLEAR AROMATIC HYDROCARBONS.			1*	2			**
Potassium arsenate.....	7784410		1000	1		C	1000# (454)
Potassium arsenite.....	10124502		1000	1		C	1000# (454)
Potassium bichromate.....	7778509		1000	1		C	1000# (454)
Potassium chromate.....	7789006		1000	1		C	1000# (454)
Potassium cyanide.....	151508		10	1,4	P098	A	10 (4.54)
Potassium hydroxide.....	1310583		1000	1		C	1000 (454)
Potassium permanganate.....	7722647		100	1		B	100 (45.4)
Potassium silver cyanide.....	506616		1*	4	P099	X	1 (0.454)
Pronamide.....	23850585	3,5-Dichloro-N-(1,1-dimethyl-2-propenyl)benzamide.	1*	4	U192	D	5000 (2270)
1-Propanal, 2,3-epoxy.....	765344	Glycidylaldehyde.....	1*	4	U126	X	1# (0.454)
Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino) carbonyl]oxime.	118063	Aldicarb.....	1*	4	P070	X	1 (0.454)
1-Propanamine.....	107108	n-Propylamine.....	1*	4	U184	D	5000 (2270)
1-Propanamine, N-propyl-.	142847	Dipropylamine.....	1*	4	U110	D	5000 (2270)
Propane, 1,2-dibromo-3-chloro-.	98128	1,2-Dibromo-3-chloropropane.	1*	4	U068	X	1# (0.454)
Propane, 2-nitro.....	78469	2-Nitropropane.....	1*	4	U171	X	1# (0.454)
Propans, 2,2'-oxybis(2-chloro-.	108601	Bis(2-chloroisopropyl) ether.	1*	2,4	U027	C	1000 (454)
1,3-Propane sulfone.....	1120714	1,2-Oxathiolane, 2,2-dioxide.	1*	4	U193	X	1# (0.454)
Propanedinitrile.....	109773	Malononitrile.....	1*	4	U149	C	1000 (4.54)
Propanenitrile.....	107120	Ethyl cyanide.....	1*	4	P101	A	10 (4.54)
Propanenitrile, 3-chloro-.	542767	3-Chloropropionitrile.....	1*	4	P027	C	1000 (454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Category	Pounds(Kg)
Propanenitrile, 2-hydroxy-2-methyl-.	75865	Acetone cyanohydrin..... 2-Methylacetonitrile	10	1,4	P069	A	10 (4.54)
1,2,3-Propanetriol, trinitrate-.	55630	Nitroglycerine.....	1*	4	P081	A	10 (4.54)
1-Propanol, 2,3-dibromo-, phosphate (3:1).	126727	Tris(2,3-dibromopropyl) phosphate.	1*	4	U235	X	1# (0.454)
1-Propanol, 2-methyl-.	78831	Isobutyl alcohol.....	1*	4	U140	D	5000 (2270)
2-Propanone.....	67641	Acetone.....	1*	4	U002	D	5000 (2270)
2-Propanone, 1-bromo-.	598312	Bromoacetone.....	1*	4	P017	C	1000 (454)
Propargite.....	2312359		10	1		A	10 (4.54)
Propargyl alcohol.....	107197	2-Propyn-1-ol.....	1*	4	P102	C	1000 (454)
2-Propenal.....	107028	Acrolein.....	1	1,2,4	P003	X	1 (0.454)
2-Propanamide.....	79061	Acrylamide.....	1*	4	U007	D	5000 (2270)
Propene, 1,3-dichloro-.	542756	1,3-Dichloropropene.....	5000	1,2,4	U084	D	5000# (227)
1-Propene, 1,1,2,3,3,3-hexachloro-.	1888717	Hexachloropropene.....	1*	4	U243	C	1000 (454)
2-Propanenitrile.....	107131	Acrylonitrile.....	100	1,2,4	U009	B	100# (45.4)
2-Propanenitrile, 2-methyl-.	126887	Methacrylonitrile.....	1*	4	U152	C	1000 (454)
2-Propenoic acid.....	79107	Acrylic acid.....	1*	4	U008	D	5000 (2270)
2-Propenoic acid, ethyl ester.	140885	Ethyl acrylate.....	1*	4	U113	C	1000 (454)
2-Propenoic acid, 2-methyl-, ethyl ester.	97632	Ethyl methacrylate.....	1*	4	U118	C	1000 (454)
2-Propenoic acid, 2-methyl-, methyl ester.	80626	Methyl methacrylate.....	5000	1,4	U162	C	1000 (454)
2-Propen-1-ol.....	107188	Allyl alcohol.....	100	1,4	P005	B	100 (45.4)
Propionic acid.....	79094		5000	1		D	5000 (2270)
Propionic acid, 2-(2,4,5-trichlorophenoxy)-.	83721	Silvex..... 2,4,5-TP acid	100	1,4	U233	B	100 (45.4)
Propionic anhydride.....	123626		5000	1		D	5000 (2270)
n-Propylamine.....	107108	1-Propanamine.....	1*	4	U194	D	5000 (2270)
Propylene dichloride.....	78875	1,2-Dichloropropane.....	5000	1,2,4	U083	C	1000 (454)
Propylene oxide.....	75569		5000	1		B	100 (45.4)
1,2-Propylenimine.....	75558	2-Methylaziridine.....	1*	4	P067	X	1# (0.454)



TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
2-Propyn-1-ol.....	107197	Propargyl alcohol.....	1*	4	P102	C	1000 (454)
Pyrene.....	129000		1*	2		X	1## (0.454)
Pyrethrins.....	121299 121211 8003347		1000	1		X	1 (0.454)
4-Pyridinamine.....	504245	4-Aminopyridine.....	1*	4	P008	C	1000 (454)
Pyridine.....	110861		1*	4	U198	X	1## (0.454)
Pyridine, 2-[(2-(dimethylamino)ethyl)-2-thenylamino]..	91805	Methapyriene.....	1*	4	U155	D	5000 (2270)
Pyridine, hexahydro-N-nitroso..	100754	N-Nitrosopiperidine.....	1*	4	U179	X	1# (0.454)
Pyridine, 2-methyl.....	109068	2-Picoline.....	1*	4	U191	D	5000 (2270)
Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)-, and salts.	54115	Nicotine and salts.....	1*	4	P075	B	100 (45.4)
4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo..	56042	Methylthioureacl.....	1*	4	U164	X	1# (0.454)
Pyrophosphoric acid, tetraethyl ester.	107493	Tetraethyl pyrophosphate.	100	1,4	P111	B	100## (45.4)
Pyrrole, tetrahydro-N-nitroso..	930552	N-Nitrosopyrrolidine.....	1*	4	U180	X	1 § (0.454)
Quinoline.....	91225		1000	1		D	5000 (2270)
RADIONUCLIDES.....			1*	3		X	1 § (0.454)
Reserpine.....	50555	Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyloxy)-methyl ester.	1*	4	U200	D	5000 (2270)
Resorcinol.....	108463	1,3-Benzenediol.....	1000	1,4	U201	D	5000 (2270)
Saccharin and salts.....	81072	1,2-Benzisothiazolin-3-one, 1,1-dioxide, and salts.	1*	4	U202	X	1# (0.454)
Safrole.....	94597	Benzene, 1,2-methylene-dioxy-4-allyl..	1*	4	U203	X	1# (0.454)
Selenious acid.....	7783008		1*	4	U204	X	1## (0.454)
Selenium ††.....	7782492		1*	2		X	1## (0.454)
SELENIUM AND COMPOUNDS.....			1*	2			**
Selenium dioxide.....	7446084	Selenium oxide.....	1000	1,4	U204	C	1000## (454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Selenium disulfide.....	7488564	Sulfur selenide.....	1*	4	U205	X	1# (0.454)
Selenium oxide.....	7446084	Selenium dioxide.....	1000	1,4	U204	C	1000## (454)
Selenourea.....	630104	Carbamimidoseleonic acid.	1*	4	P103	X	1## (0.454)
L-Serine, diazoacetate (ester).	115028	Azaserine.....	1*	4	U015	X	1# (0.454)
Silver ††.....	7440224		1*	2		C	1000 (454)
SILVER AND COMPOUNDS.....			1*	2			**
Silver cyanide.....	506649		1*	4	P104	X	1 (0.454)
Silver nitrate.....	7761888		1	1		X	1 (0.454)
Silvex.....	93721	Propionic acid, 2-(2,4,5-trichlorophenoxy)-, 2,4,5-TP acid	100	1,4	U233	B	100 (45.4)
Sodium.....	7440235		1000	1		A	10 (4.54)
Sodium arsenate.....	7631892		1000	1		C	1000# (454)
Sodium arsenite.....	7784465		1000	1		C	1000# (454)
Sodium azide.....	26628228		1*	4	P105	C	1000 (454)
Sodium bichromate.....	10588019		1000	1		C	1000# (454)
Sodium bifluoride.....	1333831		5000	1		D	5000## (2270)
Sodium bisulfite.....	7631905		5000	1		D	5000 (2270)
Sodium chromate.....	7775113		1000	1		C	1000# (454)
Sodium cyanide.....	143339		10	1,4	P106	A	10 (4.54)
Sodium dodecylbenzene sulfonate.	25155300		1000	1		C	1000 (454)
Sodium fluoride.....	7681494		5000	1		C	1000 (454)
Sodium hydrosulfide.....	16721805		5000	1		D	5000 (2270)
Sodium hydroxide.....	1310732		1000	1		C	1000 (454)
Sodium hypochlorite.....	7681529 10022705		100	1		B	100 (45.4)
Sodium methylate.....	124414		1000	1		C	1000 (454)
Sodium nitrite.....	7632000		100	1		B	100## (45.4)
Sodium phosphate, dibasic.	7558794 10039324 10140655		5000	1		D	5000 (2270)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Codet	RCRA Waste Number	Catego-ry	Pounds(Kg)
Sodium phosphate, tribasic.	7601549 7785844 10101890 10361894 7756294 10124568		5000	1		D	5000 (2270)
Sodium selenite	10102188 7782823		1000	1		C	1000## (454)
4,4'-Stilbenediol, alpha, alpha'-diethyl.	58531	Diethylstilbestrol	1*	4	U089	X	1# (0.454)
Streptozotocin	18883664	D-Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosouneido)-.	1*	4	U206	X	1# (0.454)
Strontium chromate	7789062		1000	1		C	1000# (454)
Strontium sulfide	1314961		1*	4	P107	B	100 (45.4)
Strychnidin-10-one, and salts.	57249	Strychnine and salts	10	1,4	P108	A	10 (4.54)
Strychnidin-10-one, 2,3-dimethoxy.	357573	Brucine	1*	4	P018	A	10 (4.54)
Strychnine and salts	57249	Strychnidin-10-one, and salts.	10	1,4	P108	A	10 (4.54)
Styrene	100425		1000	1		C	1000 (454)
Sulfur hydride	7783064	Hydrogen sulfide Hydrosulfuric acid	100	1,4	U135	B	100## (45.4)
Sulfur monochloride	12771083		1000	1		C	1000 (454)
Sulfur phosphide	1314803	Phosphorus pentasulfide Phosphorus sulfide	100	1,4	U189	B	100 (45.4)
Sulfur selenide	7488564	Selenium disulfide	1*	4	U205	X	1# (0.454)
Sulfuric acid	7664939 8014957		1000	1		C	1000 (454)
Sulfuric acid, dimethyl ester.	77781	Dimethyl sulfate	1*	4	U103	X	1# (0.454)
Sulfuric acid, thallium(I) salt.	7446186 10031591	Thallium(I) sulfate	1000	1,4	P115	C	1000## (454)
2,4,5-T	93785	2,4,5-T acid 2,4,5-Trichlorophenoxyacetic acid	100	1,4	U232	C	1000 (454)
2,4,5-T acid	93785	2,4,5-T 2,4,5-Trichlorophenoxyacetic acid	100	1,4	U232	C	1000 (454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Codet	RCRA Waste Number	Catego-ry	Pounds(Kg)
2,4,5-T amines	2008460 6369966 6369977 1316728 3813147		100	1		D	5000 (2270)
2,4,5-T esters	83798 2545587 61782072 1928478 25168154		100	1		C	1000 (454)
2,4,5-T salts	13560991		100	1		C	1000 (454)
TDE	72548	DDD 4,4' DDD Dichlorodiphenyl dichloroethane	1	1,2,4	U060	X	1# (0.454)
1,2,4,5-Tetrachlorobenzene.	95943	Benzene, 1,2,4,5-tetrachloro.	1*	4	U207	D	5000 (2270)
2,3,7,8-Tetrachlorodibenzo-p-dioxin(TCDD).	1746018		1*	2		X	1# (0.454)
1,1,1,2-Tetrachloroethane.	630208	Ethane, 1,1,1,2-tetrachloro.	1*	4	U208	X	1# (0.454)
1,1,2,2-Tetrachloroethane.	78345	Ethane, 1,1,2,2-tetrachloro.	1*	2,4	U209	X	1# (0.454)
Tetrachloroethylene	127184	Ethene, 1,1,2,2-tetrachloro.	1*	2,4	U210	X	1# (0.454)
2,3,4,6-Tetrachlorophenol.	58902	Phenol, 2,3,4,6-tetrachloro.	1*	4	U212	A	10 (4.54)
Tetraethyldithiopyrophosphate.	3689245	Dithiopyrophosphoric acid, tetraethyl ester.	1*	4	P109	B	100 (45.4)
Tetraethyl lead	78002	Plumbane, tetraethyl.	100	1,4	P110	B	100## (45.4)
Tetraethyl pyrophosphate.	107493	Pyrophosphoric acid, tetraethyl ester.	100	1,4	P111	B	100## (45.4)
Tetrahydrofuran	109999	Furan, tetrahydro	1*	4	U213	C	1000 (454)
Tetranitromethane	509148	Methane, tetranitro	1*	4	P112	A	10 (4.54)
Tetraphosphoric acid, hexaethyl ester.	757584	Hexaethyl tetraphosphate.	1*	4	P062	B	100 (45.4)
Thallic oxide	1314325	Thallium(III) oxide	1*	4	P113	X	1## (0.454)
Thallium	7440280		1*	2		X	1## (0.454)
THALLIUM AND COMPOUNDS.			1*	2			**
Thallium(I) acetate	563688	Acetic acid, thallium(I) salt.	1*	4	U214	X	1## (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Thallium(I) carbonate	6533739	Carbonic acid, dithallium (I) salt.	1*	4	U215	X	1## (0.454)
Thallium(I) chloride	7791120		1*	4	U216	X	1## (0.454)
Thallium(I) nitrate	10102451		1*	4	U217	X	1## (0.454)
Thallium(III) oxide	1314325	Thallic oxide	1*	4	P113	X	1## (0.454)
Thallium(I) selenide	12039520		1*	4	P114	X	1## (0.454)
Thallium(I) sulfate	7446186	Sulfuric acid, thallium(I) salt	1000	1,4	P115	C	1000## (454)
	10031591						
Thioacetamide	62555	Ethanethioamide	1*	4	U218	X	1# (0.454)
Thioanox	39196184	3,3-Dimethyl-1-(methylthio)-2-butanone,O-[(methylamino) carbonyl] oxime.	1*	4	P045	B	100 (45.4)
Thioimidodicarbonic diamide	541537	2,4-Dithiobiuret	1*	4	P049	B	100 (45.4)
Thiomethanol	74931	Methanethiol Methylmercaptan	100	1,4	U153	B	100 (45.4)
Thiophenol	108985	Benzenethiol	1*	4	P014	B	100 (45.4)
Thiosemicarbazide	79196	Hydrazinecarbothioamide	1*	4	P116	B	100 (45.4)
Thiourea	62566	Carbamide, thio-	1*	4	U219	X	1# (0.454)
Thiourea, (2-chlorophenyl)-	5344821	1-(o-Chlorophenyl)thiourea.	1*	4	P026	B	100 (45.4)
Thiourea, 1-naphthalenyl-	66884	alpha-Naphthylthiourea	1*	4	P072	B	100 (45.4)
Thiourea, phenyl-	103855	N-Phenylthiourea	1*	4	P093	B	100 (45.4)
Thiram	137268	Bis(dimethylthiocarbonyl) disulfide.	1*	4	U244	A	10 (4.54)
Toluene	108883	Benzene, methyl-	1000	1,2,4	U220	C	1000 (454)
Toluenediamine	95907	Diaminotoluene	1*	4	U221	X	1# (0.454)
	25376458						
	496720						
	823405						
Toluene diisocyanate	584849	Benzene, 2,4-diisocyanatomethyl-	1*	4	U223	B	100 (45.4)
	91087						
	26471625						
o-Toluidine hydrochloride	636215	Benzenamine, 2-methyl, hydrochloride.	1*	4	U222	X	1# (0.454)
Toxaphene	8001352	Camphene, octachloro-	1	1,2,4	P123	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
2,4,5-TP acid	93721	Propionic acid, 2-(2,4,5-trichlorophenoxy)-. Silvex	100	1,4	U233	B	100 (45.4)
2,4,5-TP acid esters	32534955		100	1		B	100 (45.4)
1H-1,2,4-Triazol-3-amine	61825	Amitrole	1*	4	U011	X	1# (0.454)
Trichlorfon	52686		1000	1		C	1000## (454)
1,2,4-Trichlorobenzene	120821		1*	2		B	100 (45.4)
1,1,1-Trichloroethane	71558	Methyl chloroform	1*	2,4	U226	C	1000 (454)
1,1,2-Trichloroethane	79005	Ethane, 1,1,2-trichloro-	1*	2,4	U227	X	1# (0.454)
Trichloroethene	79018	Trichloroethylene	1000	1,2,4	U229	C	1000# (454)
Trichloroethylene	79018	Trichloroethene	1000	1,2,4	U228	C	1000# (454)
Trichloromethanesulfonyl chloride.	594423	Methanesulfonyl chloride, trichloro-	1*	4	P118	B	100 (45.4)
Trichloromonofluoromethane.	75694	Methane, trichlorofluoro-	1*	4	U121	D	5000 (2270)
Trichlorophenol	25167822		10	1		A	10# (4.54)
	15950660	2,3,4-Trichlorophenol					
	933788	2,3,5-Trichlorophenol					
	933755	2,3,6-Trichlorophenol					
	95954	2,4,5-Trichlorophenol					
	88062	2,4,6-Trichlorophenol					
	609198	3,4,5-Trichlorophenol					
2,4,5-Trichlorophenol	95954	Phenol, 2,4,5-trichloro-	10	1,4	U230	A	10# (4.54)
2,4,6-Trichlorophenol	88062	Phenol, 2,4,6-trichloro-	10	1,2,4	U231	A	10# (4.54)
2,4,5-Trichlorophenoxyacetic acid.	93765	2,4,5-T	100	1,4	U232	C	1000 (454)
		2,4,5-T acid					
Triethanolamine dodecylbenzenesulfonate.	27323417		1000	1		C	1000 (454)
Triethylamine	121448		5000	1		D	5000 (2270)
Trimethylamine	75503		1000	1		C	1000## (454)
sym-Trinitrobenzene	99354	Benzene, 1,3,5-trinitro-	1*	4	U234	X	1## (0.454)
1,3,5-Trioxane, 2,4,6-trimethyl-	123637	Paraldehyde	1*	4	U182	C	1000 (454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Tris(2,3-dibromopropyl) phosphate.	126727	1-Propanol, 2,3-dibromo- phosphate (3:1).	1*	4	U235	X	1# (0.454)
Trypan blue	72571	2,7-Naphthalenedisulfonic acid,3,3'-(3,3'-dimethyl-phenyl)-4,4'-diyl)-bis(azo)]bis(5-amino-4-hydroxy)- tetraso-dium salt	1*	4	U236	X	1# (0.454)
Unlisted Hazardous Wastes.			1*	4			
Characteristic of Ignitability.			1*	4	D001	B	100 (45.4)
Characteristic of Corrosivity.			1*	4	D002	B	100 (45.4)
Characteristic of Reactivity.			1*	4	D003	B	100 (45.4)
Characteristic of EP Toxicity.			1*	4			
Arsenic			1*	4	D004	X	1# (0.454)
Barium			1*	4	D005	C	1000 (454)
Cadmium			1*	4	D006	X	1# (0.454)
Chromium			1*	4	D007	X	1# (0.454)
Lead			1*	4	D008	X	1# # (0.454)
Mercury			1*	4	D009	X	1 (0.454)
Selenium			1*	4	D010	X	1# # (0.454)
Silver			1*	4	D011	X	1 (0.454)
Endrin			1	1,4	D012	X	1 (0.454)
Lindane			1	1,4	D013	X	1# (0.454)
Methoxychlor			1	1,4	D014	X	1 (0.454)
Toxaphene			1	1,4	D015	X	1# (0.454)
2,4-D			100	1,4	D016	B	100 (45.4)
2,4,5-TP			100	1,4	D017	B	100 (45.4)
Uracil, 5-[bis(2-chloroethyl)amino]-.	66751	Uracil mustard	1*	4	U237	X	1# (0.454)
Uracil mustard	66751	Uracil, 5-[bis(2-chloroethyl)amino]-.	1*	4	U237	X	1# (0.454)
Uranyl acetate	541093		5000	1		D	5000## (2270)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Uranyl nitrate	10102064 38478769		5000	1		D	5000## (2270)
Vanadic acid, ammonium salt.	7603556	Ammonium vanadate	1*	4	P119	C	1000 (454)
Vanadium(V) oxide	1314621	Vanadium pentoxide	1000	1,4	P120	C	1000## (454)
Vanadium pentoxide	1314621	Vanadium(V) oxide	1000	1,4	P120	C	1000## (454)
Vanadyl sulfate	27774136		1000	1		C	1000## (454)
Vinyl acetate	108054		1000	1		D	5000 (2270)
Vinyl chloride	75014	Ethene, chloro-	1*	2,3,4	U043	X	1# (0.454)
Vinylidene chloride	75354	1,1-Dichloroethylene, Ethene, 1,1-dichloro-	5000	1,2,4	U078	D	5000# (2270)
Warfarin	81812	3-(alpha-Acetyloxybenzyl)-4-hydroxycoumarin and salts.	1*	4	P001	B	100 (45.4)
Xylene (mbed)	1330207 108383 95476 108423	Benzene, dimethyl m-o-p-	1000	1,4	U239	C	1000 (454)
Xylenol	1300716		1000	1		C	1000 (454)
Yohimben-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyloxy)-methyl]ester.	50555	Reserpine	1*	4	U200	D	5000 (2270)
Zinc ††	7440866		1*	2		X	1# # (0.454)
ZINC AND COMPOUNDS.			1*	2			..
Zinc acetate	557346		1000	1		C	1000## (454)
Zinc ammonium chloride	52628258 14539975 14639986		5000	1		D	5000## (2270)
Zinc borate	1332076		1000	1		C	1000## (454)
Zinc bromide	7699458		5000	1		D	5000## (2270)
Zinc carbonate	3486359		1000	1		C	1000## (454)
Zinc chloride	7646857		5000	1		D	5000## (2270)
Zinc cyanide	557211		10	1,4	P121	A	10## (4.54)
Zinc fluoride	7783495		1000	1		C	1000## (454)
Zinc formate	557415		1000	1		C	1000## (454)
Zinc hydrosulfite	7779864		1000	1		C	1000## (454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Category	Pounds(Kg)
Zinc nitrate.....	7779888		5000	1		D	5000## (2270)
Zinc phenolsulfonate.....	127822		5000	1		D	5000## (2270)
Zinc phosphide.....	1314847		1000	1,4	P122	C	1000## (454)
Zinc silicofluoride.....	16871719		5000	1		D	5000##(2270)
Zinc sulfate.....	7733020		1000	1		C	1000## (454)
Zirconium nitrate.....	13746899		5000	1		D	5000 (2270)
Zirconium potassium fluorides.....	16923958		5000	1		C	1000 (454)
Zirconium sulfate.....	14644612		5000	1		D	5000 (2270)
Zirconium tetrachloride.....	10026116		5000	1		D	5000 (2270)
F001 The following spent halogenated solvents used in degreasing and sludges from the recovery of these solvents in degreasing operations:			1*	4	F001	X	1# (0.454)
(a) Tetrachloroethylene.....	127184					X	1# (0.454)
(b) Trichloroethylene.....	79016					C	1000# (454)
(c) Methylene chloride.....	75092					C	1000 (454)
(d) 1,1,1-Trichloroethane.....	71556					C	1000 (454)
(e) Carbon tetrachloride.....	56235					D	5000# (2270)
(f) Chlorinated fluorocarbons.....	(N.A.)					D	5000 (2270)
F002 The following spent halogenated solvents and the still bottoms from the recovery of these solvents:			1*	4	F002	X	1# (0.454)
(a) Tetrachloroethylene.....	127184					X	1# (0.454)
(b) Methylene Chloride.....	75092					C	1000 (454)
(c) Trichloroethylene.....	79016					C	1000# (454)
(d) 1,1,1-Trichloroethane.....	71556					C	1000 (454)
(e) Chlorobenzene.....	108907					B	100 (45.4)
(f) 1,1,2-Trichloro-1,2,2-trifluoroethane.....	76131					D	5000 (2270)
(g) o-Dichlorobenzene.....	106467					B	100 (45.4)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Category	Pounds(Kg)
(h) Trichlorofluoromethane.....	75694					D	5000 (2270)
F003 The following spent non-halogenated solvents and the still bottoms from the recovery of these solvents:			1*	4	F003	B	100 (45.4)
(a) Xylene.....	1330207					C	1000 (454)
(b) Acetone.....	67641					D	5000 (2270)
(c) Ethyl acetate.....	141786					D	5000 (2270)
(d) Ethylbenzene.....	100414					C	1000 (454)
(e) Ethyl ether.....	60297					B	100 (45.4)
(f) Methyl isobutyl ketone.....	108101					D	5000 (2270)
(g) n-Butyl alcohol.....	71363					D	5000 (2270)
(h) Cyclohexanone.....	108941					D	5000 (2270)
(i) Methanol.....	67561					D	5000 (2270)
F004 The following spent non-halogenated solvents and the still bottoms from the recovery of these solvents:			1*	4	F004	X	1## (0.454)
(a) Cresols/Cresylic acid.....	1319773					C	1000# (454)
(b) Nitrobenzene.....	98953					C	1000 (454)
F005 The following spent non-halogenated solvents and the still bottoms from the recovery of these solvents:			1*	4	F005	X	1## (0.454)
(a) Toluene.....	108883					C	1000 (454)
(b) Methyl ethyl ketone.....	78933					D	5000 (2270)
(c) Carbon disulfide.....	75150					D	5000# (2270)
(d) Isobutanol.....	78831					D	5000 (2270)
(e) Pyridine.....	110861					X	1## (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
F006 Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/ stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum			1*	4	F006	X	1# (0.454)
F007 Spent cyanide plating bath solutions from electroplating operations (except for precious metals electroplating spent cyanide plating bath solutions)			1*	4	F007	A	10 (4.54)
F008 Plating bath sludges from the bottom of plating baths from electroplating operations where cyanides are used in the process (except for precious metals electroplating plating bath sludges)			1*	4	F008	A	10 (4.54)
F009 Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process (except for precious metals electroplating spent stripping and cleaning bath solutions)			1*	4	F009	A	10 (4.54)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
F010 Quenching bath sludge from oil baths from metal heat treating operations where cyanides are used in the process (except for precious metals heat-treating quenching bath sludges)			1*	4	F010	A	10 (4.54)
F011 Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations (except for precious metals heat treating spent cyanide solutions from salt bath pot cleaning)			1*	4	F011	A	10 (4.54)
F012 Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process (except for precious metals heat treating quenching wastewater treatment sludges)			1*	4	F012	A	10 (4.54)
F019 Wastewater treatment sludges from the chemical conversion coating of aluminum			1*	4	F019	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
F024 Wastes, including but not limited to distillation residues, heavy ends, tars, and reactor cleanout wastes, from the production of chlorinated aliphatic hydrocarbons, having carbon content from one to five, utilizing free radical catalyzed processes. (This listing does not include light ends, spent filters and filter aids, spent desiccants(sic), wastewater, wastewater treatment sludges, spent catalysts, and wastes listed in Section 261.32.)			1*	4	F024	X	1# (0.454)
K001 Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol			1*	4	K001	X	1# (0.454)
K002 Wastewater treatment sludge from the production of chrome yellow and orange pigments			1*	4	K002	X	1# (0.454)
K003 Wastewater treatment sludge from the production of molybdate orange pigments			1*	4	K003	X	1# (0.454)
K004 Wastewater treatment sludge from the production of zinc yellow pigments			1*	4	K004	X	1# (0.454)
K005 Wastewater treatment sludge from the production of chrome green pigments			1*	4	K005	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
K006 Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated)			1*	4	K006	X	1# (0.454)
K007 Wastewater treatment sludge from the production of iron blue pigments			1*	4	K007	X	1# (0.454)
K008 Oven residue from the production of chrome oxide green pigments			1*	4	K008	X	1# (0.454)
K009 Distillation bottoms from the production of acetaldehyde from ethylene			1*	4	K009	X	1# (0.454)
K010 Distillation side cuts from the production of acetaldehyde from ethylene			1*	4	K010	X	1# (0.454)
K011 Bottom stream from the wastewater stripper in the production of acrylonitrile			1*	4	K011	X	1# (0.454)
K013 Bottom stream from the acetonitrile column in the production of acrylonitrile			1*	4	K013	X	1# (0.454)
K014 Bottoms from the acetonitrile purification column in the production of acrylonitrile			1*	4	K014	D	5000 (2270)
K015 Still bottoms from the distillation of benzyl chloride			1*	4	K015	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code#	RCRA Waste Number	Catego-ry	Pounds(Kg)
K016..... Heavy ends or distillation residues from the production of carbon tetrachloride			1*	4	K016	X	1# (0.454)
K017..... Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin			1*	4	K017	X	1# (0.454)
K018..... Heavy ends from the fractionation column in ethyl chloride production			1*	4	K018	X	1# (0.454)
K019..... Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production			1*	4	K019	X	1# (0.454)
K020..... Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production			1*	4	K020	X	1# (0.454)
K021..... Aqueous spent antimony catalyst waste from fluoromethanes production			1*	4	K021	X	1# (0.454)
K022..... Distillation bottom tars from the production of phenol/acetone from cumene			1*	4	K022	X	1# (0.454)
K023..... Distillation light ends from the production of phthalic anhydride from naphthalene			1*	4	K023	D	5000 (2270)
K024..... Distillation bottoms from the production of phthalic anhydride from naphthalene			1*	4	K024	D	5000 (2270)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code#	RCRA Waste Number	Catego-ry	Pounds(Kg)
K025..... Distillation bottoms from the production of nitrobenzene by the nitration of benzene			1*	4	K025	X	1# (0.454)
K026..... Stripping still tails from the production of methyl ethyl pyridines			1*	4	K026	X	1## (0.454)
K027..... Centrifuge and distillation residues from toluene diisocyanate production			1*	4	K027	X	1# (0.454)
K028..... Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane			1*	4	K028	X	1# (0.454)
K029..... Waste from the product steam stripper in the production of 1,1,1-trichloroethane			1*	4	K029	X	1# (0.454)
K030..... Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene			1*	4	K030	X	1# (0.454)
K031..... By-product salts generated in the production of MSMA and cacodylic acid			1*	4	K031	X	1# (0.454)
K032..... Wastewater treatment sludge from the production of chlordane			1*	4	K032	X	1# (0.454)
K033..... Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane			1*	4	K033	X	1# (0.454)



TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
K034 Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane			1*	4	K034	X	1# (0.454)
K035 Wastewater treatment sludges generated in the production of creosote			1*	4	K035	X	1# (0.454)
K036 Still bottoms from toluene reclamation distillation in the production of disulfoton			1*	4	K036	X	1 (0.454)
K037 Wastewater treatment sludges from the production of disulfoton			1*	4	K037	X	1 (0.454)
K038 Wastewater from the washing and stripping of phorate production			1*	4	K038	X	1# (0.454)
K039 Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate			1*	4	K039	X	1## (0.454)
K040 Wastewater treatment sludge from the production of phorate			1*	4	K040	X	1# (0.454)
K041 Wastewater treatment sludge from the production of toxaphene			1*	4	K041	X	1# (0.454)
K042 Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T			1*	4	K042	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
K043 2,6-Dichlorophenol waste from the production of 2,4-D			1*	4	K043	X	1# (0.454)
K044 Wastewater treatment sludges from the manufacturing and processing of explosives			1*	4	K044	A	10 (4.54)
K045 Spent carbon from the treatment of wastewater containing explosives			1*	4	K045	A	10 (4.54)
K046 Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds			1*	4	K046	X	1## (0.454)
K047 Pink/red water from TNT operations			1*	4	K047	A	10 (4.54)
K048 Dissolved air flotation (DAF) float from the petroleum refining industry			1*	4	K048	X	1# (0.454)
K049 Slip oil emulsion solids from the petroleum refining industry			1*	4	K049	X	1# (0.454)
K050 Heat exchanger bundle cleaning sludge from the petroleum refining industry			1*	4	K050	X	1# (0.454)
K051 API separator sludge from the petroleum refining industry			1*	4	K051	X	1# (0.454)
K052 Tank bottoms (lead) from the petroleum refining industry			1*	4	K052	X	1## (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
K060 Ammonia still lime sludge from coking operations			1*	4	K060	X	1# (0.454)
K061 Emission control dust/sludge from the primary production of steel in electric furnaces			1*	4	K061	X	1# (0.454)
K062 Spent pickle liquor from steel finishing operations			1*	4	K062	X	1# (0.454)
K069 Emission control dust/sludge from secondary lead smelting			1*	4	K069	X	1# (0.454)
K071 Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used			1*	4	K071	X	1 (0.454)
K073 Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production			1*	4	K073	X	1# (0.454)
K083 Distillation bottoms from aniline extraction			1*	4	K083	B	100 (45.4)
K084 Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds			1*	4	K084	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
K085 Distillation or fractionation column bottoms from the production of chlorobenzenes			1*	4	K085	X	1# (0.454)
K086 Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead			1*	4	K086	X	1# (0.454)
K087 Decanter tank tar sludge from coking operations			1*	4	K087	X	1## (0.454)
K093 Distillation light ends from the production of phthalic anhydride from ortho-xylene			1*	4	K093	D	5000 (2270)
K094 Distillation bottoms from the production of phthalic anhydride from ortho-xylene			1*	4	K094	D	5000 (2270)
K095 Distillation bottoms from the production of 1,1,1-trichloroethane			1*	4	K095	X	1# (0.454)
K096 Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane			1*	4	K096	X	1# (0.454)
K097 Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane			1*	4	K097	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Codet	RCRA Waste Number	Catego-ry	Pounds(Kg)
K098 Untreated process wastewater from the production of toxaphene			1*	4	K098	X	1# (0.454)
K099 Untreated wastewater from the production of 2,4-D			1*	4	K099	X	1# (0.454)
K100 Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting (Components of this waste are identical with those of K069).			1*	4	K100	X	1# (0.454)
K101 Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds			1*	4	K101	X	1# (0.454)
K102 Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds			1*	4	K102	X	1# (0.454)
K103 Process residues from aniline extraction from the production of aniline			1*	4	K103	B	100 (45.4)
K104 Combined wastewater streams generated from nitrobenzene/aniline chlorobenzenes			1*	4	K104	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Codet	RCRA Waste Number	Catego-ry	Pounds(Kg)
K105 Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes			1*	4	K105	X	1# (0.454)
K106 Wastewater treatment sludge from the mercury cell process in chlorine production			1*	4	K106	X	1 (0.454)

† - indicates the statutory source as defined by 1, 2, 3, or 4 below  
 1 - indicates that the statutory source for designation of this hazardous substance under CERCLA is CWA Section 311(b)(4)  
 2 - indicates that the statutory source for designation of this hazardous substance under CERCLA is CWA Section 307(a)  
 3 - indicates that the statutory source for designation of this hazardous substance under CERCLA is CAA Section 112  
 4 - indicates that the statutory source for designation of this hazardous substance under CERCLA is RCRA Section 3001  
 †† - no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is equal to or exceeds 100 micrometers (0.004 inches)  
 ††† - the RQ for asbestos is limited to friable forms only  
 § - the Agency may adjust the RQ for radionuclides in a future rulemaking; until then the statutory 1-pound RQ applies  
 \* - indicates that the 1-pound RQ is a CERCLA statutory RQ  
 \*\* - indicates that no RQ is being assigned to the generic or broad class  
 # - indicates that the RQ is subject to change when the assessment of potential carcinogenicity and/or chronic toxicity is completed  
 ## - indicates that an adjusted RQ is proposed in a separate NPRM, in today's Federal Register [45 FR 13514, Apr. 4, 1985] applies  
 ### - the Agency may adjust the RQ for methyl isocyanate in a future rulemaking; until then the statutory 1-pound RQ applies

APPENDIX A—SEQUENTIAL CAS REGISTRY  
NUMBER LIST OF CERCLA HAZARDOUS  
SUBSTANCES

CASRN	Hazardous Substance
50000	Formaldehyde Methylene oxide
50077	Aztrino(2',3':3,4)pyrrolo(1,2-a)indole-4,7-dione,8-amino-8-[[[(aminocarbonyl)oxy)methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-Mitomycin C
50180	Cyclophosphamide 2H-1,3,2-Oxazaphosphorine,2-[bis(2-chloroethylamino)]tetrahydro-2-oxide
50293	DDT 4,4' DDT Dichlorodiphenyl trichloroethane
50328	Benzo[a]pyrene 3,4-Benzopyrene
50555	Reserpine Yohimban-18-carboxylic acid,11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-,methyl ester
51285	2,4-Dinitrophenol Phenol, 2,4-dinitro-

APPENDIX A—SEQUENTIAL CAS REGISTRY  
NUMBER LIST OF CERCLA HAZARDOUS  
SUBSTANCES—Continued

CASRN	Hazardous Substance
51434	1,2-Benzenediol,4-[1-hydroxy-2-(methylamino)ethyl]- Epinephrine
51798	Carbamic acid, ethyl ester Ethyl carbamate (Urethan)
52686	Trichlorfon
52857	Famphur Phosphorothioic acid, O,O-dimethyl-O-[p-[(di-methylamino)-sulfonyl]phenyl] ester
53703	Dibenz[a,h]anthracene 1,2,5,6-Dibenzanthracene Dibenzo[a,h]anthracene
53963	Acetamide, N-9H-fluoren-2-yl- 2-Acetylaminofluorene
54115	Nicotine and salts Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)-,and salts
55185	Ethanamine, N-ethyl-N-nitroso- N-Nitrosodiethylamine

EFFECTIVE DATE: December 29, 1986.

40 CFR Part 302 is amended as follows:

**PART 302—DESIGNATION, REPORTABLE QUANTITIES, AND NOTIFICATION**

1. The authority citation for Part 302 continues to read as follows:

Authority: Sec. 102 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. 9602; secs. 311 and 501(a) of the Federal Water Pollution Control Act, 33 U.S.C. 1321 and 1361.

2. Section 302.4 is amended by revising Table 302.4 to read as follows:

**§ 302.4 Designation of hazardous substances.**

*Table 302.4—List of Hazardous Substances and Reportable Quantities*

Note—The numbers under the column headed "CASRN" are the Chemical Abstracts Service Registry Numbers for each hazardous substance. Other names by which each hazardous substance is identified in other statutes and their implementing regulations are provided in the "Regulatory Synonyms"

column. The "Statutory RQ" column lists the RQs for hazardous substances established by section 102 of CERCLA. The "Statutory Code" column indicates the statutory source for designating each substance as a CERCLA hazardous substance: "1" indicates that the statutory source is section 311(b)(4) of the Clean Water Act, "2" indicates that the source is section 307(a) of the Clean Water Act, "3" indicates that the source is section 112 of the Clean Air Act, and "4" indicates that the source is RCRA section 3001. The "RCRA Waste Number" column provides the waste identification numbers assigned to various substances by RCRA regulations. The column headed "Category" lists the code letters "X", "A", "B", "C", and "D", which are associated with reportable quantities of 1, 10, 100, 1000, and 5000 pounds, respectively. The "Pounds (kg)" column provides the reportable quantity for each hazardous substance in pounds and kilograms.

TABLE 302.4 - LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code †	RCRA Waste Number	Category	Pounds(Kg)
Acenaphthene.....	63329		1*	2		B	100 (45.4)
Acenaphthylene.....	208968		1*	2		D	5000 (2270)
Acetic acid, thallium(I) salt.....	563688	Thallium(I) acetate.....	1*	4	U214	B	100 (45.4)
2-Amino-1-methyl benzene.....	95534	o-Toluidine.....	1*	4	U328	X	1# (0.454)
4-Amino-1-methyl benzene.....	106490	p-Toluidine.....	1*	4	U353	X	1# (0.454)
Ammonia.....	7664417		100	1		B	100 (45.4)
Ammonium bifluoride.....	1341497		5000	1		B	100 (45.4)
Anthracene.....	120127		1*	2		D	5000 (2270)
Antimony ††.....	7440360		1*	2		D	5000 (2270)
Benzene, hydroxy.....	108952	Phenol.....	1000	1,2,4	U188	C	1000 (454)
Benzene, pentachloro.....	608935	Pentachlorobenzene.....	1*	4	U183	A	10 (4.54)
Benzene, 1,3,5-trinitro.....	99354	sym-Trinitrobenzene.....	1*	4	U234	A	10 (4.54)
Benzo[ <i>j,k</i> ]fluorene.....	206440	Fluoranthene.....	1*	2,4	U120	B	100 (45.4)
Benzo[ <i>ghi</i> ]perylene.....	191242		1*	2		D	5000 (2270)
p-Benzoquinone.....	106514	1,4-Cyclohexadienedione.....	1*	4	U197	A	10 (4.54)
delta - BHC.....	319868		1*	2		X	1 (0.454)
Caplan.....	133062		10	1		A	10# (4.54)
Carbamimidosefenoic acid.....	630104	Selenourea.....	1*	4	P103	C	1000 (454)
Carbon bisulfide.....	75150	Carbon disulfide.....	5000	1,4	P022	B	100 (45.4)
Carbon disulfide.....	75150	Carbon bisulfide.....	5000	1,4	P022	B	100 (45.4)
Carbonic acid, dithallium(I) salt.....	6533739	Thallium(I) carbonate.....	1*	4	U215	B	100 (45.4)
Chloroethane.....	75003		1*	2		B	100 (45.4)
Chromic acetate.....	1066304		1000	1		C	1000 (454)
Chromic sulfate.....	10101538		1000	1		C	1000 (454)
Chromous chloride.....	10049055		1000	1		C	1000 (454)
Copper ††.....	7440508		1*	2		D	5000 (2270)
Cresol(s).....	1319773	Cresylic acid.....	1000	1,4	U052	C	1000# (454)
m.....	108394						
o.....	95487						

TABLE 302.4 - LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code †	RCRA Waste Number	Category	Pounds(Kg)
P	106445						
Cresylic acid	1319773	Cresol(s)	1000	1,4	U052	C	1000# (454)
m	108394						
o	95487						
p	106445						
Cupric chloride	7447394		10	1		A	10 (4.54)
Cupric sulfate	7758987		10	1		A	10 (4.54)
Cupric tartrate	815827		100	1		B	100 (45.4)
1,4-Cyclohexadienedione	106514	p-Benzoquinone	1*	4	U197	A	10 (4.54)
Dichloropropene - Dichloropropene (mixture)	8003198		5000	1		B	100# (45.4)
Dichloropropene(s)	26952238		5000	1		B	100 (45.4)
2,3-Dichloropropene (isomer)	78886						
1,3-Dichloropropene	542758	Propene, 1,3-dichloro	5000	1,2,4	U084	B	100# (45.4)
Diethylamine	109897		1000	1		B	100 (45.4)
Dimethylamine	124403	Methanamine, N-methyl	1000	1,4	U092	C	1000 (454)
O,O-Dimethyl O-p-nitrophenyl phosphorothioate	298900	Methyl parathion	100	1,4	P071	B	100 (45.4)
Ethane, pentachloro	76017	Pentachloroethane	1*	4	U184	X	1# (0.454)
Ethlon	563122		10	1		A	10 (4.54)
2-Ethoxyethanol	110805	Ethylene glycol monoethyl ether	1*	4	U359	X	1# (0.454)
Ethylene glycol monoethyl ether	110805	2-Ethoxyethanol	1*	4	U359	X	1# (0.454)
Ferric dextran ***	9004664	Iron dextran ***	1*	4	U139	D	5000 (2270)
Fluoranthene	206440	Benzo[ <i>j,k</i> ]fluorene	1*	2,4	U120	B	100 (45.4)
Fluorene	86737		1*	2		D	5000 (2270)
Fulminic acid, mercury(II) salt	628864	Mercury fulminate	1*	4	P065	A	10 (4.54)
Hexachlorophene	70304	2,2'-Methylenbis(3,4,6-trichlorophenol)	1*	4	U132	B	100 (45.4)
Hydrogen sulfide	7783064	Hydrosulfuric acid Sulfur hydride	100	1,4	U135	B	100 (45.4)
Hydrosulfuric acid	7783064	Hydrogen sulfide Sulfur hydride	100	1,4	U135	B	100 (45.4)
Iron dextran ***	9004664	Ferric dextran ***	1*	4	U139	D	5000 (2270)
Isoprene	78795		1000	†		B	100 (45.4)
Lead ††	7439921		1*	2		X	1# (0.454)
Lead chloride	7758954		5000	†		B	100# (45.4)
Lead fluoroborate	13814865		5000	†		B	100 (45.4)
Lead fluoride	7783462		1000	†		B	100 (45.4)
Lead iodide	10101630		5000	†		B	100 (45.4)
Lead nitrate	16099748		5000	†		B	100# (45.4)
Lead stearate	7428480 1072351 52852592 56189094		5000	†		D	5000 (2270)
Lead sulfate	15739807 7446142		5000	1		B	100 (45.4)
Lead sulfide	1314870		5000	†		D	5000 (2270)
Lead thiocyanate	592870		5000	1		B	100 (45.4)
Mercuric nitrate	10045940		10	1		A	10 (4.54)
Mercuric sulfate	7783359		10	1		A	10 (4.54)
Mercuric thiocyanate	592858		10	1		A	10 (4.54)

TABLE 302.4 - LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code †	RCRA Waste Number	Category	Pounds(Kg)
Mercurous nitrate.....	10415755		10	1		A	10 (4.54)
Mercury fulminate.....	628864	Fulminic acid, mercury(II) salt.....	1*	4	P065	A	10 (4.54)
Mercury, (acetato-O)phenyl.....	62384	Phenylmercuric acetate.....	1*	4	P092	B	100 (45.4)
Methanamine, N-methyl.....	124403	Dimethylamine.....	1000	1,4	U092	C	1000 (454)
Methane, chloro.....	74873	Methyl chloride.....	1*	2,4	U045	X	1# (0.454)
Methyl chloride.....	74873	Methane, chloro.....	1*	2,4	U045	X	1# (0.454)
Methyl parathion.....	298000	O,O-Dimethyl O-p-nitrophenyl phosphorothioate.....	100	1,4	P071	B	100 (45.4)
2,2'-Methylenebis(3,4,6-trichlorophenol).....	70304	Hexachlorophene.....	1*	4	U132	B	100 (45.4)
Monoethylamine.....	75047		1000	1		B	100 (45.4)
Pentachlorobenzene.....	608935	Benzene, pentachloro.....	1*	4	U183	A	10 (4.54)
Pentachloroethane.....	78017	Ethane, pentachloro.....	1*	4	U184	X	1# (0.454)
Phenanthrene.....	85018		1*	2		D	5000 (2270)
Phenol.....	108952	Benzene, hydroxy.....	1000	1,2,4	U188	C	1000 (454)
Phenylmercuric acetate.....	62384	Mercury, (acetato-O)phenyl.....	1*	4	P092	B	100 (45.4)
Phorate.....	298022	Phosphorodithioic acid, O,O-diethyl S-(ethylthio) methyl ester.....	1*	4	P094	A	10 (4.54)
Phosphorodithioic acid, O,O-diethyl S-(ethylthio) methyl ester.....	298022	Phorate.....	1*	4	P094	A	10 (4.54)
Plumbane, tetraethyl.....	78002	Tetraethyl lead.....	100	1,4	P110	A	10# (4.54)
Propene, 1,3-dichloro.....	542756	1,3-Dichloropropene.....	5000	1,2,4	U084	B	100# (45.4)
Pyrene.....	129000		1*	2		D	5000 (2270)
Pyridine.....	110861		1*	4	U186	C	1000 (454)
Pyrophosphoric acid, tetraethyl ester.....	107493	Tetraethyl pyrophosphate.....	100	1,4	P111	A	10 (4.54)
Selenious acid.....	7783008		1*	4	U204	A	10 (4.54)
Selenium ††.....	7782492		1*	2		B	100 (45.4)
Selenium dioxide.....	7446084	Selenium oxide.....	1000	1,4	U204	A	10 (4.54)
Selenium oxide.....	7446084	Selenium dioxide.....	1000	1,4	U204	A	10 (4.54)
Selenourea.....	630104	Carbamimidoselenic acid.....	1*	4	P103	C	1000 (454)
Sodium bifluoride.....	1333831		5000	1		B	100 (45.4)
Sodium nitrite.....	7832000		100	1		B	100 (45.4)
Sodium selenite.....	10102188		1000	1		B	100 (45.4)
Sulfur hydride.....	7783064	Hydrogen sulfide..... Hydrosulfuric acid	100	1,4	U135	B	100 (45.4)
Sulfuric acid, thallium(I) salt.....	7446186 10031591	Thallium(I) sulfate.....	1000	1,4	P115	B	100 (45.4)
Tetraethyl lead.....	78002	Plumbane, tetraethyl.....	100	1,4	P110	A	10# (4.54)
Tetraethyl pyrophosphate.....	107493	Pyrophosphoric acid, tetraethyl ester.....	100	1,4	P111	A	10 (4.54)
Thallic oxide.....	1314325	Thallium(III) oxide.....	1*	4	P113	B	100 (45.4)
Thallium ††.....	7440280		1*	2		C	1000 (454)
Thallium(I) acetate.....	563688	Acetic acid, thallium(I) salt.....	1*	4	U214	B	100 (45.4)
Thallium(I) carbonate.....	6533739	Carbonic acid, dithallium(I) salt.....	1*	4	U215	B	100 (45.4)
Thallium(I) chloride.....	7791120		1*	4	U216	B	100 (45.4)
Thallium(I) nitrate.....	10102451		1*	4	U217	B	100 (45.4)
Thallium(III) oxide.....	1314325	Thallic oxide.....	1*	4	P113	B	100 (45.4)
Thallium(I) selenide.....	12039520		1*	4	P114	C	1000 (454)

TABLE 302.4 - LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code †	RCRA Waste Number	Catego-ry	Pounds(Kg)
Thallium(I) sulfate	7446186 10031591	Sulfuric acid, thallium(I) salt	1000	1,4	P115	B	100 (45.4)
o-Toluidine	95534	2-Amino-1-methyl benzene	1*	4	U328	X	1# (0.454)
p-Toluidine	106490	4-Amino-1-methyl benzene	1*	4	U353	X	1# (0.454)
Trichlorfon	52686		1000	1		B	100 (45.4)
Trimethylamine	75503		1000	1		B	100 (45.4)
sym-Trinitrobenzene	99354	Benzene, 1,3,5-trinitro	1*	4	U234	A	10 (4.54)
Unlisted Hazardous Wastes Characteristic of EP Toxicity	N.A.						
Selenium D010	N.A.		1*	4	D010	A	10 (4.54)
Uranyl acetate ****	541093		5000	1		B	100 (45.4)
Uranyl nitrate ****	10102064		5000	1		B	100 (45.4)
Vanadium(V) oxide	1314621	Vanadium pentoxide	1000	1,4	P120	C	1000 (454)
Vanadium pentoxide	1314621	Vanadium(V) oxide	1000	1,4	P120	C	1000 (454)
Vanadyl sulfate	27774136		1000	1		C	1000 (454)
Zinc ††	7440668		1*	2		C	1000 (454)
Zinc acetate	557346		1000	1		C	1000 (454)
Zinc ammonium chloride	52628259		5000	1		C	1000 (454)
Zinc borate	1332076		1000	1		C	1000 (454)
Zinc bromide	7699458		5000	1		C	1000 (454)
Zinc carbonate	3486359		1000	1		C	1000 (454)
Zinc chloride	7646957		5000	1		C	1000 (454)
Zinc cyanide	557211		10	1,4	P121	A	10 (4.54)
Zinc fluoride	7783495		1000	1		C	1000 (454)
Zinc formate	557415		1000	1		C	1000 (454)
Zinc hydrosulfite	7779864		1000	1		C	1000 (454)
Zinc nitrate	7779866		5000	1		C	1000 (454)
Zinc phenolsulfonate	127822		5000	1		D	5000 (2270)
Zinc phosphide	1314847		1000	1,4	P122	B	100 (45.4)
Zinc silicofluoride	16871719		5000	1		D	5000 (2270)
Zinc sulfate	7733020		1000	1		C	1000 (454)
F004			1*	4	F004	C	1000# (454)
The following spent non-halogenated solvents and the still bottoms from the recovery of these solvents: (a) Cresols/Cresylic acid (b) Nitrobenzene							
F005			1*	4	F005	B	100 (45.4)
The following spent non-halogenated solvents and the still bottoms from the recovery of these solvents: (a) Toluene (b) Methyl ethyl ketone (c) Carbon disulfide (d) Isobutanol (e) Pyridine							
F020			1*	4	F020	X	1# (0.454)
Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of hexachlorophene from highly purified 2,4,5-trichlorophenol.)							

TABLE 302.4 - LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code †	RCRA Waste Number	Category	Pounds(Kg)
F021 Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce its derivatives.			1*	4	F021	X	1# (0.454)
F022 Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions.			1*	4	F022	X	1# (0.454)
F023 Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- and tetrachlorophenols. (This listing does not include wastes from equipment used only for the production or use of hexachlorophene from highly purified 2,4,5-trichlorophenol.)			1*	4	F023	X	1# (0.454)
F026 Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline conditions.			1*	4	F026	X	1# (0.454)
F027 Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component.)			1*	4	F027	X	1# (0.454)
F028 Residues resulting from the incineration or thermal treatment of soil contaminated with EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027.			1*	4	F028	X	1# (0.454)
K026 Stripping still tails from the production of methyl ethyl pyridines			1*	4	K026	C	1000 (454)
K039 Filter cake from the filtration of diethylphosphorodithioic acid in the production of phosphate			1*	4	K039	A	10 (4.54)
K046 Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds			1*	4	K046	B	100 (45.4)
K052 Tank bottoms (lead) from the petroleum refining industry			1*	4	K052	A	10# (4.54)
K087 Decanter tank tar sludge from coking operations			1*	4	K087	B	100 (45.4)
K111 Product washwaters from the production of dinitrotoluene via nitration of toluene.			1*	4	K111	X	1# (0.454)
K112 Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene.			1*	4	K112	X	1# (0.454)
K113 Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.			1*	4	K113	X	1# (0.454)



TABLE 302.4 - LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code †	RCRA Waste Number	Catego-ry	Pounds(Kg)
K114 Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.			1*	4	K114	X	1# (0.454)
K115 Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.			1*	4	K115	X	1# (0.454)
K116 Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine.			1*	4	K116	X	1# (0.454)
K117 Wastewater from the reaction vent gas scrubber in the production of ethylene bromide via bromination of ethene.			1*	4	K117	X	1# (0.454)
K118 Spent absorbent solids from purification of ethylene dibromide in the production of ethylene dibromide.			1*	4	K118	X	1# (0.454)
K136 Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.			1*	4	K136	X	1# (0.454)

† - indicates the statutory source as defined by 1, 2, 3, or 4 below  
 †† - no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is equal to or exceeds 100 micrometers (0.004 inches)  
 1 - indicates that the statutory source for designation of this hazardous substance under CERCLA is CWA Section 311(b)(4)  
 2 - indicates that the statutory source for designation of this hazardous substance under CERCLA is CWA Section 307(a)  
 3 - indicates that the statutory source for designation of this hazardous substance under CERCLA is CAA Section 112  
 4 - indicates that the statutory source for designation of this hazardous substance under CERCLA is RCRA Section 3001  
 1\* - indicates that the 1-pound RQ is a CERCLA statutory RQ  
 \*\*\* - Iron dextran was designated as a hazardous substance under CERCLA solely because of its listing as a hazardous waste under Section 3001 of RCRA. The Agency recently proposed to delist iron dextran under RCRA(50 FR 46468-46470, November 8,1985). The Agency has also proposed to delist iron dextran from Table 302.4 of 40 CFR 302.4 and thereby remove its designation as a CERCLA hazardous substance.  
 \*\*\*\* - Uranyl acetate and uranyl nitrate currently are being evaluated for their radioactive properties. Their RQs may be further adjusted in a future rulemaking adjusting the RQ of radionuclides.  
 # - indicates that the RQ is subject to change when the assessment of potential carcinogenicity and/or chronic toxicity is completed

APPENDIX A - SEQUENTIAL CAS REGISTRY NUMBER LIST OF CERCLA HAZARDOUS SUBSTANCES

CASRN	Hazardous Substance
52686	Trichlorfon
62384	Mercury, (acetato-O)phenyl-Phenylmercuric acetate
70304	Hexachlorophene 2,2'-Methylenebis(3,4,6-trichlorophenol)
74873	Methane, chloro-Methyl chloride
75003	Chloroethane
75047	Monoethylamine
75150	Carbon bisulfide Carbon disulfide
75503	Trimethylamine
76017	Ethane, pentachloro-Pentachloroethane
78002	Plumbane, tetraethyl-Tetraethyl lead
78795	Isoprene
78886	2,3-Dichloropropene (isomer)

APPENDIX A - SEQUENTIAL CAS REGISTRY NUMBER LIST OF CERCLA HAZARDOUS SUBSTANCES—Continued

CASRN	Hazardous Substance
83329	Acenaphthene
85018	Phenanthrene
86737	Fluorene
95487	o-Cresol o-Cresylic acid
95534	o-Toluidine 2-Amino-1-methyl benzene
89354	Benzene, 1,3,5-trinitro-sym-Trinitrobenzene
106445	p-Cresol p-Cresylic acid
106490	p-Toluidine 4-Amino-1-methyl benzene
106514	p-Benzoquinone 1,4-Cyclohexadienedione
107493	Pyrophosphoric acid, tetraethyl ester Tetraethyl pyrophosphate
108394	m-Cresol m-Cresylic acid

APPENDIX A - SEQUENTIAL CAS REGISTRY NUMBER LIST OF CERCLA HAZARDOUS SUBSTANCES—Continued

CASRN	Hazardous Substance
108952	Benzene, hydroxy-Phenol
109897	Diethylamine
110805	Ethylene glycol monoethyl ether 2-Ethoxyethanol
110861	Pyridine
120127	Anthracene
124403	Dimethylamine Methanamine, N-methyl-
127822	Zinc phenolsulfonate
129000	Pyrene
133062	Captan
191242	Benzo[ghi]perylene
206440	Benzo[k]fluorene Fluoranthene
208968	Acenaphthylene
288000	Methyl parathion O,O-Dimethyl O-p-nitrophenyl phosphorothioate

**Before the Environmental Quality Commission of the State of Oregon**

Proposed adoption of temporary revisions to	)	Statement of Need
"Definition" OAR 340-108-002(9)(b);	)	for Proposed Rule and
"Subdivision B: Reportable Quantities"	)	Fiscal and Economic
OAR 340-108-010(1)(d) and (2) and repeal	)	Impact
OAR 340 - Division 108 - Appendix I	)	

**Statutory Authority**

ORS 466.205, .640 and .645 require cleanup of spills and releases of oil or hazardous materials, including hazardous substances, hazardous waste, radioactive material and waste and communicable disease agents, and impose strict liability without regard to fault.

ORS 466.020 and .625 direct the Environmental Quality Commission to adopt rules necessary to carry out the cleanup requirements.

**Need for the Rule**

The Department recently analyzed data from 88 spills of oil or hazardous materials covering the period October 1 to December 19, 1986. During that period only 4% of the spills involved products that spilled in quantities between the state and federal reportable quantity level. Twenty-three (23) percent spilled quantities greater than the federal and state level. Fifty-five (55) percent involved quantities less than the state and federal levels. The rest involved oil spilling on land in quantities greater than 42 gallons.

In addition, the Department learned that 66% of all initial reports of spills and releases are made by someone other than the responsible party.

Based on these facts, the Department is proposing to revise its reportable quantity values to be the same as the federal values in 40 CFR Table 302.4 as amended prior to January 1, 1987.

**Principal Documents Relied Upon**

ORS Chapter 466

OAR 340 - Division 108

40 Code of Federal Regulation - Part 302

April 4, 1985 Federal Register - Notification Requirements; Reportable Quantity Adjustments; Final Rule and Proposed Rule

May 25, 1983 Federal Register - Notification Requirements; Reportable Quantity Adjustments; . . .

August 29, 1979 Federal Register - Hazardous Substances; Determination of Reportable Quantities; Designation; . . .

March 13, 1978 Federal Register - Water Programs: Hazardous Substances

March, 1985 - Technical Background Document to Support Rulemaking Pursuant to CERCLA Section 102- Volumes 1 and 2

**Fiscal and Economic Impact**

Revision of similar but different state reportable quantity values to make them the same as federal reportable quantity values should have a slight positive economic impact on all business by making compliance easier. Rather than tracking two values, the revision provides for consistency between state and federal reportable quantity values.

Before the Environmental Quality Commission of the State of Oregon

Proposed adoption of temporary revisions to	)	Land Use Consistency
"Definitions" OAR 340-108-002(9)(b)	)	
"Subdivision B: Reportable Quantities"	)	
OAR 340-108-010(1)(d) and (2) and repeal	)	
OAR 340 - Division 108 - Appendix I	)	

The proposed rules do not affect land use as defined in the Department's coordination program approved by the Land Conservation and Development Commission.

*Oregon Department of Environmental Quality*

## **A CHANCE TO COMMENT ON...**

**Proposed Rules Amending Spill Cleanup Requirements**

Date Prepared: 1/8/87  
Hearing Date: 1/23/87  
Comments Due: 1/23/87

**WHO IS  
AFFECTED:**

Persons who manufacture, produce, distribute, store, handle, transport or otherwise use oil and hazardous materials including hazardous substances and hazardous waste.

**BACKGROUND**

Persons owning or having control over oil or hazardous materials that is spilled or released must report the spill or release if a certain quantity is spilled or released. The current reportable (RQ) quantity level is similar to but lower than comparable federal levels at all but the one pound level. Wherein EPA uses levels of 10, 100, 1,000 and 5,000 pounds, the Department used 1, 10, 100 and 500 pounds.

**WHAT IS  
PROPOSED:**

Adopt a temporary rule to revise state reportable quantity levels to be the same as federal reportable quantity levels in 40 CFR Table 302.4.

**WHAT ARE THE  
HIGHLIGHTS:**

The Department just completed a detailed analysis of its reportable quantity rules. Of 88 products spilled or released during the period October 1 and December 19, 1986 only three incidents involved quantities between the state and federal number. Since so few spills are affected by the state's lower levels, and since different rules make it more difficult for business to comply with environmental regulations, the Department is proposing to adopt the federal reportable quantity levels.

**HOW TO  
COMMENT:**

A Public Hearing to receive oral or written comments is scheduled for:

Friday, January 23, 1987  
10:00 a.m.  
DEQ Portland Headquarters  
811 S. W. Sixth Avenue

Written comments may be submitted at the Public Hearing or mailed to DEQ, Hazardous and Solid Waste Division, Attention: Richard P. Reiter, 811 S. W. Sixth Avenue, Portland, OR 97204, and must be received by close of business (5:00 p.m.) on January 22, 1987.

**WHAT IS THE  
NEXT STEP:**

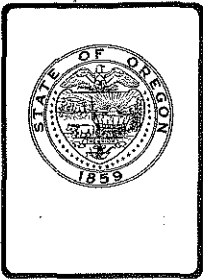
After the Public Hearing, the Environmental Quality Commission may adopt as recommended, amend and adopt, or take no action. Within 180 days the Department will hold additional public hearings to make this proposed temporary rule permanent.



811 S.W. 6th Avenue  
Portland, OR 97204

**FOR FURTHER INFORMATION:**

Contact the person or division identified in the public notice by calling 229-5696 in the Portland area. To avoid long distance charges from other parts of the state, call 1-800-452-4011.



## Environmental Quality Commission

Mailbox Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

811 S.W. Sixth Avenue, Portland, OR 97204

### MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item H, January 23, 1987, EQC Meeting

Informational Report: Eagle-Picher Minerals, Inc.

### Background

During the Public Forum at the December 12, 1986 Environmental Quality Commission Meeting, concern was raised by members of the public regarding noise and air pollution levels emitted from Eagle-Picher Minerals, Inc.. This report addresses those concerns.

Eagle-Picher Minerals, Inc. operates a diatomaceous earth processing plant on 300 acres approximately 7.5 miles west of Vale, Oregon. Natural diatomite consists mainly of the siliceous shells of fossilized single-celled aquatic plants. The raw material is mined approximately 65 miles west of the plant and trucked to the site where it is processed by drying, flux-calcining, and sizing into a finished product. After the unloading of the raw material and initial grinding, the process is contained within a closed system.

The finished product is used as a filtration media. In this application, diatomite is added to a liquid for purpose of removing suspended solids and producing brilliant clarity. Typical uses include the filtration of sugar juices (beet, cane, corn), fruit juices, edible oils and fats, other foods and beverages, pharmaceuticals, potable water, beer and wine.

The facility has been a concern of the neighboring residents since the announcement of the intended installation. These concerns included air pollution and noise.

### Air Quality

The Department's Air Contaminant Discharge Permit was issued to ensure compliance with applicable Air Quality standards necessary to provide protection of the public. The permit was issued in August 1984 and production commenced in July 1986.

The company has installed a high level of particulate emission control at their facility. All baghouses have been performance tested, as required by their permit, and are well below permitted limits.

Since the startup of this facility a number of breakdowns and fugitive emission problems have arisen which resulted in complaints from adjacent property owners. These discharges have required Departmental action to ensure compliance with the air permit limits, and to address the health concerns raised by the neighbors.

At the December 12, 1986 Environmental Quality Commission meeting, comments were received from Mr. William Schneider who owns property adjacent to and north of the plant. Mr. Schneider's residence is located approximately 3,500 feet horizontal distance on a bluff approximately 185 feet vertical distance above the plant. Comments were also received from Mr. Jack Torrey whose residence is north easterly at a horizontal distance of approximately 3,900 feet and a vertical distance of 120 feet above the plant.

In response to correspondence received from Mr. Schneider regarding his concerns, the Department advised him of our current program status by letter dated December 10, 1986 (Attachment I). Mr. Schneider again expressed his concerns to the Department by letter dated December 20, 1986 (Attachment II).

Following startup of the facility in July 1986, the Department conducted a number of plant-site inspections. These inspections have identified a number of practices and start-up problems which have resulted in diatomaceous earth and finished material becoming wind-entrained, causing public complaint and concern for health. These fugitive dust problems have resulted from conveyor leakage, uncovered dust containers, plugged product transfer lines, careless handling of cleaned up material, open truck loading of reject material, kiln flame-out and inadequate attention to clean-up of spilled material. These violations result in unquantified but clearly unacceptable emission levels. Because the emissions from these fugitive sources and upset conditions cannot be quantified, the Department cannot perform any meaningful impact analysis of those emissions. Even so, they are clearly a permit violation which must be corrected. The Department's position has been to require strict compliance with the permit limits, including those limits regulating fugitive emissions and plant upset conditions.

As a result of the Department inspections, the company was issued a "Notice of Violation" on September 10, 1986 and a five-day Notice of Intent to Assess a Civil Penalty on November 21, 1986. In response to these enforcement actions the company requested a meeting with Departmental staff which was held on December 18, 1986. At that time the company outlined a program they felt would achieve compliance (Attachment III).

Eagle-Picher has completed 16 of the items listed which addressed the Department's concerns. Three additional major items have received corporate funding approval and engineering has been completed.

The Department believes that these emission reduction actions will allow Eagle-Picher to attain compliance with permit conditions. However, the company's continual attention to all plant areas will be needed to maintain this status. The Department will continue to inspect and observe plant operations and take whatever action is necessary (including the assessment of civil penalties) to assure continual compliance.

At the Department's request the company is currently working with consultants to establish an ambient particulate sampling program to quantify ambient impact levels.

### Noise

With respect to noise control, Eagle-Picher is subject to the Department's rule for new industrial noise sources referenced in OAR 340-35-035 (1) (b) (B) and was informed of this requirement on February 23, 1984, prior to plant construction but during the planning process.

This rule applies only to industrial sources which locate on previously unused sites and limits noise emissions to 10 decibels (dBA), above pre-existing ambient  $L_{50}$  and  $L_{10}$  noise levels ( $L_{50}$  and  $L_{10}$  are levels which are equalled or exceeded 50% and 10% of any hour) at noise sensitive properties (i.e. residential).

The rule's primary purpose is to protect existing noise sensitive properties in tranquil settings, such as rural Malheur County, from unreasonable exposure to excessive noise caused by new commercial or industrial activities.

In response to public complaints of excessive noise, and pursuant to the above referenced rule, the Department required Eagle-Picher to submit ambient sound levels with plant activities halted to simulate pre-existing ambient conditions. These data were submitted and analyzed.

Based on the information submitted, the calculated mean ambient noise levels for the hours of 1 a.m. to 5 a.m. (Quietest hours during the sampling period) are  $L_{50}$  - 28 dBA and  $L_{10}$  - 34 dBA. Using this data base, the Department has established maximum nighttime allowable statistical noise limits for source operations as follows:

### Nighttime Sound Pressure Limits at Nearby Residential Property

$L_1$  - 60 dBA  
 $L_{10}$  - 44 dBA  
 $L_{50}$  - 38 dBA

It is important to note that every 10 decibel increase above a reference sound level is subjectively heard as a doubling in loudness. More specifically, a 10 decibel increase doubles the perceived loudness level, a 20 decibel increase is perceived as four times as loud, etc. The allowable performance levels set forth above as required by OAR 340-35-035 (1) (b) (B), provides for a two fold increase in loudness above the previously existing ambient sound levels.

The data submitted suggests that Eagle-Picher's facility presently exceeds these standards by a margin of 9-12 decibels (twice as loud as the standards). In comparison, the current impacts exceed previously existing ambient levels by 19-22 decibels, or in subjective terminology, the plant generates sound levels approximately four times louder than those indigenous to the area.

Eagle-Picher Noise Levels at Residential Property (Swancutt's)  
October 14, 1986, 2 a.m.

L<sub>1</sub> - 56 dBA\*  
L<sub>10</sub> - 53 dBA\*  
L<sub>50</sub> - 50 dBA\*

\* Reportedly not all fans were in maximum operation and no railsiding operation.

Eagle-Picher has shown a good faith effort by retaining an acoustical consultant, submitting the requested data and by preparing a noise compliance program. This program consists of a noise control plan and time schedule for attaining compliance with allowable noise limits. The company's compliance proposal is included with this report as Attachment IV.

The program is in progress and is designed to mitigate noise from seven (7) major noise sources as follows:

1. Fan rotational speeds were reduced or fan wheels were changed to reduce noise by November, 1986.
2. Order silencers for the seven major sources by February 15, 1987. Install the silencers on or before May 15, 1987.

Mitigation of several secondary noise sources will be accomplished as needed according to the following schedule:

1. Install noise barriers around rotary positive displacement blowers by March 31, 1987.
2. Repair "scraping or screeching" noise from two (2) screw conveyors by March 31, 1987. Other mechanical noises would be addressed as they occur in an ongoing maintenance program.
3. Install silencers on small bin vent fan, and other small fans by May 15, 1987.

Eagle-Picher's acoustical engineer predicts in his report that control of the major noise sources will result in noise levels of 38 to 42 dBA. Full implementation of the compliance plan including secondary source controls is predicted to result in emission levels at DEQ's allowable limit on residential property of L<sub>50</sub> - 38 dBA. Their engineering consultant estimates noise compliance expenditures ranging from \$80,000 to \$120,000.



Eagle-Picher has said that all noise reduction components will be installed by May 15, 1987 and that final adjustment and inspection of the controls will be completed by May 31, 1987. Upon completion of the Company's compliance effort, staff will perform a site investigation to determine the compliance status of the facility pursuant to all applicable Rules and Standards.

SUMMARY

1. There have been significant fugitive dust violations emitted from the Eagle-Picher facility. Noise levels exceed the Department's Rules.
2. Citizen concerns have been expressed regarding air quality and noise levels.
3. The Department has initiated enforcement proceedings for air quality violations and required the submittal of a noise control plan.
4. Eagle-Picher has initiated measures to control air emissions which the Department believes will result in compliance.
5. Compliance with the noise standards will be a difficult task considering the margin of non-compliance. Eagle-Picher has, however, committed to a noise reduction program which includes control measures we believe may result in compliance. Upon completion of these control measures, the Department will confirm the compliance status of the Company. If non-compliance is determined, the Department will request that the Company take additional corrective action. It would not be the Department's intent to support a variance request from the Company until all feasible control measures have been implemented.

Director's Recommendation

The Department intends to continue to require Eagle-Picher to comply with both Air Quality and Noise standards. Further enforcement action will be initiated if necessary to ensure that compliance is achieved.

It is recommended that the Commission concur in this course of action.

  
Fred Hansen

- Attachment I. Letter to William Schneider  
Attachment II: Letter from William Schneider  
Attachment III: Letter from Eagle-Picher (Air Quality)  
Attachment IV: Letter from Eagle-Picher (Noise)



## Department of Environmental Quality

522 S.W. FIFTH AVENUE, BOX 1760, PORTLAND, OREGON 97207 PHONE: (503) 229-5696

December 10, 1986

William C. Schneider  
Route 1, Box 1750  
Vale, OR 97918

Dear Mr. Schneider:

In response to your letter of September 6, 1986 to Janet Fekete, and numerous conversations with Department staff, the Department wanted to provide you with the following update concerning the Eagle-Picher facility.

The Department issued an Air Contaminant Discharge Permit for the then proposed Eagle-Picher facility on August 30, 1984. This permit contained specific air emission limits for the process equipment and also strictly limited fugitive emissions.

Eagle-Picher began operation in about June of this year. The permit allowed the permittee 180 days to demonstrate compliance with emission limits from process emission points. The company has recently completed the compliance tests, but to date we have not received the test results for verification. They should be submitted soon.

Inspections by our Eastern Region office revealed violations of the Air Contaminant Discharge Permit concerning fugitive releases of diatomaceous earth.

On September 10, 1986, the Department issued a Notice of Violation and requested Eagle-Picher to immediately eliminate these violations. Follow-up inspections revealed violations similar to the first. On November 21, 1986, a formal Notice of Violation and Intent to assess civil penalties was issued to Eagle-Picher for the continuing violations. More inspections will be conducted soon to verify if compliance has been achieved. If further violations exist, the Department is prepared to take increasingly stronger enforcement actions.

The Department has reviewed the available literature concerning the potential toxic impacts of silicon dioxide dust. A summary of this review is attached for your information. Modelling of the ambient concentration levels based on the permitted levels yields a worst case concentration of  $34.3 \text{ ug/m}^3$  ( $22 \text{ ug/m}^3$  at the nearest house). Preliminary communication from Eagle-Picher indicates that the fraction of crystalline silica in the finished product could be up to 40 percent. The raw diatomaceous earth contains less than one percent crystalline silica. Approximately one-half of the permitted emissions come from the finish end of Eagle-Picher's process. The worst case ambient concentration of crystalline silica is therefore  $6.86 \text{ ug/m}^3$  ( $34.3 \times 1/2 \times .4$ ). The National Institute for Occupational Safety and Health (NIOSH) recommends that the permissible exposure limit for respirable, free crystalline silica be  $50 \text{ ug/m}^3$  averaged over a work shift of up to 10 hours per day, 40 hours per

William C. Schneider  
December 10, 1986  
Page 2

week. The worst case modelled levels are therefore far below the recommended standard.


The Department's concern relates primarily to the violations that have been observed by the Department and by you and other residents. These violations result in unquantified emission levels which, in all probability, exceed those levels analyzed by the Department. Because the emissions from these fugitive violations and upset conditions cannot be quantified, the Department cannot perform any meaningful analysis of those emissions. The Department's position, therefore, is to require strict compliance with the permit limits, including those limits regulating fugitive emissions and plant upset conditions.

The Department is continuing to pursue analysis of the Eagle-Picher emissions including seeking further information on the crystalline silica content of the emissions, and instituting ambient air monitoring around the plant.

Eagle-Picher is subject to Oregon's rule for new industrial noise sources referenced in OAR 340-35-035(1)(b)(B). The Department has required Eagle-Picher to submit ambient sound levels with plant activities halted to simulate preexisting ambient conditions. After the plant reached capacity, the Department requested the results of a noise emission source test during full operation.

Those results were received and have been analyzed. They show that residential properties nearby the facility are experiencing levels in excess of the applicable noise standards. Eagle-Picher Industries has already cooperated by retaining an acoustical consultant and submitting the requested data. The Department has now requested that a noise compliance program be submitted by January 2, 1987. This program will consist of a noise control plan and schedule that should lead to compliance with the allowable noise limits. When Eagle-Picher completes its noise reduction program, the Department will perform noise compliance testing to ensure that the regulations have been met.

The Department appreciates the observations that you have made of conditions that appear to be violations of the permitted limits. Please feel free to keep in touch with Dave Nichol if you have further observations to report.

Sincerely,  
  
Lloyd Kostow, Manager  
Program Operations  
Air Quality Division

LK:1  
AL124  
Enclosure  
cc: Air Quality Division, DEQ  
Laboratory Division, DEQ  
Eastern Region Office, DEQ  
Noise Control Section, DEQ

William C. Schneider  
December 10, 1986  
Page 2

week. The worst case modelled levels are therefore far below the recommended standard.

The Department's concern relates primarily to the violations that have been observed by the Department and by you and other residents. These violations result in unquantified emission levels which, in all probability, exceed those levels analyzed by the Department. Because the emissions from these fugitive violations and upset conditions cannot be quantified, the Department cannot perform any meaningful analysis of those emissions. The Department's position, therefore, is to require strict compliance with the permit limits, including those limits regulating fugitive emissions and plant upset conditions.

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Lloyd Kostow, Manager  
Program Operations  
Air Quality Division

LK:1

AL124

Enclosure

cc: Air Quality Division, DEQ  
Laboratory Division, DEQ  
Eastern Region Office, DEQ  
Noise Control Section, DEQ



## Department of Environmental Quality

522 S.W. FIFTH AVENUE, BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

Diatomaceous Earth CAS#68855-54-9

Amorphous Silica (Diatomaceous Earth) CAS #68855-54-9

$\text{SiO}_2$  is a colorless odorless solid occurring as crystals or white powder. Crystalline silica or free silica refers to the orientation of  $\text{SiO}_2$  molecules in a fixed pattern characterized as tetrahedral configuration of atoms within the crystals. The 3 most common crystalline forms of free silica encountered in industry are quartz, tridymite and cristobalite. Quartz, a mineral found in most classes of rocks, occurs in large amounts as sand in stream beds and seashores, and as a constituent of soils. Tridymite forms from quartz above  $870^\circ\text{C}$  into white or colorless platy orthorhombic crystals, while cristobalite forms above  $1470^\circ\text{C}$  into white cubic-system crystals. Amorphous silica or diatomaceous earth is colorless to gray powder whose subunits are arranged randomly in contrast to the strictly regular geometric arrangements of crystalline forms.

$\text{SiO}_2$  is an important industrial material from many standpoints. Silica sand is used in manufacturing glass and ceramics; used as abrasives; as filter medium; as filler in cosmetics, pharmaceuticals, paper and insecticides; used as flattening agent in paints, porcelain and scouring soaps; used in the manufacture of insulating materials; encountered during mining, quarrying, crushing, calcining and packing operations.

Pure diatomaceous earth, unprocessed and uncalcined, is inert and is known to cause no adverse effects on health. It is considered a nuisance dust. However calcination or heat processing of diatomaceous earth may produce crystalline silica (quartz, tridymite or cristobalite) which is known to cause adverse effects after acute and chronic exposures.

Acute silicosis, now rare, may occur under conditions of extremely high crystalline silica dust exposures particularly when the particle size of the dust is very small. This disease is rapidly progressive, may develop after only months from the initial exposure, and has been known to terminate in death. Acute silicosis has been reported among sandblasters and tunnel workers. Chronic silicosis or classical silicosis, usually has a latent period of 10 or more years, with gradual worsening of dyspnea on exertion, cough, expectoration, and eventual disability. Simple silicosis, in which lung nodules are less than 1.0 cm. in diameter (measured on chest x-ray film), is generally asymptomatic. It may however, be slowly progressive even in the absence of continuing exposure. With continued exposure, it can evolve into complicated silicosis in which nodules are greater than 1.0 cm. in diameter or are conglomerated. Progressive massive pulmonary fibrosis may follow. In advanced cases, patients may develop cardiopulmonary failure. Tuberculosis is still a common complication, though less so than in the past.

Crystalline silica has also been reported to cause fibrotic nodules in the eye analogous to pulmonary silicosis. It was also noted in an apparently unique report of involvement of the cornea in foundry workers who developed pulmonary silicosis exhibiting gradual decrease in visual acuity due to corneal opacities in the pupil.

Silicon dioxide is practically non-toxic to laboratory animals by gavage in acute dosages (oral rat LD50 = 3,160 mg/kg). However, silicosis similar to that seen in man has been produced in a number of animal species including rats, guinea pigs, rabbits, dogs and monkeys via inhalation exposure. These animal studies also demonstrated a capacity for the minerals to induce a fibrogenic response in organs other than the lung. When guinea pigs and rabbits were exposed for 8 hours per day, 6 days per week for up to 2 years to 4,400 mppcf (million particles per cubic foot) to respirable dust containing 91% quartz, cellular proliferation and fibrous tissue were observed in tracheobronchial lymph nodes and lungs after only a few months of exposure. After about 2 years, the lesions presented almost all the essential characteristics of silicotic nodules seen in human cases of silicosis.

Studies on the carcinogenicity of silicon dioxide have been reported in literature involving rats. Malignant lymphoma of the histiocytic type was produced after intrapleural injection of crystalline silica especially tridymite. Studies of the National Institute for Occupational Safety and Health (NIOSH) also reported carcinogenicity in laboratory animals after intratracheal instillation and dust inhalation of SiO<sub>2</sub> to laboratory animals.

The pesticidal effect of silica is seen in its use as component of insecticides for stored grain or other granular crops. Silicon dioxide, processed from diatomaceous earth, has also been used as an insecticide for roaches and ants by creating a mechanical barrier which insects must crawl through. It has been known to cause insects to die from dehydration.

The Permissible Exposure Limit (PEL) used as a federal standard for workplaces as set by the Occupational Safety and Health Administration (OSHA) for diatomaceous earth (respirable dust) contaminated with quartz tridymite or cristobalite follows:

$$\frac{10\text{mg}/\text{m}^3 \quad (10,000\ \mu\text{g}/\text{m}^3)}{\% \text{ quartz} + 2 \times \% \text{ tridymite} + 2 \times \% \text{ cristobalite}}$$

The State of Oregon uses the following:

$$\frac{10\text{mg}/\text{m}^3 \quad (10,000\ \mu\text{g}/\text{m}^3)}{\% \text{ quartz} + 2 \times \% \text{ tridymite} + 2 \times \% \text{ cristobalite} + 2}$$

The American Conference of Governmental Industrial Hygienists (ACGIH) recommends the following TLV - TWA's:

diatomaceous earth (with less than 1% quartz):  
10mg/m<sup>3</sup>, total dust; 5mg/m<sup>3</sup>, respirable dust  
cristobalite: 0.05 mg/m<sup>3</sup>, respirable dust  
tridymite: 0.05 mg/m<sup>3</sup> respirable dust  
quartz: 0.1 mg/m<sup>3</sup>, respirable dust

The National Institute for Occupational Safety and Health (NIOSH) recommends that the permissible exposure limit for respirable, free crystalline silica be 50 ug/m<sup>3</sup> averaged over a work shift of up to 10 hours per day, 40 hours per week.

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The National Institute for Occupational Safety and Health (NIOSH) recommends that the permissible exposure limit for respirable, free crystalline silica be 50 ug/m<sup>3</sup> averaged over a work shift of up to 10 hours per day, 40 hours per week.

For dust not contaminated with SiO<sub>2</sub>, the federal OSHA standard (PEL) is:

5mg/m<sup>3</sup>, respirable dust  
15mg/m<sup>3</sup>, total dust

Likewise, the State of Oregon PEL standards are:

5mg/m<sup>3</sup>, respirable dust  
10mg/m<sup>3</sup>, total dust

The PEL's used as a federal standard as set by OSHA for crystalline silica follow:

$\frac{10 \text{ mg/m}^3}{\% \text{ SiO}_2 + 2}$  (for respirable dust)

$\frac{30 \text{ mg/m}^3}{\% \text{ SiO}_2 + 2}$  (for total dust)

In occupational exposures dealing with mixtures containing diatomaceous earth and quartz, ACGIH recommends that the mixture formula:

$$\frac{C1}{T1} + \frac{C2}{T2}$$

be used where C1 is the concentration of diatomaceous earth, T1 is the TLV for diatomaceous earth, C2 is the concentration of quartz, T2 is the TLV for quartz. If the sum is greater than 1, then the threshold limit of the mixture should be considered as exceeded.

This is a summary of information from available literature and in no way reflects the quality of the literature or departmental policy.

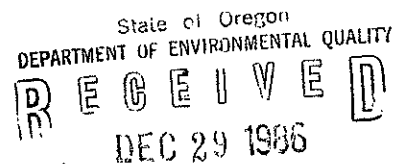


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1. National Institute for Occupational Safety and Health: Criteria for a Recommended Occupational Exposure to Crystalline Silica. NIOSH 75-10, Washington, D.C. (1974).
2. NIOSH/OSHA: Pocket Guide to Chemical Hazards. OHEW (NIOSH) Pub. no. 78-210. Washington, D.C. (1978).
3. National Institute for Occupational Safety and Health: Occupational Health Guide for Amorphous Silica (1978).
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5. Grant, W.M.: Toxicology of the Eye (2nd Ed.) Thomas, Springfield, Illinois. (1974).
6. Dauber J., et al: Experimental silicosis, morphologic and biochemical abnormalities produced by intratracheal instillation of quartz into guinea pig lung. A.M. Journal of Path. 3:101 (1980).
7. Stadler, K: Mechanism of the cytotoxicity of silicogenic powders. Betr. Silicose - Forsch (Pneumokoniose), 5:22 (1970).
8. Wagner, W.D., et al: Experimental evaluation of the threshold limit of cristobalite calcined diatomaceous earth. Am-Ind. Hyg. Assoc. 29:211-21, (1986).
10. Le Patourel, E. et al: Pesticidal composition comprising an insecticidal active sorptive dust, (1983).
11. "GOTCHA" insecticide label. EPA Reg. No. 5357-1.
12. Personal Communication with Frank Platek, NIOSH, Cincinnati, Ohio.
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14. Personal Communication with Mike Rodia, Accident Prevention Division, State of Oregon

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Yala, Oregon 97918  
20 December 1986

Mr. Fred Hansen  
D.E.Q.  
Portland, Oregon

OFFICE OF THE DIRECTOR

Dear Mr. Hansen:

In all due respect to Commissioner Buist's professional status and efforts to assuage our fears, I feel that it is extremely important that I comment on what I believe to be an erroneous statement made in response to my testimony regarding our concerns over the Eagle-Picher diatomaceous earth processing plant on the property next to us. The statement that the visible emissions posed no danger to us is very misleading for several well documented reasons:

1. To demonstrate to yourself the fallacy regarding the visibility of hazardous particles, look at this paper. I am sure that everyone realizes that this paper is visible. This paper is made of atoms which are not visible. The atoms form molecules which are the smallest particles of an element or compound capable of retaining chemical identity with the substance in mass. The atoms of silica and oxygen form the molecules of silicon dioxide, the substance with which we are concerned. The molecules form the various crystals of silicon dioxide, and it is the shape of the crystals which identify the various forms, tridymite, cristobalite etc. Cristobalite is considered to be second only to tridymite in its ability to cause silicosis. The size of the crystals determine the degree of hazard and the visibility of a single crystal.

Crystals that are 5 microns or larger in size are expelled naturally by the lungs and are not considered to cause silicosis. Crystals smaller than 5 microns are not naturally expelled and deposit in the deepest recesses in the lungs to cause silicosis. It is these smaller crystals which concern us. A micron is one thousandth of a millimeter or about one twenty-five thousandth of an inch. I have not found any one who can give a clear picture of just when particles become visible because there are several variables including the size, light quality and quantity, the contrast, and the relationship of the viewer, the light, and the particle. However, when enough particles are present, in other words when the concentration is dense enough, they are visible as a mass such as this paper is visible even though individual particles may not be visible. A particle of one micron in size is not visible to the naked eye, but we are seeing such dense clouds of silicon dioxide particles that they are visible from five and ten miles away and farther. I submitted a photo for your viewing at the hearing.

2. I believe Commissioner Buist implied that one would have to be locked up for years in a room in which the dust was so thick one could not see through it before contracting silicosis. This

conflicts with medical texts, USPHS literature, and OSHA safety standards. OSHA, USPHS, EPA, and DEQ safety standards which limit the concentrations of this material in the air speak in themselves of the hazardous nature of this material.

3. The visible dust emissions contain a mixture of particles of hazardous size as well as larger and less hazardous particles. Therefore, the more dust that is visible, the more particles there will be in the air of the hazardous size.

4. The larger particles which may not present a hazard of silicosis in themselves do present a hazard by stressing the lungs and inhibit the bodies ability to defend against the damages caused by small, dangerous particles.

5. The Malheur Valley presents an entirely different atmosphere than the sites of the other diatomaceous earth processing plant locations, and the relationship of our homes to the plant creates a much more hazardous situation. For instance, the purpose of emitting waste gases and material through stacks is to disperse these emissions into the air where they will be diluted as they disperse in the air or fall to the ground. Since the top of the Eagle-Picher stack is lower than our property and home, emissions from this plant sometimes flow directly to our home in almost undiluted form. Eagle-Picher permitted illegal trash burns of hazardous substances on their property on at least two occasions. I photographed the streams of black smoke which rose approximately 100 feet vertically then made a 90 degree turn to flow parallel to the ground for many miles. Just by chance, a DEQ inspector viewed one of the burns and cited Eagle-Picher for their illegal activity.

6. There are so few people working with this product where it is released into the air that if every one of them developed silicosis, the disease would still be considered rare when compared to more common diseases.

Because the Eagle-Picher representatives have presented so much false and misleading information, all of their statements should be suspect. As examples, they made the following statements:

The only emission is steam. I presented photos of their Lovelock, Nevada plant which they stated emitted only steam. Diatomaceous earth dust was so deep on ledges on the plant structures that they could hold no more, the highway edges were white with the dust, and the ground for hundreds of feet around the plant was white with and was mixed with accumulations of the same material that had been gathering for decades. In only six months, the Oregon DEQ has cited E-P for numerous violations on each of several visits. The Oregon DEQ has found the plant here in violation for illegal collections of this material, illegal storage, illegal transportation, illegal tanks, and illegal emissions into the air to name just a few problems.

Their manager has stated in the newspaper that no dust is visible in the air around the plant nor is it visible in their stack emissions, yet you have seen the dust in the air in the photos which I presented to you during the public forum.

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Their manager has stated in the newspaper that no dust is visible in the air around the plant nor is it visible in their vapor emissions, yet you have seen the dust in the air in the photo which I presented to you during the public forum.

He stated that their product does not contain the hazardous form of material, yet the DEQ presented testimony that Eagle-Picher's product contains up to 40% of cristobalite, the second most hazardous form of silicon dioxide (we have since been informed that their product contains between 40 and 50% cristobalite).

We were told that the plant would produce a noise level of 95 decibels which would diminish until it would be audible at our property line on a level of the human voice when talking normally. This level of sound was to be at our property line some five or six hundred yards from our home. We are awakened and kept awake by a noise level as high as 400 percent over the legal limit which is 38 decibels. In fact, the noise level at our front door as I write this letter is 54 to 56 decibels, and it is now 11:17 P.M. The DEQ has given this company months or possibly years to correct this problem.

Eagle-Picher representatives have made utterly false statements about the insecticidal affects of their products, boldly claiming that tests had been done by the entomologist from the University of Nevada, Reno "at their Lovelock plant." I testified to you that Dr. Harold Arnett stated to me that he has never spoken to an Eagle-Picher employee or officer about any such study, nor has he made such a study, and he further stated that the reason Eagle-Picher's plant at Lovelock may not affect the insect populations which are beneficial to agriculture is because that plant is not in an agricultural area of the Lovelock Valley.

Every one of these claims by Eagle-Picher has been proven false, so there is little question about the believability of this company's representatives. Is it any wonder then that former supporters of this company of Eagle-Picher now fear this company?

I'm sorry that I just don't know how to write a short letter about such a volume of material, and I appreciate your attention and consideration.

Sincerely,



Mr. B. Schneider

cc To each commission member  
Fred Hansen, DEQ

Rt 1 Box 1750  
Vale, Oregon 97918  
15 December 1986

Mr. Lloyd Kostow, Manager  
Program Operations  
Air Quality Division

*Copy to Mr. Hansen*

Dear Mr. Kostow:

I am replying to your letter regarding Eagle-Picher dated December 10th.

I appreciate your answers, however some very important questions were not answered. If you will refer to my letter to Janet Fekete dated September 6, 1986, you will find that I asked, not only about the pollution particles from stack emissions that will impact upon us, our livestock, and our property, but all emissions including fugitive emissions, the crystalline silica that will build up as deposits upon our property, and those deposits that will be recirculated countless times by the wind currents.

The standards set by NIOSH for employees do not apply to us for several reasons:

1. We are not notified to use protective devices for our protection when there are upsets at Eagle-Picher, nor do we keep these devices on hand.
2. Our time in contact or potential contact with diatomaceous earth and its silica content is much greater than 40 hours per week. We live in the proximity of this hazardous substance 168 hours per week and actually a greater percentage of the time than employees since they are away from the plant for vacations, sick leave, and when the plant is shut down for other reasons. For instance, the plant is shut down for cleanup which may not require the entire crew, and it is shut down for extended periods of time around holidays.
3. In the paragraph in which you state the quantity of silica impacting on the nearest home, I believe your figures are based upon stack emissions data supplied by the industry and do not include fugitive emissions. From my own observations and those of my neighbors, most of the dust emissions come from the finished end of the plant, either in the form of rejected finished product or finished product discharged into the air by faulty equipment. Therefore, dividing the amount of particulate matter by 2 presents a faulty result. Now, if the time weighted average for employees results in the NIOSH upper limit of 50  $\mu\text{g}/\text{cu. meter}$  figure, our exposure should be reduced commensurate with our greater exposure. For some of us, the exposure time can be 4.2 times as great as that of employees. The employees working inside of the plant buildings probably are protected from fugitive emissions by dust collecting equipment - We are not. The company has projected the buildings of at least two more processing units on the same site. This

will multiply the amount of pollution and noise by three which will impact on our homes and property to a greater extent than on employees who work mostly inside of the buildings having dust control equipment.

4. Employees are given medical examinations at company expense to determine if they may have some medical problem with the products. We have at least two neighbors who have respiratory problems, and I have had asthma in the past and lung damage from an accident, and so at least some of us are more likely to have problems with any form of dust, even inert dusts, and crystalline silica is much more of a threat to us than most farm dusts.

5. Although there may be no obvious history of silica related problems in the population, some of us have been exposed to loading doses of silica in the past and some of us are exposed to heavy concentrations of inert dusts during farming operations which will affect our abilities to cope with the emissions from Eagle-Picher.

6. Employees choose to accept their risks when they take employment - We were not given that choice.

In casual conversations with DEQ personnel, reference has been made to Janet Fekete's deep concern for our problem and the extra effort she made to research the literature in order to answer my questions. I am deeply grateful to Ms. Fekete for her efforts and am aware that this subject must have taken a great deal of her time. I and my neighbors are reasonable people and do not expect answers overnight when such efforts are required. Reference has been made to much more information than I find in your letter and the attached document titled Diatomaceous Earth CAS #68855-54-9. I would appreciate receiving this information which should be available to me.

I would also like to say that I am grateful for the concern and quick response from your Pendleton office. Mr. Nichol, who has visited the plant most often has been quick, efficient, and sincere. I even appreciate his criticisms of my observations which Mr. Nichol believe to be incorrect. His comments help me to better understand what I see, and I do try very hard to be honest and objective. Since Mr. Nichol has been the inspector with whom we have been in communication, we have not spoken to Mr. Gardels very often, but he too has been very reassuring.

I am sure that you are aware of the testimony Mr. Torrey and I gave before the Oregon Environmental Commission and the reply we received. In all due respect to the commission member who replied, at least a significant part of the answer would be better given by a physicist than a physician since the statement regarding the visibility of particles as described by this member is flawed. The only literature that I find which does not consider silica very hazardous seems to be from the industry itself or presented by those hired by the industry. I am going to repeat that our proximity to Eagle-Picher and our topographical relationship is quite different from those near



will multiply the amount of pollution and noise by three which will impact on our homes and property to a greater extent than on employees who work mostly inside of the buildings having dust control equipment.

4. Employees are given medical examinations at company expense to determine if they may have some medical problem with the products. We have at least two neighbors who have respiratory problems, and I have had asthma in the past and lung damage from an accident, and so at least some of us are more likely to have problems with any form of dust, even inert dusts, and crystalline silica is much more of a threat to us than most farm dusts.

5. Although there may be no obvious history of silica related problems in the population, some of us have been exposed to loading doses of silica in the past and some of us are exposed to heavy concentrations of inert dusts during farming operations which will affect our abilities to cope with the emissions from Eagle-Picher.

6. Employees choose to accept their risks when they take employment - We were not given that choice.

In casual conversations with DEQ personnel, reference has been made to Janet Fekete's deep concern for our problem and the extra effort she made to research the literature in order to answer my questions. I am deeply grateful to Ms. Fekete for her efforts and am aware that this subject must have taken a great deal of her time. I and my neighbors are reasonable people and do not expect answers overnight when such efforts are required. Reference has been made to much more information than I find in your letter and the attached document titled Diatomaceous Earth DAG #66885-84-3. I would appreciate receiving this information which should be available to me.

I would also like to say that I am grateful for the concern and quick response from your Pendleton office. Mr. Nichol, who has visited the plant most often has been quick, efficient, and sincere. I even appreciate his criticisms of my observations which Mr. Nichol believe to be incorrect. His comments help me to better understand what I see, and I do try very hard to be honest and objective. Since Mr. Nichol has been the inspector with whom we have been in communication, we have not spoken to Mr. Gardeis very often, but he too has been very reassuring.

I am sure that you are aware of the testimony Mr. Torrey and I gave before the Oregon Environmental Commission and the reply we received. In all due respect to the commission member who replied, at least a significant part of the answer would be better given by a physicist than a physician since the statement regarding the visibility of particles as described by this member is flawed. The only literature that I find which does not consider silica very hazardous seems to be from the industry itself or presented by those hired by the industry. I am going to repeat that our proximity to Eagle-Picher and our topographical relationship is quite different from those near

the Nevada plants, and we therefore have a unique situation here.

I am also repeating myself when I say that diatomaceous earth and the finished product from it is irritating to the eyes, the skin, and the respiratory tract. I am particularly sensitive.

We are deeply concerned because we have received information that at least two of the DEQ personnel who have appeared very objective about this matter are leaving the DEQ. Thus far the people with whom we have spoken have denied any political pressures, but I am not convinced.

In the area of Eagle-Picher's violation of the noise degradation law, we are having a hard time accepting the extension given to this company. I am aware that the DEQ had no authority to police the construction of the plant, but this company's callous disregard for us and our neighbors and for Oregon law in so many areas should result in a very hard line towards them. I am aware of the DEQ coming down hard on citizens who inadvertently violated the law, but this company hired experts to design their plant so their faulty design is inexcusable. You also state in your letter that the DEQ intends to level penalties for illegal emissions but it appears that the company can injure us for months or years with their noise. We are suffering, and I hope that you take this seriously. I was forced to ask a physician for medication so I could sleep when Eagle-Picher's noise trespasses into our home. The doctor deemed it wise to send me to a neurologist who ran tests to eliminate the possibility of an organic problem. My medical costs are now over \$970 just to find out that there is nothing wrong with me, and I find it highly objectionable that I must now take medication just to sleep in my own home. My doctor has suggested that for the sake of my health that I move away from Eagle-Picher. My nerves are becoming a mess. I have been able to recognize a definite pattern. The plant operates on a ten day work schedule followed by four days down. The first night that the plant is quiet, I still have sleep problems. The second and third nights I begin to gain more sleep time. By the fourth day, I begin to feel normal and sleep well that night. Then the entire problem begins again when the plant starts operating again. If things don't improve tremendously very soon, I will be forced to move out of my own home and come back only to work. If the DEQ can levy fines for air pollution, certainly your office can do the same for noise violations. In fact, I see nothing wrong with forcing the company to take emergency measures to bring their noise levels to within legal limits regardless of the cost to them. After all, they spent \$21 million dollars in litigation in just one three year period in their unsuccessful efforts to avoid remuneration to those they injured with their asbestos products. They can afford that amount much more easily than I can afford my doctor's bills and the threat of having insurance cancelled.

Since I am on the subject of asbestos, it appears to me that we could very well find, sometime in years to come, that silica did far more injury than first suspected by the public as happened as a result of exposure to asbestos. Under old guidelines 11.4% of the asbestos workers contracted asbestosis or cancer. Just this last year the guidelines were made more severe so that now it is predicted that 1.17% of the workers will suffer death or disability from asbestosis or cancer. Can you tell me what percentage of those exposed to silica are expected to contract silicosis, eye damage, or some other harmful effect?

And I have one last question, one that I asked of your staff in 1984. What does the DEQ define as the airshed for which this discharge permit was issued? I never did receive an answer to this question, but I did see somewhat of an explanation in a news release in 1984 after we had withdrawn our objections to Eagle-Picher's application. I think that since this company intends to build more units on this site that the air shed should be clearly defined now.

Sincerely,

*Bill Schneider*

Wm. C. Schneider

cc: Mr. Fred Hansen  
Ms. Janet Fekete  
Mr. Dave Nichol  
Representative Denny Jones  
Governor Victor Atiyeh  
Governor Elect Neal Goldschmidt

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Ms. Janet Fekete  
Mr. Dave Nichol  
Representative Danny Jones  
Governor Victor Atiyeh  
Governor Elect Neal Goldschmidt

INTRA-COMPANY  CORRESPONDENCE

Eagle-Picher Industries, Inc.

Office Celatom Plant

Date December 16, 1986

TO: R. W. PIEKARZ  
FROM: A. T. STROEBEL  
SUBJ: FUGITIVE DUST EMISSION CONTROL

Completed Actions

- 1) Shrouding on conveyor belt from pan feeder to Gruendler mill improved.
- 2) Additional vent lines to Gruendler mill and conveyor.
- 3) Gruendler Mill speed reduced.
- 4) Reduced frequency of discharging collected material from ore baghouse.
- 5) Skirting added to crude ore bin pan feeder.
- 6) Skirting added to pan feeders under fine ore bins.
- 7) Second mobile vacuum borrowed as spare.
- 8) Aurora hoppers for handling plant waste have been covered.
- 9) Waste product pile has been eliminated. Any material stacked outside will be stretchwrapped.
- 10) Full-time clean-up man added.
- 11) Waste product area has been cleaned & graveled.
- 12) Product and waste lines from blow through seal valves have had compressed air fittings added to avoid needing to take apart and clean.
- 13) Waste bin bag refeed station has been modified.
- 14) Waste bin bulk refeed station has been modified.
- 15) Delumper has been modified.
- 16) Kiln flame detector has been improved.

Committed Actions

- 1) Enclosure at waste loading station.
- 2) Strip doors for ore unloading building.
- 3) Route known reject direct to waste bin.

*Ted Stroebel*

Ted Stroebel

cc: V. J. Eisinger  
R. E. Malone

EAGLE EPICHER

December 22, 1986

ATTACHMENT IV  
EOC Agenda Item H  
January 23, 1987  
State of Oregon  
Dept. of Environmental Quality

RECEIVED  
DEC 24 1986

Noise Pollution Control

Mr. Gerald T. Wilson  
Environmental Noise Specialist  
Noise Pollution Control  
Department of Environmental Quality  
811 S.W. Sixth Avenue  
Portland, OR 97204

Dear Mr. Wilson:

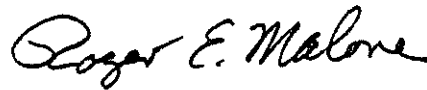
Enclosed is a comprehensive noise compliance program and implementation schedule prepared for us by our sound consultant, Thomas R. Norris, P.E., and Associates.

This plan specifies and schedules by dates the intended phases of engineering, purchasing and installation of various noise control modifications we will be making on our Celatom, Oregon Plant in Malheur County to achieve compliance.

A copy of Mr. Norris' report is being sent directly to the neighbors whose residences are in the immediate vicinity of our plant so they will be aware of the actions being taken and the intended time table.

We trust that you will find these plans suitable and are most anxious to complete this program as outlined.

Very truly yours,



Roger E. Malone

REM:tml

Encs.: Norris' Report

cc: Marc L. Greenberg  
R.W. Piekarz  
Jack D. Grinton  
To neighbors as shown on attached

INTRA-COMPANY  CORRESPONDENCE

Eagle-Picher Minerals, Inc.

Office

Date December 22, 1986

Names and Addresses of neighbors:

Bill Moore	Rural Route #1	Box 451
Bob Grove	Rural Route #1	Box 1710
Bill Schneider	"	"
Jack Torre	"	"
John Taylor	"	"
Dan & Donna Tolman	"	"
Allen & Vicki Bixby	"	"
Marie Swancutt	"	"
Neil & Martha Recknagle	"	"
Hank Bishop	"	"
John Hesse	"	"

INTRA-COMPANY



CORRESPONDENCE

Eagle-Picher Minerals, Inc.

Office

Date December 22, 1986

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Marie Swancutt	"	"
Neil & Martha Recknagle	"	"
Hank Bishop	"	"
John Hesse	"	"



# consultants in engineering acoustics

Analysis and Design for Vibration and Noise Control

• Thomas R. Norris, P.E., and Associates

December 18, 1986

Mr. Roger E. Malone  
President  
Eagle-Picher Minerals, Inc.  
P. O. Box 12130  
Reno, Nevada 89510

State of Oregon  
Dept. of Environmental Quality

RECEIVED

DEC 24 1986

Subject: Noise Control Plan

Noise Pollution Control

Dear Mr. Malone:

You requested a noise control plan, that, when fully implemented, will result in compliance to the Oregon environmental noise limits that you provided. This letter is submitted in response to that request.

This Environmental Noise Control Plan for the Celatom, Oregon plant proposes the necessary steps and a schedule that, when implemented, would achieve compliance with environmental noise requirements. Detailed noise control designs will be submitted according to the attached schedule, which is a part of this plan.

Noise control design work is continuing, and some noise controls are now in effect. Specifically, noise barriers have been installed, Fan 1-41 has been adequately slowed, and Fan 1-71 and 1-25-C have parts on order for slowing. However, the noise reduction may not be generally noticed until most other noise sources in the plant have been muffled.

After the noise is reduced, a final report will document the noise reductions. It is anticipated that this would be prepared by Mr. Jim Buntin of Brown-Buntin Associates.

This plan is organized into sections on Engineering Noise Reduction Goals, Major Noise Source Control, Secondary Noise Source Control, and a Schedule.

## Engineering Noise Reduction Goals

The following discussion develops noise reduction goals for engineering purposes. These discussions concern A-weighted, full octave band, and one-third octave band noise limits.

Mr. Roger E. Malone  
Eagle-Picher Minerals, Inc.  
December 18, 1986 Page 2

1. A-weighted criteria. The Oregon DEQ has identified an intended noise limit of an L50 of 38 dBA at residences, based on information provided to Eagle-Picher and to DEQ by Brown-Buntin Associates. This limit is dependent on assumptions regarding background noise levels. Noise levels are to be measured at residences. The Grove residence, located south of the plant, is the closest. Achieving compliance here will require the most noise reduction, and sets most design criteria.

According to Mr. Jim Buntin's report of October 21, 1986, and subsequent to lowering the rpm of some fans after our (CIEA's) initial visit, existing noise levels are an L50 of 49 dBA at night at the Grove residence (Site 4), as documented on Table III.

CIEA analyzed a nighttime tape recording made by Mr. Buntin on Loop Road near the Grove's mailbox on October 14, 1986. This location is substantially closer to the plant than the Grove residence. The noise level at the mailbox location was 55 dBA. This noise level was compared to the reported noise level as follows. Projecting this sound level to the Grove residence results in 50 dBA, assuming nighttime atmospheric conditions that favor efficient sound transmission. This is very consistent with the 49 dBA measured at the Grove residence by Mr. Buntin.

Thus, conservatively, the noise reduction required is 12 dBA, taking the difference between the higher of 49 and 50 dBA and the goal of 38 dBA.

2. The Oregon Administrative Rules' section on noise. This regulation also provides octave band noise limits. However, for practical reasons, plant sounds meeting the A-weighted limit of 38 dBA will also be well within the octave band noise limits.

3. One-third Octave Band Analysis. The Oregon noise regulation provides pure tone limits, as evidenced by one-third octave band noise levels. CIEA measurements were made on August 14, 1986 at numerous locations around the plant. These data show that one-third octave band noise levels in all directions now comply with the one-third octave requirements. The one-third octave noise limits are based on differences between adjacent frequency bands. Therefore, as plant noise is reduced, diligence will be necessary in order to design so that compliance is assured.

The most stringent regulatory requirement of those above is the A-weighted criterion of 38 dBA, requiring 12 dBA of reduction. As it is not practical to reduce all noise sources by 12 dBA, some fans will require more noise control than 12 dBA, and most minor sources less.

Mr. Roger E. Malone  
Eagle-Picher Minerals, Inc.  
December 18, 1986 Page 2

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Mr. Roger E. Malone  
Eagle-Picher Minerals, Inc.  
December 18, 1986 Page 3

After silencing, the plant will have the rough equivalent of ten major noise sources. To comply, the ten sources measured individually (the remaining nine not operating) must not exceed an average of 28 dBA, so that when operating together their sum will not exceed 38 dBA. For practical reasons, the difficult to silence sources will slightly exceed 28 dBA and the more readily silenced sources will be less; however, the average noise energy still must not exceed 28 dBA.

After approval of the noise control plan, detailed noise control designs will be submitted. The next sections discuss the important noise sources and their controls.

#### Major Noise Source Control

The dominant environmental noise is from seven fans. Noise control for each is discussed below.

Noise levels shown below are estimated at the Grove residence.

1. Fan 1-71, a Finish End B.H. Exhaust Fan, 48 dBA. This fan is one of two dominant plant noise sources. Noise is mostly from the fan outlet, with limited noise from the fan case. Detectable noise includes harmonics up to six times the blade passage tone. The fan outlet must be muffled. The case noise will probably require control by bracing and/or enclosing. Fan wheel changes and rpm changes would also reduce noise for this and all other fans.

Last week, Eagle-Picher completed an analysis of fan rpm reduction for 1-71. An rpm reduction alone would produce inadequate noise reduction, but would greatly assist other noise controls that will be needed.

2. Fan 1-51-A, the Finish End Bin Vent Fan, approximately 44 dBA. This is a small bin vent, and is unusually loud for its size and horsepower. The fan outlet aims directly toward neighbors to the south, but the noise is not noticeable to the north. This fan should respond well to outlet muffling. Case noise appears to be insignificant.

3. Fan 1-25-C, a Wet End B.H. Exhaust Fan, approximately 40 dBA. This fan is the other dominant noise source, and is similar to fan 1-71 in noise emitted to all directions except to the south, (toward the Grove residence) where it is much less. The fan outlet must be muffled. Limited fan case noise control is probably required.

Mr. Roger E. Malone  
Eagle-Picher Minerals, Inc.  
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Last week, Eagle-Picher completed an assessment of impact on plant operations of reducing the rpm of Fan 1-25-C. The same comment on Fan 1-71 also applies here.

4. Fan 1-85, the Finish End Packer/Bulk B.H. Fan, approximately 38 dBA. This fan is physically similar to fan 1-71, but is not as loud. Fan outlet muffling is required, but probably not fan case noise controls.

5. Fan 1-33-A, the Wet End Waste Bin Vent Fan, approximately 34 dBA. This is a small vent fan on the waste bin, located near the center of the plant. The noise is directional. Outlet muffling is required, but not fan case noise control.

6. Fan 1-9, the Crusher Bin B.H. Fan. Noise from fan 1-51-A is at exactly twice the frequency of fan 1-9 within the speed stability of the induction motors driving these fans. Therefore, spectral analysis of tapes made near the Grove residence could not provide a direct measurement of Fan 1-9 noise. Estimates based on other data are that this fan is between 32 and 36 dBA at the Grove residence. Fan outlet silencing is required if nighttime fan operation will occur. The need for fan case noise control is doubtful, and will be evaluated after silencing. Eagle-Picher personnel have stated that this fan is used only during the daytime for several hours per day, at present.

7. Fan 1-41, a Finish End Backwash Fan. This fan has an open inlet. The noise is below 30 dBA at the Grove residence, but is clearly audible and is very significant to the north and east. During initial plant layout, to provide acoustic shielding, the warehouse was sited just south of this and other ground-level noise sources. The shielding is highly effective; this fan's noise is not detectable at the Grove or Swancutt mailboxes. Preferred noise control for Fan 1-41 is to slow the fan using a two-speed drive, as much of the noise is developed during low flow conditions, and to silence the inlet. The silencer, with or without an rpm reduction, would provide major noise reduction benefits to nearby in-plant areas. Other alternates that may be feasible include adding a second small fan for low flow conditions, and moving the damper to the inlet side of the fan.

Last week, Eagle-Picher reported that the rpm of 1-41 had been greatly reduced. Close-in measurements show a 6 to 13 dBA reduction. If distant measurements using fine-line spectrum analysis equipment confirm this amount of noise reduction, then no further muffling for this fan is needed to achieve the environmental noise reduction goal.

Mr. Roger E. Malone  
Eagle-Picher Minerals, Inc.  
December 18, 1986 Page 4

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### Secondary Noise Source Control

Most secondary noise sources will require noise control to meet an L50 of 38 dBA criterion at the Grove residence. However, we found that several did not require noise reduction and are included for completeness. These secondary noise sources are:

8. Fans 1-7-B and 1-18-A, Small Bin Vent Fans. These were not in operation at the time of our visit. Although they could not be measured, they are identical to other bin vent fans. Assuming identical noise levels, fan outlet mufflers will be needed.

9. Positive displacement blowers. These are responsible for many minor spectral peaks above 500 Hz; the noise of each blower by itself is minor, but when combined, total in the mid to high 30 dBA range. Candidate P.D. Blowers for noise control are 1-73, 1-61, 1-32 and 1-78. Noise control, if needed, would consist of noise barriers around the blowers, and possibly inlet muffler changes. These blowers, actually small air compressors, produce significant noise to the north and east. Prior to any final design and implementation, the noise of each blower should be evaluated in detail and the usefulness of any noise control confirmed.

10. Fan Cases of 1-71, 1-25-C, 1-69, 1-13, 1-24, and 1-9. Most large fan cases emit noise at the fundamental frequency and at the first harmonic. Noise control, if needed, would consist of fan case and duct bracing, and possibly noise barrier panels. (Because of high levels of noise emitted by the fan outlets, it would have been costly and inexact to determine, prior to fan muffling, the exact amounts of noise reduction, if any, required by each fan case. However, it was determined that only fans 1-71 and 1-25-C are likely to require over 5 dBA of case and duct wall noise reduction, based on vibration measurements.) Fans 1-69, 1-13, 1-24, and 1-9 may not require case and duct noise controls.

11. Small fan inlets and outlets. These will require individual attention during a site visit. Fan 1-35-B is a likely candidate for an inlet muffler. Fan 1-14-A is already muffled.

12. Mechanical Noises. Two screw conveyors, 1-26 and occasionally 1-52, emitted scraping and squeaking sounds. These noises were in the low 40 dBA range on Graham Boulevard to the east of the plant, but only episodically. Recommended noise reduction consists of bending or adjusting parts to eliminate internal metal-on-metal scraping. If this is not feasible, then other means of noise control can be devised.

Mr. Roger E. Malone  
Eagle-Picher Minerals, Inc.  
December 18, 1986 Page 6

Eagle-Picher reports that the mechanical noise sources mentioned were repaired successfully, eliminating the noises. Should such scraping or other noises re-appear in the future, similar actions will need to be made.

13. Bin Vibrators. At the plant entrance along Graham Boulevard, vibrators raise plant noise in the 63 Hz band from 62 up to 67 dBA (unweighted). However, the octave noise level in the 63 Hz band does not exceed the regulatory limit of 62 dBA at residences. No noise control is required to achieve the noise reduction goal.

14. Bag House Air Cleaners. These devices emit noise several times a minute. They are audible toward the north. Substantial noise control for these devices may be exceedingly difficult, and their distinctive intermittent noise may set a lower limit to achievable L10 noise levels. They are not expected to require noise control to achieve compliance, and will remain audible.

15. Warning Devices. No noise reduction is required to meet the environmental noise regulations. Their sound will remain audible.

### Schedule

The schedule allows time for developing special resonant silencers that are tailored to these fans and are not subject to acoustic degradation. The schedule also allows time for unforeseen delays. Such delays cannot be ruled out because of potential impact of some noise controls on production.

The steps necessary to reduce plant noise and their schedule are described below. Step one applies to all noise sources, steps 2 through 7 apply to major noise sources only, and steps 8 through 12 apply to the secondary noise sources only. Figure 2 charts the schedule.

1. Identify and prioritize plant noise sources and their noise control. This was completed in September 1986. A summary of the findings appears in the preceding section.

2. Fan rpm reductions. Eagle-Picher has evaluated fan rpm reductions and fan wheel changes. This required the achievement of stable plant operation as a part of startup. Then, fan wheel changes and rpm reductions were evaluated for feasibility. This was done in September, October, and November, 1986.



Mr. Roger E. Malone  
Eagle-Picher Minerals, Inc.  
December 18, 1986 Page 6

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Mr. Roger E. Malone  
Eagle-Picher Minerals, Inc.  
December 18, 1986 Page 7

3. Establish noise reduction engineering goals, both plant-wide and for individual major noise sources. This was done subsequent to reducing fan rpm's, in October, 1986.

4. Design or specify mufflers for the seven major noise sources. This will likely require an additional plant visit for checking supports and clearances. At least two, and probably three, degradation-resistant muffler designs will be needed. Commercial mufflers will be used only if appropriate; otherwise, custom and/or proprietary designs will be specified. Design work will be submitted as the designs are developed. This work will proceed in November 1986 through February 28, 1987.

5. Order and receive mufflers for the major noise sources. Bidding and fabrication, if local, would require three to eight weeks. Order time for any commercially available silencers is typically six to sixteen weeks. Order by February 15 and receive on or before April 30, 1987. As appropriate, Eagle-Picher will look for ways to shorten order and fabrication time.

6. Installation. Most installation can proceed as mufflers are received. The last would be installed 15 days after receipt, or by May 15, 1987.

7. Inspect major noise source silencers. Some may require adjustment. Any fan case silencing would be specified at this time. Complete within two weeks of silencer installation, or May 31, 1987 at the latest.

8. Silence secondary small bin vent fans, and other small fans. Silencers will be designed or specified by January 31, 1987.

9. Order small fan mufflers by February 15, 1987 and received by April 15, 1987.

10. Install small fan mufflers by May 15, 1987 or sooner if all major fans are silenced earlier than the deadline. Accelerated installation would not result in significant benefit to neighbors because of dominant fan noises, but may ease scheduling pressure on maintenance staff.

11. Place noise shields around some rotary positive displacement blowers, as needed. This can proceed any time, but will provide no large noise reduction benefit until the major noise sources are reduced. Complete by March 31, 1987.

12. Mechanical noises. Complete by March 31, 1987. Sooner completion is desirable because no design work is needed and to prevent a "rush" maintenance schedule at the time of silencer

Mr. Roger E. Malone  
Eagle-Picher Minerals, Inc.  
December 18, 1986 Page 8

installation. New mechanical noises may arise from time to time, and would be addressed, as needed.

13. Inspect secondary noise source controls within two weeks of installation, or no later than May 30, 1987.

The proposed schedule provides time to develop noise controls that are practical and will provide enduring noise reduction. For example, a concern is that conventional fiberglass packed silencers, although quick to order and install, would be subject to a slow degradation because of the severity of the application. A result would be a plant noise that, although initially in compliance, could creep upward after several months or a year. A result could be eventual non-compliance, retrofits, and hard feelings by neighbors. For these reasons, conventional fiberglass silencers will be used only in those few locations where CIEA believes that they will remain effective.

#### WHAT TO EXPECT

Full implementation of the compliance plan will result in noise levels that comply with the identified goal of 38 dBA.

Reduction of the dominant major fan noises (Items 1 through 7 above) will reduce plant noise to about 38 to 42 dBA at the nearest residence. The major noises now heard by neighbors will be substantially gone. Accurate evaluation of any remaining unsilenced secondary noises at reasonable levels of effort will then be feasible. These remaining secondary noise sources will be prioritized and reduced if necessary. Non-steady noises, such as voices and shovel use, will become more audible.

My experience is that factory sounds, reasonably neutral in character, which produce noise levels of 40 to 42 dBA, even in quiet rural areas, are usually found to be acceptable even for concerned residents. Thus, after control of the four loudest noise sources, urgency will be less and calendar time will be available for careful evaluation of remaining noise sources and for installation of their controls. For this reason, noise control designs for the loudest noise sources should be accelerated, if feasible.

#### COST

Cost is significant because of the number of noise sources, and because of the amount of noise reduction required from the four loudest fans. Also, to achieve durable noise controls, there will be a substantial amount of fabrication using heavy steel plate. Substantial consulting labor was incurred in separating

Mr. Roger E. Malone  
Eagle-Picher Minerals, Inc.  
December 18, 1986 Page 8

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Mr. Roger E. Malone  
Eagle-Picher Minerals, Inc.  
December 18, 1986 Page 9

and cataloging the many plant noise sources at many locations.  
This is in addition to design consulting costs.

Below is a rough budget:

Silencing major noise sources No. 1 through 7:	\$50-70K
Silencing secondary noise sources No. 8 to 12:	15-25K
Design and analysis costs:	15-25K

Total: \$80-120K

My expectation is that costs can be held to about \$100K by careful attention to design.

This completes our noise control plan. Please do not hesitate to call should you have questions or comments.

Sincerely,

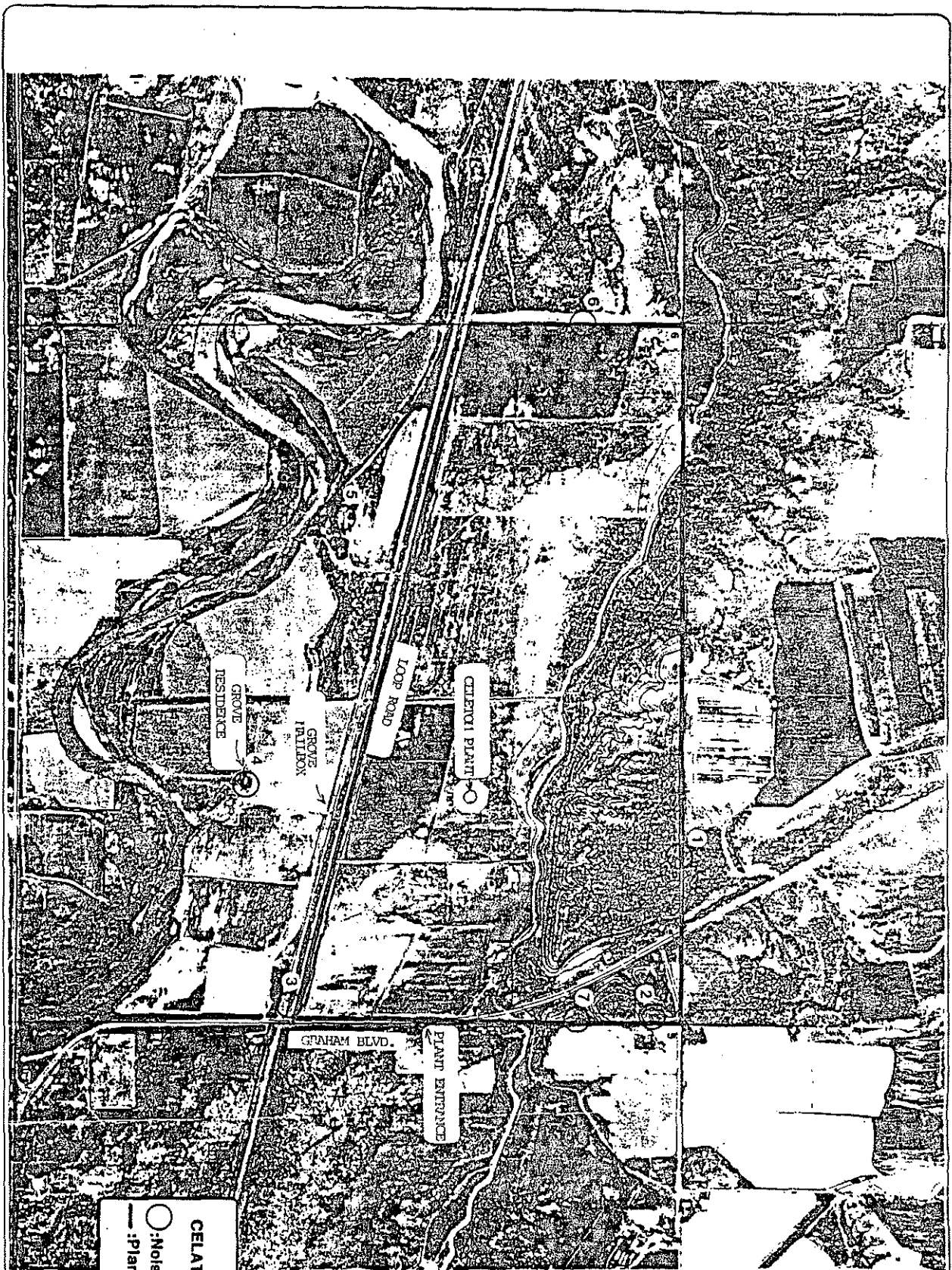


Thomas R. Norris, P. E.

TRN:e

Encs.: Figures 1 & 2

cc: Mr. Greenberg, Eagle-Picher Industries, Inc.  
Mr. Buntin, Brown-Buntin Associates

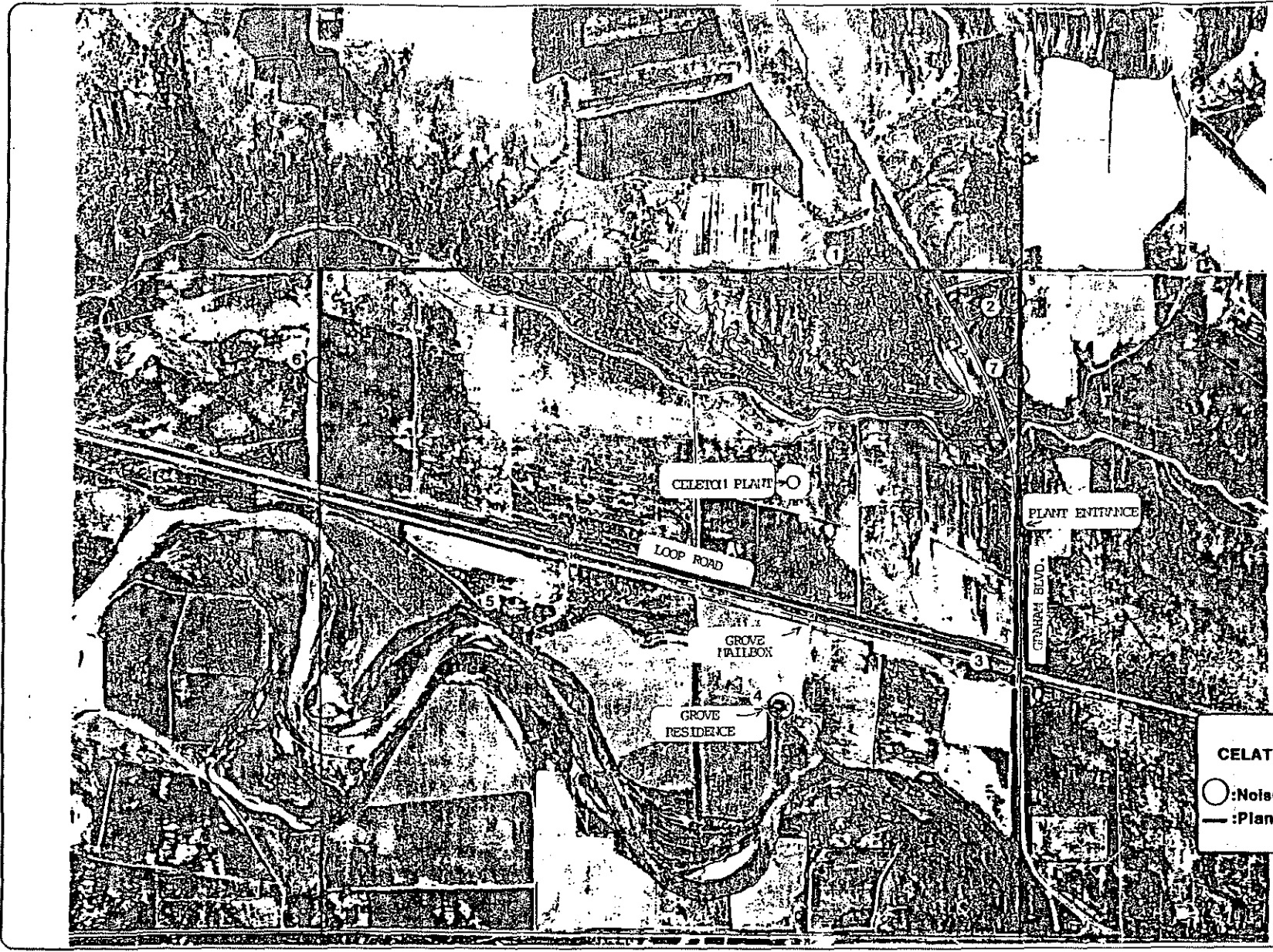


**BBA**

**FIGURE 1**  
**CELATOM PLANT AREA MAP**  
 ○: Noise Level Monitoring Sites  
 □: Plant Site

NORTH →

CONSULTANTS IN ENGINEERING ACOUSTICS, DECEMBER 1, 1986  
 MAP SOURCE: BROWN-BUNTIN ASSOCIATES



**FIGURE 1**  
**CELATOM PLANT AREA MAP**  
 ○: Noise Level Monitoring Sites  
 —: Plant Site

BBA

CONSULTANTS IN ENGINEERING ACOUSTICS, DECEMBER 1, 1986  
 MAP SOURCE: BROWN-BUNTIN ASSOCIATES







## STATE OF OREGON

## INTEROFFICE MEMO

TO: Environmental Quality Commission      DATE: January 16, 1987

FROM: Director

SUBJECT: Supplemental Information to Agenda Item H, January 23, 1987, EQC Meeting  
Informational Report: Eagle-Picher Minerals, Inc.

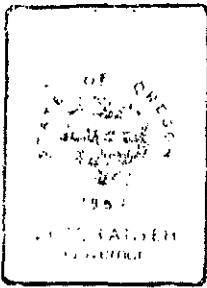
As an update to the status of air quality compliance activities at Eagle-Picher, The Department has attached our most recent correspondence. This information, which was not available at the time of staff report drafting, provides a description of the pollution control actions completed and time lines for completing the control of other identified problem areas.

Representatives of Eagle-Picher are planning to attend the January 23, 1987 Commission and respond to any questions you may have.

Fred Hansen

Attachments

Robert C. Harris:ts  
229-5259  
January 16, 1987



# Department of Environmental Quality

522 S.W. THIRD AVENUE, BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 325-1551

December 22, 1986

• Robert W. Piekarz  
Vice President, Engineering  
Eagle-Picher Industries  
Minerals Division  
P.O. Box 12130  
Reno, NV 89510

Re: ACDP No. 23-0032  
Malheur County

Dear Mr. Piekarz:

The meeting between Department staff and Eagle-Picher representatives on December 18, 1986 was very encouraging. We have a better understanding of your plans for complying with your Air Contaminant Discharge Permit.

On November 21, 1986, your company was issued a Notice of Violation and Intent to Assess Civil Penalty for violations of your permit. A follow-up inspection by Steve Gardels, Eastern Regional manager, on December 9 and 10, 1986 found repeated violations for which the Department could assess civil penalties. However, as a result of our meeting, we believe your company is making significant progress to comply by making physical equipment changes and additions, and by establishing management procedures.

The Department has decided to not assess civil penalties at this time subject to the following:

1. You provided a list of items that you are committed to implement. By January 9, 1987, submit a schedule of when these items will be completed. The schedule must show prompt implementation to be acceptable.
2. Immediate and continued compliance with Condition 6 (copy enclosed) of your permit. Whenever you have a spill, you must immediately clean it up to prevent the wind from blowing it away. This will require constant vigilance on your part.

A summary of the violations that Mr. Gardels found are as follows:

1. Raw diatomaceous earth was allowed to accumulate around the conveyer systems from the raw unloading conveyers and below the storage silos.
2. Diatomaceous earth product was found on the ground in the reject bag storage area.
3. During the inspection, several bags of diatomaceous earth product were broken open in the reject pile storage area. The material was not immediately cleaned up and put into enclosed containers.

4. A large spill of diatomaceous earth product from a line coming from the finished end baghouse had occurred. All of the outside equipment was covered with the product. No effort was made to wash down the equipment and/or vacuum up the spillage to comply with the permit.
5. A large amount of fugitive dust was released during the loading from the waste bin into open top trucks. This situation apparently occurs daily when the waste bin is unloaded.

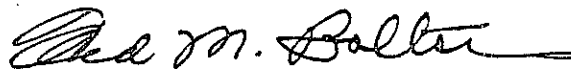
During our meeting, you indicated that you could comply with your permit for the above or similar situations except for item #5. To eliminate the fugitives from the waste bin unloading operation, you said you will build an enclosure. Until the enclosure is completed, you will continue to violate Condition 8 of your permit.

The Department does not have the authority to allow the continued releases until a waste bin area enclosure is constructed. Therefore, as an interim measure, you should begin using enclosed truck trailers for loading waste materials so that dust emitted during the loading will be routed to the baghouse control system as required by your permit. If you can devise other temporary measures to comply, please feel free to do so. Be advised however, that allowing emissions during the transfer of waste product from the waste bin to trucks cannot be ignored during any future inspections that may be performed by the Department.

I appreciate the fact that your company took our notice very serious and is actively working on solutions to correct the problems. I am expecting to hear from you soon concerning the compliance dates to complete your commitments.

If you have any questions, feel free to call me at 229-5373 in Portland or Mr. Gardels at 276-4063 in Pendleton.

Sincerely,



Fred Bolton, Administrator  
Regional Operations Division

FMB:b  
GB6319

cc: Steve Gardels, Eastern Region Office, DEQ  
Paul Harper, Director of Environmental Affairs and Safety, Eagle-Picher  
Ted Stroebel, General Works Manager, Eagle-Picher  
Air Quality Division, DEQ



FEDERAL EXPRESS

January 8, 1987

Mr. Fred Bolton  
Administrator, Regional Operations Div.  
State of Oregon  
Dept. of Environmental Quality  
811 S.W. 6th Avenue  
Portland, OR 97204

RE: ACDP No. 23-0032, Malheur County

Dear Mr. Bolton:

Thank you and your staff for meeting with us in your Portland office on December 18, 1986.

During our discussions, we submitted an outline of those items which concerned your Eastern Regional (Pendleton) office. This listed the progressive measures needed to mitigate these problems. Your letter of December 22, 1986 requests that we also submit an implementation schedule. This schedule is as follows:

I. COMPLETED ACTIONS

1. Shrouding on conveyor belt from pan feeder to Gruendler (crusher) mill improved. Completed on November 1986.
2. Additional vent lines to Gruendler mill and conveyor. Completed on November 1986.
3. Gruendler mill speed reduced. Completed on October 1986.
4. Reduced frequency of discharging collected material from crude ore baghouse. Completed on December 1986.
5. Skirting added to crude ore bin pan feeder. Completed on October 1986.
6. Skirting added to pan feeders under fine ore bins. Completed on October 1986.
7. Second mobile vacuum is in place as a spare. Initiated on December 16, 1986.
8. Aurora hoppers for handling plant waste have been covered. Completed on November 1986.
9. Waste product pile has been eliminated. Any material stacked outside will be stretchwrapped. Completed on December 9, 1986.

Mr. Fred Bolton  
DEQ  
January 8, 1987

Page 2.

10. A full-time dust spill clean-up person has been added. Initiated on December 15, 1986. All plant personnel have been instructed on the importance of housekeeping and of promptly addressing spillages.
11. Waste product area has been cleaned and graveled. Completed on December 16, 1986.
12. Product and waste lines from blow-through seal valves have had compressed air fittings added to avoid disassembly to clean. Completed on November 1986.
13. Waste bin bag refeed station has been modified. Completed on October 1986.
14. Waste bin bulk refeed station has been modified. Completed on October 1986.
15. Delumper has been modified. Completed on November 1986.
16. Kiln flame detector has been improved, multiple redundancy. Completed on December 1986.
17. Strip doors for ore unloading building. Completed on December 30, 1986.

## II. COMMITTED ACTIONS

1. Route known reject directly to waste bin. Will be complete by January 15, 1987.
2. Enclosure at waste loading station. Will be complete by February 15, 1987. An interim solution has been implemented on January 8, 1987.

A sealable tarpaulin trailer cover is being used by our ore and waste hauling contractor as a methodology for the enclosure of the waste haulage truck trailers during the waste loadout operations, pending the completion of the waste loading enclosure.

These address items 1 through 5 of Mr. Gardels' noted violations as itemized in your letter.

Our commitment to the complete cooperation with DEQ in the intent and spirit of Oregon's air quality laws remains; however, we may be reaching the limits of best available control technology (B.A.C.T.)

Mr. Fred Bolton  
DEQ  
January 8, 1987

Page 3.

The use of a multiple redundant flame failure detection system is a good example. We have installed an "improved" infrared system along with the standard ultraviolet "minipeeper" system. The infrared unit was not commercially available when the plant was designed.

Please advise me at 702/322-3331 should you have any questions.

Very truly yours,

EAGLE-PICHER MINERALS, INC.

R. W. Piekarz, P.E.  
Vice President Engineering  
& Environmental Affairs

RWP:ief

cc: Steve Gardels, Eastern Region, DEQ, Pendleton  
Paul Harper, Director of Env. Affairs & Safety, E-P, Cincinnati  
Ted Stroebel, General Works Manager, E-P, Celatom  
Air Quality Division, DEQ, Portland



## *Environmental Quality Commission*

~~Mailing Address: BOX 1760 PORTLAND, OR 97207~~

~~522 SOUTHWEST 5TH AVENUE PORTLAND, OR 97204 PHONE (503) 229-5696~~

811 S.W. Sixth Avenue, Portland, OR 97204

### MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item I, January 23, 1987, EQC Meeting

Informational Report on the Vehicle Inspection Program,  
1985-1986

### Background

Oregon Revised Statutes (ORS) 805.350 and 815.300 through 320 provide that motor vehicles registered within designated boundaries meet emission standards established by the Environmental Quality Commission (EQC) prior to vehicle registration or re-registration. The Department of Environmental Quality (DEQ) operates Oregon's Inspection and Maintenance (I/M) Program in two air quality regions, the greater Portland area defined by the Metropolitan Service District boundaries and the greater Rogue Valley defined by the Medford-Ashland Air Quality Maintenance Area (AQMA).

The program began operation in July, 1975 in the Portland area. The program began operation in the Rogue Valley in January, 1986. Since the program startup, the Department has prepared periodic update reports on the inspection program operation. The first of these reports was presented to the Commission at its January 18, 1977 meeting. Subsequent reports were submitted in 1979, 1981, 1983, and 1985.

### Evaluation

Attached is a new informational report prepared by the Department for your consideration. The purpose of the report is to provide a summary and update on the operation of Oregon's Vehicle Inspection Program during 1985 and 1986. The report contains an overview summary that provides a general descriptive narrative. It is followed by various appendices which provide a more technical and detailed commentary on the program operations, emission characteristics of vehicles, air quality benefits, and other support documentation.

Among the highlights of the report are the following:

1. During 1985 and 1986, over 850,000 emission tests have been conducted and over 550,000 Certificates of Compliance were issued.
2. The Commission implemented ORS 468.397 establishing the Oregon I/M Program in the Rogue Valley area. At the end of its first year of operation, over 58,000 emissions tests were conducted at the Rogue Valley I/M station.
3. Idle emission reductions from cars and trucks tested continue to be documented. Overall idle emission reductions of 66% for carbon monoxide (CO) and 75% for hydrocarbons (HC) were calculated based on comparing the results of the cars and trucks that passed with the emissions from those that failed and were ultimately repaired.
4. Computer modeling indicates that compliance with ozone (O<sub>3</sub>) and CO should be achieved by the end of 1987 in both the Portland and Medford areas.

Director's Recommendation

It is recommended that the Commission accept this informational report.



Fred Hansen

Attachment: Report On Oregon Vehicle Inspection Program 1985-1986

W. JASPER:a  
VA5848  
229-5081  
January 6, 1987



STATE OF OREGON  
ENVIRONMENTAL QUALITY COMMISSION

REPORT ON  
OREGON VEHICLE INSPECTION PROGRAM  
1985 - 1986

PREPARED FOR PRESENTATION AT  
JANUARY 23, 1987  
ENVIRONMENTAL QUALITY COMMISSION MEETING

BY  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
VEHICLE INSPECTION PROGRAM

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REPORT ON  
OREGON VEHICLE INSPECTION PROGRAM  
1985-1986

THE ROLE OF I/M PROGRAMS IN AIR QUALITY CONTROL

Oregon's response to the federal Clean Air Act is the State Implementation Plan (SIP). This plan outlines the major air pollution problems of the state and the programs aimed at reducing pollution levels. Whether the problem is industrial or residential, fixed-source or mobile, the SIP prescribes remedies for the pollution ills. This report focuses on mobile-sourced pollution from motor vehicles. The specific program is I/M ("inspection and maintenance"). The Oregon I/M Program is operated by the Department of Environmental Quality (DEQ), which acts under the direction of the Environmental Quality Commission.

I/M programs help reduce air pollution by requiring the inspection of motor vehicle exhaust emissions and the repair of vehicles that are producing more than the allowed levels of pollution. The federal Environmental Protection Agency (EPA) regards I/M as an effective strategy to help urban areas control motor vehicle pollution and meet national air quality standards. The Clean Air Act required states to meet these standards by December 31, 1982. Congress provided, however, that areas with severe pollution problems could be granted extensions to the end of 1987 if they agreed to initiate I/M programs. I/M was emphasized because its potential for reducing mobile-sourced emissions is significantly greater than any other approach.

Vehicle emissions inspection programs are now operating in 33 states and the District of Columbia. They range in size from relatively small (the Boise, Idaho program) to very large (the seven major air quality area programs in California). From Alaska to Arizona and New York to California, every region of the nation has addressed its air pollution problems through the implementation of I/M programs to protect public health. The U.S. General Accounting Office issued a report in 1985 criticizing some I/M programs. Nevertheless, the GAO concluded that well run I/M programs were effective air pollution control measures. The report cited many features of the Oregon I/M program as a model for other states.

Oregon has one of the nation's oldest and most highly rated I/M programs. This is the program operated in the Portland metropolitan area since 1975 by the state Department of Environmental Quality (DEQ). Only the State of New Jersey's vehicle inspection program has been in existence longer. The DEQ also administers one of the nation's newest I/M programs, Oregon's I/M operation in the Rogue Valley of southern Oregon. This program was launched on January 1, 1986, to help the Medford area solve its persistent carbon monoxide problem. Under Oregon law, I/M programs may be required in any area that cannot reasonably meet state and federal clean air standards by any other means. Vehicle inspection is frequently regarded as a "last

resort strategy", but it is also a proven way to reduce air pollution from motor vehicles. Even with the development of better pollution control equipment and tougher emissions standards for new cars and trucks, I/M programs still play a vital role in keeping air pollution levels down in many urban communities.

#### MOTOR VEHICLES: A MAJOR SOURCE OF POLLUTION

Though Oregon has fewer urban areas than many states, its more populated cities can experience significant air pollution from automobiles and other motor vehicles. In any community with heavy traffic, the increased level of exhaust emissions creates air quality problems. These problems can become particularly serious if the area's geography and weather encourage the buildup of air pollution. These conditions exist in some western Oregon areas, especially in the Rogue Valley.

Vehicle exhaust emissions contain three major pollutants—carbon monoxide (CO), hydrocarbon gases (HC) and oxides of nitrogen (NOx). (The latter two combine, in the presence of sunlight and elevated temperatures, to produce ozone—more commonly known as "smog.") Motor vehicles account for 73 percent of the carbon monoxide and 46 percent of the hydrocarbons in the Portland airshed; in the Medford-Ashland Air Quality Maintenance Area (AQMA), they generate 59 percent of the carbon monoxide and 33 percent of the hydrocarbons. Portland and Medford currently exceed federal Clean Air Act standards for carbon monoxide. Portland also exceeds standards for ozone.

I/M programs address the health and livability problems associated with increased exhaust emissions from motor vehicles in urban areas. They identify vehicles with excessive exhaust emissions and require their repair. The DEQ analyzed vehicle emissions characteristics tested during 1986 in both Portland and Medford. Vehicles that passed the I/M test averaged 66 percent cleaner for carbon monoxide and 75 percent cleaner for hydrocarbons. The number of vehicles tested and pass rates for cars and trucks are shown in Tables 1 and 2.

#### OREGON'S I/M PROGRAM

##### REQUIREMENTS

Vehicle inspection in Oregon is tied to motor vehicle registration. Most vehicles must pass the exhaust emissions test every two years. Some vehicles, including government-owned vehicles and heavy-duty, gasoline-powered trucks, must be inspected every year. Testing is mandatory for gasoline-powered cars, trucks, vans, motor homes and buses, as well as diesel-powered passenger cars and diesel trucks with manufacturers' gross vehicle ratings of 8,500 pounds or less. Some classes of vehicles are exempt. This includes new vehicles, those more than 20 model years old, those with farm plates and vehicles used in interstate commerce.

Table 1  
 Department of Environmental Quality  
 Vehicle Inspection Program  
 811 S. W. Sixth Avenue  
 Portland, Oregon

ACTIVITY SUMMARY FOR JANUARY 1985 THROUGH NOVEMBER 1986

**EMISSION INSPECTION TESTS**

Light Duty	800,140
Heavy Duty	<u>27,154</u>
Total	827,294

By Location:	
Gresham	164,845
Milwaukie	135,065
Northeast	145,136
Hillsboro	60,668
Northwest	60,927
Beaverton	202,274
Medford	58,379

Certificates of Compliance Issued - 549,999

**LIGHT DUTY VEHICLE EMISSION CONTROL TEST SUMMARY**

	Total Number	Total Percentage	Vehicle Category			
			: 1981+ 25%	1975-1980 49%	1968-1974 23%	Pre-1968 3%
<b>Pass Emission Test</b>	525,905	66%	: 88%	59%	55%	65%
<b>Test Failed For:</b>			:			
Excessive Carbon Monoxide (CO)	71,327	9 %	: 2 %	10 %	14 %	11 %
Excessive Hydrocarbons (HC)	56,752	7 %	: 2 %	8 %	11 %	8 %
Excessive HC and CO at idle	43,808	5 %	: 1 %	8 %	5 %	2 %
Either CO or HC @ 2500 rpm	8,045	1 %	: 4 %	- %	- %	- %
Disconnected Emission Control Equipment	49,531	6 %	: 2 %	10 %	6 %	- %
Other Causes (i.e., smoke, dilution, idle speed)	37,875	5 %	: 2 %	4 %	8 %	12 %
Excessive Noise	6,897	1 %	- %	- %	2 %	3 %

Table 2

Department of Environmental Quality  
Vehicle Inspection Program  
811 S. W. Sixth Avenue  
Portland, Oregon

HEAVY-DUTY GASOLINE VEHICLE TEST SUMMARY  
Jan 85 through Nov 86 - All Stations

Pre-1970 Trucks (2042)

Pass Emission Test	64%
Tests Failed for Carbon Monoxide (CO)	7%
Tests Failed for Hydrocarbons (HC)	11%
Tests Failed for Both HC & CO	2%
Tests Failed for CO @ 2500 rpm	11%
Tests Failed for Other Causes	5%

1970-1973 Trucks (9430)

Pass Emission Test	61%
Tests Failed for Carbon Monoxide (CO)	11%
Tests Failed for Hydrocarbons (HC)	9%
Tests Failed for Both HC and CO	3%
Tests Failed for CO @ 2500 rpm	11%
Tests Failed for Other Causes	5%

1974-1978 Trucks (9283)

Pass Emission Test	60%
Tests Failed for Carbon Monoxide (CO)	11%
Tests Failed for Hydrocarbons (HC)	11%
Tests Failed for Both HC and CO	3%
Tests Failed for CO @ 2500 rpm	7%
Tests Failed for Emission Equipment Disconnects	5%
Tests Failed for Other Causes	3%

1979 and Later Trucks (8941)

Pass Emission Test	74%
Tests Failed for Carbon Monoxide (CO)	3%
Tests Failed for Hydrocarbons (HC)	10%
Tests Failed for Both HC and CO	1%
Tests Failed for CO @ 2500 rpm	1%
Tests Failed for Emission Equipment Disconnects	7%
Tests Failed for Other Causes	2%

Oregon's vehicle inspection programs are completely self-supporting, through the seven-dollar fee charged for the Certificate of Compliance. This certificate is issued when a vehicle passes the I/M inspection, and is required to register the vehicle. There is no charge if a vehicle fails the test, but its registration cannot be renewed until it is retested and passes.

Oregon's I/M Program operates under rules adopted by the state Environmental Quality Commission (EQC). This citizen board, appointed by the Governor, supplies policy direction to the DEQ. During 1985-1986, its most significant action relating to vehicle inspection was designation of the Rogue Valley as part of Oregon's I/M Program.

#### THE PORTLAND AREA

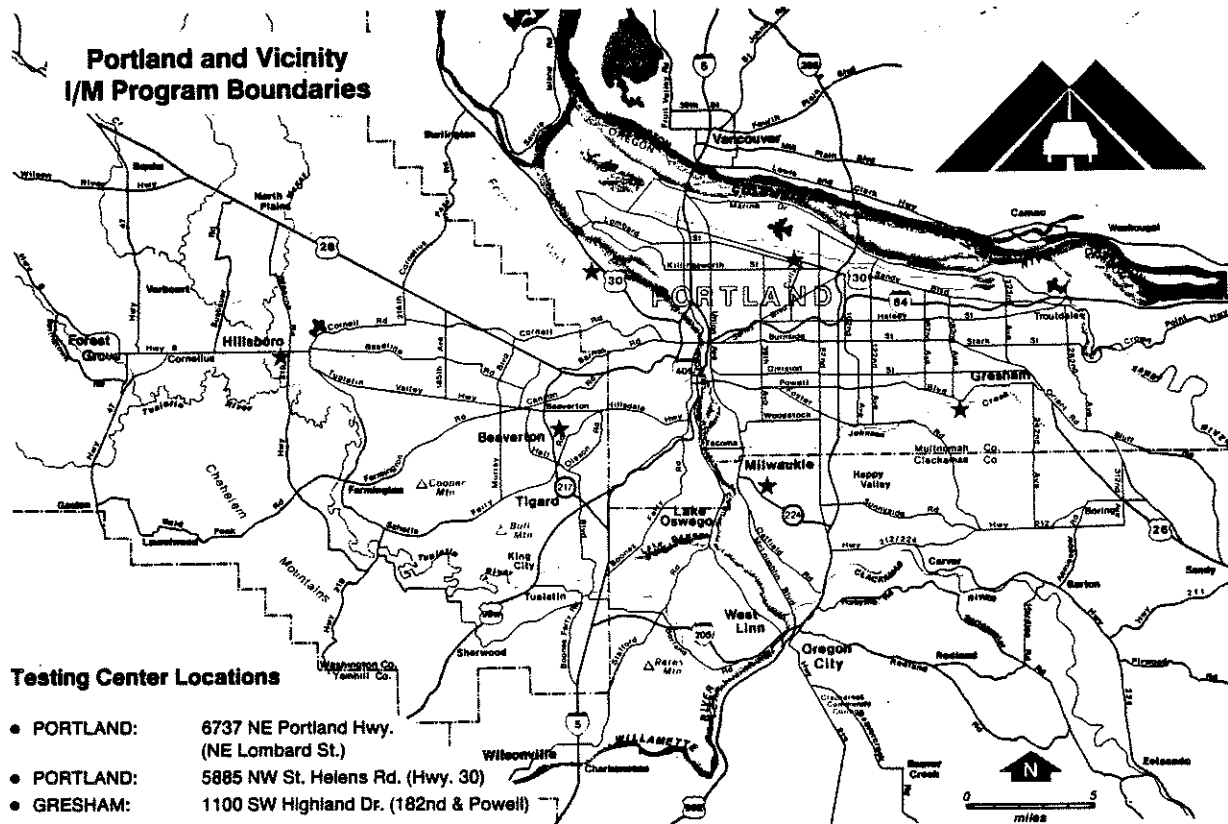
The Oregon I/M program in the Portland area operates in the 455-square-mile Metropolitan Service District, which includes portions of Clackamas, Multnomah and Washington counties. (Figure 1 shows the inspection area and locations of the six Portland-area testing stations.) During 1985 and 1986, these stations tested over 800,000 vehicles and issued 550,000 Certificates of Compliance. The I/M boundaries, defined by Oregon statute, are designed to include as many of the vehicles regularly traveling in the Portland area as possible. Studies conducted by DEQ during 1985 continued to support estimates that about 88 percent of the motor vehicles driven in the area on a regular basis are registered within the I/M boundaries. Commuter traffic from Clark County, Washington, though it has increased significantly in recent years, accounts for only about 3 percent of the vehicle traffic in the Portland area.

Vehicle inspection is one of several control strategies employed to deal with motor vehicle pollution in Portland. Other approaches include the federal new-car emission standards, parking controls, improved traffic flow and increased use of mass transit. During the last two years, public use of the Tri-Met mass transit system has declined by about 5 percent. Population growth in the Portland suburbs and the recent availability of cheaper gas has helped increase the number of vehicle miles traveled in the area by about 5-7 percent during the last two years. And there is considerable pressure on the City of Portland to increase its current lid on the number of parking spaces in the downtown area. These programs have helped Portland make steady progress toward meeting Clean Air Act standards, but the more stable nature of the vehicle inspection program makes it a key element of plans to maintain those ambient air standards once they are achieved.

#### THE OREGON I/M PROGRAM IN THE ROGUE VALLEY

Medford has the worst carbon monoxide problem in Oregon, and an I/M program had been recommended for several years as the only way the area can meet health standards for this pollutant. In 1985, the Oregon Legislature mandated I/M for any area of the state that cannot meet Clean Air Act requirements by any other means. As a result of this legislation, the DEQ

# FIGURE 1



**STATION HOURS: OPEN 10 a.m. to 6 p.m., Tuesdays through Saturdays  
CLOSED on Sundays and Mondays**

\* In August 1986, the Hillsboro station will move to 1065 N.E. 25th Avenue.



implemented the I/M program in the Rogue Valley on January 1, 1986. This followed a two-month period of voluntary testing and a public awareness and education program designed to help explain how the program works and why it is needed.

The I/M exhaust emissions test is required for vehicles registered within the approximately 115-square mile Medford-Ashland Air Quality Maintenance Area (AQMA). (See Figure 2). Besides Medford and Ashland, this includes the communities of Eagle Point, White City, Central Point, Jacksonville, Phoenix and Talent. The AQMA includes about 85 percent of the total Jackson County population, an estimated 88 percent of the motor vehicle traffic that regularly travels through the carbon-monoxide problem areas in central and north Medford originates from within this area.

The DEQ operates the Rogue Valley I/M Program from a single testing station, located near the Medford-Jackson County Airport in north Medford. The Department estimates that about 80,000 vehicles will be tested at the station during the first two years of operation. During 1986, the station conducted 58,379 vehicle tests and issued over 58,000 Certificates of Compliance.

#### THE I/M TEST

All vehicles that go through the DEQ inspection stations in Portland and Medford receive the same test. The inspection takes about five minutes, though waiting times to take the test vary with the time of day and month. A licensed DEQ vehicle inspector uses an exhaust gas analyzer to measure tailpipe emissions. The emission standards vary with make, model and the number of engine cylinders. Older vehicles are not required to meet the same tailpipe standards as newer models. All vehicles are also checked for excessive smoke and exhaust system leaks.

Any 1975 or newer model must pass a "tampering" inspection for defective or missing pollution control equipment. This includes the leaded-fuel inlet restrictor required on all "unleaded fuel only" vehicles. Since April 1, 1985, the inspection procedure in Portland has also included a test for excessive exhaust noise. Noise emission standards were implemented as a result of a petition presented in 1984 to the Environmental Quality Commission by a Portland citizens' group, the Coalition for Livable Streets. The Commission held public hearings, and then directed the DEQ to include noise testing as part of the vehicle inspection procedure. Because the petition was based in Portland, the noise test is not included in the Rogue Valley at this time.

#### PASS RATE

Vehicle inspection statistics in Tables 1 and 2 for calendar years 1985 and 1986 show an average overall pass rate of around 64 percent. The pass rate in Portland averaged 67 percent for all vehicles tested. Surprisingly, for a new program, the pass rate in Medford has averaged 62 percent since the I/M startup in January 1986.

# FIGURE 2

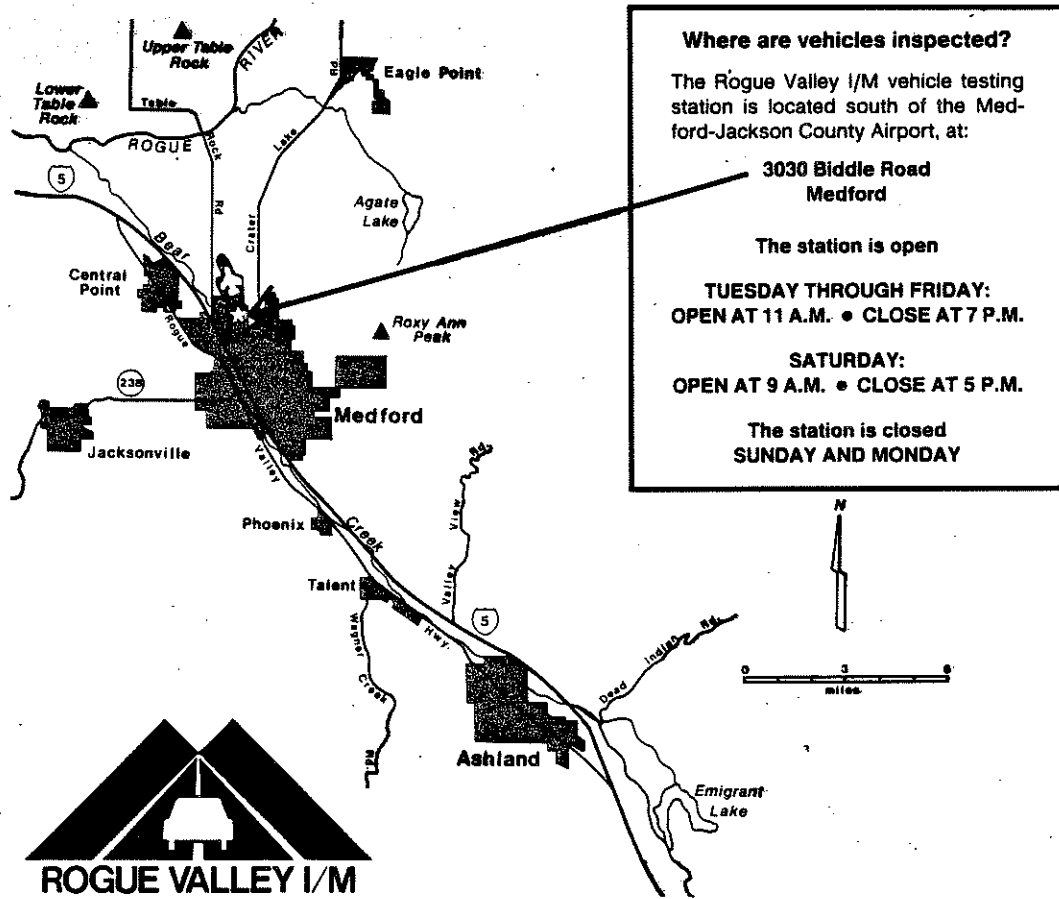


Table 1 includes the major categories of why vehicles failed the test. The major difference between Portland and Medford is the rate of failure for disconnected or missing pollution control equipment. This is to be expected for a newer program. (Portland also has one of the lowest tampering rates in the nation, according to an EPA report released in 1985. That survey showed that in Portland only about 8 percent of the vehicles tested have missing or defective pollution control equipment, while nationwide the tampering rate is close to 25 percent. This statistic is frequently cited as evidence of the effectiveness of the Portland vehicle inspection program.) Table 1 shows that for the whole 85-86 listing period, 6 percent of the vehicle tests conducted ended in failure because of "tampering" with emission control equipment. For the Portland portion of that sample, the average rate was 5%. For the Rogue Valley portion, the average tampering rate observed was 10%. If a vehicle fails the inspection, the owner is given information about possible causes for the failure and a explanation of emissions warranties that may apply.

DEQ surveys indicate that some vehicles need only minor repair or adjustments to pass the test. Common adjustments involve the carbureter, choke, idle speed or ignition timing. Replacement of spark plugs, sparkplug wires or air filters is also fairly common. Major engine repairs, such as overhauls, are necessary for less than 1 percent of the vehicles that fail the inspection. The range of repairs is as varied as the range of vehicles tested.

REPAIR COSTS

DEQ surveys conducted during 1986 in Portland and Medford define "cost of repair" as the amount a customer reported spending to repair the vehicle after it failed an I/M test (see Table 3). The survey of 3,000 customers included questions about the types of repairs, who made them and the customer's level of satisfaction. The average cost of repair reported in Portland was \$44.50, while the average cost reported in Medford was \$59.79. The higher costs reported in Medford were attributable to two factors: (1) A greater number of repair items per vehicle (2.3 items in Medford, compared to 1.5 in Portland), and (2) the higher costs of repairing or replacing pollution control equipment, a more common item in the Rogue Valley survey. The first factor was more significant, reflecting the fact that there was simply more routine work to be done on Rogue Valley vehicles to get them properly in tune for the exhaust emissions inspection. This is to be expected in a new program.

Table 3

AVERAGE COST OF REPAIR REPORTED  
AFTER FAILING I/M TEST

	<u>Portland Area</u>	<u>Rogue Valley Area</u>
Overall Average Repairs	\$44.50	\$59.79
New Car Dealers	77.69	71.88
Service Stations	33.87	75.40
Independent Garages	80.81	71.77
Self or Friend	22.99	39.13

Most of the customers surveyed reported satisfaction with the repairs. Nine out of 10 respondents said their cars ran better or the same after the repairs. Those responses were divided about equally between "better" and "same."

#### SERVICE AND QUALITY CONTROL

The DEQ strives for good service at its vehicle inspection stations by providing convenient facilities, keeping waiting lines as reasonable as reasonably short as possible, employing a trained and helpful staff and maintaining equipment in good condition. Each testing station participates in a rigorous program of equipment calibration and maintenance to insure that exhaust emissions are measured accurately. Every new vehicle inspector receives 32 hours of classroom training, followed by a month of on-the-job training. All inspectors take part in training sessions to keep them current on automotive technology and other issues related to their jobs.

Direct service at the testing stations is augmented by a licensed fleet inspection program. During the past two years, 51 fleet operations were licensed to test and certify their own vehicles. All I/M testing is backed up by an administrative and engineering staff that helps provide efficient program operation, as well as educational and support efforts for the automotive service industry. As a tribute to their efforts, the vehicle inspection program's management and supervisory staff received the Governor's Management Service Recognition Award in May 1985. The award cited the staff's efficient management of public funds and significant contribution to the reduction of air pollution in the Portland airshed.

Education and support efforts were particularly important to help facilitate the startup of the Rogue Valley I/M Program. The DEQ has provided six-week training clinics for automotive service technicians in the I/M area. This ongoing program trains mechanics as "Recognized Emission Technicians." Local response to this program has been excellent. To date, 11 courses have been conducted and 124 technicians certified.

It is too early to get a reliable reading on compliance with the I/M program in the Rogue Valley, but the EPA conducted a comprehensive audit of the Portland vehicle inspection program in 1985. The federal agency found a high rate of compliance; about 95 percent of the motor vehicle owners are responding to the requirements of the I/M program. The EPA audit report also commented: "DEQ is running a well-designed and effectively managed vehicle inspection program. The I/M staff appeared very competent and interested in the success of the program....EPA believes the program is extremely effective, as demonstrated by the significant improvements in air quality since the program started."

#### AIR QUALITY IMPROVEMENTS FROM I/M

During its more than 11 years of operation, the vehicle inspection program in Portland has been the focus of several surveys by EPA and other agencies

outside DEQ. Those studies, as well as records maintained by DEQ, document the program's positive impact on the Portland airshed. There are three different ways to measure this:

1. Emission Levels. DEQ's day-to-day tailpipe emission measurements indicate the I/M test is an effective way to identify vehicles that are giving off excessive pollution. After these vehicles have been repaired and retested, they show a measured idle-speed reduction of up to 70 percent for carbon monoxide emissions and 65 percent for hydrocarbons. Eugene, which has no I/M program, served as a control area for a 1978-79 study by DEQ. Fleetwide emissions averaged 50 percent higher in the Eugene cars than in the Portland cars tested.

As mentioned earlier, DEQ statistics (Figures 3 & 4) for calendar years 1985 and 1986 show that passing vehicles averaged 37 percent cleaner for carbon monoxide and 75 percent cleaner for hydrocarbons. These averages are based on computer tracking and analysis of about 21,000 exhaust emissions tests, primarily at the Rogue Valley station. The emissions reductions noted are consistent with overall emissions trends noted in Portland over the past several years.

2. Computer Modeling. EPA uses computer modeling to assign credits to the different air pollution control strategies. The most current models indicate that the Portland airshed contains 33 percent less carbon monoxide because of vehicle inspection. For ozone, Portland's ambient air is projected to be in compliance with federal standards by the end of 1987. Without I/M, the EPA computer models do not project compliance.

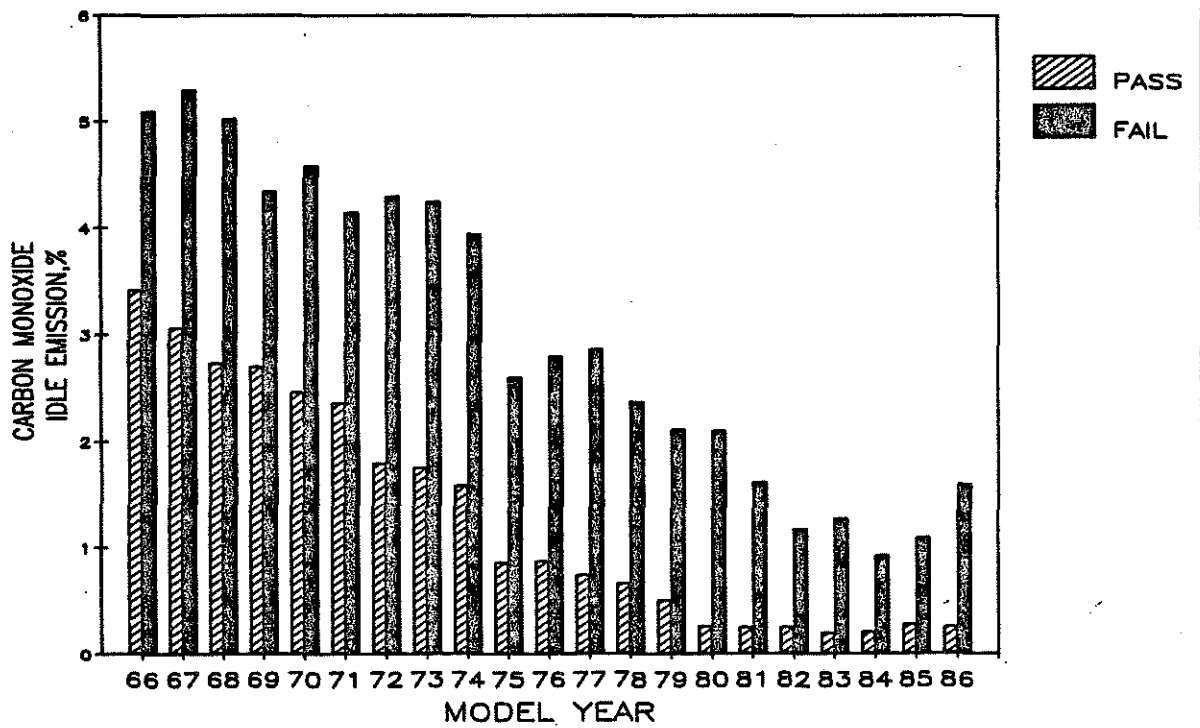
3. Air Quality Monitoring. Before Portland implemented a vehicle inspection program in 1975, the metropolitan area frequently violated state and federal health standards for carbon monoxide. In 1972, for example, the DEQ recorded more than 150 days of violation. Ten years later, in 1982, Portland had only two violation days. In 1985, Portland exceeded the standard on two days; during 1986, the area recorded zero violations.

Ozone levels have also improved in Portland, though this pollutant is subject to weather variations that complicate the picture. The overall reductions in both carbon monoxide and ozone have occurred despite increases in population, the number of motor vehicles on the road and the total number of miles traveled in the Portland area.

In Medford, it is too soon to assess the impact of I/M through air quality monitoring. The area recorded 33 days above the carbon monoxide standard in 1985 and 22 above the standard during 1986. Medford appears to be on a generally improving trend for carbon monoxide, but this picture is complicated by the area's changing traffic patterns, sluggish economy and persistent air stagnation problems.

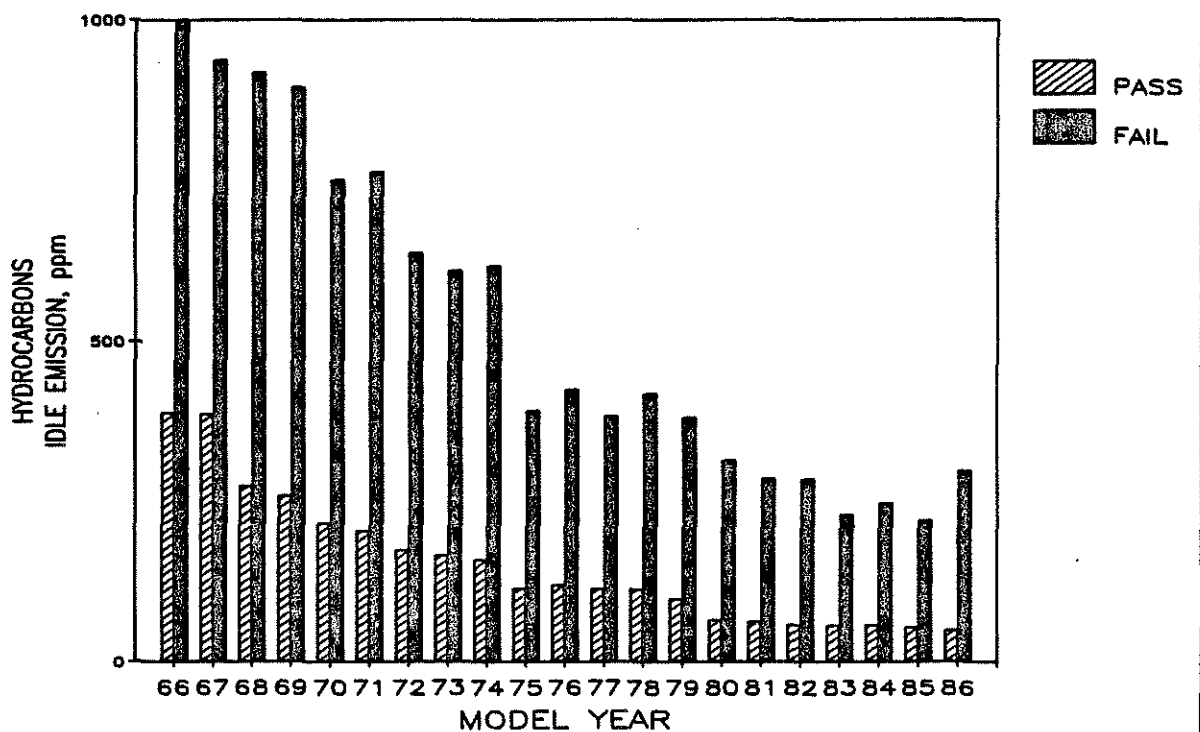
In looking at I/M programs and air quality improvements, it is important to note that all three of the above measures of air quality reflect the contribution of control measures other than vehicle inspection. This

FIGURE 3  
 AVERAGE CARBON MONOXIDE IDLE EMISSIONS  
 OF VEHICLES TESTED IN THE I/M TEST



DELTC

FIGURE 4  
 AVERAGE HYDROCARBON IDLE EMISSIONS  
 OF VEHICLES TESTED IN THE I/M TEST



DELTHC

includes the improved pollution control equipment on newer vehicles, improvements in traffic flow, parking controls and use of public transportation. The bottom line, however, is that "high emitting" vehicles would have been generating from two to three times as many pollutants if they had not been identified by the Portland vehicle inspection program.

#### THE OUTLOOK FOR I/M IN OREGON

The stringent new-car emissions standards implemented by the federal government in 1981, along with the need for better fuel economy, brought about major changes in automobile engine technology. Just as many argued that the introduction of catalytic convertors in the 1970's would eliminate the need for I/M programs, some now point to the "electronics revolution" as a reason to eliminate vehicle emission inspections. There may indeed be a point at which we no longer need I/M, but current data suggest that day may be a long way off. The sophisticated new pollution control equipment is more effective, but its effectiveness deteriorates over a period of time. Maintenance is required to keep it operating properly. I/M is still needed for these new technology vehicles, just as it has been for earlier models.

The vehicle inspection programs in the Portland and Medford areas are an important component of the State Implementation Plan under the Clean Air Act. The purpose of these programs is to reduce carbon monoxide emissions through improved vehicle maintenance. (For Portland, this also applies to ozone-producing hydrocarbons.) The emissions reductions obtained through I/M in Portland have helped the area make significant progress in meeting ambient air standards. The new program in the Rogue Valley is regarded as essential to achieving ambient air carbon monoxide standards for the Medford area. Emissions inspection is a key element in current control strategies for both areas.

#### APPENDICES

The appendices attached to this report provide additional detail on various aspects of the Oregon I/M Program. These appendices are:

- A. Environmental Quality Commission Actions, 1985-1986.
- B. Program Operations in the Oregon I/M Program during 1985-1986.
- C. Emissions from Cars and Trucks.
- D. Vehicle Inspection and Air Quality.
- E. Population and Traffic Trends in Oregon's I/M Areas.
- F. I/M Programs around the Nation: A Brief Summary.

(Because of the voluminous nature of these materials, please contact the DEQ, Vehicle Inspection Program for a complete set of the Appendices.)

STATE OF OREGON  
ENVIRONMENTAL QUALITY COMMISSION

REPORT ON  
OREGON VEHICLE INSPECTION PROGRAM  
1985 - 1986

(TECHNICAL APPENDICES)

PREPARED FOR PRESENTATION AT  
JANUARY 23, 1987  
ENVIRONMENTAL QUALITY COMMISSION MEETING

BY  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
VEHICLE INSPECTION PROGRAM



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for  
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Summary of Oregon Environmental Commission Vehicle Inspection Program  
 Related Actions During 1985-1986

<u>Date</u>	<u>Action</u>
March 8, 1985	Received information report on I/M program for 1983-1984.
April 19, 1985	Adopted changes affecting Vehicle Inspection Program rules regarding engine changes and underhood inspection.
June 7, 1985	Issued an emergency repeal of the motorcycle noise testing requirements.  Adopted Intergovernment agreement providing for mandatory noise testing of Tri-Met buses.
July 19, 1985	Gave authorization for public hearings to gather testimony on new boundaries, implementing HB 2458. This action was the first step in establishing the Rogue Valley I/M program.
September 27, 1985	Adopted rules which established boundaries in the Medford-Ashland and Air Quality Maintenance Area. Effective date for I/M program in the Rogue Valley Area was January 1, 1986.
November 28, 1985	Adopted rules formalizing suspension of motorcycle noise testing requirements.
June 13, 1986	Gave authorization to conduct public hearings to consider amendments to test standards.
July 25, 1986	Received an informational report reviewing the light duty vehicle noise testing.
September 12, 1986	Adopted amendments affecting inspection program standards for 1972-1974 model year cars.
October 24, 1986	Approved Modification to Bus Noise Inspection Intergovernmental Agreement with Tri-Met.

WPJ:a  
 VA5849.A  
 November 12, 1986

## Inspection Program Operations

ORS 815.300 provides that motor vehicles registered within the boundaries of the Metropolitan Service District, in the greater Portland metropolitan area and Medford-Ashland AQMA, comply with the emission control test method, criteria and standards established by the Environmental Quality Commission. Compliance is required in order to register or renew the registration of a motor vehicle. Passenger cars and light duty trucks, which constitute the bulk of the inspection workload, are on a biennial registration renewal schedule and are tested every two years. Heavy duty trucks and government-owned vehicles are tested on an annual basis. Certain classes of vehicles have been legislatively exempted from the emission control test requirements.

The primary goal of the inspection program is to reduce automotive caused air pollution by promoting proper vehicle maintenance. To do this with an acceptable level of service for the public, the inspection program provides sufficient, convenient facilities and reasonable customer waiting times, by utilizing testing equipment in excellent condition and a trained and helpful staff. The Department of Environmental Quality currently operates six motor vehicle inspection centers in the greater Portland metropolitan area and one inspection center in Medford.

Direct service at the inspection stations is supported by administrative and engineering efforts. Administrative and engineering staff work on a variety of related tasks and projects in providing efficient program operation, and educational and support efforts for the automotive service industry. Efforts in these areas are important since individuals who repair motor vehicles must be aware of what is expected and why.

With the biennial licensing cycle for passenger cars and light duty truck registrations, the emission inspections are not spread evenly throughout the two-year period. Figure B-1 shows the month's test volumes during 1985 and 1986. Figure B-2 shows daily testing activity for 1985 and 1986. During this period, approximately 800,000 light duty vehicle inspections were conducted at the Department's facilities and over 500,000 certificates were issued. Overall program statistics are shown in Tables B-1 and B-2.

During 1985-1986, the program staff has conducted or participated in a wide range of activities. There was a survey of randomly selected vehicle licenses from shopping center and work parking lots in the Portland metropolitan area. The registration information was then cross-referenced with the driver's license files. Vehicles registered outside of the MSD area were additionally cross-referenced in that town's phone book as an additional verification of residence. This survey data, composed of 2 percent of the vehicles in this area, indicated about 10 percent of those vehicles may have been improperly registered. This is the same order of magnitude that the Motor Vehicle Division reports in its survey of liability insurance compliance.

TABLE B-1

Department of Environmental Quality  
 Vehicle Inspection Program  
 811 S. W. Sixth Avenue  
 Portland, Oregon

ACTIVITY SUMMARY FOR JANUARY 1985 THROUGH NOVEMBER 1986

EMISSION INSPECTION TESTS

Light Duty            800,140  
 Heavy Duty         27,154  
 Total                827,294

By Location:  
 Gresham            164,845  
 Milwaukie         135,065  
 Northeast         145,136  
 Hillsboro          60,668  
 Northwest         60,927  
 Beaverton         202,274  
 Medford            58,379

Certificates of Compliance Issued - 549,999

LIGHT DUTY VEHICLE EMISSION CONTROL TEST SUMMARY

	Total Number	Total Percentage	Vehicle Category			
			1981+ 25%	1975-1980 49%	1968-1974 23%	Pre-1968 3%
Pass Emission Test	525,905	66%	88%	59%	55%	65%
Test Failed For:						
Excessive Carbon Monoxide (CO)	71,327	9 %	2 %	10 %	14 %	11 %
Excessive Hydrocarbons (HC)	56,752	7 %	2 %	8 %	11 %	8 %
Excessive HC and CO at idle	43,808	5 %	1 %	8 %	5 %	2 %
Either CO or HC @ 2500 rpm	8,045	1 %	4 %	- %	- %	- %
Disconnected Emission Control Equipment	49,531	6 %	2 %	10 %	6 %	- %
Other Causes (i.e., smoke, dilution, idle speed)	37,875	5 %	2 %	4 %	8 %	12 %
Excessive Noise	6,897	1 %	- %	- %	2 %	3 %

Table B-2

Department of Environmental Quality  
 Vehicle Inspection Program  
 811 S. W. Sixth Avenue  
 Portland, Oregon

HEAVY-DUTY GASOLINE VEHICLE TEST SUMMARY  
 Jan 85 through Nov 86 - All Stations

Pre-1970 Trucks (2042)

Pass Emission Test	64%
Tests Failed for Carbon Monoxide (CO)	7%
Tests Failed for Hydrocarbons (HC)	11%
Tests Failed for Both HC & CO	2%
Tests Failed for CO @ 2500 rpm	11%
Tests Failed for Other Causes	5%

1970-1973 Trucks (9430)

Pass Emission Test	61%
Tests Failed for Carbon Monoxide (CO)	11%
Tests Failed for Hydrocarbons (HC)	9%
Tests Failed for Both HC and CO	3%
Tests Failed for CO @ 2500 rpm	11%
Tests Failed for Other Causes	5%

1974-1978 Trucks (9283)

Pass Emission Test	60%
Tests Failed for Carbon Monoxide (CO)	11%
Tests Failed for Hydrocarbons (HC)	11%
Tests Failed for Both HC and CO	3%
Tests Failed for CO @ 2500 rpm	7%
Tests Failed for Emission Equipment Disconnects	5%
Tests Failed for Other Causes	3%

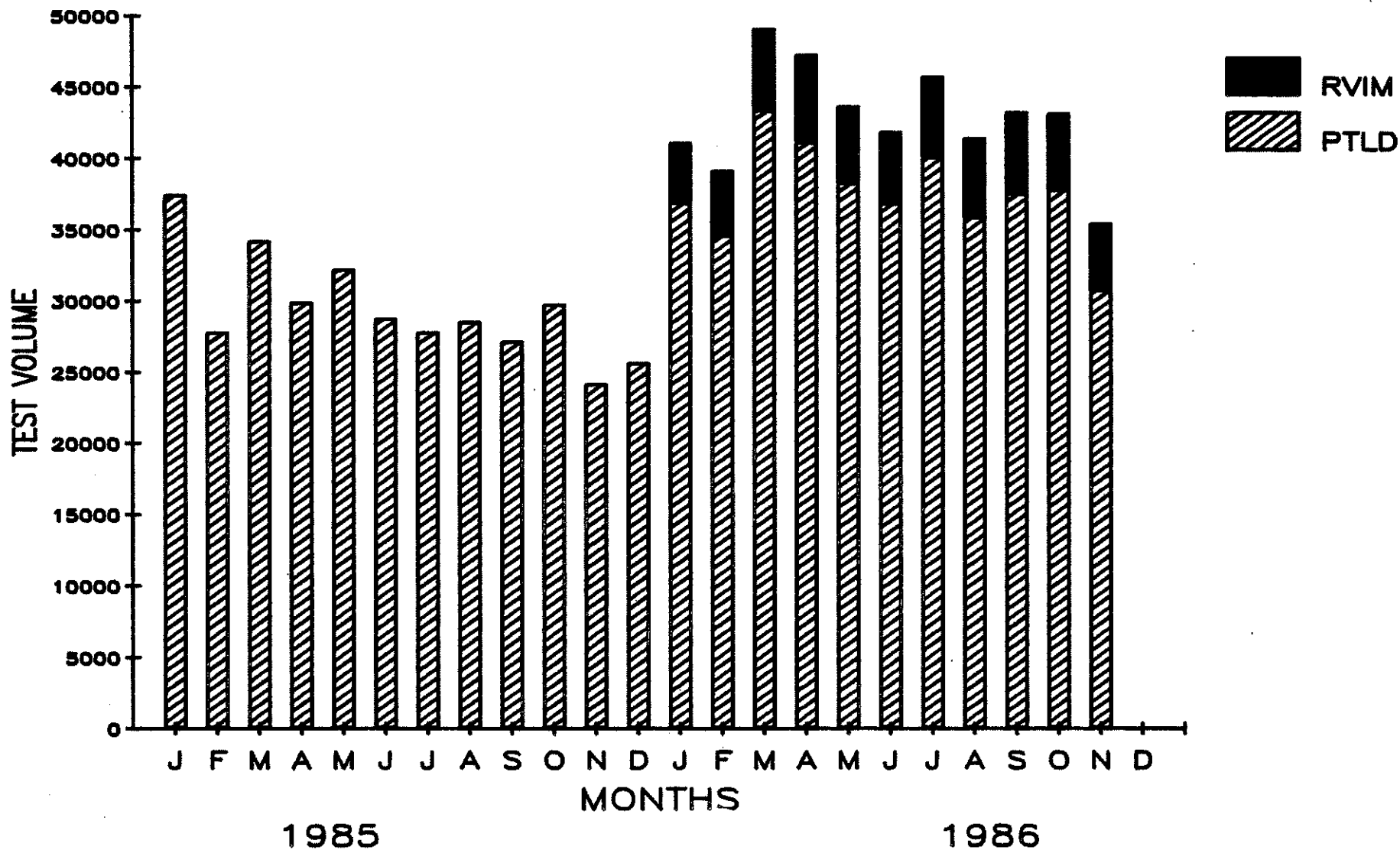
1979 and Later Trucks (8941)

Pass Emission Test	74%
Tests Failed for Carbon Monoxide (CO)	3%
Tests Failed for Hydrocarbons (HC)	10%
Tests Failed for Both HC and CO	1%
Tests Failed for CO @ 2500 rpm	1%
Tests Failed for Emission Equipment Disconnects	7%
Tests Failed for Other Causes	2%

VMHD (2/80)

VIP 86360

FIGURE B-1  
 ACTIVITY SUMMARY FOR OREGON I/M STATIONS  
 OPERATED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY  
 JANUARY 1985 THROUGH DECEMBER 1986

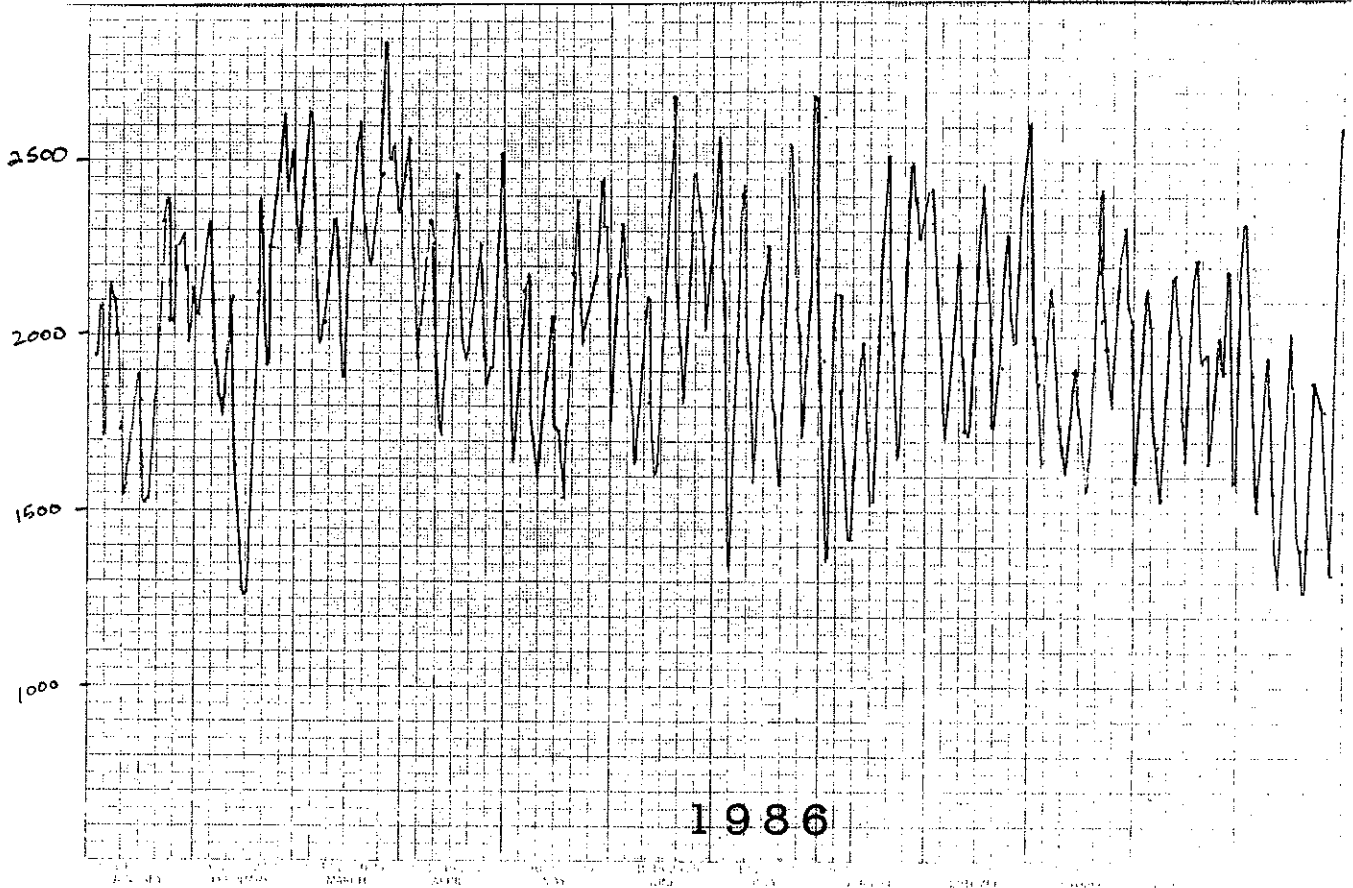
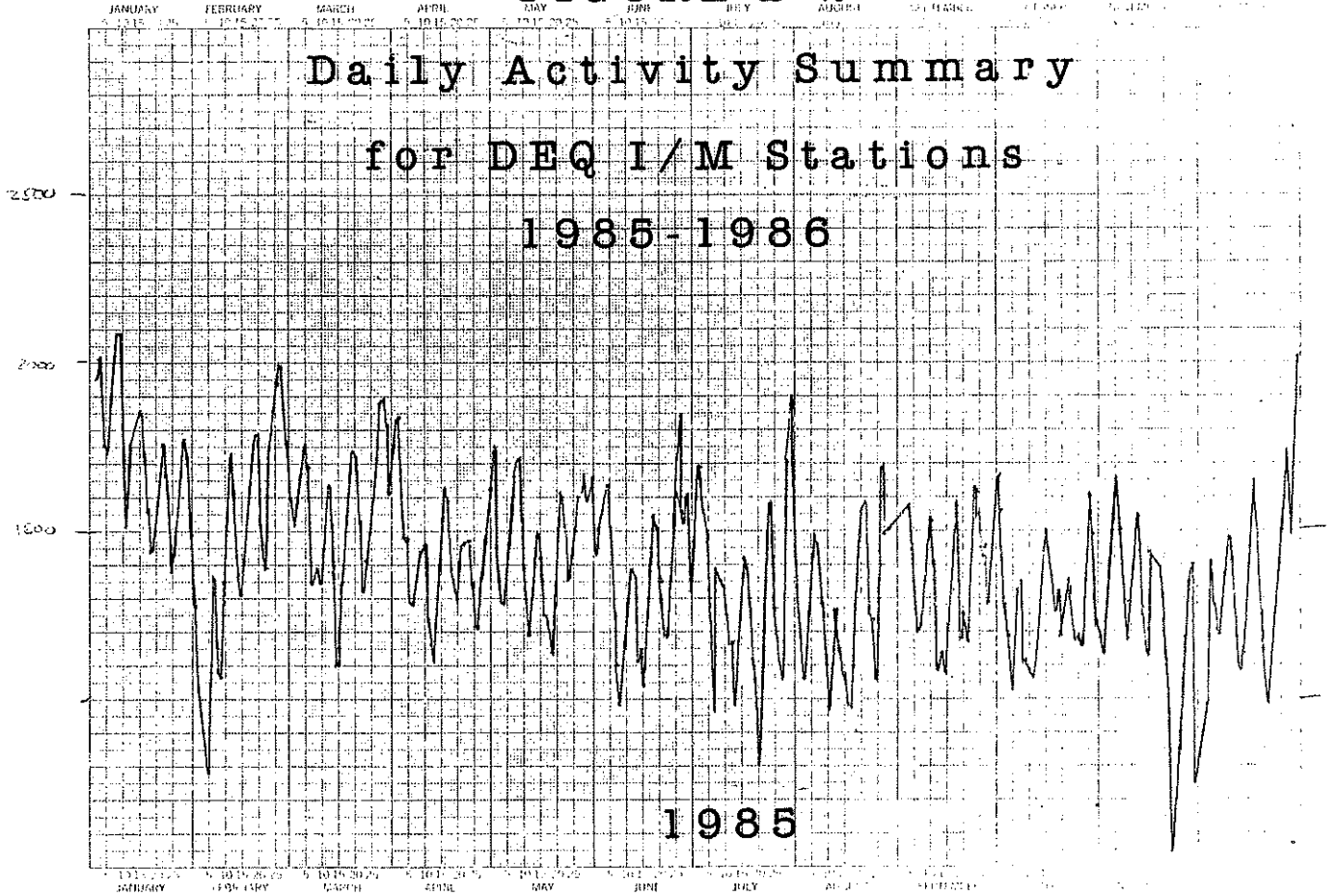


# FIGURE B-2

## Daily Activity Summary

for DEQ I/M Stations

1985-1986



An agreement between the Department and federal General Services Administration was implemented in early 1985. This agreement simplifies some procedures by providing invoiced billing for the 600 federal vehicles assigned to the Portland metropolitan area.

On May 29, 1985, the program's management and supervisory staff was awarded the Governor's Management Service Recognition Award by Governor Atiyeh in Salem. This was the first time the award was presented to a team of employees rather than to an individual.

One member of the program's staff suggested several ideas for extending the "useful life" of the exhaust gas analyzers. One such suggestion, specifically to rebuild rather than purchase new HC/CO detector assemblies by using the sensor from surplus carbon dioxide assemblies, was adopted by the Oregon Employee Suggestion Award Board. This suggestion, estimated to realize a net savings of \$2500.00 annually was given the "Suggestion of the Month Award" for May, 1986.

#### Fleet Inspection Operations

The Department's daily inspection activities are augmented by a licensed fleet inspection program. During this past two-year period, 51 licensed fleet inspection operations have been licensed to test and issue Certificates of Compliance to their vehicles. During the past two years, the licensed fleets issued 12,501 Certificates of Compliance. This is approximately 2 percent of the program's testing volume, yet does not directly impact the testing stations' workload.

The fleet operations currently licensed are listed in Table B-3.

#### Customer Interaction

The program's engineering and supervisory staff continues to work with customers regarding their vehicle failing to meet the exhaust emission and/or noise levels. As such, a significant amount of staff time is devoted to direct interaction with the customer. These direct contacts are normally either by telephone or person-to-person. The customers vary from the typical vehicle owner/operator to the automotive service technician that is trying to accomplish the necessary repairs within reasonable costs and still maintain a satisfied customer.

Customers with vehicles that present unusual testing problems or situations are referred, if necessary, by the inspector staff to the program field supervisors. At that time, an appointment can be made to have a vehicle brought into the program's Tech Center, 1301 S.E. Morrison Street, Portland, or to the Rogue Valley station for further testing. If appropriate, diagnostic evaluation to identify the cause(s) of failure is done.

Direct personal contacts by the program's field supervisors with customers who have encountered difficulties in meeting the testing program standards



Table B-3

STATE OF OREGON  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
VEHICLE INSPECTION PROGRAM  
LIST OF LICENSED FLEET OPERATIONS

Portland Metropolitan Area

001 Portland Motor Pool  
002 Mobile Chef (Canteen Company)  
003 City of Portland - Bureau of Fleet Management  
004 U.S. Postal Maintenance Facility  
005 Oregon State Highway Division  
006 Washington County Public Works  
007 General Telephone Company  
009 Northwest Natural Gas Co.  
010 Portland General Electric (5 locations)  
011 Pacific Northwest Bell Telephone  
012 Clackamas County Public Works  
013 Multnomah County  
014 United Parcel Service  
015 Port of Portland  
016 Portland School District #1  
017 Pacific Power and Light Company  
018 Beaverton School District #48  
020 Carnation Company  
021 Laidlaw Transportation  
022 City of West Linn  
023 Power Rents, Inc.  
024 Tri-Met Transportation  
026 City of Lake Oswego  
027 North Clackamas School District #1  
028 Washington County Fire District #1  
029 Lake Oswego School District #7  
030 Consolidated Freightways  
031 City of Oregon City  
032 Oregon City School District  
033 City of Milwaukie  
034 Portland Bottling Company  
035 Unified Sewerage Company  
036 Parkrose School District #3  
037 Tektronix, Inc.  
038 David Douglas School District  
039 City of Forest Grove  
040 Oregon National Guard  
041 Reynolds School District  
042 City of Beaverton  
043 Hillsboro School District  
044 Oregon Air National Guard  
045 Tualatin Fire District  
046 City of Hillsboro  
047 City of Tualatin Maintenance  
049 City of Gresham

Rogue Valley Area

003 Jackson County Fleet Services  
004 City of Ashland  
006 City of Medford  
011 Pacific Northwest Bell Telephone  
017 Pacific Power & Light Company

and criteria average between 15 and 20 per week. Although these personal contacts in addition to the telephone contacts, are extremely time consuming, it enhances the staff's ability to effectively relate to and understand the customer's concerns about the operation of the inspection and maintenance program.

These sessions often serve the same type of functions as the Action Line in the local paper. The customer is concerned that a repair shop has quoted excessive repairs to properly repair the vehicle, or the customer feels that the inspection station has unfairly failed their vehicle. The usual result of these sessions is to confirm what the customer already knows or suspects. Occasionally, however, an error or oversight is uncovered, especially when the vehicle concerned is considered "exotic". Thus, the process serves as a safety net from both the customer and the staff's perspective.

### Training Activities

Secondary Education - The program's staff has continued its educational environmental awareness efforts utilizing its powertrain demonstration unit. During the past two years, seminars have continued to be made to groups around the state. This is an important educational tool in explaining emission control to groups, particularly high school and community college students.

The program's supervisory staff has been actively involved as members of educational advisory committees, both at the local and state level. These involvements range from local high school and community college automotive programs to the Oregon Association of Industrial Clubs of America (VICA). In April, 1986, the program's staff received a plaque recognizing the Department as a 10 year industrial sponsor.

Inspection Staff - The program's inspector staff size has ranged from 35 to 47 during the past two years. New inspectors are normally hired on a seasonal or temporary basis and after completing their trial service period, are rotated into permanent positions when turnover occurs. New inspectors receive 32 hours of classroom training, followed by on-the-job training at the inspection stations. During 1985-1986, 26 new inspectors were trained. The purpose of the training sessions, conducted 4 times in this past period, is to provide new inspectors the necessary background information, knowledges and skills to perform the entry level requirements of the inspector's job duties. All inspectors are required to satisfactorily complete a six month trial service period and must be able to meet licensing requirements that have been legislatively established.

Fleet Inspectors - All previously licensed fleet inspectors are required to attend a one day update training session every two years. Fourteen of the recertification sessions were conducted. Additionally, 45 newly licensed fleet inspectors were provided training by the program staff during five sessions. Fleet operation inspectors must complete a 16 hour training session to become licensed as a fleet inspector. The 51 licensed fleet operations employ a total of 154 licensed fleet inspectors.

Rogue Valley Emission Technician Clinics - As previously stated, a major goal of the Oregon I/M program is to improve air quality by promoting proper automotive maintenance. In view of the existing interest for additional motor vehicle emission control efforts in the Rogue Valley, it was determined that conducting a mechanic emission training program would be beneficial and would definitely complement implementation of an I/M program in the area. The Environmental Protection Agency provided the Department training funds to conduct such a program in the Rogue Valley area.

The goal of the training program was to increase the skills and confidence levels of automotive service technicians in the I/M program area for maintaining and repairing emission controlled vehicles. It was determined that startup problems of an I/M program would be eased if the service industry received prior specific emission control training. Likewise, ongoing problems of vehicle misadjustments would also be reduced.

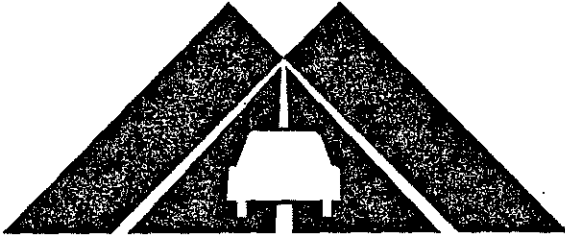
An automotive instructor training workshop was conducted by program staff at Rogue Community College from September 30 to October 4, 1985. The purpose of this workshop was to "train the trainers" that could later be called upon to present emission control training courses to the automotive service industry in the Rogue Valley area. This 40 hour workshop was attended by 12 instructors from the local area.

A services agreement contract between the Department and Jackson Educational Services District (ESD) was prepared. This agreement provided for the ESD to administer funds and paperwork necessary to compensate the instructors at the completion of each course. The continued willingness of the ESD staff to reduce or eliminate typical intergovernmental agency obstacles and delays demonstrated their desire to make this effort a joint success.

The training classes, which were conducted at the RVIM testing station, began November 5, 1985. A total of 11 classes have been conducted during the past year. Each session consisted of 30 hours of classroom and hands-on training. The hands-on training was a necessary segment so the technician could apply and reinforce the information learned in the classroom. A total of 128 technicians, representing 56 service facilities, have completed this training course. Of these facilities, 34 have met the criteria necessary to display their Rogue Valley I/M program "Recognized Emissions Technician" sign.

Figure B-3 shows the brochure that is available for Rogue Valley area residents, listing the technicians that have successfully completed the course.

# Rogue Valley I/M Program



## RECOGNIZED EMISSION TECHNICIANS

"Recognized Emission Technicians" are Jackson County-area mechanics who have completed a 36-hour course on Emissions Systems Diagnosis. This course is run by the Rogue Valley I/M ("Inspection and Maintenance") program.

These technicians have learned advanced skills in diagnosing the causes of motor vehicle pollution and ways to cure it. They have demonstrated to the Rogue Valley I/M Program their capability in using exhaust gas analyzers to diagnose emission control problems.

By participating in the course, these recognized technicians, along with their employers, have shown a commitment to cleaner air in the Rogue Valley. Accurate engine analysis plays an important role in reducing air pollution from motor vehicles.

**October 1986**

**Department of Environmental Quality**

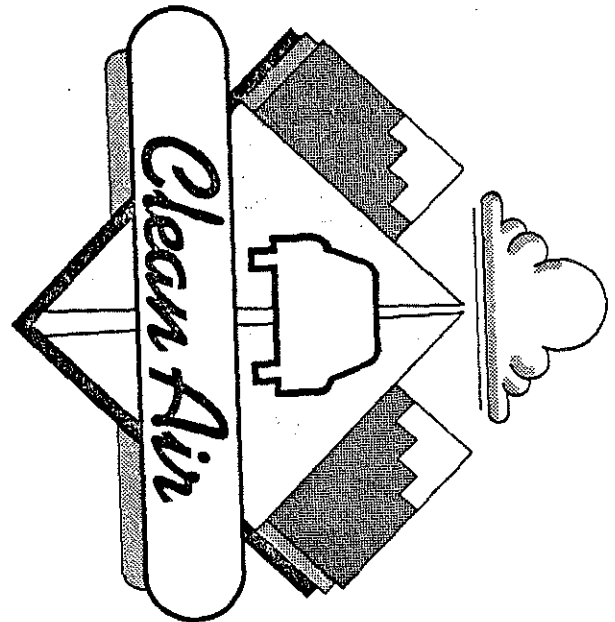
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### Recognized Emission Technicians

The following automotive service technicians have been recognized for satisfactorily completing the Emissions Systems Diagnosis Course conducted by the Rogue Valley I/M Program. The firms they work for have also been recognized because they are equipped with exhaust gas analyzers for accurate engine analysis.

This list will be updated as others complete the course and become Recognized Emission Technicians

Additional Emissions Systems Diagnosis classes are now being scheduled. For more information, call the Rogue Valley I/M Office in Medford, 776-6140.



## Oregon's I/M Program In The Rogue Valley

The 1985 Oregon Legislature passed and the governor signed into law House Bill 2845. This law required the Environmental Quality Commission (EQC) to designate boundaries of areas needing a motor vehicle inspection program. The Medford-Jackson County area has been identified as one such area.

In July, 1985, the EQC authorized a series of public hearings for the proposed I/M program. It was proposed the boundaries would be the Medford-Ashland AQMA, which includes the cities of Medford, Ashland, Central Point, Eagle Point, Jacksonville, Phoenix and Talent.

Six public hearings were held in August, 1985 and on September 27, 1985, the EQC designated the Medford-Ashland Air Quality Maintenance Area (AQMA) as the boundary for the I/M program. Beginning January 1, 1986, a Certificate of Compliance issued by the Department would be required for residents in the AQMA to renew vehicle registration.

An Inspection Units Supervisor with 11 years experience in the Portland program was selected to supervise the Rogue Valley inspection program. The remaining program staff consists of an Administrative Assistant, a Senior Vehicle Emissions Inspector, and 6 Vehicle Emissions Inspectors.

A staff member with several years of experience, most recently at the Hillsboro station, was chosen and transferred by the Department to fill the position of Sr. Vehicle Emission Inspector. This, in turn, provided other inspectors in the Portland area some promotional and transfer opportunities. The six remaining authorized Vehicle Emissions inspector positions for the Rogue Valley program were filled from applicants that interviewed for the Senior Vehicle Emissions Inspector position. All were from the Rogue Valley area. An initial one week of classroom and on-site training was conducted in Portland as part of their job training.

A short-term voluntary testing program was implemented beginning November 19, 1985. This was accomplished by temporarily assigning inspectors from the Portland program to operate a Mobile Testing Unit at different locations throughout the Rogue Valley area.

The I/M program staff in the Rogue Valley began testing vehicles and issuing Certificates of Compliance on December 26, 1985, using the Department's mobile testing van. On January 1, 1986, the Rogue Valley I/M station opened with two lanes in operation with the third completed in February. A grand opening was held on January 7, 1986, with local dignitaries and media observing DEQ Director Fred Hansen cutting the ribbon.

A great deal of effort was put together to develop a successful public awareness program. Providing factual information in a timely and informative manner greatly assisted the public's understanding and acceptance of this program. A multi-media program was developed that was

shown to interested citizen groups throughout the valley. The key points of this effort were to clearly explain the problems and show why after all was said and done, I/M was the only answer that was available. In November, the Department received the the 1986 regional Public Relations Society of America Spotlight Award recognizing the overall excellence and effectiveness for its public awareness program to improve community relations in the Rogue Valley.

### Noise Testing

In the spring of 1984, the Environmental Quality Commission received a petition from the Portland Area Coalition for Livable Streets. The petition requested that all major motor vehicle categories, including Tri-Met's diesel buses, be included in a noise inspection program. As a result of this citizen petition, public hearings were held. In November of 1984, the Environmental Quality Commission directed the Department to include noise testing as part of the current vehicle emission testing program. The EQC set a start-up date of April 1, 1985 for noise testing of passenger cars, vans and pickup trucks. Motorcycles were to be included in the noise testing program; however, this was rescinded due to lack of necessary legislative budget authorization.

The only aspect of Oregon's I/M program not included in the Rogue Valley was the mandatory noise inspection. The major reasoning accepted by the Commission was that this was a Portland area solution to a Portland area problem identified by Portland area residents.

The noise test for passenger cars, vans and pickups is fast and simple. A noise measurement is taken 20 inches from the tailpipe when the engine is running at 2500 RPM. The 2500 RPM point is a part of the existing emission test, and the noise test is conducted concurrently with the emissions test. Noise limits for most front-engine vehicles is 93 dBA and 95 dBA for rear-engine vehicles.

Responding to the petition's additional request, the Commission directed the Department to develop, prior to April 1, 1985, an agreement that would ensure that all of Tri-Met's buses are maintained to appropriate noise emission limits. On June 7, 1985, an intergovernmental agreement was approved for testing and certifying of the buses which met the noise standards.

Under the terms of the intergovernmental agreement, Tri-Met is required to annually certify that each bus meets a noise emission limit. This noise limit is intended to distinguish defective or deteriorated exhaust system components from those in good (quiet) repair. For noise testing purposes, Tri-Met's bus fleet is currently considered to consist of 14 subfleets, representing the different bus models with their respective engine and exhaust system configurations. Because of the various subfleet systems, differing noise limits were established for each subfleet. Tri-Met has taken corrective measures for bus noise compliance that has ranged from simple bolt tightening, gasket replacement, and muffler replacement, to an

exhaust system conversion using components that were not supplied when the vehicle was new. This latter option has been used only when vehicles from one subfleet exceeded their particular noise limit. Tri-Met has found the noise testing program to be an effective engine diagnostic test as well as a way to meet noise emission levels.

#### Program Facilities

Construction of a new building to replace the existing operation at 6737 N.E. Portland Highway was completed in April, 1985. The new facility, financed and developed by the property owner, resulted in a inspection station with three covered inside lanes and one outside lane for larger vehicles. This replaced the open air facility that had existed for almost ten years.

With only one central location planned for the Rogue Valley area, station location was a critical issue. Many hours of staff time were spent in finding a suitable location for the Rogue Valley testing station. After reviewing various sites, it was agreed that an existing building located near the Jackson County Airport, at 3030 Biddle Road, could be modified to the program's requirements. An agreement was signed on October 4, 1985 for the 5-year lease to begin November 1, 1985. Beginning October 31, 1985, the program staff was able to utilize the building as a training center.

A major undertaking of staff time was dedicated to the design, construction, delivery, installation and equipping of the Rogue Valley station's test booth modules. The test booths were constructed, delivered and installed by the program's maintenance staff in Portland after it was determined that necessary completion dates could not be met by outside contractors. These dates were necessary to have testing begin on schedule.

In August, 1986, a new inspection station in Hillsboro was opened. The attractive, efficient facility is a major improvement for the western Washington County area, which is one of metropolitan Portland's fastest growing areas. For the past nine years, the program had been operating out of a "temporary" single-lane mobile unit on Southwest Baseline Road in Hillsboro.

In September 1986, the Beaverton inspection station was repainted, inside and out, as part of a preventive maintenance program. This is the only facility that is owned by the Department. The land is leased from the City of Beaverton under an urban renewal redevelopment agreement. All other inspection facilities are leased.

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## Emissions From Cars and Trucks

The purpose of conducting an I/M program is to identify vehicles in need of maintenance. The emission reductions obtained help achieve the area's goal of meeting the federal ambient air quality health standards. Emissions from motor vehicles are regulated in two ways, both of which affect air quality.

The U.S. government, acting through the Environmental Protection Agency, has established new vehicle standards. These standards regulate new motor vehicle emissions of carbon monoxide (CO), unburned hydrocarbons (HC), nitrogen oxides (NO<sub>x</sub>) and particulate matter. These standards apply to all motor vehicles, whether cars or pickups or motorcycles or heavy trucks and buses. The test procedure used to test new cars and light trucks is called the Federal Test Procedure. It is conducted by having a vehicle start up and drive on a dynamometer through a prescribed driving cycle that lasts about 22 minutes. The emissions that are generated are captured in bags and then analyzed for compliance against the appropriate federal new vehicle standard. The test procedure for new heavy truck engines is slightly different, in that heavy truck engines are mounted on an engine dynamometer rather than being installed in a vehicle. All emission standards or measurements for federal requirements are expressed in terms of mass of pollutant emitted per-mile travel (i.e. grams per vehicle mile). For heavy duty engines, it is mass of pollutant per unit of work (i.e., grams per brake-horsepower hour).

The Oregon I/M program idle emission test does not use the Federal Test Procedure, nor does the state test new vehicles. The state idle test uses a short test that is intended to identify high emitting vehicles and predict whether the vehicle would pass or fail the Federal Test Procedure. The test method used is referred to as the 2-stage idle test. In addition to gaseous emission measurements made and recorded at idle and 2500 RPM, there is an inspection of the emission control equipment on 1975 and newer model year motor vehicles. Table C-1 summarizes the overall inspection activity for 1985 and 1986. Table C-2 presents a similar summary for heavy duty trucks.

Documenting the reductions in vehicular emissions is done by two major methods. The first uses computer modeling. A tool called "MOBILE3" is used to calculate the emission rates. The I/M program and how it is conducted is factored into this model. Local climatic and population figures are added, giving the program a good degree of local customizing. Figure C-1 shows the results of these computer modeling runs. These curves show that the modeling estimates that the I/M program cars are about 30 percent cleaner for CO and 11 percent cleaner for hydrocarbons than non I/M cars.



Table C-1

Department of Environmental Quality  
 Vehicle Inspection Program  
 811 S. W. Sixth Avenue  
 Portland, Oregon

ACTIVITY SUMMARY FOR JANUARY 1985 THROUGH NOVEMBER 1986

EMISSION INSPECTION TESTS

Light Duty            800,140  
 Heavy Duty         27,154  
 Total                 827,294

By Location:  
 Gresham            164,845  
 Milwaukie         135,065  
 Northeast         145,136  
 Hillsboro          60,668  
 Northwest         60,927  
 Beaverton         202,274  
 Medford            58,379

Certificates of Compliance Issued - 549,999

LIGHT DUTY VEHICLE EMISSION CONTROL TEST SUMMARY

	Total Number	Total Percentage	Vehicle Category			
			1981+ 25%	1975-1980 49%	1968-1974 23%	Pre-1968 3%
<b>Pass Emission Test</b>	525,905	66%	88%	59%	55%	65%
<b>Test Failed For:</b>						
Excessive Carbon Monoxide (CO)	71,327	9 %	2 %	10 %	14 %	11 %
Excessive Hydrocarbons (HC)	56,752	7 %	2 %	8 %	11 %	8 %
Excessive HC and CO at idle	43,808	5 %	1 %	8 %	5 %	2 %
Either CO or HC @ 2500 rpm	8,045	1 %	4 %	- %	- %	- %
Disconnected Emission Control Equipment	49,531	6 %	2 %	10 %	6 %	- %
Other Causes (i.e., smoke, dilution, idle speed)	37,875	5 %	2 %	4 %	8 %	12 %
Excessive Noise	6,897	1 %	- %	- %	2 %	3 %

Table C-2

Department of Environmental Quality  
 Vehicle Inspection Program  
 811 S. W. Sixth Avenue  
 Portland, Oregon

HEAVY-DUTY GASOLINE VEHICLE TEST SUMMARY  
 Jan 85 through Nov 86 - All Stations

Pre-1970 Trucks (2042)

Pass Emission Test	64%
Tests Failed for Carbon Monoxide (CO)	7%
Tests Failed for Hydrocarbons (HC)	11%
Tests Failed for Both HC & CO	2%
Tests Failed for CO @ 2500 rpm	11%
Tests Failed for Other Causes	5%

1970-1973 Trucks (9430)

Pass Emission Test	61%
Tests Failed for Carbon Monoxide (CO)	11%
Tests Failed for Hydrocarbons (HC)	9%
Tests Failed for Both HC and CO	3%
Tests Failed for CO @ 2500 rpm	11%
Tests Failed for Other Causes	5%

1974-1978 Trucks (9283)

Pass Emission Test	60%
Tests Failed for Carbon Monoxide (CO)	11%
Tests Failed for Hydrocarbons (HC)	11%
Tests Failed for Both HC and CO	3%
Tests Failed for CO @ 2500 rpm	7%
Tests Failed for Emission Equipment Disconnects	5%
Tests Failed for Other Causes	3%

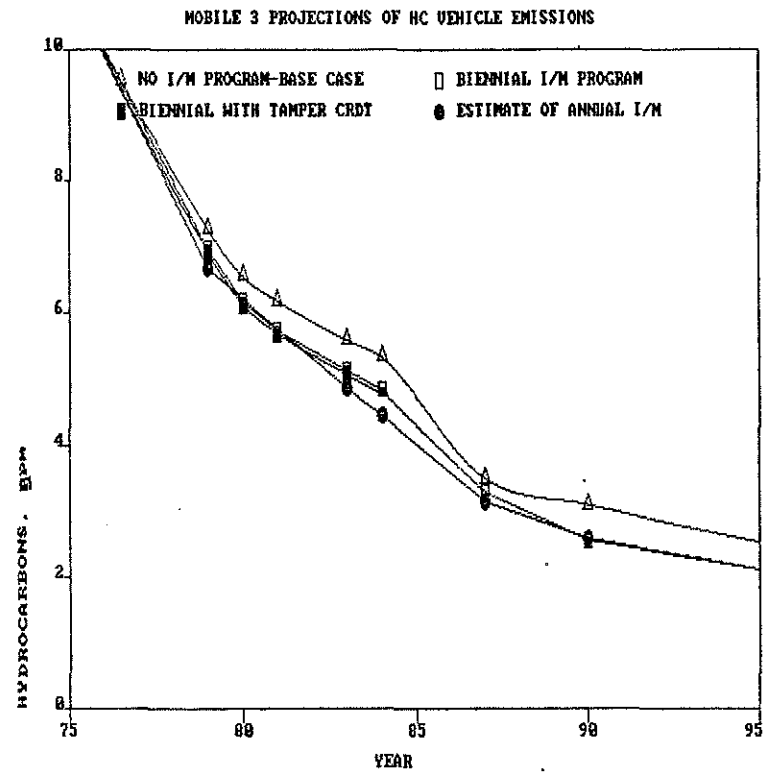
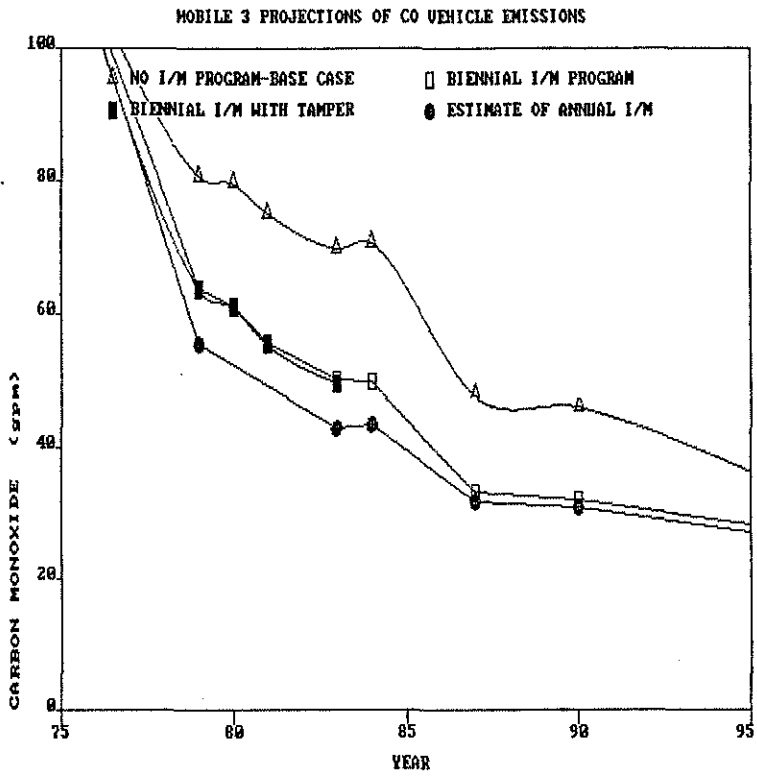
1979 and Later Trucks (8941)

Pass Emission Test	74%
Tests Failed for Carbon Monoxide (CO)	3%
Tests Failed for Hydrocarbons (HC)	10%
Tests Failed for Both HC and CO	1%
Tests Failed for CO @ 2500 rpm	1%
Tests Failed for Emission Equipment Disconnects	7%
Tests Failed for Other Causes	2%

VMHD (2/80)

VIP 86360

FIGURE C-1



Much effort goes into analyzing the data from the individual vehicle tested. In the past, this data was obtained by means of "data grab sample". Since all the emission test data was recorded on paper, reviewing each test individually was very labor intensive. Because of this, a smaller sample was "grabbed" and the analysis was then projected to the whole group.

The Department implemented a pilot data capture project as part of its I/M operation in the Rogue Valley. The I/M program in the Rogue Valley is equipped with an AT&T 7300 computer system that allows for simultaneous input of emissions data from each of the 3 inspection lanes. The system was brought on line at the end of July 1986 after initial installation and shakedown at the Northeast inspection station in Portland.

The records are transmitted nightly to the Department's central computer via telephone lines. Since the installation of the system, about 85 percent of the test records have been captured on computer files. The remaining records are contained on the manual backup system. Most of the system difficulty requiring the use of manual records occurred during the software debugging phase in the early part of the project.

The test data from the I/M program in the Portland area is still being manually recorded. As such, it is still difficult and labor intensive to review. Because of the availability of the electronic files of I/M test data from the program in Medford and the interest of the effects of the program on that area, most of the data analysis of in-use cars and trucks will be from the Rogue Valley. However, there will be sufficient information to show that car emissions from the southern Oregon area were not all that different from their northern cousins.

During the public hearings on implementation of the I/M program in the Rogue Valley, there was much concern expressed about the failure rate of the vehicles. Testimony was given that failure rates would be too excessive and that the costs associated with repair of failed vehicles would be prohibitive and pose an undue economic burden on the area residents. This has not been the case. Table C-3 compares the Portland area pass/fail statistics with those from Rogue Valley. Figure C-2 compares the age distribution of vehicles in the two areas. Overall, the main difference appears in the category of emission control equipment failures with some minor variations in emissions failure. The failure rates for HC and CO were a little higher than the Portland area vehicles. This is not unexpected, since this is the initial part of the I/M program in Rogue Valley and there has been maintenance and repair work done that may otherwise have been neglected or ignored.

FIGURE C-2  
AGE DISTRIBUTION OF VEHICLES IN THE OREGON I/M PROGRAM  
PORTLAND AREA VS ROGUE VALLEY AREA VEHICLES

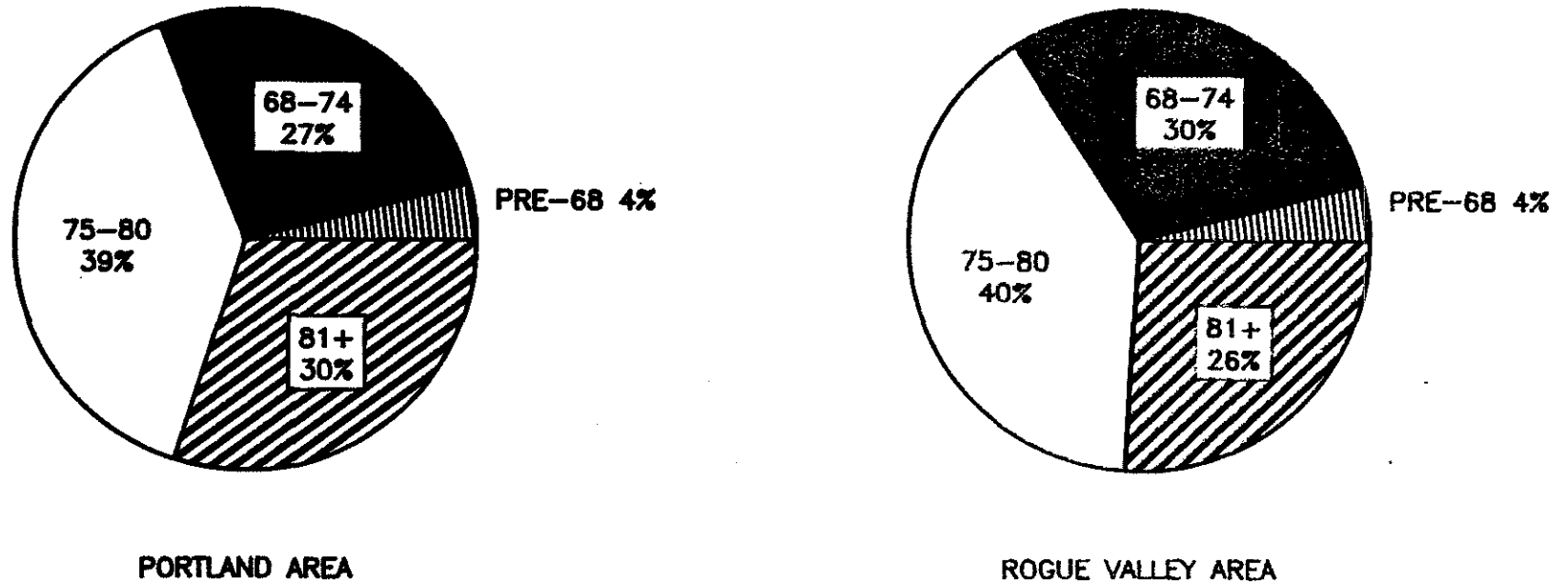


Table C-3

Department of Environmental Quality  
Vehicle Inspection Program

A Comparison of Pass & Fail Rates  
For November 1986  
Of The 6 Portland Area Stations  
And The Rogue Valley Station

	<u>Portland Area</u>	<u>Rogue Valley</u>
Pass Emission Test	67%	62%
Tests Failed for Excessive CO	8%	9%
Tests Failed for Excessive HC	7%	9%
Tests Failed for Excessive HC & CO at Idle	5%	5%
Tests Failed for Either HC or CO @ 2500 RPM	1%	1%
Disconnected Emission Equipment	5%	10%
Other Causes	5%	4%
Excessive Noise	1%	N/A

Emission Reductions

During the six months that the computer system has been operating, about 21,000 Rogue Valley vehicles have been tested with the results electronically stored. About 1,000 vehicle emission tests were captured in the Portland area during the initial shakedown prior to the delivery of the computer system to Medford.

The emissions data from cars and trucks is compared against test standards. The values were chosen in part based upon levels that would be proper for maintained vehicles. Thus, when technicians service vehicles and use the correct techniques and procedures, the tailpipe emissions should be well below the state's idle emission standards. The inspection for emission control equipment is included because emission equipment is important in all driving modes, not just at idle when the I/M test is made. This concept is of even more importance today with totally integrated engine/emission control/fuel economy designs.

The analysis of the data collected during the emissions test documents improvements in emissions. Differences in emission readings between different makes of vehicles can be related to design problems or to the way specific groups of vehicles are maintained. The common maintenance factors often relate to some very specific vehicle subgroups such as 4x4's.

Table C-4 contains the overall average idle emissions readings for Portland and Rogue Valley area vehicles because only limited data from the program in Portland is available for analysis on the computer. This

chart helps tie together the emission reduction results from the two areas. Emission readings at the 2500 RPM point are included for 1981 and new vehicles, because this is a pass/fail test condition for those vehicles.

Table C-4

Average Idle Emissions  
of Vehicles Passing and Failing  
the DEQ I/M Test

<u>Age Group</u>	<u>Portland Area Vehicles</u>		<u>Rogue Valley Area Vehicles</u>	
	<u>Pass</u>	<u>Fail</u>	<u>Pass</u>	<u>Fail</u>
Pre-68	-	-	2.93	4.95
68-74	1.96	4.94	1.88	3.99
75-80	0.56	2.62	0.57	2.18
81 +	0.07	0.88	0.94	1.18
@ 2500 RPM ('81 +)	0.16	1.60	0.24	1.74

<u>Age Group</u>	<u>Portland Area Vehicles</u>		<u>Rogue Valley Area Vehicles</u>	
	<u>Pass</u>	<u>Fail</u>	<u>Pass</u>	<u>Fail</u>
Pre-68	-	-	430	1042
68-74	138	1147	231	719
75-80	111	437	123	342
81 +	43	140	65	243
@ 2500 RPM ('81 +)	46	126	55	152

The average emissions for both passing and failing tend to be of the same order of magnitude in both Portland and the Rogue Valley. The emission reductions between the pass and fail results also tend to be about the same. This type of information has been documented before. In a study during the late 70's, the EPA compared emissions from cars in Portland with those from the Eugene area. The study found that the Portland area test fleet was 50 percent cleaner than the Eugene fleet. The study also indicated that high emitting can be identified and repaired. The emission reduction obtained from identifying failed vehicles and having them repaired is what gives the emission reduction benefit.

Having showed the general similarities and differences between the two areas in the Oregon I/M program, the remaining analysis will use data predominately from the Rogue Valley. Data from Portland will only be used to highlight or provide added emphasis.

Figures C-3 through C-6 show the average idle emissions for cars and pickup trucks. These emission reductions from Rogue Valley area vehicles are of the same order of magnitude of emission reductions documented from prior years in the Portland area. Overall, the average idle emissions reductions for all vehicles in the study group is 66 percent for carbon monoxide and 75 percent for hydrocarbons. This is shown in Figure C-7 and 8.

Figures C-9 through C-12 show average pass and fail emission levels for several popular car makes. These charts indicate that there can be a large variation between different makes in their average emissions. Pass/fail percentages are listed in Table C-5.

Table C-5

LISTING OF MAKES AND CORRESPONDING PASS RATES IN I/M TEST  
(All Models - All Years)

<u>Make</u>	<u>Percent Pass</u>
Ford	57%
Honda	79%
Chevrolet	59%
Oldsmobile	70%
Toyota	72%
Nissan (Datsun)	63%
Buick	65%
Subaru	70%
Mazda	64%
Dodge	56%
Pontiac	53%
Plymouth	54%
Volkswagon	60%
Mercury	61%
Chrysler	67%
Cadillac	69%
Lincoln	66%

There are many reasons why the emission characteristics of cars and trucks are different. There are design differences among the various manufacturers. Some of these designs have been involved in emission related recalls. As an example, the data indicates that the 1982 Nissan Hanja and Sentra with the 1.5 litre engines had a 50 percent failure rate in the I/M test. These vehicles were involved in a CO related recall announced this last year.

An example of the effects of engine design can be found in the pickup truck engines. Most of these engines do not use the more sophisticated electronic control/feedback systems found in passenger cars. There is a higher failure rate observed among this group, most probably because of faulty mechanical or misadjustments made to change vehicle performance. Such an example is found in the 5.0 litre Chevrolet pickup.

Other groups may have high listings in Table C-5 because the name brand has been manufacturing and selling cars in this country for many years. Ford, for example, has been retailing for over 75 years, while Suzuki has been marketing passenger vehicles for less than a year. Thus, in groupings



FIGURE C-3  
 AVERAGE EMISSIONS FROM ROGUE VALLEY AREA CARS  
 COMPARING AVERAGE CARBON MONOXIDE IDLE EMISSIONS  
 OF VEHICLES THAT PASS WITH THOSE THAT FAIL THE I/M TEST

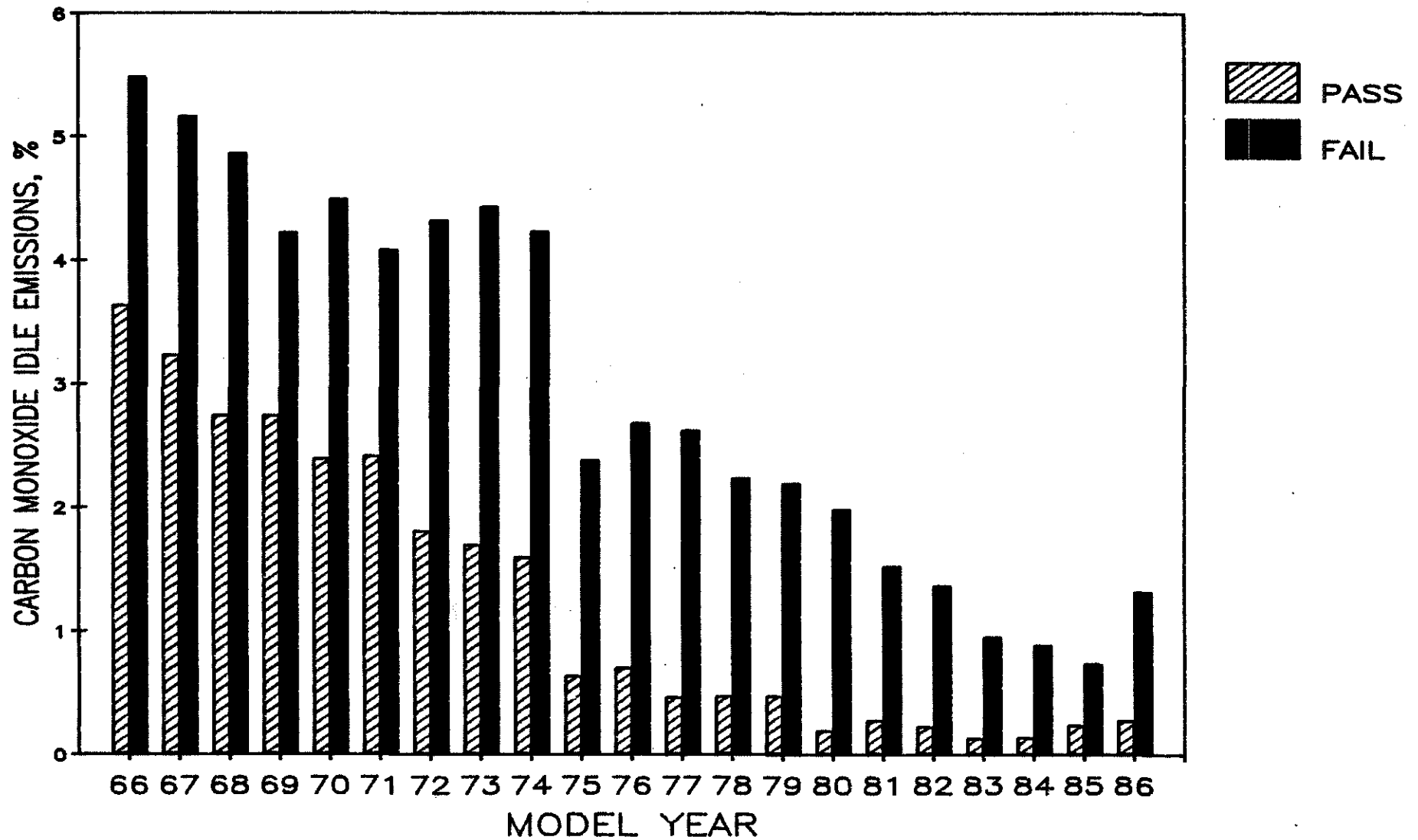


FIGURE C-4  
 AVERAGE EMISSIONS FROM ROGUE VALLEY CARS  
 COMPARING AVERAGE HYDROCARBON IDLE EMISSIONS  
 OF VEHICLES THAT PASS WITH THOSE THAT FAIL THE I/M TEST

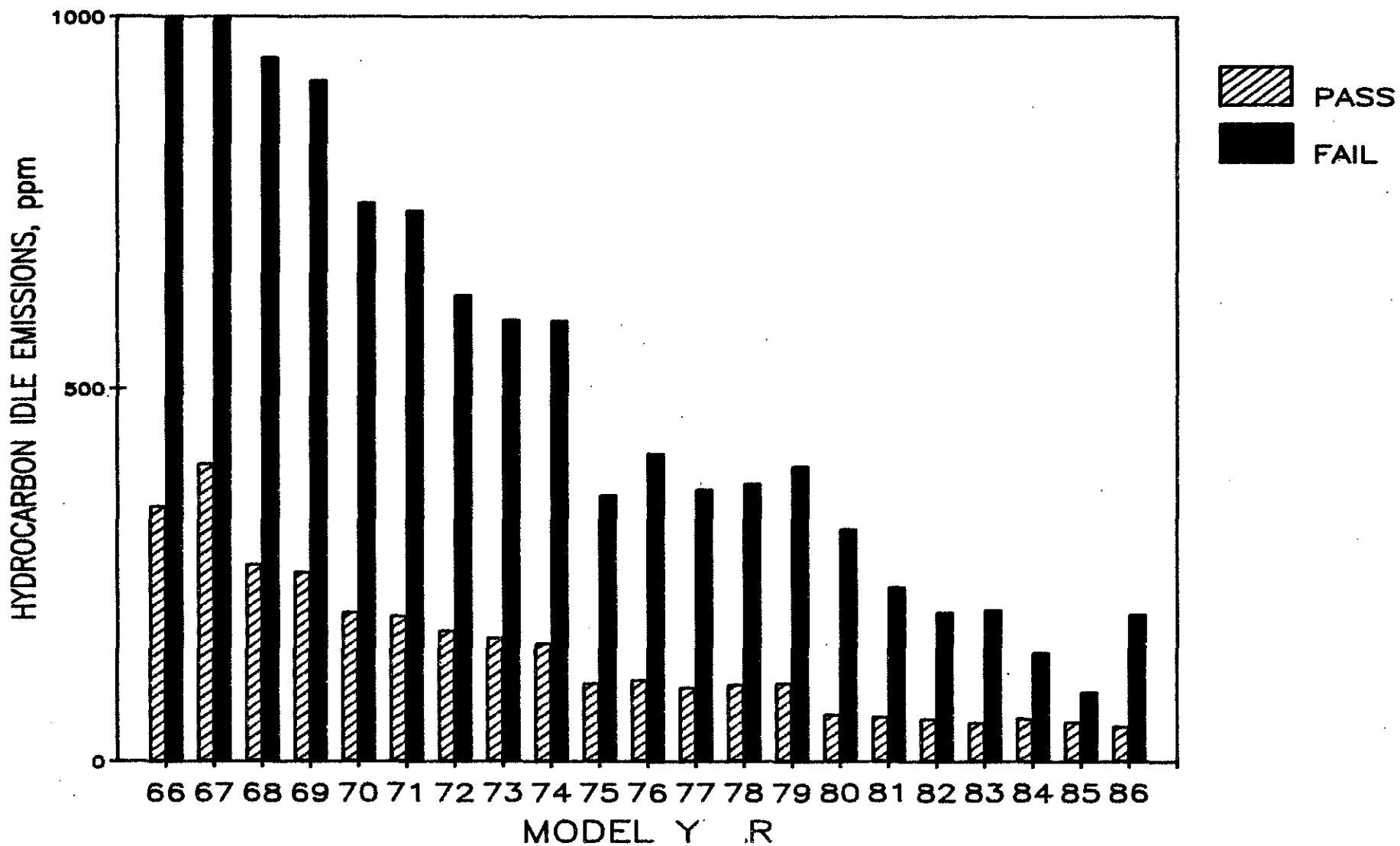


FIGURE C-5  
AVERAGE CARBON MONOXIDE IDLE EMISSIONS  
FROM ROGUE VALLEY AREA LIGHT DUTY TRUCKS

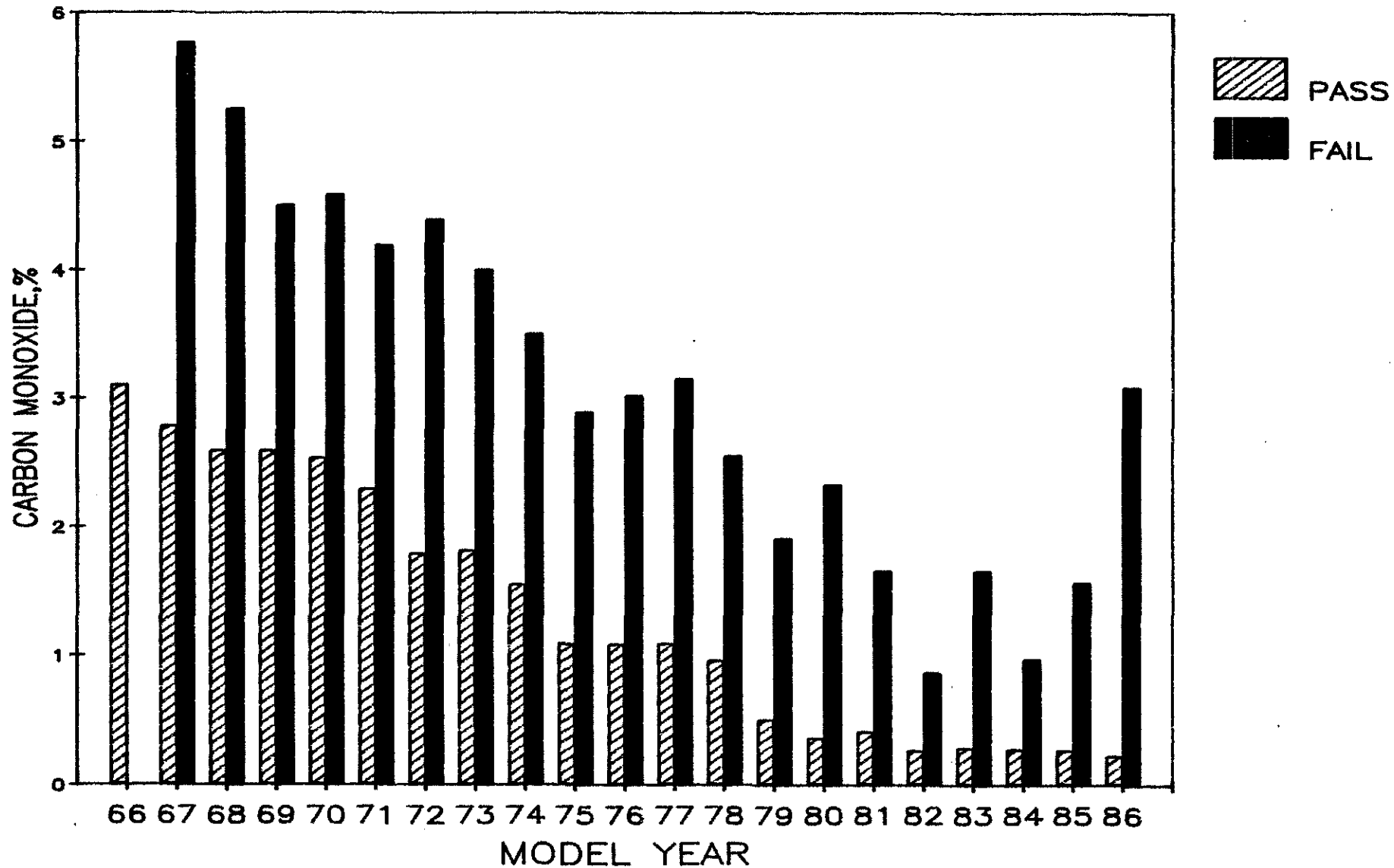


FIGURE C-6  
AVERAGE HYDROCARBON IDLE EMISSIONS  
FROM ROGUE VALLEY AREA LIGHT DUTY TRUCKS

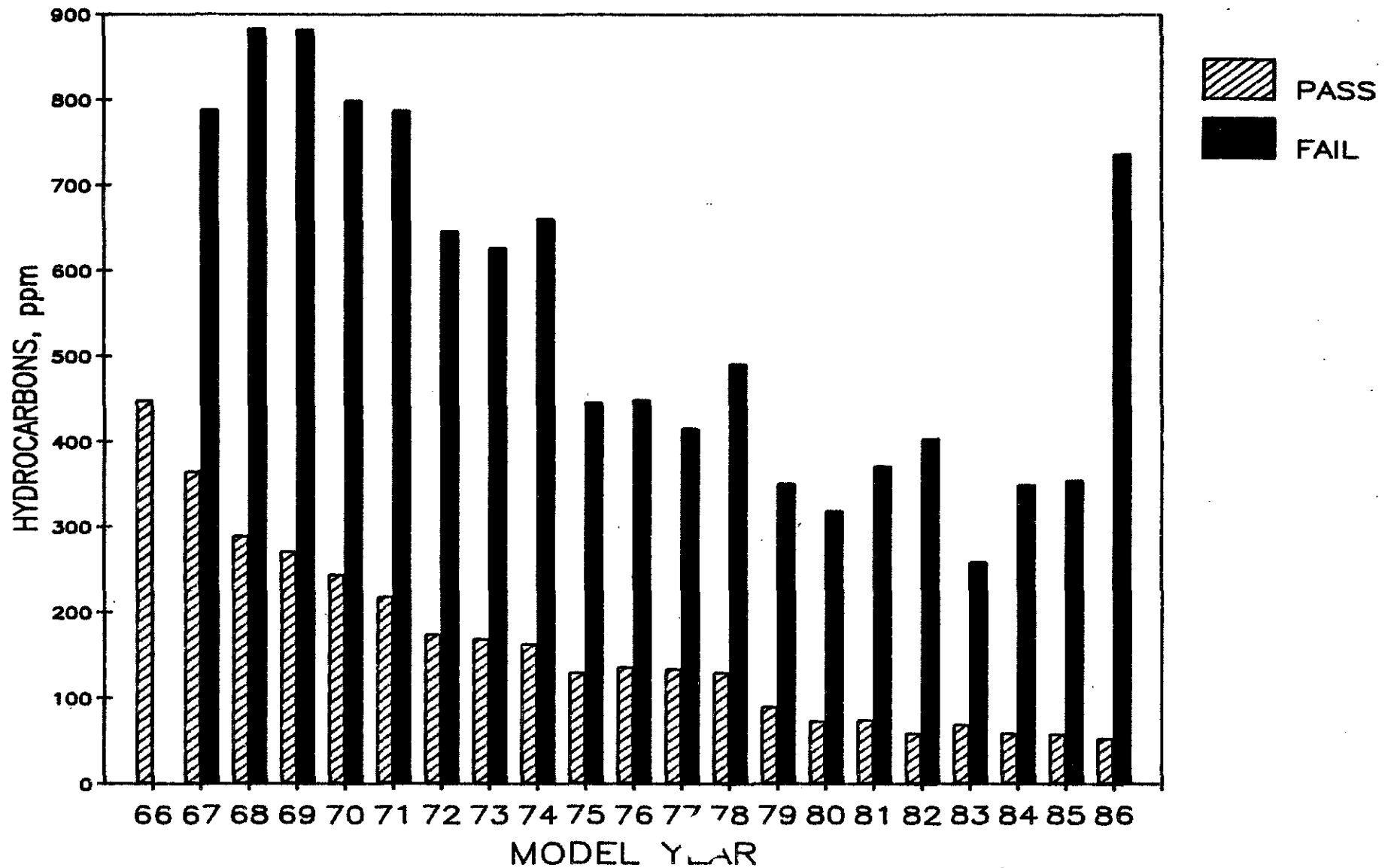


FIGURE C-7  
 OVERALL AVERAGE IDLE EMISSION  
 REDUCTION IN CARBON MONOXIDE

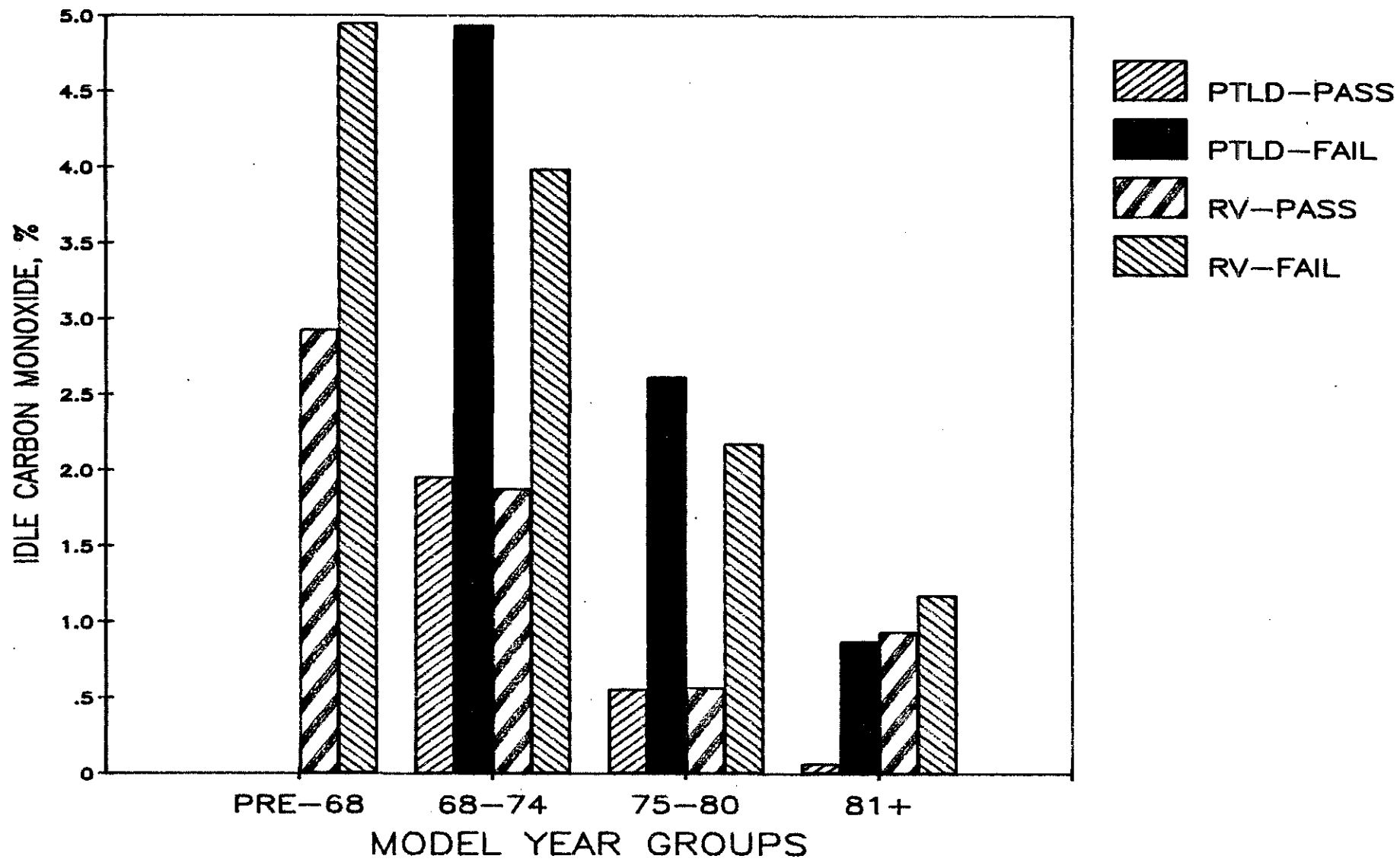


FIGURE C-8  
 OVERALL AVERAGE IDLE EMISSION  
 REDUCTION IN HYDROCARBONS

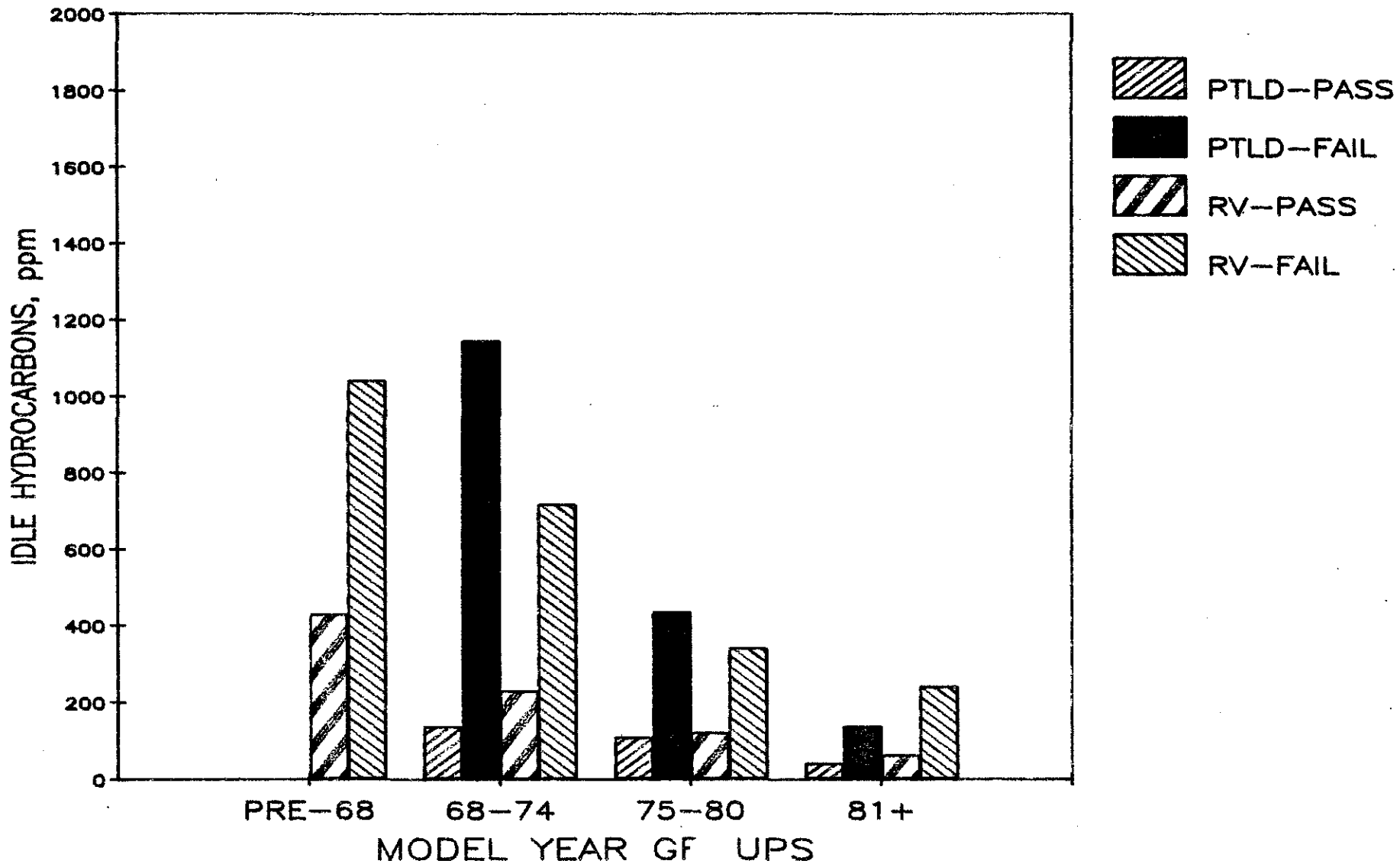


FIGURE C-9  
AVERAGE IDLE EMISSIONS FOR FORDS  
OBSERVED IN I/M TESTS

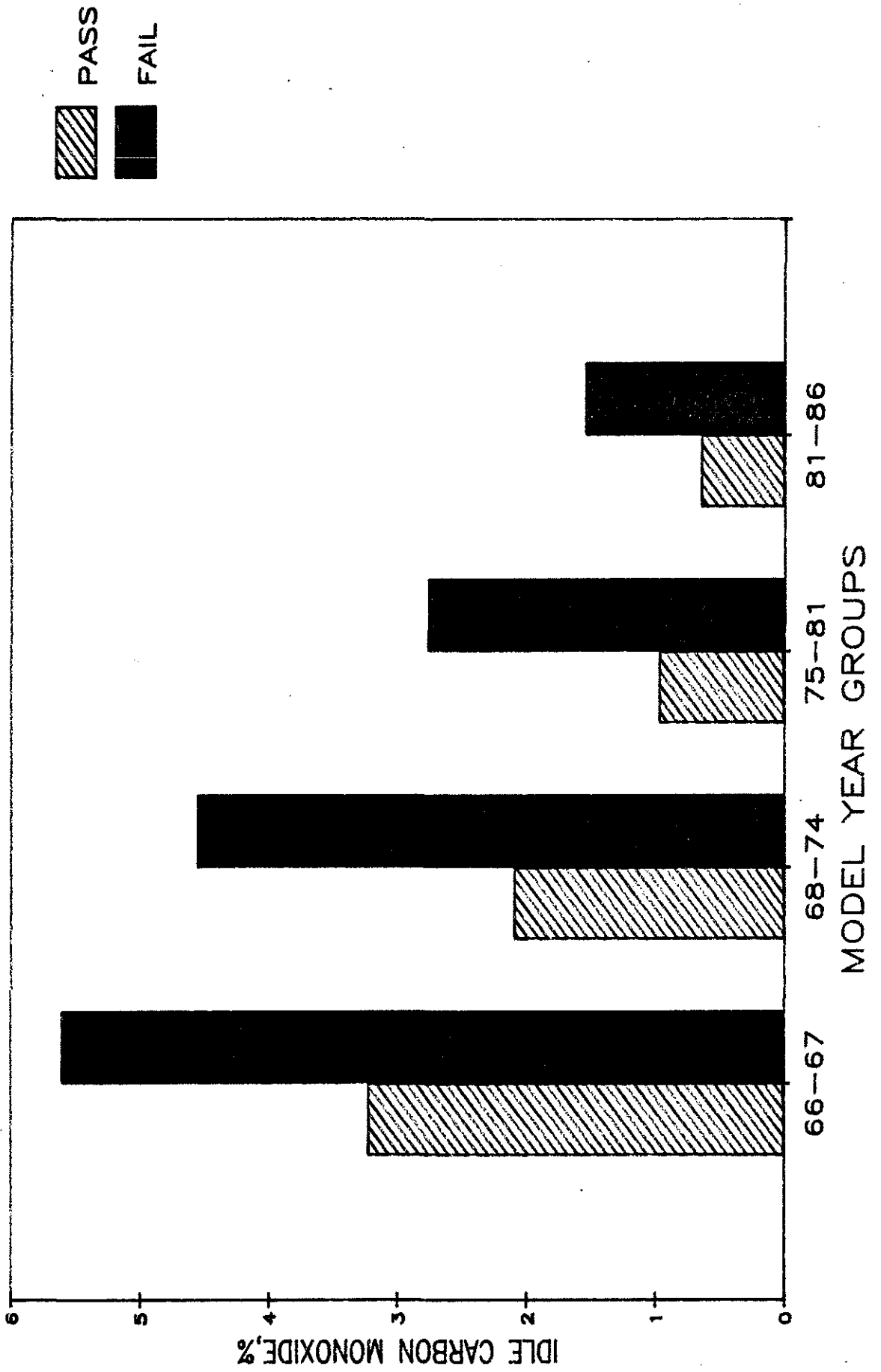


FIGURE C-10  
AVERAGE IDLE EMISSIONS FOR FORDS  
OBSERVED IN I/M TESTS

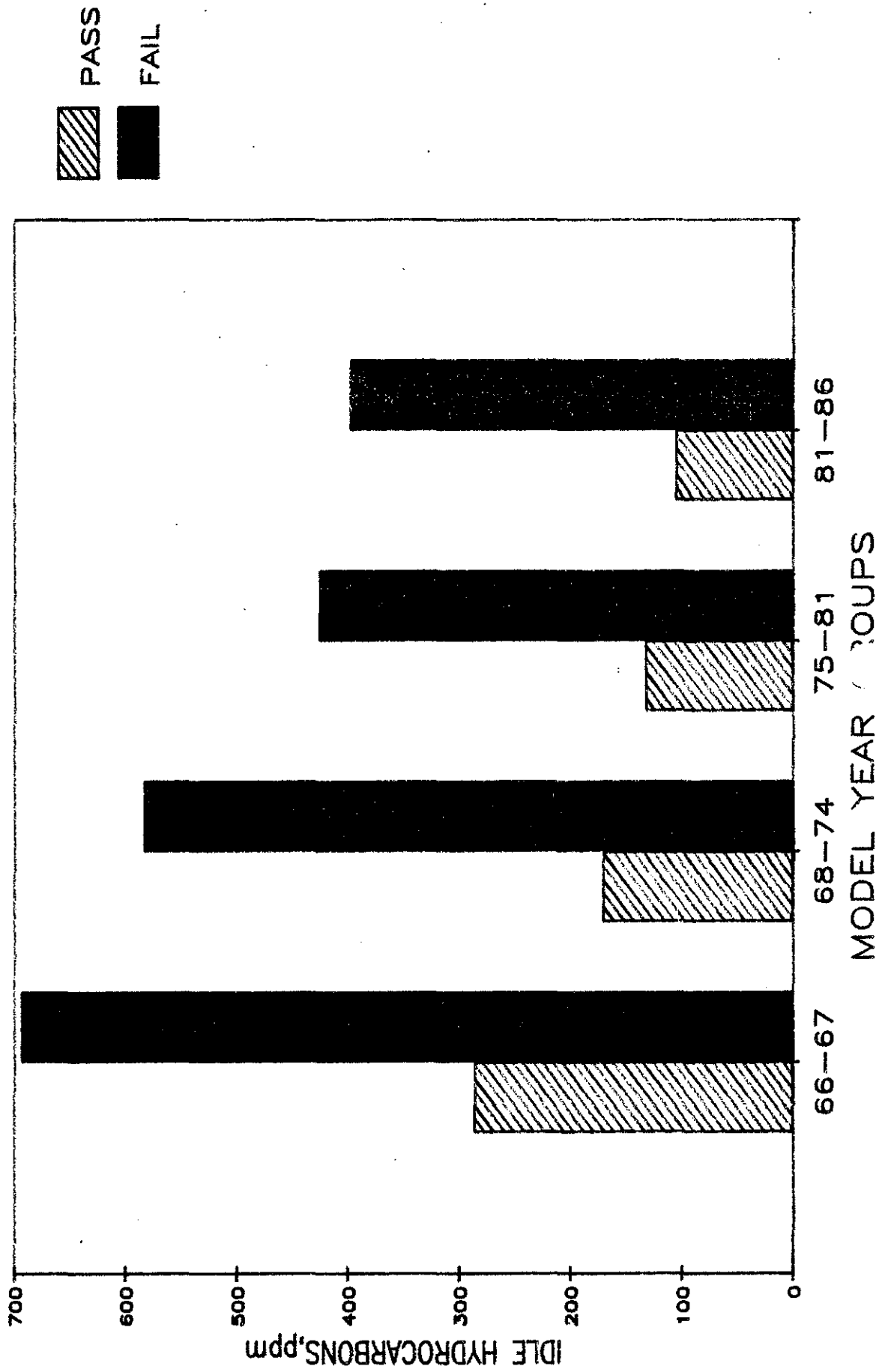




FIGURE C-11  
 AVERAGE EMISSION OF GENERAL MOTORS CARS  
 ILDE CARBON MONOXIDE--PASS&FAIL

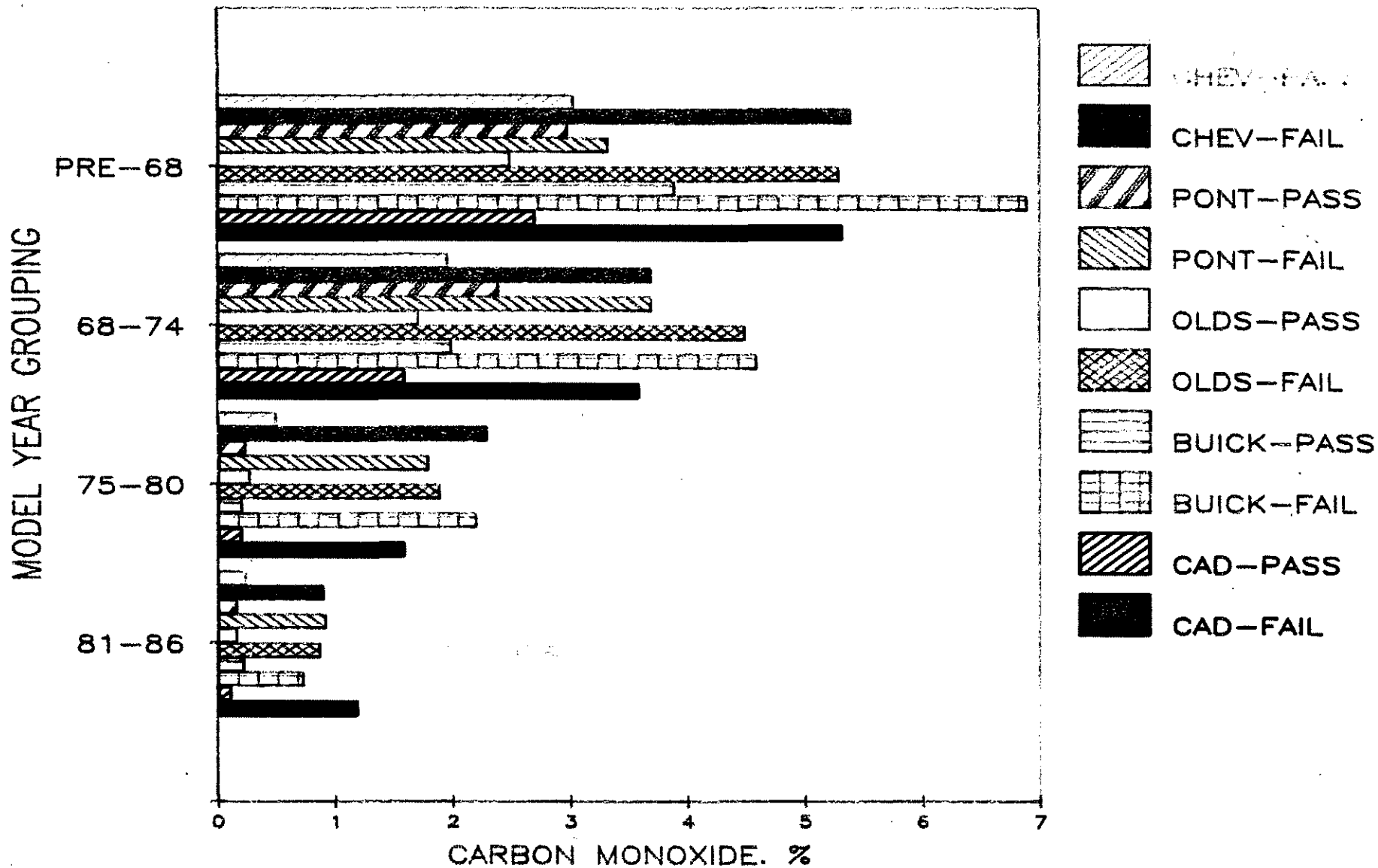
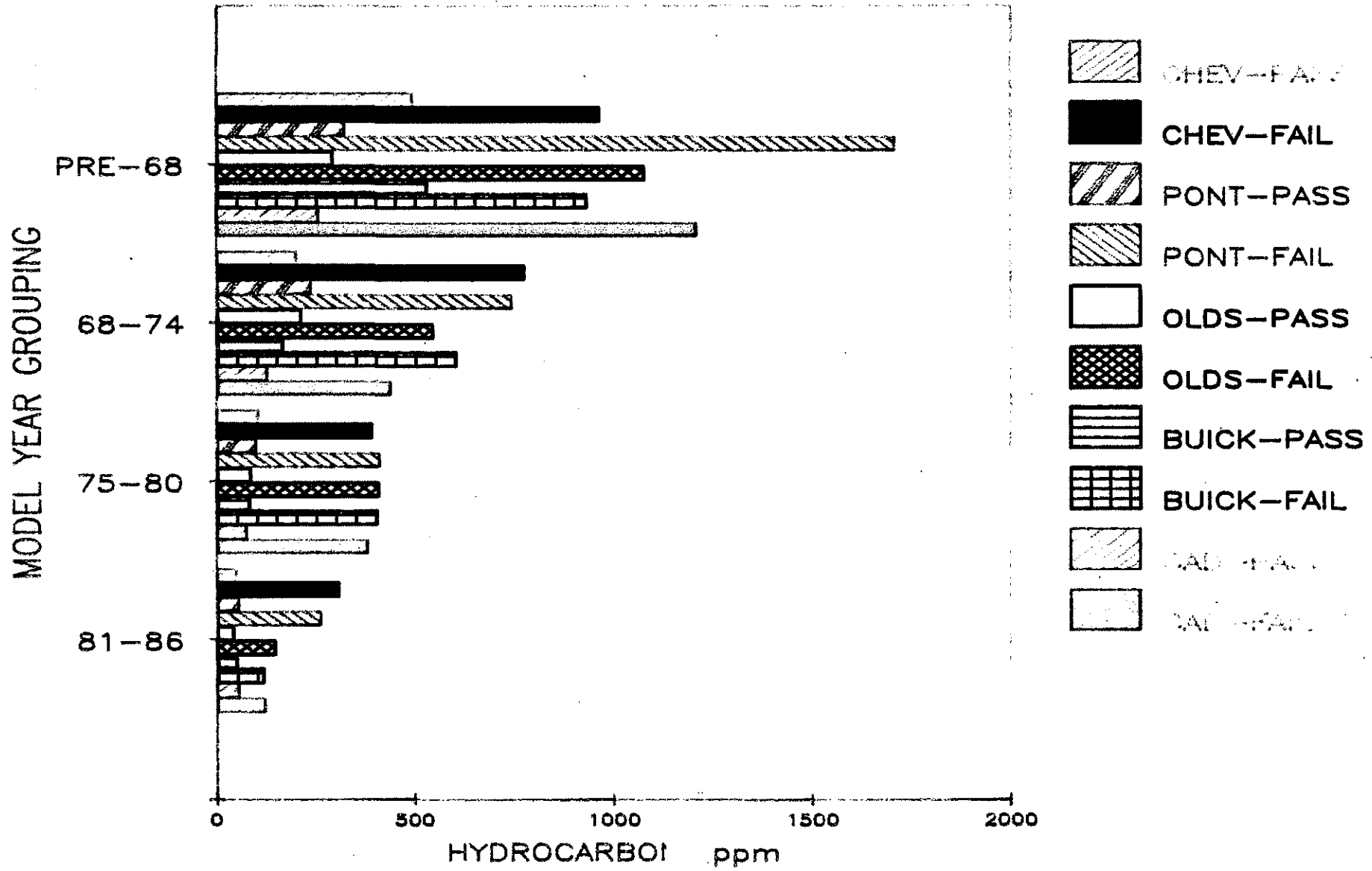


FIGURE C-12  
 AVERAGE EMISSION OF GENERAL MOTORS CARS  
 ILDE HYDROCARBONS--PASS&FAIL



such as Table C-5, the older vehicles that are approaching the end of their useful life, are combined with the newer replacements.

The inspection of emission control equipment, while a long term occurrence for motorists participating in the program in the Portland area, was a factor that generated much trepidation in Rogue Valley area residents. The lack of firm data of the amount of "tampering" lead to a variety of estimates on how high the idle emissions would be and how much tampering would be observed when the inspection program began operation. Fears of mammoth amounts of tampering and grossly excessive emissions were unfounded. Granted, emission and tampering failure rates in the Rogue Valley area are higher than in the Portland area. They only average about 5 percentage points higher for the entire fleet. This was much less than what some of the in-house estimates predicted.

Table C-6 shows the difference in observed tampering rates between the Portland area vehicles and Rogue Valley vehicles. While observation rates for disconnected emission equipment are higher in the Rogue Valley area, they were not as high as some predictions.

Table C-6

OBSERVED EMISSION EQUIPMENT DISCONNECT RATE  
BY MODEL YEAR GROUPING  
PERCENT OF TESTS

<u>Equipment Type</u>	<u>1975-80</u>		<u>1981 +</u>	
	<u>Portland</u>	<u>Medford</u>	<u>Portland</u>	<u>Medford</u>
Positive Crankcase Ventilation System (PCV)	1.1	0.6	0.17	0.23
Fuel Filler Inlet Restrictor	0.8	4.1	0.2	0.09
Thermal Air Cleaner	1.6	4.8	0.3	1.1
Air Injection Reactor System (Includes Pulse Air)	1.0	1.8	0.2	0.3
Catalytic Convertor	0.9	1.7	0.2	0.5
Evaporative Emission Control	1.1	1.6	0.5	0.7
Exhaust Gas Recirculation	1.8	2.8	0.5	0.2
Spark Control	0.7	0.9	0.1	0.1

Table C-6 indicates that most of the emission equipment disconnections are observed on older vehicles. Three years ago, less than 2% of the 1981 and newer vehicles had "tampering". This year, roughly double that amount is being observed. The observation ratio for equipment disconnection are twice again as high at the Rogue Valley station where the I/M program has just started.

Reviewing the types of equipment, as listed in Table C-6 gives an indication of how air quality can be improved. For the 1975-1980 model year grouping, major differences were observed in the following categories: fuel filler inlet restrictor, thermal air cleaner, air injection pump, and catalytic convertor. The catalytic convertor is the most effective piece of pollution control equipment prior to the installation of the micro-processor controls. It is affected and poisoned by leaded fuel, evidenced by the "fuel filler" category. The thermal air cleaner is an unusually effective device for improving emissions and vehicle driveability in cold weather. The replacement of these devices alone, will significantly reduce emissions and greatly aid in meeting the air pollution goals.

#### Cost of Repair

Besides the emission reductions obtained, the next most asked question about inspection maintenance is "What does it cost?" The cost of repair is the amount of money that a customer reported spending in order to repair the vehicle after failing an I/M test. A survey was made to update the Department's estimate of average repair costs. The data obtained from this study was obtained in a two-part survey: the initial part in the spring and the later part in the fall of 1986. The data from the early portion was used to prepare a paper for presentation at a Society of Automotive Engineers meeting. The fall data was collected to provide additional background information and validation of the spring survey's finding.

The costs reported by customers covered every conceivable repair from simple carburetor adjustments to replacing tampered emission control equipment, to repowering diesel engine vehicles with gasoline engines. Questions about the types of repairs, who made them, and the customers' satisfaction with repairs were asked. While there were some differences between the overall average dollar repair figures, statistically they were equivalent, giving good repeatability between the spring and fall surveys. The average cost in the spring is \$50.68, with a \$44.50 average for Portland and a \$59.79 for Rogue Valley. In the fall, the average was \$57.02, with a \$55.16 for Portland and a \$65.67 for Medford. Combining both spring and fall surveys, there were over 3,000 respondents who reported repair costs after initially failing the I/M tests.

In general, repair costs per category of repair are no different in Medford or Portland. When comparing average costs per repair action, the costs were essentially identical at \$26.03. This is because the average number of repaired items per respondent in the Rogue Valley was higher than it was in Portland. Rogue Valley respondents reported 2.3 repair actions per response compared to 1.5 repair actions per response from the Portland

respondents. This is due to the fact that there is simply more repair work to be done in the Rogue Valley, because of the startup nature of the I/M program. Reviewing individual repair categories by repair source shows that there is essentially no difference in average costs between the Portland area and Rogue Valley area respondents.

With repair expenses being relatively the same between the two areas, there appears no basis for early fears that the automotive service industry would, in general, be taking unfair advantage of failed motorists. Indeed, rare are complaints that the service industry is engaging in "rip-off" practices.

One of the questions asked of all survey participants was about the perceived driveability of the vehicle after repair. Roughly, 9 out of 10 respondents reported that their vehicle performed "better" or "the same". Overall, it was roughly a 50/50 split between the categories. Only 1 in 10 reported that the vehicle ran "worse". The highest worse rating was given by those indicating self-repair of the car.

Table C-7 shows the average cost of repair grouped by vehicle make. Note that the average cost for most makes is near the average value reported for the whole vehicle population. However, owners of expensive makes of cars report higher repair values, in line with their higher initial cost. The types of repairs performed on these vehicles are not particularly different, but their higher initial costs result in higher maintenance and repair costs.

Table C-7

Reported Average Cost of Repair  
Portland and Medford Data Combined  
Vehicle Makes  
All Years/All Models Combined  
Including Pickups

<u>Make</u>	<u>Average Cost</u>	<u>Std Dev</u>	<u>N</u>
Ford	\$ 69.48	\$127.86	301
Honda	158.13	356.55	10
Chevrolet	57.29	178.89	218
Oldsmobile	36.39	44.00	34
Toyota	44.05	66.01	48
Nissan	33.12	73.84	51
Buick	39.46	68.89	46
Subaru	6.98	5.69	4
Mazda	42.65	47.39	9
Dodge	57.64	73.65	89
Pontiac	73.00	148.25	47
Plymouth	43.79	87.17	45
Volkswagon	53.50	87.38	53
Mercury	44.53	101.60	31
Chrysler	57.33	152.00	22
Cadillac	142.00	145.37	9
Lincoln	174.00	187.50	4

Table C-8 compares the recent survey with past studies. There were many changes in survey techniques aimed at improving the quality of the information. There is also a change on the perception of the customer on the types of repairs performed. This is due to the fact that the vehicle fleet has changed. Also in the survey, only the respondents in both Portland and the Rogue Valley areas reported the same percentages of major engine repairs, 3 percent. Hardly an excessive figure. The costs have changed with times, but the increases are consistent with the changes as measured by the Consumer Price Index.

Table C-8

Past Survey Information  
on Reported Cost of Repair  
for Oregon I/M Program

<u>Repairs and Adjustments Performed for Retest</u>	<u>1974</u>	<u>April 80 Portland</u>	<u>May 86</u>	
			<u>Portland</u>	<u>Medford</u>
A/F Mixture Adjustment	89%	35.1%	63.5%	63.0%
Idle Speed Adjustment		16.7	11.6	8.7
Air Filter Replacement	6	7.3	6.8	10.2
Carburetion Repair	2	9.7	4.1	11.3
Dwell/Timing Adjustment	-	7.1	6.8	23.9
Spark Plug & Wire Replacement	22	8.8	5.3	17.8
Distributor Repair	-	3.5	1.2	1.7
Vacuum Hose	-	2.1	3.3	3.9
Tune-Up	30		15.1	25.4
<u>Reported Cost of Repair</u>				
\$ 0 - 5	-	29.6	31.6	21.3
5.01 - 10.00	56.0	33.9	10.7	5.7
10.01 - 20.00	-	18.2	26.2	20.7
20.01 - 30.00	17	5.4	5.5	13.2
30.01 - 50.00	17	3.8	6.4	11.9
50.01 - 70.00	3	3.8	4.1	6.3
over \$75.00	8	5.1	15.2	20

Noise Inspection

Effective April 1, 1985, noise compliance was added to the vehicle testing requirements for the greater Portland metropolitan area. This was the result of a petition for rulemaking by the Livable Street Coalition. Because of the local Portland area petition, the staff recommended to the Commission and they decided not to include the noise requirement when the I/M program was brought on-line in the Rogue Valley. Since implementation and through November, 1986, 642,206 vehicles have been noise tested. Some 6,897, or just over 1 percent of the vehicles tested, have been identified with exhaust noise in excess of state standards.

Noise failures occur primarily among the vehicles in excess of 12 years of age. Less than 0.10% of vehicles newer than 1975 model year are identified as noisy. Implementation of this aspect of the program is complete for light duty cars and trucks.

#### Conclusion

Emission measurements document the effectiveness of the I/M program. Computer modeling continues to show the effectiveness of I/M programs. Idle emission measurements from the cars and trucks tested show significant reductions in the emissions of the passing and failing vehicles. The emission reduction of the repaired vehicles translate themselves into air quality improvements.

Costs of repair have been documented. Customers generally are satisfied with their vehicles after repair. The dollar values reported are consistent with past surveys.

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## Vehicle Inspection and Air Quality

In past reports this section has centered upon reporting the summary status of air quality in the Portland metropolitan area. With the inclusion of the Rogue Valley (Medford-Ashland AQMA) in the Oregon I/M program, this section will be composed of two separate parts dealing individually with each.

Both the Portland and Medford areas have a variety of air pollution control problems. The major pollutant problems that are related to the motor vehicle are carbon monoxide in both the Portland and Medford areas, and ozone in the Portland area.

For purposes of definition, carbon monoxide (CO) is a colorless, odorless gas that is highly toxic. It is formed by incomplete combustion of fossil fuels. It offsets the blood's ability to carry oxygen, causing health difficulties for those with heart and other chronic diseases. It will reduce lung capacities and can impair mental abilities, and in extremely high concentrations, it can cause death.

Ozone is the chemical that is measured to track all photochemical oxidants. Ozone is a colorless gas with a pungent metallic odor in high concentrations. It causes damage to the lungs and also to plants and other materials. It is formed during the photochemical reaction between oxides of nitrogen (NO<sub>x</sub>) and hydrocarbons. Nitrogen dioxide, a major component of NO<sub>x</sub> is a toxic reddish-brown gas. It is formed during the combustion processes, such as in the automobile engine, boilers, and from various industrial sources. Hydrocarbons are compounds resulting from unburned fuel, evaporative fuel losses, and industrial and chemical applications.

### Greater Portland Metropolitan Area

Transportation control strategies aimed at controlling high carbon monoxide and ozone levels have been developed and implemented. In early 1986, the City of Portland adopted an update of the downtown parking policy. A revised comprehensive parking inventory by the City of Portland was conducted and completed in the fall of 1986. The results of the parking policy update and the revised inventory are expected to be incorporated as a revision to the transportation control strategy during the first half of 1987.

The other elements in the transportation control strategy have remained unchanged. Table D-1 summarized the transportation control strategy including the original 1973 strategy and its 1982 revision. The key elements include:

- 1 Continue the inspection maintenance program;
- 2 Continue to promote mass transit; and
- 3 Parking inventory control.



Most transit improvement elements were completed by 1984. The newest element of the mass transportation program was the completion and inauguration of the MAX light rail service in September 1986. Transit officials are pleased with its higher than projected usage by area residents.

#### Table D-1

#### Portland Oregon Transportation Control Strategy

#### 1973 Plan

1. New Motor Vehicle Program - federal responsibility.
2. The inspection/maintenance program - state responsibility.
3. Mass Transit improvements - Tri Met responsibility.
4. Traffic plan and circulation improvements - local government responsibility.

#### 1982 Revisions

1. Continue the biennial auto inspection/maintenance program.
2. Operate the downtown transit mall, and purchase 77 new articulated and 75 standard coaches. This has been accomplished.
3. Restore fareless square to all hours of the day. This has been accomplished.
4. Expand bus service on I-5 freeway corridor. This has been accomplished.
5. Operate ride-share programs; continue city carpool permit program for six-hour parking meters; implement McLoughlin corridor ride-share program; pursue state legislation that would remove institutional barriers to ride-sharing. All of these items have been maintained.
6. Maintain and manage downtown parking inventory of 40,855 spaces, implemented through the services of a full-time parking manager. This is ongoing.

Sources of carbon monoxide within the Oregon portion of the AQMA are shown in Table D-2. The major source has been and remains motor vehicles. Reductions in CO emissions have been somewhat offset by increases in residential woodstove heating. Nevertheless, the 1985 emission projections represent a 24 percent reduction in carbon monoxide emissions since 1980 - approximately 5 percent per year.

Table D-2

Summary of Carbon Monoxide Emissions (Tons/Year) Within  
the Oregon Portion of the Portland-Vancouver Interstate AQMA\*

<u>Source</u>	<u>Year</u>		
	<u>1980</u>	<u>1983</u>	<u>1985</u>
Industrial	12,539	7,994	8,294
Non-industrial Fuel Combustion (Residential)	47,656	55,982	70,599
Misc. (Fires, Solid Waste)	1,188	1,167	1,125
Highway Transportation (Motor Vehicles)	378,821	302,296	287,205
Off Highway including rail, air, river	24,487	24,411	24,964
Total	464,523	391,850	392,187

\* Source - Report on Reasonable Further Progress through December 31, 1985  
- Oregon DEQ to USEPA, October 1986

Figure D-1 shows the number of exceedance days at the three main Portland monitoring sites. The fourth site at SE Lafayette Street is not included in this data presentation because of its short time span of operation and because it is located in a residential neighborhood and appears to be primarily affected by woodstove emissions rather than motor vehicle emissions.

Compliance is defined as not having more than one violation day of the CO standard per calendar year. The State Implementation Plan (SIP) is being revised to reflect a new compliance date of 1987. Originally, compliance had been projected in the SIP to be obtained by the end of 1985. The continuous CO monitors operated by DEQ in the Portland area have not had any violations of the Federal 9 ppm (10 mg/m<sup>3</sup>) ambient CO standard based upon the second highest day exceedance since the first quarter of 1984.

The CAMS (Continuous Air Monitoring Station in downtown Portland) had no exceedances while both the Hollywood and 4th & Alder site had exceedance days, but no violation days. Although 1985 and 1986 ambient CO data indicate marginal compliance with the standard, the model projections indicate that continuous compliance will not be achieved until 1987 and the SIP is being revised to reflect this. Ambient carbon monoxide emission reductions have been obtained over the past several years. The trend lines in Figure D-2 show that downward trend.

FIGURE D-1  
CARBON MONOXIDE  
NUMBER OF EXCEEDANCE DAYS

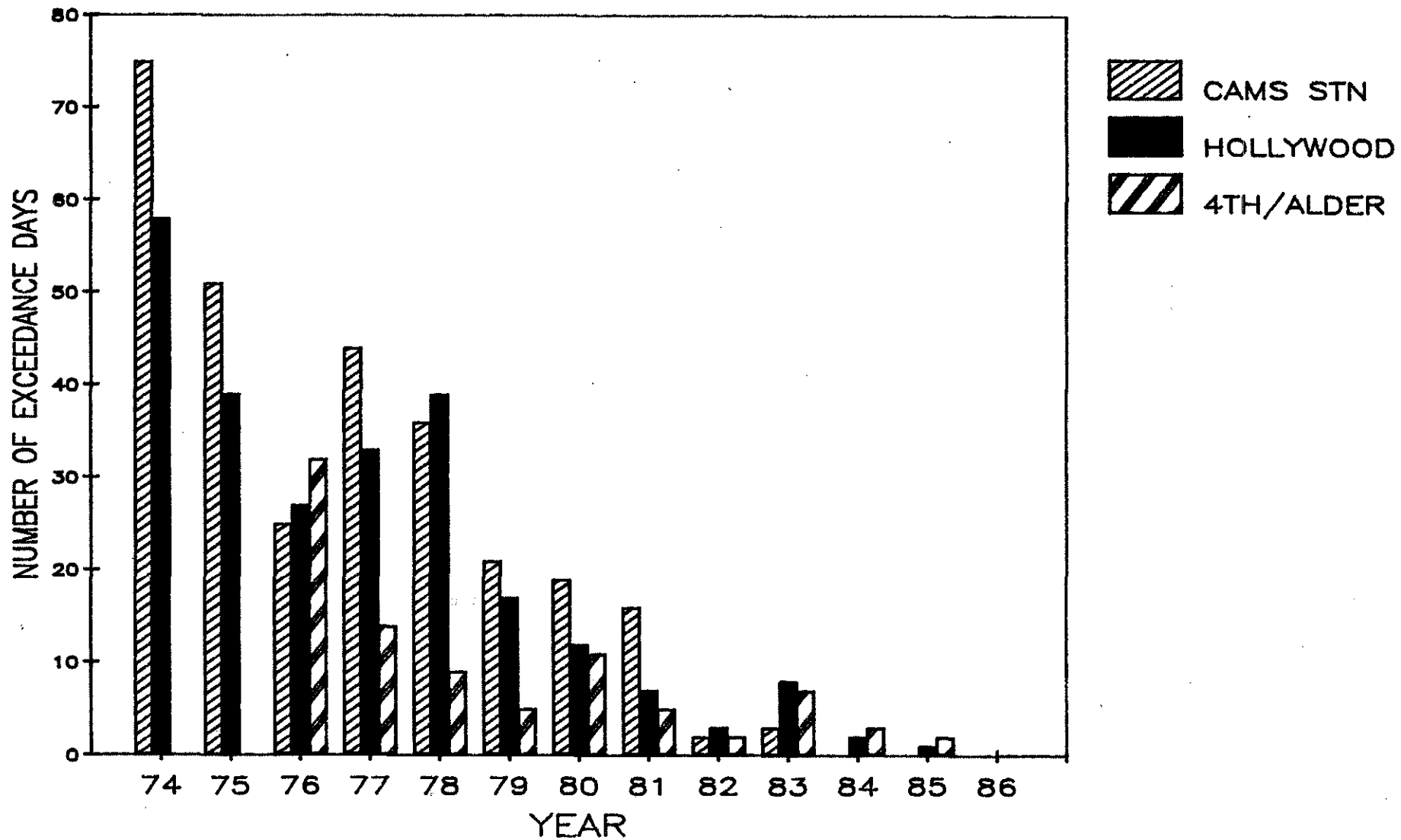
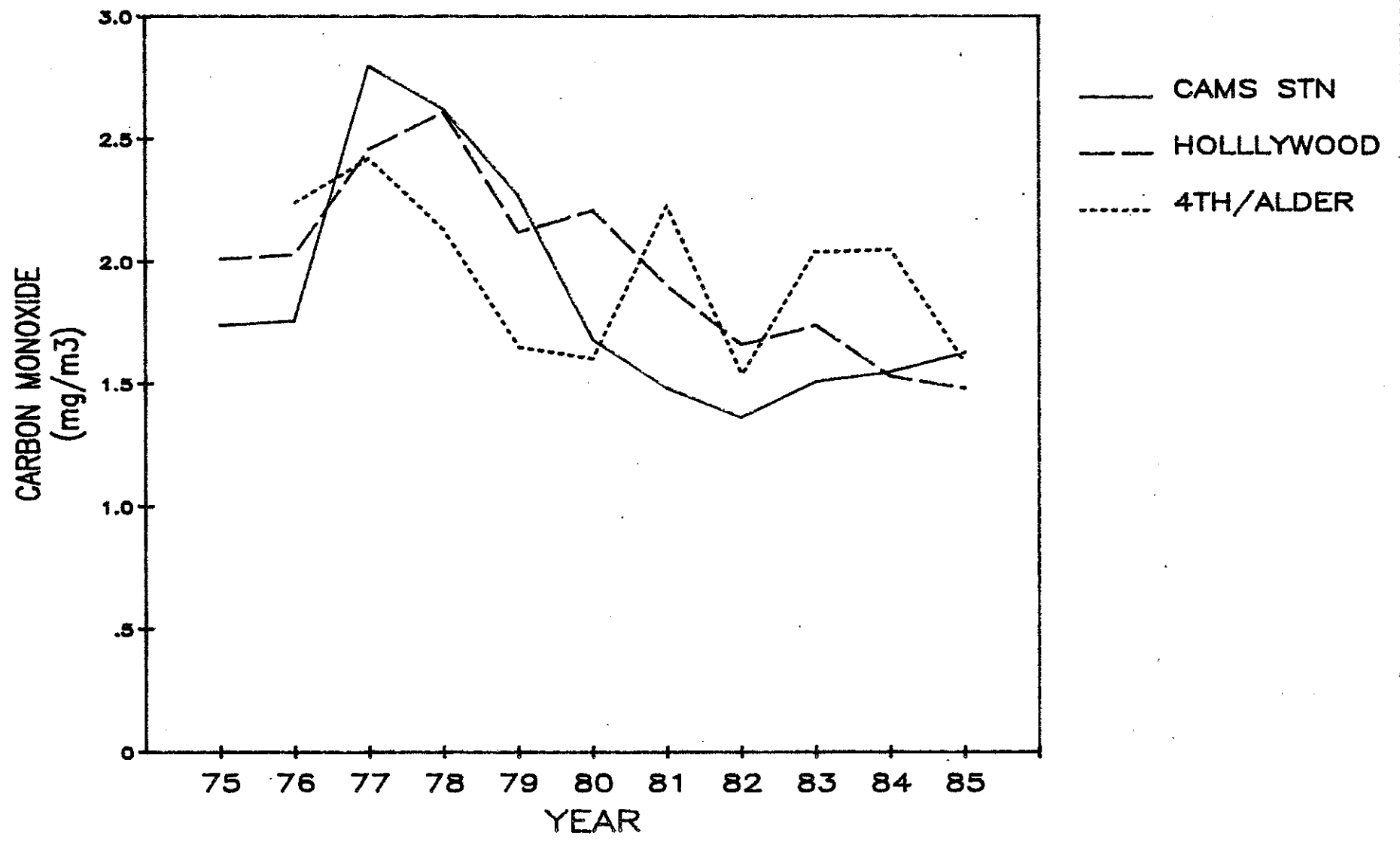


FIGURE D-2  
CARBON MONOXIDE EMISSION TRENDS  
GEOMETRIC MEANS



Violations of the ambient CO standard are due to a variety of reasons. Meteorology plays a significant role. Traffic has increased in the Portland area over the past several years, and this can be offsetting some of the emission reductions obtained from the federal new car program and the inspection maintenance program. Statewide traffic, measured as vehicle miles traveled, is up almost 5 percent over the years 1984 and 1985. Vehicle registrations have not increased correspondingly. This indicates that people are driving more than in recent years. With the recent stabilization and decline of the price of gasoline, this trend may continue.

CO compliance has been maintained at the CAMS station for 1984 through 1986. This gives a good indication that traffic related CO violations will be under control by 1987. When attainment is reached at all sites, the issue will then switch to maintaining compliance with the standard. The maintenance of compliance below the required standard will require new strategies of and by itself if population growth increases, or it may just require keeping the existing programs operating. While continual decreases in vehicle emission levels should maintain compliance for the foreseeable future, population increases and increases in the vehicle miles traveled will affect the amount of pollution entering the local atmosphere.

The compliance plan for ozone in the Portland area has not been changed for the past several years. Area sources are shown in Table D-3. The plan relies on transportation measures, the I/M program, and control of volatile organic compounds (VOC) from stationary sources. Attainment of the ozone standard is still projected by December 1987. During 1985 and 1986, violations occurred both at the Carus monitoring site and the Milwaukie monitoring site. Ozone levels exceeded the standard on two days at Carus and one day at Milwaukie in 1985; and on one day at Carus and three days at Milwaukie in 1986. This data is shown graphically in Figures D-3 and D-4 for the Carus and Milwaukie sites respectively. The ozone standard allows for one exceedance per year at each site. The frequency of ozone exceedances appears closely related to the frequency of hot days with temperatures of 90° F or more. The 1985-86 ozone season had a total of 36 days with maximum temperatures of 90° F or more. That's about 16 days more than normal. Without the various ozone controls in effect, including the I/M program, the exceedances would most likely have been higher and more frequent.

The problem of increased fuel volatility is affecting some of the ozone reduction benefits obtained. The oil companies over the past 10 years have increased the volatility of gasoline about 2 to 4 psi. There are a wide variety of factors that have lead to these increases. The sources of crude oil for US domestic supply have changed requiring changes in refining operations. The lead phasedown program which has resulted in a reduction of average lead content from about 3 gm/gal. to 0.1 gm/gal. contributed to the need to reformulate the gasoline blends. The final factor which has affected refinery blending is that the sales ratio between leaded and unleaded gasoline has changed so that over 60 percent of the gasoline sold nationwide is unleaded. Coupled with changing these stocks, lead phasedown, and other factors has resulted in a change in gasoline formulas.

FIGURE D-3  
 OZONE DATA  
 CARUS MONITORING STATION

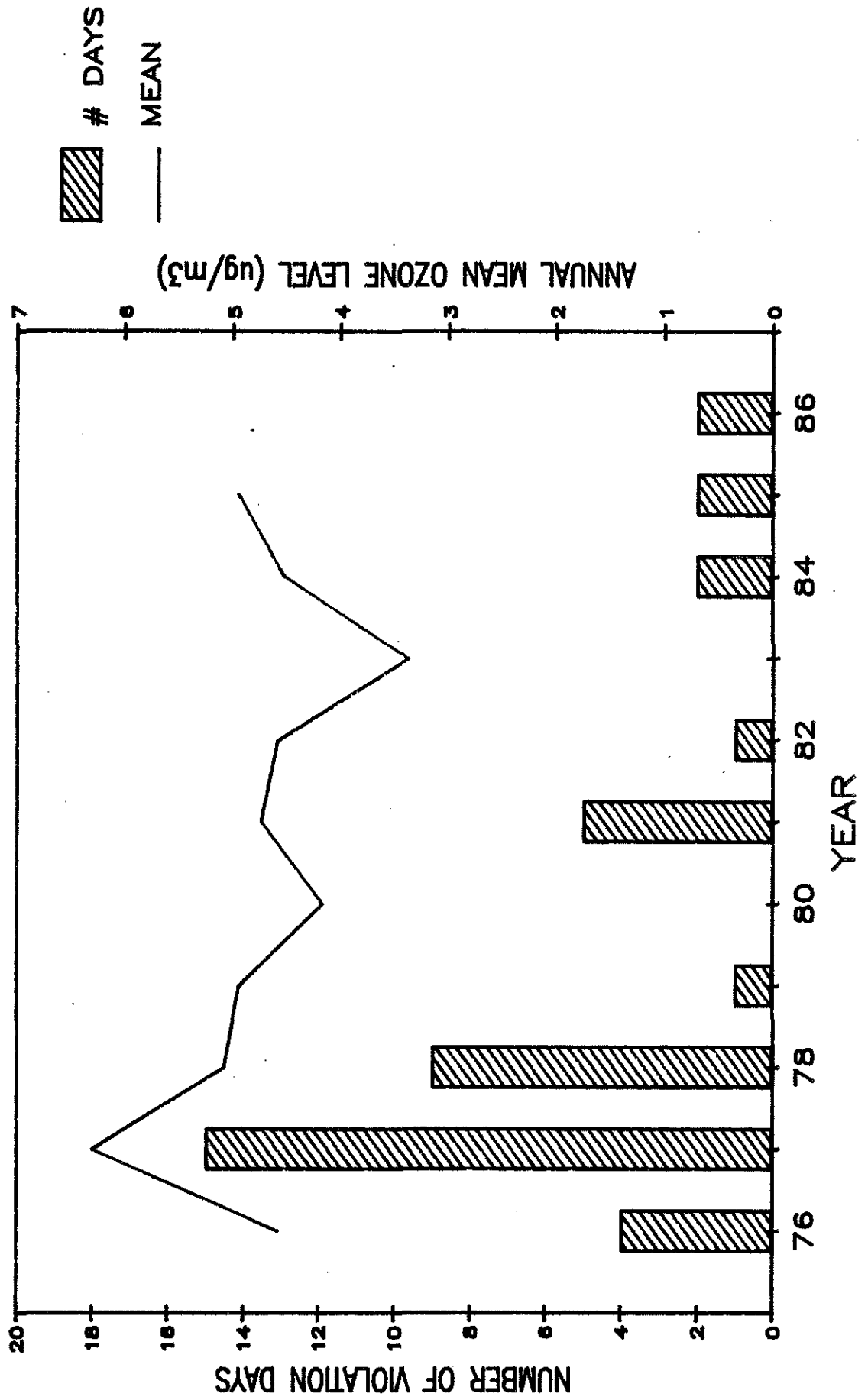


FIGURE D-4  
 OZONE DATA  
 MILWAUKIE AIR MONITORING STATION

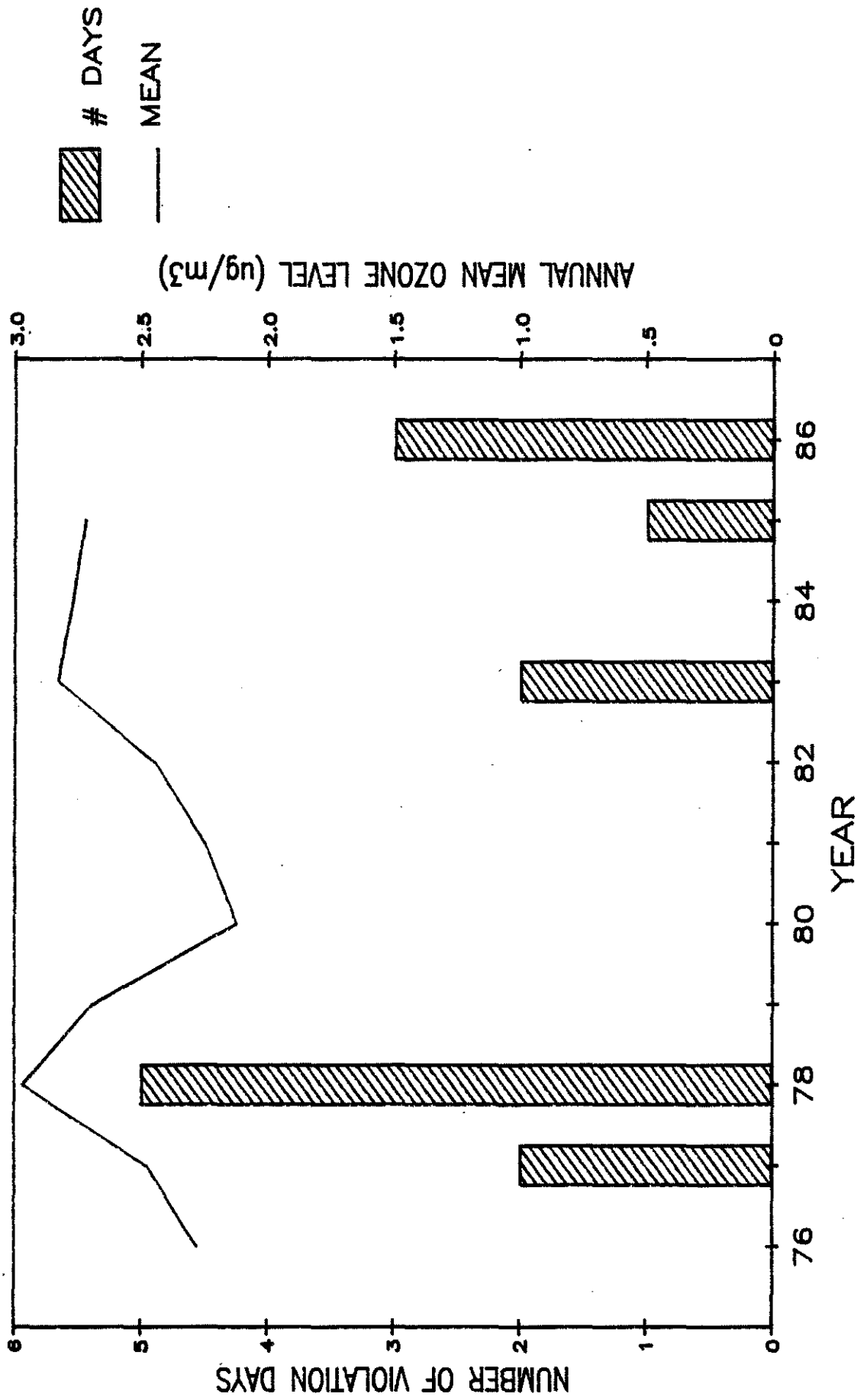


Table D-3

Summary of Hydrocarbon (VOC) Emissions (Kg/Day) Within the Oregon  
Portion of the Portland-Vancouver Interstate AQMA\*

<u>Source</u>	<u>Year</u>		
	<u>1980</u>	<u>1983</u>	<u>1985</u>
Gasoline Marketing (except vehicle fueling)	22,315	2,843	3,070
Vehicle Fueling	6,918	6,580	6,729
Industrial Processes	6,670	6,511	6,103
Industrial & Non- Industrial Surface Coatings	34,404	36,191	28,862
Solvents & Misc.	17,595	15,656	15,557
Highway Vehicles	77,133	63,056	56,684
Off Highway including rail, air, river	6,202	5,797	5,941
Total	171,237	130,123	122,946

\* Source - Report on Reasonable Further Progress through  
December 31, 1985 - Oregon DEQ to USEPA, October 1986.

All these factors have affected the ability of the on-board vapor recovery systems, installed on passenger vehicles since 1971, to adequately do their designed jobs. This affects vehicular refueling emissions. All fueling facilities in the Portland metro area have Stage I vapor recovery (tanker truck-to-gas station). State II (gas station-to-vehicle) has been mentioned as an alternative to be considered—more on a national level, than on a local level. This national consideration is being made by the USEPA in response to the large number of cities in the United States that are forecasting continued ozone noncompliance into the 1990's.

Medford-Ashland AQMA

The Medford-Ashland AQMA last SIP update for carbon monoxide was made in 1985. That document was adopted by the Environmental Quality Commission at the same time that the Medford-Ashland AQMA was established as an I/M zone under ORS 468.397 (HB 2845 1985 Oregon Legislature). Figures D-5 and D-6 show the number of exceedance days for carbon monoxide and the long-term CO trend.



FIGURE D-5  
MEDFORD AREA CARBON MONOXIDE  
GEOMETRIC MEANS

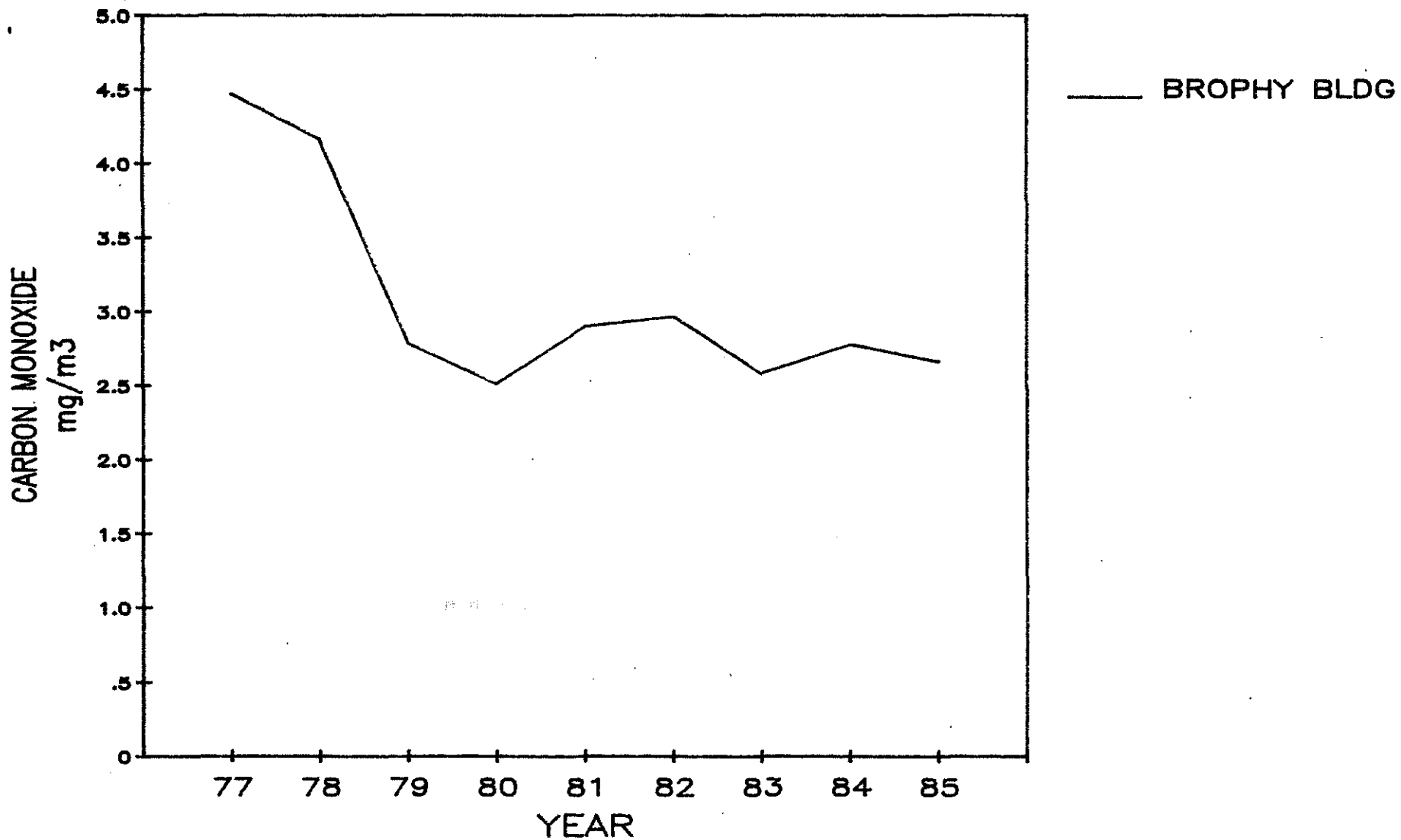
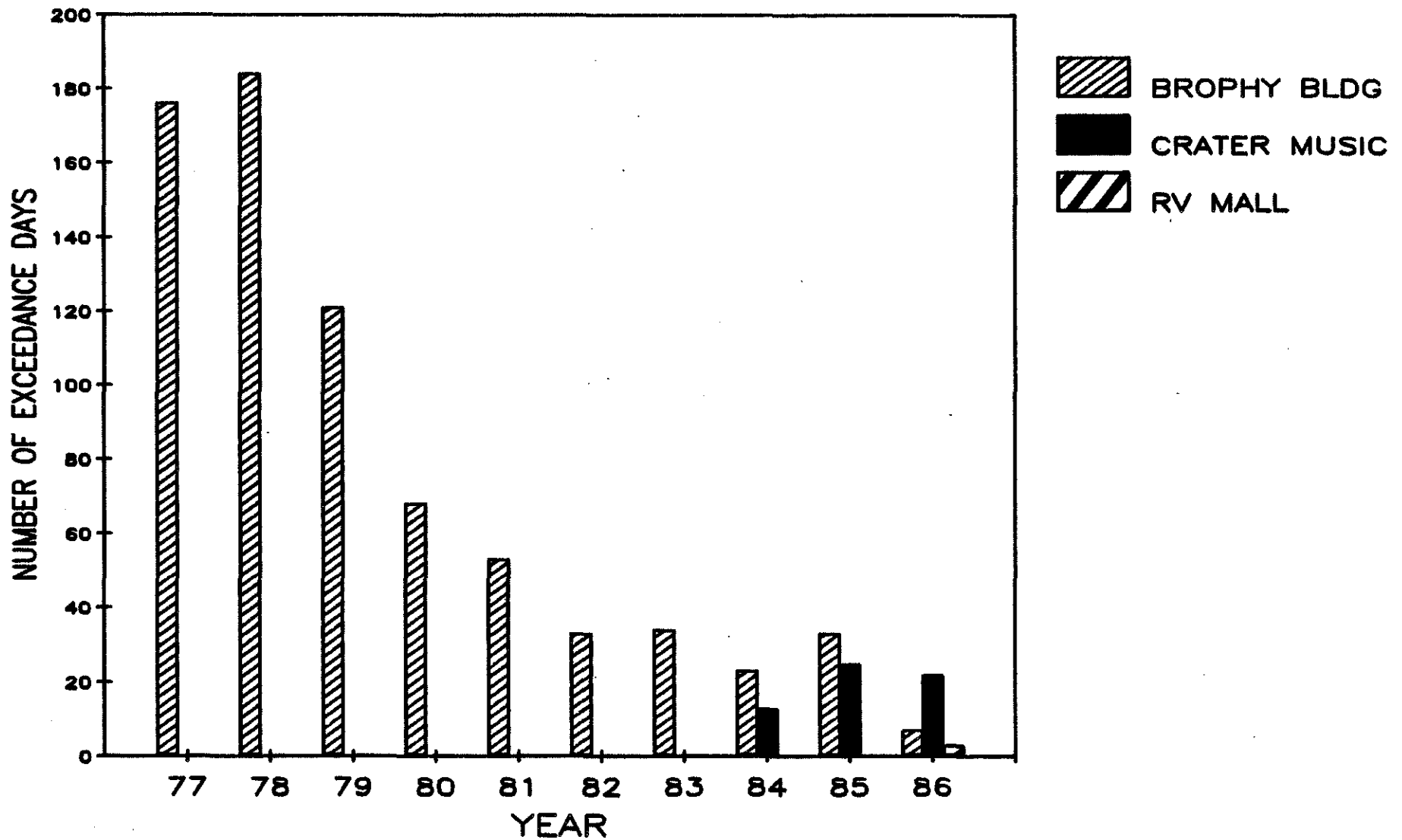


FIGURE D-6  
MEDFORD AREA CARBON MONOXIDE  
NUMBER OF EXCEEDANCE DAYS



Carbon monoxide episodes in the Medford-Ashland AQMA, (Rogue Valley) are made worse by air stagnation and geography of its high mountain valley. Medford's CO problem has been described as among the top ten in the country. To help meet ambient CO health standards, an I/M program started January 1, 1986. That was the last element of the Rogue Valley CO attainment plan to be put into place. The plan projects compliance by the end of 1987.

Table D-4 lists the CO emission inventory and sources for the Rogue Valley area. As in the Portland area, motor vehicles are the major source, but because of the geography and economy, residential woodstoves are a higher relative contributor than in Portland.

Table D-4

Summary of Carbon Monoxide Emissions (Tons/Yr)  
For The Medford Ashland AQMA\*

<u>Source</u>	<u>Year</u>		
	<u>1980</u>	<u>1983</u>	<u>1985</u>
Industrial	3,017	2,731	3,337
Non Industrial Fuel	12,650	11,738	12,434
Combustion (including woodstove)			
Misc. (fires, solid waste)	3,175	1,118	1,339
Highway Transportation (Motor Vehicles)	36,234	31,627	28,617
Off Highway	3,173	3,005	3,037
Total	58,249	50,219	48,804

\* Source - Report on Reasonable Further Progress through December 31, 1985 - Oregon DEQ to USEPA, October 1986.

The Economy

Much has been written about the Oregon economy of late. This document is not the place for an economic discussion, but the economy has had mixed influences on air pollution in both Portland and the Rogue Valley.

Population growth over the past five years has been relatively flat, and times it has declined (see Table E-2 and E-10). The economic slump has put negative pressure on the state and has contributed to compliance with some of the air pollution goals. There have been changes in individual habits where dirtier and less costly fuels have been chosen. Burning wood is such an example.

The economic slump has also apparently slowed new car sales, thus slowing replacement of the existing fleet, thus reducing the benefits of the federal new car program over this time period. To show the effect, the average age of cars in Oregon now has grown from seven years in 1975 to ten years in 1985. On the other hand, the slowness in growth has relieved pressures on how to accommodate additional industrial sources. As Oregon prepares to close out the 1980's, the environmental stage has changed much over the last ten years. Much good has been accomplished. Habits have changed. New technologies have emerged and all that can be predicted with certainty is that there will be continued changes.

## Population Growth and Traffic Pattern Trends

PORTLAND AREA

In 1974, the Oregon Legislature established the boundaries for the Vehicle Inspection Program as being identical to the existing Metropolitan Service District (MSD) boundaries, covering portions of Multnomah, Clackamas and Washington Counties. Vehicles registered within the MSD are required to pass the inspection prior to vehicle registration. Following a vote during the May 1978 primary election, the MSD was reorganized to include a smaller segment of Washington County and a larger part of Clackamas County. The Legislature adopted the current MSD boundaries as the boundaries for the Vehicle Inspection Program, effective January 1, 1980. This section reviews trends in population and traffic patterns associated with the program's geographic area.

Population

The MSD covers portions of Multnomah, Washington and Clackamas Counties and estimates its population in 1985 at 970,243. Since the MSD boundary was altered on January 1, 1979, only a few years of comparable population data is available (Table E-1). Growth is seen between 1979-1981. A population loss occurred between 1981-1983, and growth resumed in 1984 and 1985.

Table E-1

## MSD Population Since 1979

<u>Year</u>	<u>Population</u>	<u>Growth</u>
1979	906,800	---
1980	938,571	31,771
1981	947,890	9,319
1983	935,000	-12,890
1984	954,370	19,370
1985	970,243	15,873

To get a more complete view of MSD population trends, the tri-county (Multnomah, Clackamas and Washington) population should be examined. Table E-2 and Figure E-1 provide a good estimate of the MSD population growth rate since approximately 88 percent of the tri-county residents live within the MSD.

Table E-2

Population Distribution\*  
in the Portland Metropolitan Area

Year	Multnomah	Washington	Clackamas	Clark Co, WA	Total of 3 Oregon Counties	Total of 4 Counties	Total State of Oregon
1970	554,668(55%)	157,920(15%)	166,088(16%)	128,454(13%)	878,676	1,007,130	2,091,533
1971	559,700(54%)	169,660(16%)	174,900(17%)	130,100(12%)	904,260	1,034,360	2,143,010
1972	560,000(53%)	178,300(16%)	178,400(17%)	132,800(13%)	916,700	1,049,500	2,183,270
1973	556,000(52%)	182,500(17%)	185,600(17%)	135,200(13%)	924,100	1,059,300	2,224,900
1974	544,900(51%)	189,400(18%)	196,900(18%)	140,300(13%)	931,200	1,071,500	2,226,000
1975	547,900(51%)	190,900(18%)	202,900(19%)	149,000(14%)	941,700	1,090,700	2,299,000
1976	553,000(50%)	196,000(18%)	205,800(19%)	154,300(14%)	954,800	1,109,100	2,341,750
1977	556,400(49%)	200,800(18%)	211,000(19%)	164,000(14%)	968,200	1,132,200	2,396,100
1978	549,000(48%)	217,000(19%)	220,000(19%)	169,400(15%)	986,000	1,155,900	2,521,850
1979	556,600(47%)	225,100(19%)	231,000(19%)	178,900(15%)	1,012,700	1,191,600	2,584,350
1980	562,300(45%)	247,800(20%)	243,000(19%)	192,227(15%)	1,053,100	1,245,327	2,639,915
1981	561,400(45%)	253,800(20%)	246,100(19%)	195,800(15%)	1,061,300	1,257,100	2,660,735
1982	564,500(45%)	259,700(20%)	245,100(19%)	198,600(16%)	1,069,300	1,267,900	2,665,185
1983	557,500(44%)	257,400(20%)	243,600(19%)	200,000(16%)	1,058,500	1,258,500	2,635,000
1984	562,300(44%)	260,200(20%)	246,300(19%)	201,700(16%)	1,068,800	1,270,500	2,660,000
1985	561,800(44%)	268,000(21%)	248,200(19%)	203,400(16%)	1,078,000	1,281,400	2,675,800
Average** Growth/Year (1970-79)	0.04%	4.0%	3.7%	3.7%	1.5%	1.9%	
Growth/Year** (1979-81)	0.4%	6.2%	3.2%	4.6%	2.4%	2.7%	
Growth/Year** (1981-83)	0.3%	0.7%	-0.5%	1.1%	-0.1%	0.05%	
Growth/Year** (1983-85)	0.4%	2.0%	0.9%	0.9%	0.9%	0.9%	
Average** Growth/Year (1970-1985)	0.08%	3.6%	2.7%	3.1%	1.4%	1.6%	

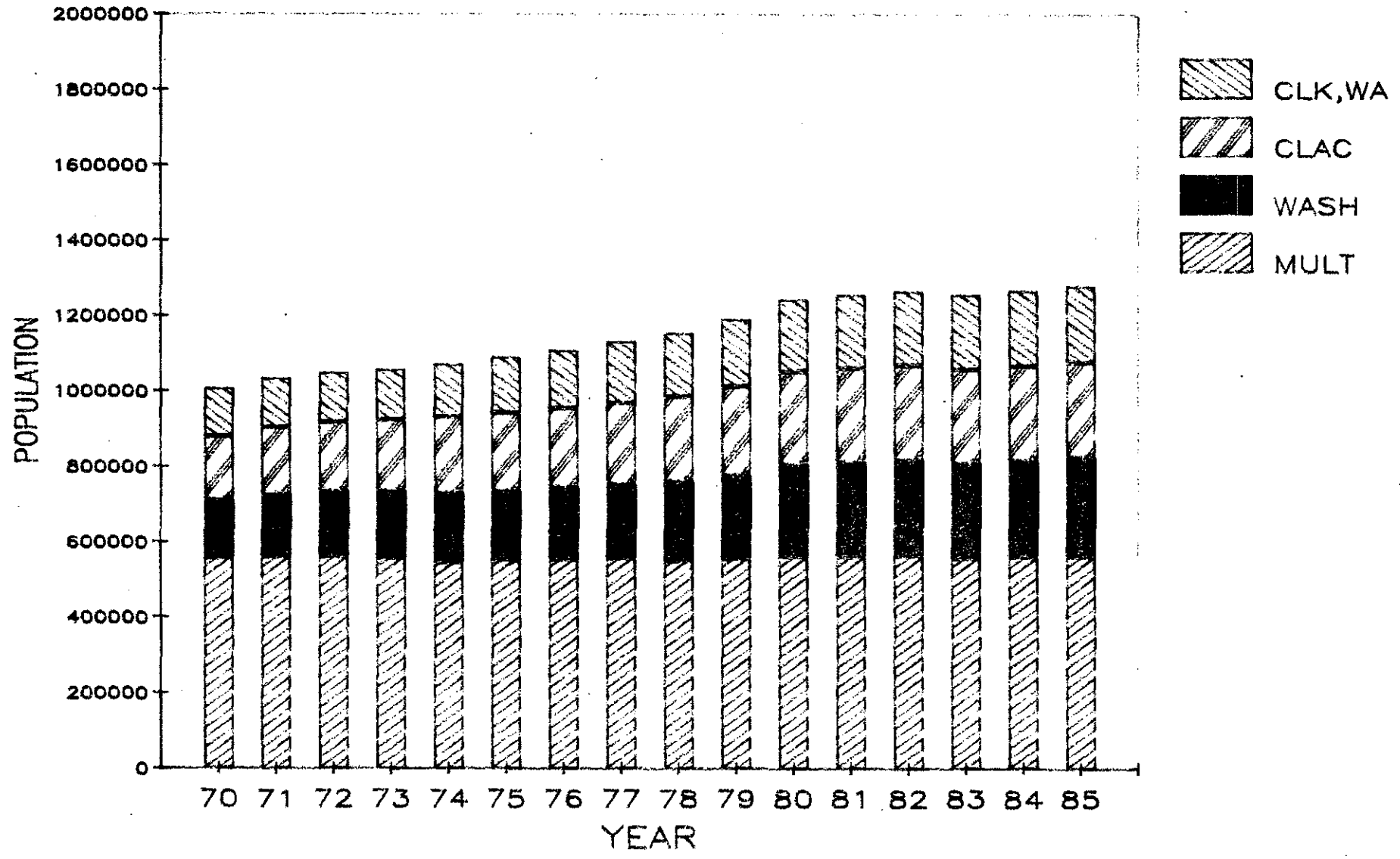
\* Data from Portland State University Center for Population Research and Census

\*\* Growth per year was calculated using the compounding formula:

$$I = (P/P_i)^{1/n-1}$$

Where: I = growth rate per year  
P = population after "n" years  
P<sub>i</sub> = initial population  
n = number of years

FIGURE E-1  
 POPULATION DISTRIBUTION IN THE  
 PORTLAND METROPOLITAN AREA



The Multnomah County population has remained essentially the same since 1970, while Clackamas and Washington Counties have had population increases of 49 percent and 69 percent, respectively. Clark County, Washington, has also shown a substantial growth of 58 percent since 1970. As compared to the greater Portland metropolitan area, the Multnomah County portion of population has decreased from 55 percent in 1970 to the current portion of 44 percent. Thus, the population of the metropolitan area is increasing, but not evenly throughout the area. The fastest growth continues to occur in the suburbs.

Overall, population growth in the tri-county area since 1970 has been at an average rate of 1.5 percent per year. The growth rate was much higher between 1977 and 1980, averaging 2.9 percent per year. Growth continued at a slower rate in 1981 and 1982, but then took a drop in 1983. This likely represents a temporary population loss due to extended economic hard times. Between 1983 and 1985, population again began to grow.

A look at working population will give some insight into traffic trends during weekday rush hours. Probably the best indicator of working population is income taxes filed by county, from the Oregon Department of Revenue. This is summarized in Table E-3 for the metropolitan area. The numbers in parentheses show the fraction of total population that is paying Oregon income tax.

Table E-3

Oregon State Income Taxes Filed

County	1970 Returns	1981 Returns	1982 Returns	1983 Returns	1984 Returns	(. )-84 Growth/Y
Multnomah	204,500(37%)	246,450(44%)	238,028(42%)	230,209(41%)	234,745(41%)	1.0%
Washington	61,987(39%)	106,364(42%)	102,223(39%)	105,226(41%)	108,069(42%)	4.0%
Clackamas	53,150(32%)	97,787(40%)	94,530(39%)	94,356(39%)	96,443(39%)	4.3%
Clark Co., WA	12,700(10%)	24,692(13%)	23,161(12%)	22,915(11%)	24,632(12%)	4.8%
Total of 3 Oregon Counties	319,637(36%)	450,601(42%)	434,781(41%)	429,791(41%)	439,257(41%)	2.3%
Grand Total	332,337	472,595	457,942	452,706	463,889	2.4%

\* Growth per year was calculated using the corresponding formula:

$$I = (P/P_i)^{1/n-1}$$

Where: I = growth rate per year  
P = population after "n" years  
P<sub>i</sub> = initial population  
n = number of years



Overall, the growth in working population (Table E-3) in the MSD is almost double the growth of the total population (Table E-2) between 1970 and 1984. However, in the four years 1979-82, this trend was reversed, probably as a result of high Portland area unemployment. Table E-4 shows the annual average unemployment rates for the Portland metropolitan area for the last fifteen years. In 1983-84 the annual rate of employed people was expected to within the MSD. Annual employment growth was only 0.5%/year for 1983-84.

Table E-4

Unemployment Rates  
Portland Metropolitan Area

<u>Period</u>	<u>Rate</u>
1970	6.3
1971	7.1
1972	6.1
1973	5.4
1974	6.2
1975	9.5
1976	8.7
1977	6.8
1978	5.2
1979	5.4
1980	6.3
1981	8.0
1982	10.1
1983	10.1
1984	8.0
1985	7.4
1986	7.7

Vehicle Registration

Table E-5 shows passenger car registration and population figures for the ten Oregon counties with the largest number of passenger vehicle registrations. Overall, since 1970, increases have occurred in both vehicle registrations and in population. The data shows that vehicle registration in almost all counties has been growing at a rate of over twice that of the population. The highest growth rates both in population and in vehicle registrations are occurring in Deschutes, Clackamas and Washington Counties. Multnomah County, the state's most populous, had a minimal population increase but still shows significant growth in vehicle registration.

However, between 1981 and 1983, the population and vehicle registrations generally began to fall. The 1984-85 data shows a general upturn in population and vehicle registration but not as robust as in the previous growth years. Both Coos and Linn counties still showed population declines while vehicle registrations grew slightly.

Table E-5

## Vehicle Registration and Population by County

County	Estimated 1983 Passenger Car Registrations	Estimated 1985 Passenger Car Registrations	Registration Growth Rate/Year 1970-1983*	Registration Growth Rate/Year 1983-1985*	Estimated 1983 Population	Estimated 1985 Population	Population Growth Rate/Year 1970-83*	Population Growth Rate/Year 1983-85*
1. Multnomah	364,687	379,919	0.8%	2.1%	557,500	561,800	0.04%	0.4%
2. Lane (Eugene)	207,613	214,450	3.7%	1.6%	267,900	269,500	1.7%	0.2%
3. Clackamas (Portland/ Oregon City)	191,886	202,233	6.0%	2.7%	243,600	248,200	3.0%	0.9%
4. Washington (Portland/ Beaverton)	185,973	198,045	5.9%	3.2%	257,400	268,000	3.8%	2.0%
5. Marion (Salem)	160,456	167,619	4.5%	2.2%	205,900	213,750	2.3%	1.9%
6. Jackson (Medford)	112,968	118,606	5.0%	2.5%	133,350	137,900	2.7%	1.7%
7. Douglas (Roseburg)	76,159	77,995	4.2%	1.2%	90,400	92,150	1.7%	1.0%
8. Linn (Albany)	71,217	72,119	3.8%	0.6%	89,350	89,000	1.7%	-0.2%
9. Coos (Coos Bay)	48,897	49,040	2.9%	0.1%	61,450	60,150	0.7%	-1.0%
10. Deschutes (Bend)	57,450	62,087	8.3%	4.0%	63,300	65,400	5.8%	1.7%

\* Growth per year was calculated using the compounding formula:

$$I = (P/P_i)^{1/n-1}$$

Where: I = growth rate per year  
P = population after "n" years  
P<sub>i</sub> = initial population  
n = number of years

### Morning Traffic Trends

Morning traffic trends can provide a feel for the business development throughout the tri-county area. Vehicles traveling between 6 a.m. and 11 a.m. on weekdays generally represent morning business traffic.

Figure E-2 gives the average morning weekday traffic into and out of downtown Portland for June 1986. Besides displaying the total vehicle counts, the figure shows the growth in traffic count which has occurred since 1970, and the growth in this count in the last few years.

Morning traffic counts have substantially increased over the past sixteen years. The largest increase by far occurred at the Vista Ridge Tunnel (Highway 26), reflecting the population and business activity increases in Washington County.

Of some concern to Oregonians is the influx of vehicles from Vancouver, Washington, where cars are not required to pass an air pollution emissions test. The morning southbound traffic counts at the two Interstate bridges provides an indication of the number of people residing in Washington that work in Oregon. This traffic count data compares very well with the Oregon income taxes filed for Clark County residents shown in Table E-3.

Figure E-2 shows that a great share of the morning traffic entering Oregon from Washington stops in Portland. Each morning, about 28,000 vehicles enter Oregon over the I-5 and I-205 Bridges. The shopping centers and industrial areas along the Columbia River are expected to attract a large portion of these vehicles. In the last two years the southbound traffic across the two Columbia River bridges increased about 18 percent.

The combined interstate bridge traffic counts show approximately a 98 percent increase in southbound traffic over the past sixteen years. This growth in bridge traffic is of twice the magnitude of the growth rate in vehicle registration in the Portland tri-county area (54 percent). The actual out-of-state influx of approximately 28,000 vehicles each morning is only about 3 percent of the vehicle population in the Portland tri-county area. The 28,000 vehicles represent 15 percent of the registered vehicles in Clark County Washington.\*

### Vehicles From Outside the Vehicle Inspection Boundaries

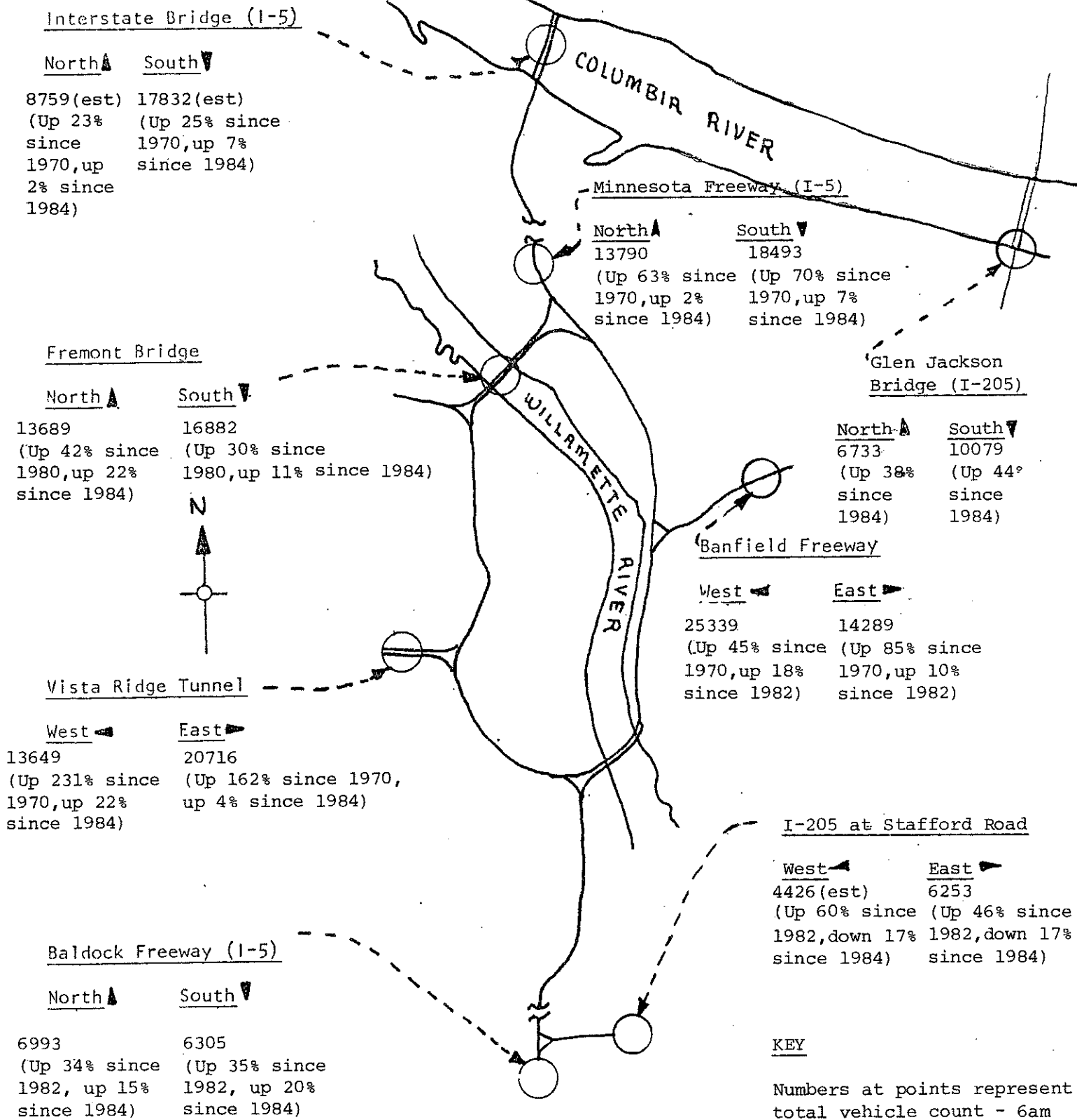
The vehicle inspection boundaries have been legislatively established as the Metropolitan Service District (MSD) boundaries. This area is shown in Figure E-3, along with the average daily traffic (ADT) across those boundaries for major thoroughfares. During 1985, there was a total of 280,000 ADT on these main roads. Assuming a worst case that all of the traffic on these roads is registered outside the MSD, then 18 percent of the passenger vehicles operating within the MSD would not have been tested. This does not take into account through traffic.

\* Data from Department of Licensing, Olympia, Washington.

Figure E-2

## AVERAGE WEEK-DAY FLOW OF VEHICLES ON THE PORTLAND FREEWAY SYSTEM FROM 6 AM - 11 AM

JUNE 1986

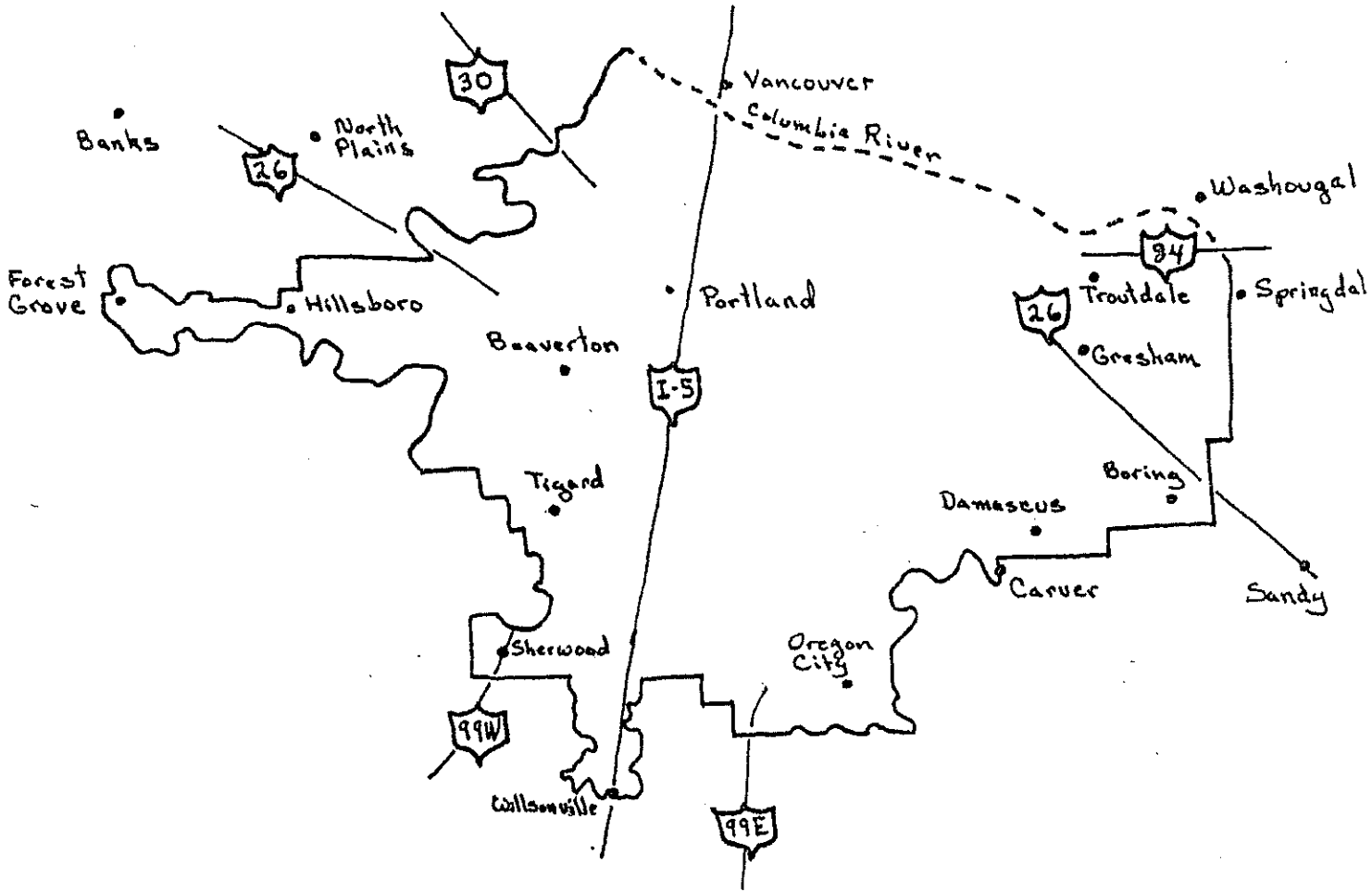


KEY

Numbers at points represent total vehicle count - 6am to 11am (Numbers in parenthesis show traffic growth)

Figure E-3

AVERAGE DAILY TRAFFIC (ADT) ACROSS CURRENT  
VEHICLE INSPECTION BOUNDARIES



AVERAGE DAILY TRAFFIC AT MSD BOUNDARIES

	<u>1979</u>	<u>1981</u>	<u>1983</u>	<u>1985</u>
I-5/Interstate Bridge (North Boundary)	100,800	103,400	82,800	85,600
I-84N/Jordan Interchange (East Boundary)	13,700	13,700	14,000	14,700
U.S. 26/Kelso Road (East Boundary)	13,100	13,700	13,900	12,900
U.S. 99E/South End Road (South Boundary)	9,300	9,000	8,800	10,100
I-5/Wilsonville Interchange (South Boundary)	48,100	48,500	51,700	56,400
U.S. 99W/Kruger Road (South Boundary)	14,700	14,600	17,200	18,800
U.S. 26/Cornelius Pass Road (West Boundary)	12,300	14,000	13,800	17,800
U.S. 30/Portland City Limits (North Boundary)	14,800	14,700	14,900	12,700
I-205/Interstate Bridge (North Boundary)	-0-	-0-	37,500	51,000
<b>TOTALS</b>	<b>226,800</b>	<b>231,600</b>	<b>254,600</b>	<b>280,000</b>

The Department did an additional study of Oregon license plates observed in parking lots within the Portland area to gauge out-of-area impact. This study shows that about 12 percent of those Oregon licensed vehicles were from outside the MSD area.

Vehicle Usage

Pollution emitted into the Portland airshed from vehicles is a function of the amount of pollution emitted per mile and the total miles traveled. Table E-6 and Figure E-4 show the trend of vehicle usage in the Portland area in the last nine years. The table gives the estimated miles traveled per year on the primary and secondary streets in the tri-county area. There has been an overall increase of 39 percent in traffic in the last ten years. Note in the years 1979-80 there was little change in traffic volume, but in 1981 volumes again began to show substantial increases. Many factors, including economic outlook could have caused such a reaction. One of the stronger factors may have been the increased fuel prices in 1979-80 with the subsequent leveling off of prices in 1981.

Table E-6

Annual Vehicle Miles  
Portland Metropolitan Area

<u>Year</u>	<u>Multnomah</u>	<u>Clackamas</u>	<u>Washington</u>	<u>Total</u>	<u>Change in Total Miles</u>
1975	1,518,000,000	597,000,000	686,000,000	2,801,000,000	- - - - -
1976	1,619,000,000	659,000,000	751,000,000	3,029,000,000	228,000,000
1977	1,682,000,000	708,000,000	796,000,000	3,186,000,000	157,000,000
1978	1,724,000,000	782,000,000	870,000,000	3,376,000,000	190,000,000
1979	1,713,000,000	792,000,000	855,000,000	3,362,000,000	- 14,000,000
1980	1,678,000,000	776,000,000	911,000,000	3,365,000,000	3,000,000
1981	1,731,000,000	806,000,000	941,000,000	3,478,000,000	113,000,000
1982	1,732,000,000	826,000,000	966,000,000	3,524,000,000	86,000,000
1983	1,726,000,000	907,000,000	1,010,000,000	3,643,000,000	119,000,000
1984	1,865,000,000	950,000,000	1,092,000,000	3,907,000,000	264,000,000

Another of the factors affecting vehicle usage in the Portland metropolitan area is bus ridership. Table E-7 shows the number of boarding passengers in each of the last sixteen fiscal years.

FIGURE E-4  
ANNUAL VEHICLE MILES TRAVELED  
PORTLAND METROPOLITAN AREA

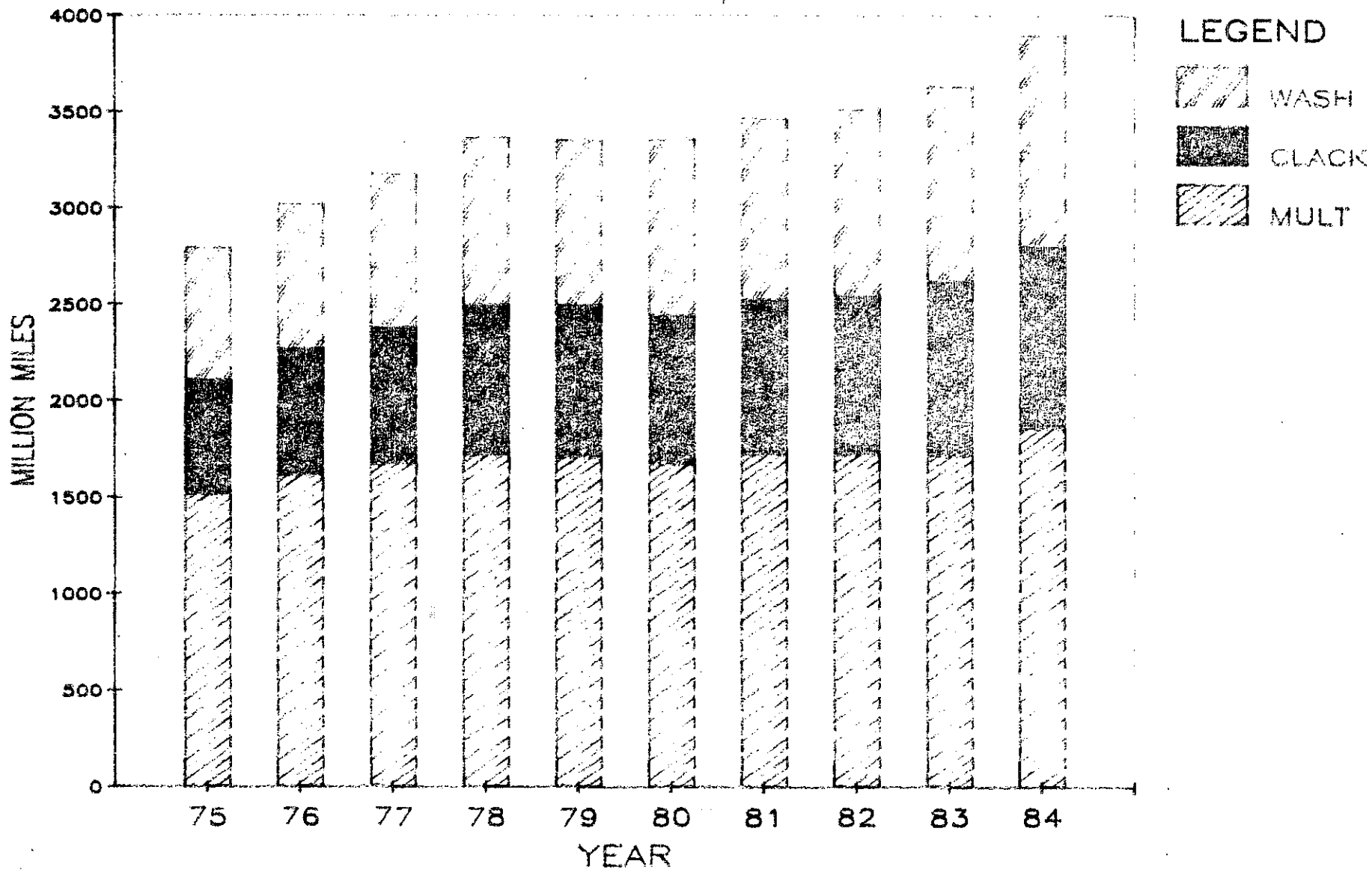


Table E-7  
Tri-Met Bus Ridership

<u>Fiscal Year</u>	<u>Number of Boarding Passengers</u>	<u>Increase in Number of Passengers</u>
1970-71	20,730,000	-----
1971-72	21,350,000	620,000
1972-73	22,170,000	820,000
1973-74	25,480,000	3,310,000
1974-75	28,360,000	2,880,000
1975-76	35,210,000	6,850,000
1976-77	38,080,000	2,870,000
1977-78	41,570,000	3,490,000
1978-79	42,250,000	680,000
1979-80	50,670,000	8,420,000
1980-81	48,090,000	-2,580,000
1981-82	47,090,000	-1,000,000
1982-83	49,320,000	2,230,000
1983-84	49,320,000	- 0 -
1984-85	47,400,000	-1,920,000
1985-86	45,000,000	-2,400,000

Bus ridership increased every year between 1970 and 1980, however, between 1980 and 1982 a drop in ridership was shown. Between 1982 and 1984 ridership increased, but dropped again in 1984 and 1986. A Tri-Met spokesman suggested a couple reasons for such fluctuations: 1) fluctuations in fuel prices; 2) fluctuations in employment.

Summary of Portland Area

The population of the MSD (also the Vehicle Inspection Program boundaries) is estimated at 970,243. The annual growth rate over the last fifteen years was 1.5 percent per year. In the last few years the population growth has slowed and for the first time in fifteen years the population declined between 1982 and 1983. The population began to rise again in 1984-85. The past growth was mainly occurring in the suburban areas. Multnomah County has shown no significant net population gain in the last fifteen years.

Between 1970 and 1980 working population in the metropolitan area had grown at a rate of 3.4 percent per year. However, in both 1981 and 1982 working population dropped. Unemployment rates peaked in 1982, leveled off in 1983 and dropped then leveled off in 1984 through 1986.

The number of registered vehicles in the metropolitan area has fluctuated with population, increasing between 1970-81 and showing a drop between 1981-83, and increasing again during 1984-85.



Morning traffic (6 a.m. - 11 a.m.) on major roads in the metropolitan area over the last 15 years has increased. There continues to be a trend of greater growth in the suburbs relative to downtown. There was no clear indication of reduction in morning traffic during the 1982-83 recession years and growth continued strong in 1984-86. Every weekday morning approximately 28,000 vehicles (about 3% of the total number of vehicles registered in the MSD) enter Oregon across the two interstate bridges (I-5 and I-205). Morning traffic across the bridges has increased at the rate of five percent per year over the past sixteen years.

Currently it is estimated about 12 percent of Oregon's registered vehicles operating within the MSD come from outside the area. This ratio has not changed significantly in the past few years.

Overall, the vehicle usage (vehicle miles traveled) in the metropolitan area has increased by an average of four percent per year in the last nine years. Between 1979 and 1980 there was little change in traffic volume, but between 1981 and 1984 a significant increase was again seen.

#### MEDFORD-ASHLAND AREA

On September 27, 1985, the Environmental Quality Commission adopted rules for implementation of an Inspection Maintenance (I/M) Program for the Medford-Ashland area. The boundaries selected for the program were those of the existing "Medford-Ashland Air Quality Maintenance Area" (AQMA). The Rogue Valley I/M program began operations in January 1986. The designated AQMA includes a reported 85 percent of the population of Jackson County, Oregon.

#### Population

The Medford-Ashland and AQMA includes at least parts of the incorporated cities listed on Table E-8.

Table E-8  
Cities Within the Medford-Ashland AQMA

<u>Cities</u>	<u>Estimated 1985 Population</u>
Ashland	15,660
Central Point	6,740
Eagle Point	3,010
Jacksonville	1,990
Medford	41,975
Phoenix	2,510
Talent	2,660
Total	74,545

The incorporated cities listed in Table E-9 are within Jackson County but outside the AQMA:

Table E-9

Cities Inside Jackson County  
but  
Outside Medford-Ashland AQMA

<u>Cities</u>	<u>Estimated 1985 Population</u>
Butte Falls	450
Gold Hill	910
Rogue River	1,440
Shady Cove	1,190
Total	3,990

The total Jackson County population in 1985 was 137,900 of which 85 percent (117,000) is reported by Jackson County to be within the AQMA. It is of note that only an estimated 63 percent of the population within the AQMA reside in incorporated cities.

The population of Jackson County is shown in Table E-10 for the last eight years.

Table E-10  
Population of Jackson County, Oregon\*

<u>Year</u>	<u>Population</u>
1978	126,900
1979	130,250
1980	132,456
1981	133,700
1982	133,725
1983	133,350
1984	135,100
1985	137,900

\*Data from Center for Population Research and Census, Portland, Oregon

The overall growth in eight years was a very slow nine percent with a lull in 1981-1983, where growth was at a standstill. The years 1984 and 1985 - 85 showed improved growth.

The estimated unemployment rate in Jackson County for the last several years is shown in Table E-11. State Employment Division spokesman said that the data was accurate to within + 10 percent and in fact was not biased by excluding those that are chronically unemployed and off the unemployment rolls.

Table E-11

Annual Average Jackson County Unemployment Rate

<u>Year</u>	<u>Unemployment Rate, %</u>
1978	7.0
1979	8.9
1980	10.3
1981	12.7
1982	14.4
1983	12.0
1984	10.1
1985	9.4
1986	9.0

To add perspective to the employment figures, view the number of Jackson County residents that filed Oregon State income tax returns, shown in Table E-12.

Table E-12

Oregon State Income Taxes Filed for Jackson County\*

<u>Year</u>	<u>Number of Returns</u>
1982	47,126 (35%)
1983	47,961 (36%)
1984	49,134 (36%)

The numbers in parentheses show the returns as a percentage of the total population. There was little change indicated in this percentage in the years 1982-1984. This same consistency was also observed in the Portland area for those years. The percentage of employed people in the Portland area is 41 percent compared to 36 percent for Jackson County. This is consistent with the reported higher unemployment rate in Jackson County.

\* Oregon State Department of Revenue

### Out of Area Vehicles

During the summer of 1986, the Department conducted a study to estimate the magnitude of out of area vehicles. License plate numbers were collected at random from area parking lots. The addresses on the registrations were compared to area phone directory listings. In this survey for the Rogue Valley area, 17 percent of the vehicles were registered outside of the Medford-Ashland AQMA.

### Bus Ridership

Buses are an alternative form of transportation that can help reduce pollution in the towns in the Rogue Valley by removing passenger cars from the roads. Reduced passenger car mileage leads to both low pollutant emissions and enhanced traffic flow. Table E-13 shows the number of annual boarding riders on the buses of the Rogue Valley Transit District, the only bus service in the Rogue Valley.

Table E-13

#### Annual Bus Ridership in Rogue Valley

<u>Fiscal Year</u>	<u>Boarding Riders</u>
1981-82	230,575
1982-83	273,711
1983-84	363,807
1984-85	630,424
1985-86	1,095,692

Notice that in the last two years the ridership has jumped dramatically. The 1984-85 increase was a result of reducing the time between buses from 45 minutes to 30 minutes, and the 1985-86 increase resulted from the transfer of school children onto the bus system by cancelling an existing school bus program. The figure of just over a million ridership in Rogue Valley compares to a figure of 45 million ridership in the Portland area. The population in the Rogue Valley AQMA is estimated at 117,215 compared to 970,243 for the Portland MSD. The ridership of the Rogue Valley Transit District would have to grow by a factor of five to have ridership equivalent to that of Portland. Nevertheless, even at just over a million in ridership, the Rogue Valley Transit District will certainly still make a substantial contribution to reduction of pollution and traffic congestion.

### Summary of Medford-Ashland AQMA

The Rogue Valley I/M program began operation in January 1986, with boundaries the same as the Medford-Ashland AQMA. The 1985 population estimate of the AQMA is 117,000, approximately 85 percent of the Jackson County population.

The unemployment rate in Jackson County in 1986 is 9.0 percent, a substantial improvement from the 1982 peak rate of 14.4 percent, but still higher than the estimated 7.7 percent for Portland.

The per capita vehicle registration in Jackson County is 0.9, slightly higher than that in the Portland area.

Oregon licensed vehicles which travel into the AQMA for a visit is estimated as 17 percent of the total traffic.

Bus ridership in the AQMA is increasing but the per capita ridership is only 1-5th that of Portland ridership.

## Inspection/Maintenance Programs by Geographic Area

The following are brief, thumbnail descriptions of inspection/maintenance programs operating or scheduled to begin operation in the United States. Thirty-three states and the District of Columbia are discussed. Cost figures reported are based upon charges to the motorist, and do not include program costs funded by the individual State general funds unless specifically cited.

**The West.**Alaska

Alaska has a decentralized inspection/maintenance program that began operation in July 1985. It is be operated in the Anchorage and Fairbanks areas. No vehicle registration is to be issued unless a vehicle has been inspected. All vehicles are included in the inspection program.

Arizona

Arizona has a centralized private contractor inspection/maintenance program. Mandatory operation of the Arizona program began in January 1976. The program operates in the Phoenix and the Tuscon metropolitan areas. The inspection fee to the motorist effective January 1987 is \$7.12, for passenger cars and light trucks and \$24 for vehicles over 26,000 pounds gross vehicle weight rating. Several other changes have been made in the Arizona inspection/maintenance program including mandatory tampering inspection of all 1975 and newer vehicles and raising of the cost of repair limit from \$50 to \$300 for 1980 and newer cars. The cost limits are not applicable for repairing tampered vehicles including vehicles that have been improperly using leaded fuels.

California

California has a decentralized inspection/maintenance program. The program began operation in March 1984. The program operates in the Sacramento, San Francisco Bay, Fresno, Ventura, South Coast Basin (Los Angeles) and San Diego areas. The testing cycle is biennial, and fees are set by the individual inspection stations and range from \$19 to \$35. Gasoline-powered passenger vehicles and trucks up to 20 years of age and up to 8,500 pounds gross vehicle weight rating are included.

Colorado

Colorado operates an annual decentralized inspection/maintenance program in the Front Range (Denver, Colorado Springs and Fort Collins) areas. The program operation began in 1982. Test fee is \$10. The inspection program covers vehicles 1968 and newer, up to 10,000 pounds gross vehicle weight rating. Legislative changes were made in 1986 that tie the inspection requirement to registration renewal.

### Idaho

Idaho operates an annual decentralized inspection/maintenance program in the Boise (Ada County) area. The program started in August 1984. The test fee ranges between \$3 and \$10 and averages \$9.73. Three dollars goes to the County to cover administrative costs. Inspection is required for all light duty vehicles 1970 and newer.

### Nevada

Nevada has an annual decentralized inspection program in the Las Vegas, Reno, and Carson City areas. Test fee is set by market competition and averages about \$10. The inspection program covers about 1965 and newer vehicles, up through 8,500 pounds gross vehicle weight rating.

### New Mexico

New Mexico was operating an annual centralized contractor operation, which started in January 1983 in the Albuquerque area. The funding mechanism was ruled invalid by the New Mexico courts. This action effectively canceled the program. No alternative has been implemented. Clean Air Act Sanctions were imposed April 1985.

### Oregon

Oregon operates a biennial centralized program in the greater Portland metropolitan and Medford (Rogue Valley) areas. The program in Portland started operation in July 1975. The program in Rogue Valley was added in 1986. All gasoline-powered motor vehicles regardless of weight rating, and diesel vehicles under 8500 gross vehicle weight must be certified before registration renewal. The certificate fee is \$7.00.

### Utah

Utah operates an annual centralized program in the Salt Lake and Davis County areas. Provo, Utah was added July 1986. The program began operation in April 1984. The inspection fee is \$9.00. All 1968 and newer vehicles are included in the inspection program. A tampering inspection is included.

### Washington

Washington has an annual centralized contractor operated inspection/maintenance program operating in both the greater Seattle and Spokane areas. The inspection/maintenance program started in Seattle in 1982 with Spokane joining in 1985. The overview of the contractor is funded by the State general fund. The program covers all vehicles up to 14 years of age.

## **The Midwest**

### Illinois

Illinois inspection/maintenance program started May 1986. It is a centralized contractor-operated program in the greater Chicago and East St. Louis metropolitan areas. No inspection fee is directly charged the motorist. Funding is obtained from the general fund.

### Indiana

Indiana has contracted the biennial inspection to the Indiana Vocational Technical College. The program started in June of 1984. There is no test fee associated with the inspection. The program has a biennial test cycle and requires vehicle model years from 1973 through the present and up to 10,000 pounds gross vehicle weight rating to be inspected. The program area is limited to the Chicago, Illinois and Louisville suburban areas.

### Michigan

Michigan started its inspection/maintenance program December 1985. It is a decentralized program operating in the greater Detroit area. The inspection fee is \$10 and includes vehicles through the last nine model years.

### Missouri

Missouri has an annual decentralized inspection/maintenance program which began operation in January 1984. An idle test is used and pollution control equipment is inspected. The test fee is \$4.50. The program covers 1968 and newer vehicles, up to 6,000 pounds gross vehicle weight rating.

### Ohio

Ohio has designated Cincinnati and Cleveland as nonattainment areas. The SIP was disapproved by EPA in 1984.

### Wisconsin

Wisconsin has a central contractor-operated inspection/maintenance program operating in the greater Milwaukee area. There is no test fee. They use a loaded mode and idle test with the loaded portion of the test being used for vehicle preconditioning. All vehicles less than 15 years of age and under 8,000 pounds gross vehicle weight rating are required to go through the inspection.

## **The South**

### Alabama

There is currently no program in Alabama. The Birmingham area is in nonattainment of federal air quality standards, and an inspection



program may be required. The current status of such a requirement is under study.

#### Georgia

Georgia has an annual decentralized inspection/maintenance program operating in the Atlanta area. In this program the idle test is used. Test fee is \$5.00. Vehicles 12 years of age and newer and under 8,500 pounds gross weight rating are required to be inspected.

#### Kentucky

Kentucky has a centralized contractor inspection/maintenance program operating in the Louisville area. The test fee is \$6.00. All vehicles up to 18,000 pounds gross vehicle weight rating are required to be inspected. The Kentucky suburban area of Cincinnati, Ohio, is also in nonattainment, and started a program in November 1986.

#### Louisiana

The Louisiana inspection/maintenance program began in September 1985. It was incorporated into the State's Safety inspection program and operates state wide except for New Orleans. The Baton Rouge area is in nonattainment. The New Orleans area is in compliance.

#### North Carolina

North Carolina has incorporated an inspection/maintenance program in its annual decentralized safety inspection. The program is limited to the Charlotte area but the Raleigh area was brought in line in 1986. The inspection fee is \$12. The program covers all vehicles 12 years old and newer.

#### Oklahoma

Oklahoma started an inspection/maintenance program in the Tulsa area in January 1986. It is scheduled to expand to the Oklahoma City area in January 1987. It is a decentralized inspection/maintenance program that does a tampering inspection only. The test fee is \$5. There is no cost waiver and it applies to all 1979 and newer vehicles under 8,500 pounds gross vehicle weight.

#### Tennessee

Tennessee has two different operating inspection/maintenance programs. In the Nashville area, there is an annual centralized contractor operated program. The program began operation in 1984. A \$7.00 fee is charged. It covers vehicles 12 years of age or newer and under 8,500 pounds gross vehicle weight rating. An annual centralized locally-run program is operating in the Memphis area. This program began operation in August 1983. No fee is charged, but the program covers all model year vehicles.

## Texas

Texas is operating an annual decentralized tamper only inspection/maintenance program. The program started in 1984 in Houston and the Dallas-Fort Worth and El Paso areas were added in 1986. The inspection requirement applies to all 1968 and newer vehicles.

## **The East**

### Connecticut

Connecticut has an annual statewide contractor operated inspection/maintenance program. The program began operation in January 1983. The program is enforced via window stickers, as opposed to using the state's registration system. The test fee is \$10. Vehicles covered include 1968 and newer vehicles, up to 10,000 pounds gross vehicle weight rating.

### Delaware

Delaware operates a state operated annual centralized inspection/maintenance program in the New Castle County (Wilmington) area. There is no test fee. The idle test is used. The inspection requirement covers vehicles with model years 1968 and newer and rated under 8,500 pounds gross vehicle weight rating.

### Maryland

Maryland has an annual centralized contractor-operated program. The program began operation in February of 1984. The program is limited to the greater Baltimore/Washington, D.C. area. The test fee is \$9.00. All vehicles within the last 12 model years, up to 10,000 pounds gross vehicle weight rating are required to be inspected.

### Massachusetts

Massachusetts has an annual decentralized program operating statewide. The program began operation in April of 1983. The system uses a window sticker enforcement system. The test fee is \$10. Vehicles up to 15 years of age and under 8,000 pounds gross vehicle weight rating are included.

### New Hampshire

New Hampshire is developing a decentralized inspection/maintenance program that is scheduled to start in September 1987. It is scheduled to cover all vehicles up to 15 years of age.

### New Jersey

New Jersey has the oldest inspection/maintenance program in the United States. It is a statewide annual state-operated centralized program which began operation in February of 1974. The program uses an idle test and

has been incorporated into the state's safety inspection system. Test fee is included in the registration charge.

#### New York

New York has an annual decentralized inspection program operating in the New York City metropolitan area. The program began operation in January 1981. Tampering inspection was included for 1984 and newer vehicles effective July 1984. The inspection fee is \$6.50. The program includes all vehicles up to 8,500 pounds gross vehicle weight rating.

#### Pennsylvania

Pennsylvania has an annual decentralized inspection/maintenance program. The program began operation in June 1984. The program is limited to the Philadelphia/Pittsburgh/Harrisburg areas. The test fee is \$5.00. The program covers all vehicles up to 25 years of age and under 11,000 pounds gross vehicle weight rating.

#### Rhode Island

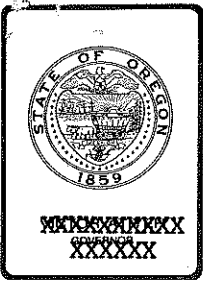
Rhode Island has an annual statewide decentralized inspection/maintenance program. Their program began operation in 1979. The test fee is \$4.00. The idle test was added to the existing safety inspection. No SIP credit is claimed by Rhode Island for this I/M program.

#### Virginia

Virginia has an annual decentralized inspection/maintenance program. The program is limited to the Washington, D.C. suburban area. The inspection fee is \$5.00. It covers the last eight years of vehicles, up to 6,000 pounds gross weight rating. Data is collected manually.

#### Washington, D.C.

Washington, D.C. has an annual centralized district government operated inspection/maintenance program. The program was added to an existing safety inspection program. The program started operation in January 1983. The inspection fee is \$5.00. It covers all vehicles under 6,000 pounds gross vehicle weight rating.



# Environmental Quality Commission

~~MAILING ADDRESS: BOX 1760, PORTLAND, OREGON 97201~~

~~822 SOUTHWEST SIX AVENUE, PORTLAND, OREGON 97204~~ PHONE (503) 229-5696  
811 SW Sixth Avenue, Portland, Oregon 97204

Neil Goldschmidt  
Governor

## MEMORANDUM

To: Environmental Quality Commission  
From: Director  
Subject: Agenda Item K, January 23, 1987, EQC Meeting

Issue Paper: Determination of Percent Allocable For  
Pollution Control Tax Credits

During the Commission's consideration of the tax credit application for the Ogden-Martin facility in Marion County, legal and policy questions arose. The Department brings this issue paper to the Commission in an attempt to outline the issues and promote discussion of them by the Commission, resulting in the Department receiving policy direction from the Commission.

### Background

The pollution control tax credit statute (ORS 468.190) states that the Commission shall consider five factors in establishing the percent of the pollution control facility cost allocable to pollution control. These factors are as follows:

- (a) If applicable, the extent to which the facility is used to recover and convert waste products into a salable or usable commodity.
- (b) The estimated annual percent return on the investment in the facility.
- (c) If applicable, the alternative methods, equipment and costs for achieving the same pollution control objective.
- (d) Any related savings or increase in costs which occur or may occur as a result of the installation of the facility.
- (e) Any other factors which are relevant in establishing the portion of the actual cost of the facility properly allocable to the prevention, control or reduction of air, water or noise pollution or solid or hazardous waste or to recycling or properly disposing of used oil.

In the past, the Department has selected only one factor which was in most cases factor (b), return on investment. In a few cases other factors, as applicable, have been considered in the staff report and used to establish percent allocable.

In reviewing the application for tax credit for the Ogden-Martin resource recovery facility, the Commission decided that it was important for all five factors to be considered by the Commission in determining percent allocable. In doing this, the Commission weighted the relevant factors and arrived at a percent allocable which was a combination of these weighted factors.

The issues which now must be addressed are, first, how all five factors should be considered and, second, when all five factors are considered, whether and how they should be weighted.

1. Consideration of the five factors.

- a. Legal counsel has determined that in order to satisfy statutory requirements, the Commission must consider all five factors in establishing percent allocable for all tax credit certifications. Since Department staff reports are usually adopted as findings of the Commission, if the Commission agrees with staff findings, the statutory requirement will be met if the staff reports appropriately discuss our consideration of all five factors.

Though all five factors would be analyzed in all cases, the Department would expect to base the determination of percent allocable in most cases on factor (b), return on investment. Because of the nature of the model used to determine return on investment, factor (a), the extent to which the facility recovers and converts waste into a salable or usable commodity and factor (d), any related savings resulting from the facility, are taken into account. For example, in reviewing an application for a scrubber system which collects wood fibers in exhaust gas, DEQ would consider the savings which result from returning wood fibers to the process. These would be considered as part of the annual operating expenses used in the return on investment calculation.

In the example above, it could be argued that the sole purpose of the facility was air pollution and that sole purpose should be considered an "other" factor under (e). However, the Department recommends eliminating from consideration those factors which the Department considers in determining eligibility (e.g. principal or sole purpose).

- b. The tax credit rule (OAR 340-16-030(2)) states that the Commission shall consider the five factors "if applicable". Based on legal advice regarding interpretation of the statute to require consideration of all five factors in all cases, the rule should be amended to more accurately parallel the statute.

2. Using the five factors to determine percent allocable.

In those cases where more than one factor is considered applicable, the Commission may wish to develop a method to determine which factor or combination of factors should be used and if a combination of factors is used, how they should be weighted.

a. Which factor or combination of factors.

Currently, the tax credit rule (OAR 340-16-030(5)) states that the Commission shall choose the factor or combination of factors which result in the least percent allocable. Some question has been raised by legal counsel as to whether this rule is actually within the authority granted to the Commission which states that "the Commission may adopt rules to establish methods to determine the portion of costs properly allocable" to pollution control (ORS 468.190(3)). Since this rule appears to be beyond statutorily granted rule making authority, the Commission should consider amending the rules to delete this section.

b. The Department needs criteria to use in deciding whether more than one factor should be used in determining percent allocable in a particular case. We also need a process to determine if all factors used should be weighted equally. We could have all factors weighted equally except in those cases determined by the Commission to be unique because of the nature of the facility, in which case the Commission would determine the weighting.

Return on Investment Calculation

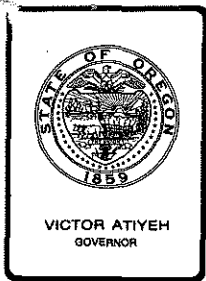
Another issue which needs to be addressed is whether the Department's present return on investment calculation, which is an internal rate of return method using cash flow analysis, is the most appropriate. The Department needs to review alternatives and decide how best to approach an evaluation of the current method and any potential revision of it.

Director's Recommendation

The Department requests that the Commission discuss the conceptual framework it wishes to have the Department use in drafting rules on issues covered in this paper.



Fred Hansen



## *Environmental Quality Commission*

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696  
811 S.W. Sixth Avenue, Portland, OR 97204 Phone (503) 229-5696

### MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item K, January 23, 1987, EQC Meeting

Request For An Exception to OAR 340-41-026(2) (An EQC Policy Requiring Growth and Development Be Accommodated Within Existing Permitted Loads) By Wacker Siltronic Corporation.

### Background and Problem Statement

Wacker Siltronic Corporation has requested the Environmental Quality Commission grant an exception to a water quality management plan policy, OAR 340-41-026(2). This policy states: "In order to maintain the quality of waters in the State of Oregon, it is the policy of the EQC to require that growth and development be accommodated by increased efficiency and effectiveness of waste treatment and control such that future discharge loads from existing sources do not exceed presently allowed discharged loads unless otherwise specifically approved by the EQC."

This policy recognizes that each river's assimilative capacity is limited and maintenance of water quality, while accommodating growth, will require more stringent controls. However, this policy is only one of several criteria which apply to industrial treatment facilities discharging treated effluent to surface waters. In determining the allowable discharge standards for new and expanded industrial treatment facilities, the Water Quality Management Plan, OAR 340, Division 41, presents other policies and requirements that, together with OAR 340-41-026(2), must be reconciled. These include:

1. Specific industrial waste treatment requirements are determined on an individual basis in accordance with applicable federal requirements. States must require that, at a minimum, the industrial permit conditions comply with the appropriate "federal effluent guidelines".
2. All facilities must be designed to incorporate "highest and best practicable treatment and/or control of waste" to maintain dissolved oxygen and overall water quality at the highest possible levels. These levels of control are established by the Department.

3. Permit limits are established so that waste discharges will not impair beneficial uses or violate water quality standards for the basin.

Since 1978, Wacker Siltronic Corporation has operated a silicon wafer manufacturing facility at 7200 N.W. Front Avenue, Portland. Through the process of crystallization, Wacker grows silicon ingots, slices them into thin wafers for polishing, and sells the polished wafers to other high-tech companies for processing into computer chips.

When the NPDES permit was first issued to Wacker Siltronic in 1978, the Department did not have experience with this type of industry and there were no federal effluent guidelines to follow. Therefore, the permit limits were based on the Department's best professional judgment. The original NPDES permit limits are as follows:

	Concentrations		Loadings	
	Monthly Ave. mg/1	Daily Max. mg/1	Monthly Ave. lb/day	Daily Max. lb/day

(Originally Proposed Limits) at a flow of 0.20 MGD

Total Suspended Solids (TSS)	15	30	25	50
Biochemical Oxygen Demand (BOD)	15	30	25	50
Fluoride	6	12	10	20
Hexavalent Chromium (Cr <sup>+6</sup> )	0.02	0.05	0.03	0.1
Total Chromium (Cr <sup>T</sup> )	0.3	1.0	0.5	1.0
Total Toxic Organics (TTO)	--	1.37		

Wacker's first phase proposal in 1978 was to discharge an average of 0.20 million gallons per day (MGD) of process waste water from the wafer plant. The initial application implied that wafer production would be expanded in the future. It further stated that a polysilicon plant would be constructed at a later date which would also increase waste water flow. Since the timing for construction of the polysilicon plant and the expansion of wafer production were uncertain, the Department based the permit limitations on a flow of 0.20 MGD with an understanding that it could be increased in the future. However, had Wacker proposed to include higher wafer production and the polysilicon plant in the initial development, the original permit would have contained limits to accommodate the additional production facilities.



The original flow estimate has proved to be low. Wastewater flow at the original production levels was about 0.28 MGD or 40 percent over what was projected. Since 1983, existing production lines have expanded by about 50 percent, which increased average flows to between 0.30 and 0.35 MGD. As yet, the polysilicon plant has not been constructed. Wacker's projections through 1991 would triple the original production level and raise the average flow to 0.65 MGD. If the poly plant comes on line in the late 1980's, the total flow will increase to 0.80 MGD by 1991.

Since actual process water flows have exceeded the projected design flow of 0.20 MGD, it is becoming more difficult for Wacker to comply with the loading limitations.

Wacker Siltronic submitted an application to renew their NPDES permit based on a flow of 0.80 MGD. Renewal of the permit based on this requested flow would increase by 300 percent, the permitted waste loads discharged to the Willamette River. However, based upon the size of the receiving stream, the increased loadings are relatively insignificant: the TSS and BOD<sub>5</sub> each would increase from a monthly average of 25 lbs/day to 100 lbs/day, for example. In comparison, during the summer, about 50,000 lbs/day of BOD<sub>5</sub> is discharged into the Willamette River system from other industrial and domestic source upstream from the Wacker plant.

#### Alternatives and Evaluations

Two alternatives exist for the Commission to consider in response to Wacker Siltronic Corporation's request for permit renewal. If the Department is to renew the permit as requested by Wacker, the Commission would have to grant an exception to the water quality management policy which requires that growth and development be accommodated within existing permitted loads. The alternatives are discussed and evaluated as follows:

1. Approve the requested increase in permitted waste discharge loads.

This proposal would not change any of the existing concentration limitations because the degree of treatment would be the same, but it would increase the allowable (lbs/day) loadings for TSS, BOD, and fluoride by 300 percent. The increased loading for chromium would be somewhat different since the basis for flow would be 0.65 MGD rather than 0.80 MGD. Chromium is generated as a waste only in the wafer plant.

	Concentrations		Loadings	
	Monthly Ave.	Daily Max.	Monthly Ave.	Daily Max.
	<u>mg/1</u>	<u>mg/1</u>	<u>lb/day</u>	<u>lb/day</u>

(Requested Limits, based on flow of 0.80 MGD which would include a flow allowance for the Polysilicon plant)

TSS	15	30	100	200
BOD	15	30	100	200
Fluoride	6	12	40	80
Cr <sup>+6</sup>	0.02	0.05	0.11	0.27
Cr <sup>I</sup>	0.3	1.0	1.6	5.4
TTO*	--	1.37		

The concentration limitations in Wacker's permit are based on the Department's determination of "highest and best practicable treatment". These limitations are considerably more restrictive than that allowed by the federal guidelines of 1983. Diversion of the waste waters to the City of Portland's sanitary sewerage system is not desirable from the City's and the Department's viewpoints because the waste stream is too dilute to be further treated by the City's sewage treatment works.

The Department has taken several river samples above and below Wacker's discharge point during the summer low flow period, and has not seen any measurable effect from the discharge. The quality of the Willamette River near the point of discharge has been very good.

The current and requested discharge volumes are relatively small. In addition, during the critical low flow condition of the Willamette River, Columbia River water normally intrudes up the Willamette River to the vicinity of Wacker's discharge. Columbia River water is generally colder and contains more dissolved oxygen than the Willamette water. Consequently, the dissolved oxygen concentrations rise in this stretch of the Willamette river during the summer. At the requested loadings, the discharge will not have any measureable effect on the water quality of the Willamette River.

---

\* Total toxic organics.

2. Deny the request for an increase in permitted waste discharge loads.

This alternative could lead to two different actions. First, Wacker Siltronic could request authorization from the City of Portland to divert additional flow to the City's sewerage system. Indications are the City would not want this waste water because the low concentration of pollutants from the Wacker plant are about the same concentrations as the discharge from the City's sewage treatment plant. Consequently, the pollutants in the Wacker waste water would essentially flow through the sewage treatment plant with no treatment. The additional flow rate from Wacker would probably aggravate by-pass problems inherent with the City's combined sanitary/storm sewer system.

Second, Wacker could choose to install additional treatment systems to lower the concentration of pollutants while increasing the volume of the discharge. This could allow Wacker to increase the discharge volume, but keep the discharge load within current permit limits. The type of additional treatment necessary at these low concentrations would be very expensive, and somewhat experimental. In the Department's view, it would gain no measurable environmental benefit.

Although the pollutant concentrations could probably be sufficiently lowered to accommodate the planned expansions with existing loading limits, Wacker views this approach as an unreasonable financial burden since the permit limits are already based on "highest and best practicable treatment and/or control of waste", and it is not anticipated there would be any measureable water quality impact.

The Department believes granting Wacker's request will not diminish the Commission's efforts to preserve and enhance water quality in the Willamette River. The low level of pollutants discharged compared with the quantity and quality of the receiving stream is such that no measurable impact is expected by granting this exception to the existing policy.

Summation

1. Wacker Siltronic Corporation has requested an increase in the loading limitations of their NPDES permit. Such request will require the Commission to consider an exception to OAR 340-41-026(2) which requires that growth and development be accommodated within existing permitted waste discharge loads, unless otherwise approved by the Commission.

2. Wacker Siltronic has presented their expansion plans which call for flows to increase to 0.65 MGD by 1991. Assuming the polysilicon plant is constructed at that time, flows will increase another 0.15 MGD to 0.80 MGD.
3. The low concentration of pollutants in Wacker's effluent are basically similar to that of the discharge from the City Portland's sewage treatment plant. Thus, Wacker's effluent would not receive further treatment if it is diverted to the City's plant or subjected to other conventional treatment methods.
4. Although the loadings would increase by about 300 percent, the overall discharge to the Willamette River would still be relatively small. The Department's sampling of the Willamette River near Wacker's outfall has not shown any measurable degradation of water quality. The Department does not believe there would be any measureable impact on the water quality of the Willamette River as a result of the increase.
5. Wacker Siltronic's outfall is located in the lower Willamette River where, during the summer, Columbia River water intrudes. This condition: (1) results in higher dissolved oxygen concentrations than are normally found upstream in the Willamette River; and (2) provides sufficient capacity to assimilate Wacker's proposed increased loadings.

Director's Recommendation

Based upon the Alternatives and Evaluation, the Director recommends that the Commission adopt the staff report as its findings, allow an exception to the existing policy, and grant the requested permitted load increase based on a flow of 0.80 MGD.

  
Fred Hansen

Attachments (3)

- A - OAR 340-41-026
- B - Permit Renewal Application
- C - Draft Renewal Permit

Larry D. Patterson:h  
WH1375  
229-5374  
December 1, 1986

Permit Number:  
Expiration Date: 6/30/91  
File Number: 93450  
Page 1 of 6 Pages

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

**WASTE DISCHARGE PERMIT**

Department of Environmental Quality  
522 Southwest Fifth Avenue, Portland, OR  
Mailing Address: Box 1760, Portland, OR 97207  
Telephone: (503) 229-5696

Issued pursuant to ORS 468.740 and The Federal Clean Water Act

**ISSUED TO:**

Wacker Siltronic Corporation  
P.O. Box 03180  
Portland, OR 97203

**SOURCES COVERED BY THIS PERMIT:**

<u>Type of Waste</u>	<u>Outfall Number</u>	<u>Outfall Location</u>
Silicon Manufacturing	001	River Mile 6.6

**PLANT TYPE AND LOCATION:**

Manufacturing Monocrystalline Silicon  
7200 N.W. Front Ave.  
Portland

**RECEIVING STREAM INFORMATION:**

Major Basin: Willamette  
Minor Basin: -  
Receiving Stream: Willamette River  
County: Multnomah  
Applicable Standards: OAR 340-41-445

EPA Reference No. OR 003058-9

Issued in response to Application No. 999527 received 5/2/86.

\_\_\_\_\_  
Fred Hansen, Director

\_\_\_\_\_  
Date

**PERMITTED ACTIVITIES**

Until this permit expires or is modified or revoked, the permittee is authorized to construct, install, modify or operate a waste water collection, treatment, control and disposal system and discharge to public waters adequately treated waste waters only from the authorized discharge point or points established in Schedule A and only in conformance with all the requirements, limitations, and conditions set forth in the attached schedules as follows:

	<u>Page</u>
Schedule A - Waste Discharge Limitations not to be Exceeded..	2,3
Schedule B - Minimum Monitoring and Reporting Requirements...	4
Schedule C - Compliance Conditions and Schedules.....	5
Schedule D - Special Conditions.....	6
General Conditions.....	Attached

Each other direct and indirect waste discharge to public waters is prohibited.

This permit does not relieve the permittee from responsibility for compliance with any other applicable federal, state, or local law, rule, standard, ordinance, order, judgment, or decree.

SCHEDULE A

1. Waste Discharge Limitations not to be Exceeded After Permit Issuance Date, and Prior to Completion of the Polysilicon Plant.

Outfall Number 001

	Concentrations		Loadings	
	Monthly Ave. mg/1	Daily Max. mg/1	Monthly Ave. lb/day	Daily Max. lb/day
(Process Waste Water)				
Suspended Solids	15	30	81	162
BOD	15	30	81	162
Fluoride	6	12	33	65
Hexavalent Chromium	0.02	0.05	0.11	0.27
Total Chromium	0.3	1.0	1.6	5.4
Total Toxic Organics**	-	1.37	-	-
(Cooling Water and Boiler Blowdown)				
Total Phosphates	2.0	5.0	-	-

(Combined Outfall)

Limitations

pH	Shall not be outside the range 6.0-9.0 except for 7 hours and 26 minutes per month per outfall. An individual excursion shall not exceed 60 minutes.			
Temperature	Shall not exceed 85°F.			
Free Available Chlorine *	0.2	0.5	-	-

2. Waste Discharge Limitations not to be Exceeded After Permit Issuance Date, and After Completion of the Polysilicon Plant.

Outfall Number 001

	Concentrations		Loadings	
	Monthly Ave. mg/1	Daily Max. mg/1	Monthly Ave. lb/day	Daily Max. lb/day
(Process Waste Water)				
Suspended Solids	15	30	100	200
BOD	15	30	100	200
Fluoride	6	12	40	80
Hexavalent Chromium	0.02	0.05	0.11	0.27
Total Chromium	0.3	1.0	1.6	5.4
Total Toxic Organics**	-	1.37	-	-
(Cooling Water and Boiler Blowdown)				
Total Phosphates	2.0	5.0	-	-

(Combined Outfall)

Limitations

pH

Shall not be outside the range  
6.0-9.0 except for 7 hours and  
26 minutes per month per outfall.  
An individual excursion shall  
not exceed 60 minutes.

Temperature

Shall not exceed 85°F.

Free Available  
Chlorine

0.2

0.5

-

-

\* Discharge of chlorine shall not occur more than two (2) hours on any day. Further, during chlorination there shall be no discharge of cooling tower blowdown.

\*\* Total Toxic Organics is defined in 40 CFR 469.21(a).

3. Notwithstanding the effluent limitations established by this permit, no wastes shall be discharged and no activities shall be conducted which will violate Water Quality Standards as adopted in OAR 340-41-445 except in the following defined mixing zone:

The mixing zone shall consist of a portion of the Willamette River not to exceed a 50 foot radius from the point of discharge.

SCHEDULE B

Minimum Monitoring and Reporting Requirements (unless otherwise approved in writing by the Department)

Outfall Number 001

<u>Item or Parameter</u>	<u>Minimum Frequency</u>	<u>Type of Sample</u>
(Process Waste Water)		
Flow	Continuously	Totalizing Recorder
BOD	Weekly	24-hour Composite
Suspended Solids	Weekly	24-hour Composite
Hexavalent Chromium	Weekly	24-hour Composite
Total Chromium	Weekly	24-hour Composite
Fluoride	Weekly	24-hour Composite
pH	Continuously	Recorder
Total Toxic Organics *	Monthly	Grab
Minutes pH is outside the range of 6.0-9.0	Continuously	
Number of pH excursions outside the range of 6.0-9.0 that exceed 60 minutes in duration	Continuously	
(Cooling Water and Boiler Blowdown)		
Flow	Continuous	Totalizing Recorder
Total Phosphates	Weekly	Grab
(Combined Outfall)		
pH (After September 30, 1984)	Weekly	Grab
Temperature	Continous	Recorder
Free Available Chlorine	Weekly	Grab
Bioassay**	During Cooling System Chlorination	Grab
	2 per year (approx. 6 months apart)	96 hr Static

\* In accordance with 40 CFR 469.21(a), the permittee shall monitor for all Total Toxic Organic compounds at least annually. Those Total Toxic Organic compounds confirmed to be present in the waste water, or likely to be present, shall be monitored on a monthly basis.

\*\* Bioassay must be performed in a manner approved in writing by the Department.

Reporting Procedures

Monitoring results shall be reported on approved forms. The reporting period is the calendar month. Reports must be submitted to the Department by the 15th day of the following month.



SCHEDULE C

1. As soon as practicable but not later than July 1, 1987, the permittee shall submit a report which evaluates the design capacity of the existing waste water treatment and control systems. The report shall compare existing and projected flows and/or loadings with the design capacity of the systems. Should any portions of the treatment and control systems approach capacity during the period of this permit, the report shall include a schedule for upgrading those items.
2. The permittee shall submit a proposed plan by August 15, 1986, to evaluate the organic strength of the waste water by methods other than the conventional BOD-5 test. Such alternatives could include COD or TOC. The results of the approved study shall be submitted to the Department by no later than July 1, 1987.

SCHEDULE D

Special Conditions

1. The total discharge shall be controlled to maintain a reasonably constant flow rate throughout each 24-hour operating period.
2. Sanitary wastes shall be disposed to the City of Portland municipal sewage system.
3. An adequate contingency plan for prevention and handling of spills and unplanned discharges shall be in force at all times. A continuing program of employee orientation and education shall be maintained to ensure awareness of the necessity of good inplant control and quick and proper action in the event of a spill or accident.
4. An environmental supervisor shall be designated to coordinate and carry out all necessary functions related to maintenance and operation of waste collection, treatment, and disposal facilities. This person must have access to all information pertaining to the generation of wastes in the various process areas.
5. There shall be no heavy metal based additives in the cooling tower or the boiler waters.
6. The Department shall be notified in writing when construction of the polysilicon plant begins and when the polysilicon plant is completed.

MAIL TO:

DEPARTMENT OF ENVIRONMENTAL QUALITY - Business Office

P. O. Box 1760

Portland, OR 97207

APPLICATION FOR RENEWAL OF A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT NPDES-R

Appl. 999521  
File No. 93450  
Received: 2 MAY 86

CG# 12770  
\$300.00  
5-01-86

OR-00305B-9

A. REFERENCE INFORMATION:

Official Name and Address of Applicant (Owner) Wacker Siltronic Corporation P. O. Box 03180 Portland, OR 97203		Present Permit No. <u>3847-J</u> Date Expires <u>09/30/86</u>
Responsible Official (Name, Title, Address, Phone) John Pittman, Director of Engineering P. O. Box 03180 Portland, OR 97203 (503) 243-2020	Alternate Responsible Official or Chief Operator Murray Tilson, Facilities Operations/Environmental Supervisor	
Description of activities requiring a permit from the Department: (Check all that apply) <input type="checkbox"/> Construct, install, or modify waste collection, treatment, or disposal facilities. <input checked="" type="checkbox"/> Operate waste collection, treatment, or disposal facilities. <input checked="" type="checkbox"/> Discharge treated waste waters into the waters of <u>Willamette River</u> <input type="checkbox"/> Other _____		

B. GENERAL QUESTIONS:

1. Have the treatment or disposal methods employed, as indicated in previous applications, been altered in any way since the last application was submitted? YES  NO  
If yes, explain.

2. Has the quantity or quality of wastes discharged, as indicated in previous applications, been significantly changed in any way since the last application was submitted?  
X YES NO If yes, explain.

B.2. - See Attachment No. 1 dated 4/28/86.

C. SPECIAL QUESTIONS AND REQUESTED INFORMATION

1. If any changes in operations or waste quantity or quality are anticipated in the near future, please attach an explanation or proposal.

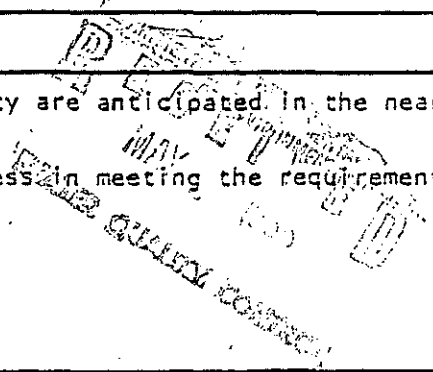
2. Please attach a brief report which indicates your progress in meeting the requirements and limitations of your present permit.

C.1. - See Attachment No. 1 dated 4/28/86.  
C.2. - See Attachment No. 2 dated 4/28/86.

I hereby certify that the information contained in this application is true and correct to the best of my knowledge and belief.

EPA 5-13-86  
cc: Larry Patterson  
cc: NW Region

Signature of owner (or legal y authorized representative)  
By: John L. Pittman  
Title Director of Engineering Date 4/28/86



Attachment No. 1

April 28, 1986

Wacker Siltronic Corporation  
P.O. Box 03180  
Portland, OR 97203  
7200 N.W. Front Ave.  
Portland, OR 97229  
Phone (503) 243-2020  
TWX 910-464-4777  
FAX 503 226-0052

Oregon Department of Environmental Quality  
P. O. Box 1760  
Portland, Oregon

Reference: NPDES Permit Renewal Application  
Sections: B.2 and C.1

We respectfully offer the following to support our need to increase our TSS/BOD loading limitations on NPDES Permit No. 3847-J for effluents discharging into the Willamette River.

Historical Overview

The original estimated combined effluent flow rate of 200,000 GPD was too low for the process installed because:

1. The automatic wafer cleaning machines installed in Portland were of a design with larger capacities than those in use in Germany. For this reason, design water consumption had to be based on the German historical data, modified to be applicable to these newer, larger machines. As it turned out the actual required water use was 80% more than this estimate.
2. The original wastewater calculations were made assuming one Lapping machine was to be installed when in fact six machines were actually installed.

These problems showed up early in the plant operation. The initial hyper-pure water system, which supplies water to the above mentioned machines and the other processes, was greatly undersized. After nine months of plant operation its capacity was increased 85% just to meet the water demands of the production equipment installed at original construction. The average wastewater flows began to exceed the estimated effluent flow rate of 200,000 GPD as soon as this new water treatment system was installed. Flows at full production were measured as high as 280,000 GPD peak.

The original production equipment was capable of supplying sales needs until early 1983. New equipment has been added incrementally since then to meet the increased demand for silicon wafers. In fact the capacity, since the Plant's original construction, has been increased approximately 50%. Future expansions are planned and will be completed as the demand for silicon wafers increases. Long term plans are to have a capacity which is three (3) times the original 1979 capacity, perhaps as early as 1991.

#### Expansion Considerations

As a world class wafer fabrication facility, we are driven by the era of the megabit chips. The importance of high purity water necessary for the wafer cleaning is a key component in our manufacturing process. Two notable examples of new processes in use are the Epitaxial facility and the new LPCVD facility. The tighter specifications, demanding higher quality wafers, necessitates better cleaning and larger amounts of hyper-pure cleaning water (see Figure No. 1).

The semiconductor industry is around 25 years old and its volatility is such that current technology becomes obsolete about every five years. This constant change prevents our wafer manufacturing process from being optimized and established.

We believe silicon will continue its vital role in semiconductor manufacturing. Increased sales in the areas of larger diameter wafers, increased use of Epitaxy and LPCVD processes are expected to provide a continuing growth for our business.

#### Community Impact

Wacker Siltronic expects to construct a polycrystalline silicon plant on the Portland site during the late 1980's. For the purpose of estimating waste flows, it is projected that this plant will start up during 1988-1989 timeframe.

The new polysilicon plant will initially employ 125-150 persons, expanding to an employment level which should exceed 200 by the early 1990's.

Also, the wafer plant is expected to expand during this same period. The wafer plant currently has an annual payroll of \$20 million and it is anticipated that 600 additional jobs will be added to this operation by 1990.

For each additional job which is provided by Wacker, it is estimated that two (2) jobs are created in the local community. Wacker Siltronic is currently expending over \$15 million annually for goods and services to over 500 local vendors. By 1990, with the aforementioned expansions, this figure will be increased substantially, perhaps to \$25 million annually, and spread to a more diverse group of contractors, suppliers and consultants.

The attached Figure No. 2 shows both the actual (1980-1985) and projected (1986-1991) units of production for Wacker Siltronic as well as the actual and projected process wastewater flows to the Willamette River. The actual data for both production units and wastewater flow were taken from historical records. The

projected production units were taken from sales forecasts while the projected waste water flow rates were attained by applying the projected production units to the formula represented by the curve shown in Figure Nos. 3 & 4.

Recommendations

We request that the the renewal of the existing NPDES permit flow rates be increased from the existing 320,000 GPD to our projected flow of 800,000 GPD through 1991 which includes the construction and operation of our new poly plant, as shown on Figure Nos. 1 & 2 attached. Even with these increased flow projections, Wacker Siltronic is committed to meeting the 15 ppm monthly average and 30 ppm daily maximum concentration limits for BOD. We request that the TSS concentration levels be maintained at the current permit limits of 23 ppm monthly average and 60 ppm daily maximum, as established by the Federal effluent guidelines for the semiconductor industry. The attached Table No. 1 is a summary of proposed permit limitations.

JRE:ll

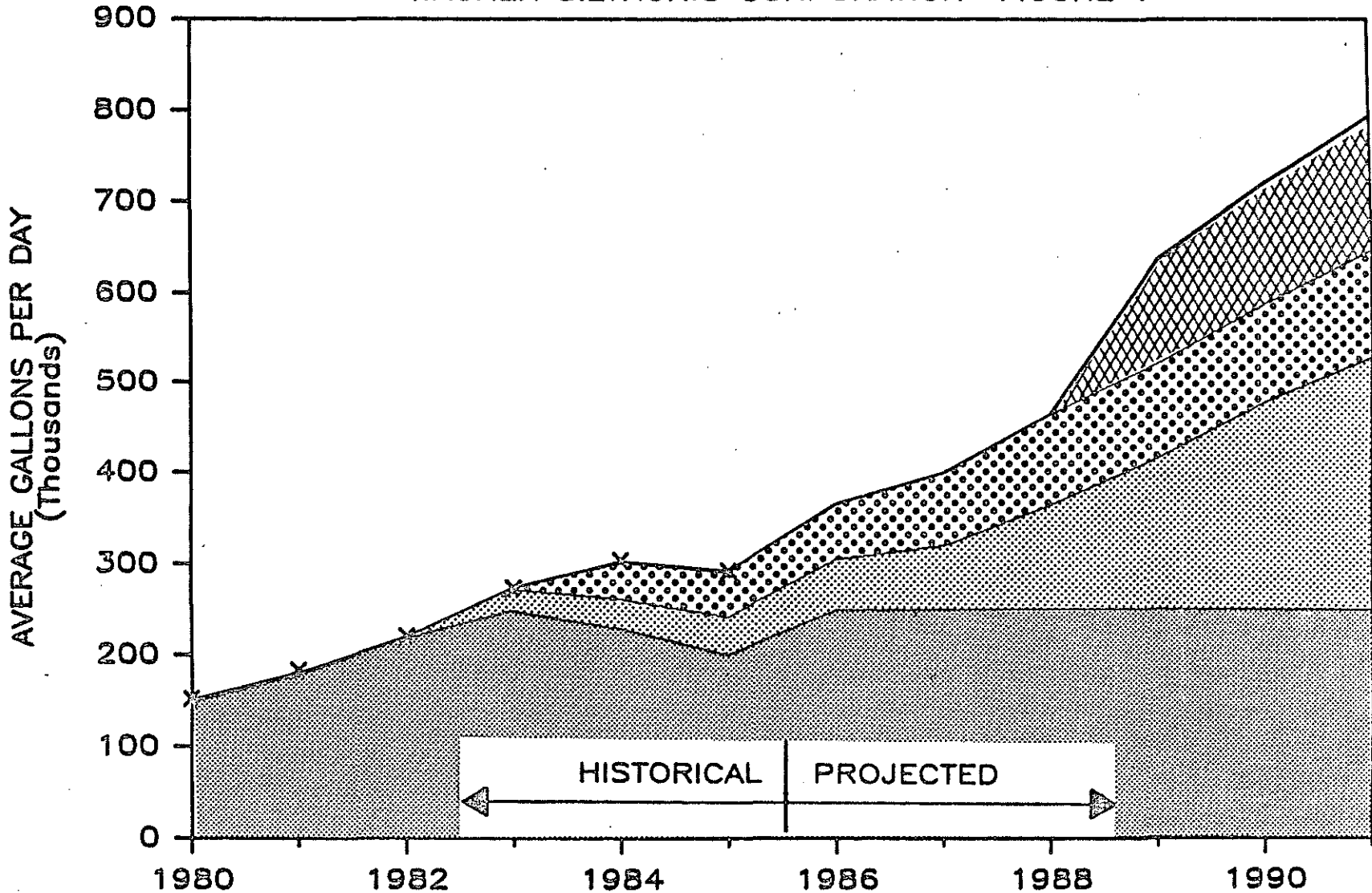
cc: file

Enclosures:

- Figure No. 1 - Process Wastewater Flows
- Figure No. 2 - Wastewater Flows and Production
- Figure No. 3 - Wastewater Flow and Production (Theoretical)
- Figure No. 4 - Wastewater Flow Per Production Unit (Theoretical)
- Table No. 1 - Requested Waste Discharge Limitations.

# PROCESS WASTEWATER FLOWS

WACKER SILTRONIC CORPORATION FIGURE 1



x 4/86 GEC  
HISTORICAL AVERAGE

ORIGINAL EQUIPMENT INCREASED CAPACITY NEW PROCESSES POLY PLANT

**OREGON ADMINISTRATIVE RULES**  
**CHAPTER 340, DIVISION 41 - DEPARTMENT OF ENVIRONMENTAL QUALITY**

months. Where applicable in a waste discharge permit, the low flow period may be further defined.

(16) "Secondary treatment" as the following context may require for:

(a) "Sewage wastes" means the minimum level of treatment mandated by EPA regulations pursuant to Public Law 92-500.

(b) "Industrial and other waste sources" imply control equivalent to best practicable treatment (BPT).

(17) "Nonpoint Sources" refers to diffuse or unconfined sources of pollution where wastes can either enter into - or be conveyed by the movement of water to - public waters.

Stat. Auth.: ORS Ch. 468

Hist.: DEQ 128, f. & ef. 1-21-77; DEQ 24-1981, f. & ef. 9-8-81

**Highest and Best Practicable Treatment and Control Required**

**340-41-010** [SA 26, f. 6-1-67;  
Repealed by DEQ 128,  
f. & ef. 1-21-77]

**Restriction on the Discharge of Sewage and Industrial Wastes and Human Activities Which Affect Water Quality in the Waters of the State**

**340-41-015** [SA 26, f. 6-1-67;  
Repealed by DEQ 128,  
f. & ef. 1-21-77]

**Maintenance of Standards of Quality**

**340-41-020** [SA 26, f. 6-1-67;  
DEQ 28, f. 5-24-71, ef. 6-25-71;  
Repealed by DEQ 128,  
f. & ef. 1-21-77]

**Implementation of Treatment Requirements and Water Quality Standards**

**340-41-022** [DEQ 28, f. 5-24-71, ef. 6-25-71;  
DEQ 46, f. 6-15-72, ef. 7-1-72;  
Repealed by DEQ 128,  
f. & ef. 1-21-77]

**Mixing Zones**

**340-41-023** [DEQ 55, f. 7-2-73, ef. 7-15-73;  
Repealed by DEQ 128,  
f. & ef. 1-21-77]

**Testing Methods**

**340-41-024** [DEQ 55, f. 7-2-73, ef. 7-15-73;  
Repealed by DEQ 128,  
f. & ef. 1-21-77]

**General Water Quality Standards**

**340-41-025** [SA 26, f. 6-1-67;  
DEQ 39, f. 4-5-72, ef. 4-15-72;  
DEQ 55, f. 7-2-73, ef. 7-15-73;  
Repealed by DEQ 128,  
f. & ef. 1-21-77]

**Policies and Guidelines Generally Applicable to All Basins**

**340-41-026** (1)(a) Existing high quality waters which exceed those levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water shall be maintained and protected unless the Environmental Quality Commission chooses, after full satisfaction of the intergovernmental coordination and public participation provisions of the continuing planning process, to lower water quality for necessary and justifiable economic or social development. The Director or his designee may allow lower water quality on a short-term basis in order to respond to emergencies or to otherwise protect public health and welfare. In no event, however, may degradation of water quality interfere with or become injurious to the beneficial uses of water within surface waters of the following areas:

- (A) National Parks;
- (B) National Wild and Scenic Rivers;
- (C) National Wildlife Refuges;
- (D) State Parks.

(b) Point source discharges shall follow policies and guidelines (2), (3), and (4), and nonpoint source activities shall follow guidelines (5), (6), (7), (8), and (9).

(2) In order to maintain the quality of waters in the State of Oregon, it is the policy of the EQC to require that growth and development be accommodated by increased efficiency and effectiveness of waste treatment and control such that measurable future discharged waste loads from existing sources do not exceed presently allowed discharged loads unless otherwise specifically approved by the EQC.

(3) For any new waste sources, alternatives which utilize reuse or disposal with no discharge to public waters shall be given highest priority for use wherever practicable. New source discharges may be approved by the Department if no measurable adverse impact on water quality or beneficial uses will occur. Significant or large new sources must be approved by the Environmental Quality Commission.

(4) No discharges of wastes to lakes or reservoirs shall be allowed without specific approval of the EQC.

(5) Log handling in public waters shall conform to current EQC policies and guidelines.

(6) Sand and gravel removal operations shall be conducted pursuant to a permit from the Division of State Lands and separated from the active flowing stream by a water-tight berm wherever physically practicable. Recirculation and reuse of process water shall be required wherever practicable. Discharges, when allowed, or seepage or leakage losses to public waters shall not cause a violation of water quality standards or adversely affect legitimate beneficial uses.

(7) Logging and forest management activities shall be conducted in accordance with the Oregon Forest Practices Act so as to minimize adverse effects on water quality.

(8) Road building and maintenance activities shall be conducted in a manner so as to keep waste materials out of public waters and minimize erosion of cut banks, fills, and road surfaces.

(9) In order to improve controls over nonpoint sources of pollution, federal, state, and local resource management agencies will be encouraged and assisted to coordinate planning and implementation of programs to regulate or control runoff, erosion, turbidity, stream temperature, stream flow, and the withdrawal and use of irrigation water on a basin-wide approach so as to protect the quality and beneficial uses





## *Environmental Quality Commission*

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### MEMORANDUM

To: Environmental Quality Commission  
From: Director  
Subject: Agenda Item L, January 23, 1987 EQC Meeting

Public Hearing and Proposed Adoption of Modifications to Section 401 Certification Rules, OAR Chapter 340, Division 48

### Background

At the December 12, 1986 meeting of the Environmental Quality Commission, the Department was directed to:

1. Prepare proposed amendments to the existing 401 certification procedural rules (OAR Chapter 340, Division 48) to:
  - (a) Conform the rules to the Oregon Court of Appeals interpretation of the applicable provisions of the Federal Clean Water Act as set forth in Arnold Irrigation District v. Department of Environmental Quality, 79 Or. App. 136, 717P. 2d 1274 (1986), hereafter referred to as Arnold; and to
  - (b) Incorporate an alternative to the current rule that requires an applicant to submit, as part of a completed application, information obtained from the appropriate local planning jurisdiction regarding compliance with land use requirements. It was the unanimous desire of the Commission to consider an alternative which would establish a time certain for the planning jurisdiction to provide advice to the Department on land use requirements that may be water quality related.
2. Publish notice of a rulemaking hearing in the January 2, 1987, edition of the Secretary of State's Bulletin and mail notice to the appropriate Department mailing lists.
3. Hold the rulemaking hearing before the EQC at its regular meeting scheduled for January 23, 1987.

The Department has prepared draft amendments to the 401 certification rules (Attachment A) and has circulated public notice of a rulemaking hearing (Attachment B). Notice was published in the Secretary of State's Bulletin on January 2, 1987, and was mailed to persons known to be interested in the 401 certification process and persons who have requested notice of rulemaking actions.

Discussion of Proposed Rule Amendments

Following is a brief discussion of the intent of changes incorporated in the draft rule amendments:

OAR 340-48-005 Purpose

Language has been added to this rule to clarify that the Department's actions in the 401 certification process are performed pursuant to Section 401 of the Federal Clean Water Act. However, the Department will also comply with state law to the extent that federal law does not supersede state law.

OAR 340-48-010 Definitions

(No Changes Proposed.)

OAR 340-48-015 Certification Required

(No Changes Proposed.)

OAR 340-48-020 Application for Certification

(2)(c) The words "Legal description of the project location" in this subsection have been found to be subject to varied interpretation. Therefore, an amendment has been proposed to better reflect the intent of the information requested.

(2)(i) The existing rule language in this subsection requiring that land use information be obtained from the local planning jurisdiction may not be consistent with the Arnold decision and is deleted. In addition, the Commission wanted an alternative provided.

Proposed new wording requires the applicant to include an exhibit containing information regarding local land use plan provisions which impact a proposed project. This information will provide a basis for the Department to determine which provisions may be water quality related in the context of the applicant's project. The information requested can be prepared by the applicant. Land use compatibility findings prepared by the local planning jurisdiction are requested if available. A new section (4) has also been added to provide that if findings are not included in the exhibit, the Department will forward the applicant's exhibit to the local planning agency for review and comment. (Refer to further discussion in subsequent paragraph on section (4).)

- (2)(j) The existing rule language in this subsection regarding documentation of compliance with hydroelectric project standards is not consistent with the Arnold decision and is deleted. In its place, the applicant is requested to include an exhibit which identifies and discusses applicable provisions of the hydroelectric standards so that the Department can determine which provisions may be water quality related in the context of the applicant's project.
- (2)(k) This is a new subsection added to require the applicant to identify any other requirements of state law applicable to the proposed project that may have a direct or indirect relationship to water quality.
- (4) This is a new section added to the rule. The remaining sections are renumbered accordingly. This section describes actions by the Department to determine if an application is complete and so notify the applicant.

The section provides that if the application appears complete based on a preliminary review and if local planning agency land use compatibility findings are included, the application can be deemed complete immediately. If the application documents submitted do not contain findings from the local planning jurisdiction, the Department will forward the applicant's exhibit describing land use impacts to the local planning agency for comment. The application will not be deemed complete until comments are received or 60 days elapses, whichever occurs first. If comment is not received within the 60 day period, the Department will continue to seek input during the public comment period.

Once the application is deemed to be complete, processing of the application will commence by circulating public notice as provided in section (5) of the rule.

The Department has proposed to add section (4) of the rule to encourage applicant to resolve land use issues before applying a 401 certification. In cases where the applicant is unable or unwilling to deal with land use issues at the local level, the proposed section allows the Department to obtain information from the local land use agency with only a minimal delay. Input on land use issues from the local planning jurisdiction is helpful, if not critical, if the Department is to appropriately and accurately condition a 401 certification. This is because the Department has almost no expertise in any local comprehensive land use plan and has no identified resource within the agency to evaluate the land use issues. The Department believes it is appropriate to allow opportunity for local involvement and input before the application is deemed complete. It is also believed

to be in keeping with the intent of the Department's agreement with the Department of Land Conservation and Development.

- (8) This section is one of those renumbered and is amended to conform to the Arnold decision by limiting the extent of DEQ evaluation to factors that may be water quality related.

OAR 340-48-025 Issuance of a Certificate

- (1) The language in this section which relates to determination of a complete application is deleted since the previously described new Section (4) in the previous rule covers the issue in expanded form.
- (2)(f) This subsection cites findings that the Department must make prior to granting certification. The original rule language quoted from the requirements of ORS 468.732 (Section 7 of HB 2990). In order to conform to the Arnold decision, paragraphs (C) and (D) of this subsection regarding compliance with new hydroelectric project standards and other requirements of state and local law have been deleted as a prerequisite to certification. These paragraphs are reworded and attached to a revised subsection (2)(g) which provides for conditioning a certificate to require compliance with water quality related requirements of state law. This change makes the rule inconsistent with the state statutory requirement of ORS 468.732, but consistent with federal law as interpreted by the Court of Appeals in the Arnold decision. The proposed rule amendment seeks to preserve as much of the intent of ORS 468.732 as possible consistent with the federal law as interpreted in the Arnold decision.
- (2)(g) This existing subsection which provides for a certificate condition requiring other state permits to be obtained before the activity certified is deleted since it may conflict with the Arnold decision.

As noted above, a new subsection is added in its place to provide for conditions that may be attached to a certificate to require compliance with water quality related requirements of state law.

- (2)(h) The Department believes that, after a 401 certification is granted, a project may be modified by the applicant to comply with other regulatory requirements imposed later by local, state, and federal permitting agencies. This new subsection is added to require a certificate holder to notify the Department of all changes in the project proposal subsequent to certification. Such notification will give the opportunity to review the water quality related impacts of such changes. If changes result in

significant water quality impacts, the Department could pursue suspension or revocation of the certificate pursuant to OAR 340-48-040.

The Department believes it appropriate to further explore with federal permitting or licensing agencies the option of amending granted certificates. This would allow the Department to attach additional conditions as an alternative to revoking a certificate when a project is changed in a manner to impact water quality. Future rulemaking in this area may be appropriate.

OAR 340-48-030 Certification Delivery

(No Changes Proposed.)

OAR 340-48-035 Denial of Certification

(No Changes Proposed.)

OAR 340-48-040 Revocation or Suspension of Certification

(No Changes Proposed.)

### Alternatives and Evaluation

After receiving testimony in response to the public notice, the Commission may adopt proposed rule amendments with such further modifications as may be appropriate based on testimony, or decline to adopt any rule modifications.

Since existing rules do not conform to the Arnold decision, some amendment to remove apparent conflicts is desirable. While the Department could interpret and seek to apply the existing rules in a manner believed consistent with the Arnold decision, it is better to give applicants the benefit of rules which clarify the present interpretation.

It is important to reiterate that the rule amendments, as proposed, deviate from the state statutory requirement of ORS 468.732. The proposed amendments seek to preserve as much of the intent of ORS 468.732 as possible consistent with federal law as interpreted by the Court of Appeals in the Arnold decision.

The Department believes it appropriate to adopt these rule amendments now. However, the Department believes additional changes that may be needed to correct problems or resolve issues that can not be predicted or anticipated at this time, but which will develop as actual applications are processed.

Summation

1. At the December 12, 1986 meeting of the Environmental Quality Commission, the Department was directed to prepare proposed amendments to the 401 Certification procedural rules to conform the rules to the Court of Appeals decision in Arnold Irrigation District v. Department of Environmental Quality and to provide an alternative process for obtaining input from the local planning jurisdiction regarding land use requirements that may be water quality related. The Department was further instructed to give public notice of a rulemaking hearing to be held before the Commission at it's regular meeting on January 23, 1987.
2. The Department has prepared proposed rule amendments (Attachment A).
3. Notice of the hearing (Attachment B) was published in the Secretary of State's Bulletin on January 2, 1987. Notice was also mailed to the Department mailing list for rulemaking hearings and to persons known to be interested in 401 Certification.

Director's Recommendation

It is recommended that the Commission receive public testimony regarding the proposed rule amendments contained in Attachment A. It is further recommended that the Commission evaluate the testimony received, and adopt the rule amendments with such further changes as may be appropriate in response to testimony.



Fred Hansen

Attachments: (2)

Attachment A Draft Rule Amendments  
Attachment B Public Notice

Richard J. Nichols:h  
WH1495  
229-5342  
December 29, 1986

Note: Bracketed lined through [---] material is deleted.  
Underlined \_\_\_\_ material is new.

OREGON ADMINISTRATIVE RULES  
Chapter 340, Division 48

DIVISION 48

CERTIFICATION OF COMPLIANCE WITH WATER QUALITY REQUIREMENTS AND STANDARDS.

340-48-005 -- PURPOSE.

The purpose of these rules is to describe the procedures to be used by the Department of Environmental Quality for receiving and processing applications for certification of compliance with water quality requirements and standards for projects which are subject to federal agency permits or licenses and which may result in any discharge into navigable waters or impact water quality. In this certification process, the Department of Environmental Quality acts pursuant to Section 401 of the Federal Clean Water Act. The Department will also comply with state law to the extent that federal law does not supersede state law.

340-48-010 -- DEFINITIONS.

As used in these rules unless otherwise required by context:

- (1) "Certification" means a written declaration by the Department of Environmental Quality, signed by the Director, that a project or activity subject to federal permit or license requirements will not violate applicable water quality requirements or standards.
- (2) "Clean Water Act" means the Federal Water Pollution Control Act of 1972, PL 92-500, as amended.
- (3) "Coast Guard" means U.S. Coast Guard.
- (4) "Commission" means Oregon Environmental Quality Commission.
- (5) "Corps" means U.S. Army Corps of Engineers.
- (6) "Department" or "DEQ" means Oregon Department of Environmental Quality.

- (7) "Director" means Director of the Department of Environmental Quality or the Director's authorized representative.
- (8) "Local Government" means county and city government.

**340-48-015 -- CERTIFICATION REQUIRED.**

Any applicant for a federal license or permit to conduct any activity, including but not limited to the construction or operation of facilities which may result in any discharge to waters of the State, must provide the licensing or permitting agency a certification from the Department that any such activity will comply with Sections 301, 302, 303, 306, and 307 of the Clean Water Act which generally prescribe effluent limitations, water quality related effluent limitations, water quality standards and implementation plans, national standards of performance for new sources, and toxic and pretreatment effluent standards.

**340-48-020 -- APPLICATION FOR CERTIFICATION.**

- (1) Except as provided in section (6) below, completed applications for project certification shall be filed directly with the DEQ.
- (2) A completed application filed with DEQ shall contain, at a minimum, the following information:
- (a) Legal name and address of the project owner.
  - (b) Legal name and address of owner's designated official
  - (c) [~~Legal description of the project location.~~] A description of the project location sufficient to locate and distinguish proposed project facilities.
  - (d) Names and addresses of immediately adjacent property owners.
  - (e) A complete description of the project proposal, using written discussion, maps, diagrams, and other necessary materials.
  - (f) Name of involved waterway, lake, or other water body.
  - (g) Copies of the environmental background information required by the federal permitting or licensing agency or such other environmental background information as may be necessary to demonstrate that the proposed project or activity will comply with water quality requirements.
  - (h) Copy of any public notice and supporting information, issued by the federal permitting or licensing agency for the project.



- (i) [A statement from the appropriate local government whether the project is compatible with the acknowledged local comprehensive plan and land use regulations or that the project complies with statewide planning goals if the local plan is not acknowledged. If the project is not compatible or in compliance, the statement shall include reasons why it is not. If a local government is the applicant for a project for which it has also made the land use compatibility determination, the State Land Conservation and Development Department may be asked by DEQ to review and comment on the local government's compatibility determination.] An exhibit which:

- (A) Identifies and cites the specific provisions of the appropriate local land use plan and implementing regulations that are applicable to the proposed project;
- (B) Describes the relationship between the proposed project and each of the provisions identified in subparagraph (A) above; and
- (C) Discusses the potential direct and indirect relationship to water quality of each item described in subparagraph (B) above.

If specific land use compatibility findings have been prepared by the local planning jurisdiction, these findings should be submitted as part of this exhibit and may be substituted for the requirements in subparagraphs (A) and (B) above.

- (j) [Specific detailed documentation of compliance with the hydroelectric project standards established in Sections 3 and 5 of Chapter 569, Oregon Laws 1985 and rules adopted by the Water Resources Commission and Energy Facility Siting Council implementing such standards.] For hydroelectric projects, an exhibit which:
- (A) Identifies and cites the applicable provisions of ORS 469.371 and 543.017 and implementing rules adopted by the Energy Facility Siting Council and Water Resources Commission;
- (B) Describes the relationship between the proposed project and each of the provisions identified in subparagraph (A) above; and
- (C) Discusses the potential direct and indirect relationship to water quality each item described in subparagraph (B) above.

- (k) An exhibit which identifies and describes any other requirements of state law applicable to the proposed project which may have a direct or indirect relationship to water quality.
- (3) The DEQ reserves the right to request any additional information necessary to complete an application or to assist the DEQ to adequately evaluate the project impacts on water quality. Failure to complete an application or provide any requested additional information within the time specified in the request shall be grounds for denial of certification.
- (4) The Department shall notify the applicant by certified mail of the date the application is determined to be complete. The application will be immediately deemed complete if a preliminary review indicates that all information required by section (2) of this rule is provided and the exhibit required by subsection (i) of section (2) contains findings of the local planning jurisdiction. If findings of the local planning jurisdiction are not included, the Department shall forward the exhibit submitted in response to subsection (i) of section (2) to the local planning jurisdiction for review and comment. The application shall not be deemed complete until the local planning jurisdiction provides comments to the Department, or 60 days have elapsed, whichever occurs first. If no comment is received within the 60 day period, the Department will continue to seek information from the planning circulation, but will deem the application complete and proceed with evaluation of public notice as provided in section (5) of this rule.
- (5)[(4)] In order to inform potentially interested persons of the application, a public notice announcement shall be prepared and circulated in a manner approved by the Director. Notice will be mailed to adjacent property owners as cited in the application. The notice shall tell of public participation opportunities, shall encourage comments by interested individuals or agencies, and shall tell of any related documents available for public inspection and copying. The Director shall specifically solicit comments from affected state agencies. The Director shall provide a period of not less than 30 days following the date of the public notice during which time interested persons may submit written views and comments. All comments received during the 30-day period shall be considered in formulating the Department's position. The Director shall add the name of any person or group upon request to a mailing list to receive copies of public notice.
- (6)[(5)] The Director shall provide an opportunity for the applicant, any affected state, or any interested agency, person, or group of persons to request or petition for a public hearing with respect to certification applications. If the Director determines that new information may be produced thereby, a public hearing will be held prior to the Director's final determination. Instances of doubt shall be resolved in favor of holding the hearing. There shall be public notice of such a hearing.

(7)[46] For projects or activities where the Division of State Lands is responsible for compiling a coordinated state response (normally applications requiring permits from the Corps or Coast Guard), the following procedure for application and certification shall apply:

- (a) Application to the Federal agency for a permit constitutes application for certification.
- (b) Applications are forwarded by the Federal Agency to the Division of State Lands for distribution to affected agencies.
- (c) Notice is given by the Federal Agency and Division of State Lands through their procedures. Notice of request for DEQ certification is circulated with the Federal Agency Notice.
- (d) All comments including DEQ Water Quality Certification are forwarded to the Division of State Lands for evaluation and coordination of response. The Division of State Lands is responsible for assuring compatibility with the local comprehensive plan or compliance with statewide planning goals.

(8)[47] In order to make findings required by OAR 340-48-025(2), the Department's evaluation of an application for project certification may include but need not be limited to the following:

- (a) Existing and potential beneficial uses of surface or groundwater which could be affected by the proposed facility.
- (b) Potential impact from the generation and disposal of waste chemicals or sludges at a proposed facility.
- (c) Potential modification of surface water quality. [~~or quantity.~~]
- (d) Potential modification of groundwater quality.
- (e) Potential impacts from the construction of intake or outfall structures.
- (f) Potential impacts from waste water discharges.
- (g) Potential impacts from construction activities.
- (h) The project's compliance with plans applicable to Section 208 of the Federal Clean Water Act.
- (i) The project's compliance with water quality related standards established in Sections 3 and 5 of Chapter 569, Oregon Laws 1985 (ORS 543.017 and 469.371) and rules adopted by the Water Resources Commission and the Energy Facility Siting Council implementing such standards.

## 340-48-025 -- ISSUANCE OF A CERTIFICATE.

- (1) [~~Within thirty (30) days from the time the Department determines an application is complete, it shall so notify the applicant by certified mail.~~] Within ninety (90) days [~~of receiving a complete application for project certification,~~] after an application is deemed complete pursuant to OAR 340-48-020(4), the DEQ shall serve written notice upon the applicant that the certification is granted or denied or that a further specified time period is required to process the application. Written notice shall be served in accordance with the provisions of OAR 340-11-097 except that granting of certification may be by regular mail. Any extension of time shall not exceed 1 year from the date of filing a completed application.
- (2) DEQ's Certification for a project shall contain the following [~~information~~]:
- (a) Name of Applicant;
  - (b) Project's name and federal identification number (if any);
  - (c) Type of project activity;
  - (d) Name of water body;
  - (e) General location;
  - (f) Findings that the proposed project is consistent with:
    - (A) Rules adopted by the EQC on Water Quality;
    - (B) Provisions of Section 301, 302, 303, 306 and 307 of the Federal Water Pollution Control Act, PL 92-500, as amended;
  - (g) Such conditions as the Director determines necessary to require compliance with:
    - (A)[~~(C)~~]For hydroelectric projects, those standards established in Sections 3 and 5 of Chapter 569, Oregon Laws 1985 (ORS 543.017 and 469.371) and rules adopted by the Water Resources Commission and Energy Facility Siting Council implementing such standards that the Director determines are water quality related;
    - (B)[~~(D)~~]Standards of other state and local agencies that the Director determines are water quality related and are other appropriate requirements of state law according to Section 401 of the Federal Water Pollution Control Act, PL 92-500, as amended.

[4g] For projects requiring a site certificate from the Energy Facility Siting Council or a water appropriation permit from the Water Resources Commission, DEQ shall include a condition requiring such certificate or permit to be obtained prior to initiating the activity for which 401 certification is granted.]

(h) A condition which requires the certificate holder to notify the Department of all changes in the project proposal subsequent to certification.

- (3) If the applicant is dissatisfied with the conditions of any granted certification, the applicant may request a hearing before the Commission. Such requests for a hearing shall be made in writing to the Director within 20 days of the date of mailing of the certification. Any hearing shall be conducted pursuant to the rules of the Commission for contested cases.
- (4) Certifications granted pursuant to these rules are valid for the applicant only and are not transferable.

#### 340-48-030 -- CERTIFICATION DELIVERY.

For projects where application for certification is filed directly with DEQ by the applicant, the DEQ certification will be returned directly to the applicant. For those applications that are coordinated by the Division of State Lands, DEQ certification will be delivered to the Division of State Lands for distribution to the applicant and the federal permitting agencies as part of the State of Oregon coordinated response.

#### 340-48-035 -- DENIAL OF CERTIFICATION.

If the Department proposes to deny certification for a project, a written notice setting forth the reasons for denial shall be served upon the applicant following procedures in OAR 340-11-097. The written notice shall advise the applicant of appeal rights and procedures. A copy shall also be provided to the federal permitting agency. The denial shall become effective 20 days from the date of mailing such notice unless within that time the applicant requests a hearing before the Commission or its authorized representative. Such a request for hearing shall be made in writing to the Director and shall state the grounds for the request. Any hearing held shall be conducted pursuant to the rules of the Commission for contested cases.

#### 340-48-040 -- REVOCATION OR SUSPENSION OF CERTIFICATION.

- (1) Certification granted pursuant to these rules may be suspended or revoked if the Director determines that:
  - (a) The federal permit or license for the project is revoked.

- (b) The federal permit or license allows modification of the project in a manner inconsistent with the certification.
  - (c) The application contained false information or otherwise misrepresented the project.
  - (d) Conditions regarding the project are or have changed since the application was filed.
  - (e) Special conditions or limitations of the certification are being violated.
- (2) Written notice of intent to suspend or revoke shall be served upon the applicant following procedures in OAR 340-11-097. The suspension or revocation shall become effective 20 days from the date of mailing such notice unless within that time the applicant requests a hearing before the Commission or its authorized representative. Such a request for hearing shall be filed with the Director and shall state the grounds for the request. Any hearing held shall be conducted pursuant to the rules of the Commission for contested cases.

*Oregon Department of Environmental Quality*

# A CHANCE TO COMMENT ON...

Modification of Water Quality 401 Certification Rules  
(OAR 340 Division 48)

Date Prepared: 12/18/86

Hearing Date: 1/23/87

Comments Due: 1/22/87

**WHO IS  
AFFECTED:**

Those persons making application for 401 certification of federally licensed projects, other agencies involved in the review process, and other interested parties.

**WHAT IS  
PROPOSED:**

The Department is proposing to make modifications to Oregon Administrative Rules Chapter 340 Division 48. These rules prescribe procedures for the water quality certification process pursuant to Section 401 of the Federal Clean Water Act.

**WHAT ARE THE  
HIGHLIGHTS:**

Portions of present Environmental Quality Commission rules governing 401 certification must be modified to conform to the Oregon Court of Appeals interpretation of the applicable provisions of the Federal Clean Water Act.

In addition, the Environmental Quality Commission proposes to consider an alternative to the current rule that requires an applicant to submit, as part of a completed application, information obtained from the appropriate local planning jurisdiction regarding compliance with land use requirements. Such an alternative would establish a time certain for the local planning jurisdiction to provide advice to the Department on land use requirements that may be water quality related.

**LAND USE  
CONSISTENCY:**

This proposed rule modification does not affect land use. It will affect the procedure the Department uses in determining which land use requirements are water quality related.

**FISCAL AND  
ECONOMIC  
IMPACT:**

This rule change will have no fiscal impact. It may reduce the time it takes for an applicant to receive certification of a project. Therefore, the small business impact would be to their benefit.

A copy of the proposed rule amendments may be obtained from Department of Environmental Quality, Water Quality Division, 811 S. W. 6th Avenue, Portland, OR 97204, telephone 229-5325.



811 S.W. 6th Avenue  
Portland, OR 97204

11/1/86

**FOR FURTHER INFORMATION:**

Contact the person or division identified in the public notice by calling 229-5696 in the Portland area. To avoid long distance charges from other parts of the state, call 1-800-452-4011.

**HOW TO  
COMMENT:**

A public hearing on the proposed rule amendments will be held before the Environmental Quality Commission during their regularly scheduled meeting as follows:

Date: January 23, 1987  
Place: 4th Floor Conference Room  
811 S. W. 6th Avenue  
Portland, OR 97204  
Time: 11:00 a.m. - 1:00 p.m.

Written comments should be delivered to the offices of the Department of Environmental Quality, 811 S.W. 6th Avenue, Portland, OR 97204 by 5:00 p.m. on January 22, 1987 so copies can be made available to the Commission before the hearing.

**WHAT IS THE  
NEXT STEP:**

After the public testimony has been received, the rules will be adopted as proposed, adopted with changes, or not adopted. The Commission may make a final determination at the end of the hearing.

WC1380



## STATEMENT OF NEED FOR RULEMAKING

Pursuant to ORS 183.335(7), this statement provides information on the Environmental Quality Commission's intended action to adopt a rule modification.

### (1) Legal Authority

ORS 468.020 authorizes the Commission to adopt rules necessary and proper in performing the functions vested by law in the Commission.

ORS 468.730 authorizes the Commission to adopt the necessary rules to implement those provisions of the Federal Water Pollution Control Act which are within the jurisdiction of the state.

Chapter 569, Oregon Laws 1985 established requirements for review of hydroelectric projects.

Oregon Court of Appeals decision, Arnold Irrigation District and General Energy Development, Inc. v. Department of Environmental Quality, requires a rule change.

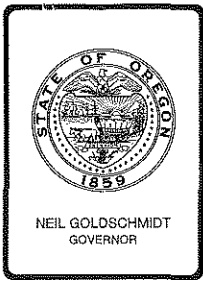
### (2) Need for the Rule

Under the Federal Water Pollution Control Act (Clean Water Act) the Department of Environmental Quality has the responsibility to review applications for a Federal license or permit to conduct any activity which may result in any discharge into navigable waters. After review, the Department must certify whether the discharge or activity will comply with effluent limitations, water quality standards, national standards of performance for new source, and toxic and pretreatment standards. Rules are needed to establish procedures for applying for certification, providing for public input in the certification process, addressing land use issues and concerns, and describing certification issuance, denial and appeal procedures.

The "Arnold" decision, cited above, makes it necessary to change portions of the existing rules. Some of these rule modifications are a result of that decision.

### (3) Principal Documents Relied Upon In This Rulemaking

- a. ORS 468.020
- b. ORS 468.730
- c. Federal Water Pollution Control Act (Clean Water Act)  
Title IV, Section 401
- d. Chapter 569, Oregon Laws 1985
- e. Arnold Irrigation District and General Energy Development, Inc.  
v. Department of Environmental Quality



## *Environmental Quality Commission*

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

### MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item M, January 23, 1987, EQC Meeting

Request for Extension of the July 1, 1986 Deadline for  
Providing the Opportunity to Recycle in the Portland  
Wasteshed (ORS 459.185(9)).

### Background and Problem Statement

The Recycling Opportunity Act, adopted by the 1983 Legislature, requires that the opportunity to recycle be provided to all persons in Oregon by July 1, 1986.

The opportunity to recycle includes:

- (a) A place for receiving source separated recyclable materials, located either at the disposal site or at another location more convenient to the population being served;
- (b) If a city has 4,000 or more people, on-route collection at least once a month of source separated recyclable materials from collection service customers within the City's urban growth boundary; and
- (c) A public education and promotion program that gives notice to each person of the opportunity to recycle and encourages source separation of recyclable material.

ORS 459.185(9) allows any affected person to apply to the Commission to extend the time permitted for providing all or part of the opportunity to recycle or submitting a recycling report to the Department. The Commission may: (a) grant an extension upon a showing of good cause; (b) impose any necessary conditions on the extension; or (c) deny the application in whole or in part.

On September 12, 1986, the Environmental Quality Commission (EQC) granted the City of Portland an extension until January 31, 1987 for providing the opportunity to recycle. The City based its request for an extension on the fact that the City Council had on June 4, 1986 chosen a plan for providing recycling collection. Contractors would provide monthly collection at the curb of recyclable materials and garbage haulers permitted by the City would collect newspapers weekly at the garbage can. All that was needed was time to implement the chosen program.

The extension granted by the EQC required the City to follow an implementation schedule (see Attachment I). The schedule called for issuing a request for bids for recycling contractors in September. In October, the City Council refused to authorize issuance of the request for bids. Since then, none of the tasks on the implementation schedule have been accomplished. (For background on the Council deliberations, see Attachment II).

On January 6, 1987, the City requested a second extension for 90 days in order "to review the recycling plan and alternative proposals, make a recommendation and allow the new City Council time to decide on how to proceed with implementation" (see Attachment III). The request did not include time to implement a recycling program once a decision was made.

#### Alternatives and Evaluation

In order to grant the request for a time extension, the Commission must find that the City has shown good cause for the extension.

The City has based its request for an extension on the following facts:

- (1) The City Council has encountered opposition to the chosen plan. Most of that opposition is from garbage haulers who are concerned that if they do not win the bid for providing recycling collection, they will not be allowed to provide that service to their customers.
- (2) The Bureau of Environmental Services, which has solid waste management responsibilities, has been reassigned from Commissioner Bogel to newly-elected Commissioner Koch. Commissioners Koch and Blumenauer are new to the City Council and did not participate in the June 1986 Council decision to implement a recycling program by contracting for recycling services.

The Department finds that the change in City Council membership is good cause to grant an extension in order to allow the new members time to become familiar enough with the issues to make an informed decision on a recycling program for the City.

The Department recommends that the extension be granted with the following conditions:

1. The City Council must make a decision by the first week in April on a method for providing recycling service and promotion and education.
2. The chosen program must be at least as effective in increasing participation in recycling and volumes recycled as the program adopted by the City Council in June, 1986.
3. Once chosen, the program must be implemented as quickly as possible. Within two weeks from the date the City Council decides upon the method for providing recycling, a schedule for implementation activities must be submitted to DEQ for approval.
4. If the chosen program is not operational by July 1, 1987, the City must establish an interim recycling program by July 1 which will offer at least monthly recycling service to each Portland household.

These conditions will ensure that the Council does not delay longer than necessary in making a decision and implementing a program. If a decision on the program is not made by the first week in April, the conditions of the extension will be violated and the Department will recommend that the EQC immediately begin the hearings process leading to an enforcement order. Condition 2 requires that the chosen program be at least as effective as the contract option originally chosen by the City. That option anticipates a 20% participation rate after the second year.

Condition 3 requires DEQ approval of the implementation schedule. The length of the extension will ultimately be determined by that implementation schedule. Previously developed schedules for implementation of the contract or permit options indicate that with diligent work, a recycling program could be operational by July 1, 1987. The City estimates that it would need from 12-18 months to franchise the garbage collection system. If implementation of the chosen program cannot be accomplished by July 1, 1987, as would be the case if the City chooses to franchise the garbage collection system as well as recycling collection, then the City must establish an interim recycling program. The interim program would have to provide recycling service to each Portland household but would likely not service business and industry nor be as effective as the program originally chosen by the Council. This interim program would therefore not comply with the Recycling Opportunity Act.

If the Commission denies the extension, then the Department will determine that the recycling report cannot be approved and portions of the opportunity to recycle are not being provided and report that finding to the Commission. The Commission must then hold a public hearing in Portland and determine whether all or part of the opportunity to recycle

is not being provided. If it is not, the Commission must order the opportunity to recycle to be provided. The order may include the manner in which recyclable material is to be collected, who is to provide the service, a timetable for implementation and any other requirement the Commission determines is necessary in order to ensure establishment of a program (ORS 459.185(6)).

The Department recommends approval of the extension with conditions because enforcement proceedings would not achieve an operational recycling program any more rapidly than the extension with conditions, assuming that the City complies with the conditions of the extension.

#### Summation

1. The opportunity to recycle must be provided to all persons in Oregon by July 1, 1986. The Commission may grant an extension of that deadline upon a showing of good cause, impose any necessary conditions on that deadline or deny the application in whole or in part.
2. The City of Portland, the wasteshed representative for the Portland Wasteshed, has requested a second extension of the July 1 deadline to April 30, 1987.
3. The City has requested an extension because:
  - (a) The City Council did not pass implementing ordinances for the recycling collection plan as scheduled in the extension granted by the EQC; and
  - (b) There are two new members on the City Council and the Bureau of Environmental Services has been reassigned to newly-elected Commission Koch.
4. The change in City Council membership is good cause to grant an extension in order to allow the new members two months to become familiar enough with the issues concerning the City's proposed recycling collection program to make an informed decision.
5. Three months (until July 1, 1987) will be necessary for implementation of an interim or final program after a decision is made.

#### Director's Recommendation

Based upon the findings in the Summation, it is recommended that the Commission grant the City of Portland an extension of the July 1, 1986 deadline for providing the opportunity to recycle in the Portland Wasteshed with the following conditions:

1. The City Council must make a decision by the first week in April on a method for providing recycling service and promotion and education.

2. The chosen program must be at least as effective in increasing participation in recycling and volumes recycled as the program adopted by the City Council in June, 1986.
3. Once chosen, the program must be implemented as quickly as possible. Within two weeks from the date the City Council decides upon the method for providing recycling, a schedule for implementation activities must be submitted to DEQ for approval.
4. If the chosen program is not operational by July 1, 1987, the City must establish an interim recycling program by July 1 which will offer at least monthly recycling service to each Portland household.

*Mike*

Fred Hansen

- Attachments I. City of Portland Recycling Implementation Schedule, EQC Agenda Item J, September 12, 1986 EQC Meeting.
- II. City of Portland memo from Delyn Kies dated December 9, 1986.
  - III. Letter from John Lang to Fred Hansen dated January 6, 1987.
  - IV. Letter from Portland City Council to EQC dated January 21, 1987.
  - V. Public Comments.

Lorie Parker:m  
SM752  
229-5826  
January 22, 1987

CITY OF PORTLAND RECYCLING IMPLEMENTATION SCHEDULE

- July 1986      Recycling Contracts: Develop qualifications and specifications for bidding contracts
- Meet with potential bidders re: requirements
- Negotiate Intergovernmental Agreement with Multnomah County
- Promotion: Draft Request for Proposals for promotion and education program
- August 1986      Recycling Contracts: Review qualifications and specifications with potential bidders, and finalize the bid qualifications and specifications.
- Complete Intergovernmental Agreement with Multnomah County
- Develop budget and implementation staffing requests
- Promotion: Issue Requests for Proposals
- September 1986 Recycling Contracts: Issue request for bids
- Hauler Permits: Revise City Code requirements re: newspaper collection
- Promotion: Select contractor and negotiate contract
- Plan and materials proposed
- October 1986      Recycling Contracts: Award contracts for 6 areas
- Hauler Permits: Coordinate billing with Metro
- Promotion: Develop program and finalize schedule
- November-  
December 1986      Recycling Contracts: Contractors design routes and prepare for implementation
- Promotion: Materials developed for start-up phase
- Advance notification of service to residential, commercial and industrial generators of waste
- January 1987      Recycling Contracts: Start-up of curbside service
- Program modifications
- Promotion: Initial promotion campaign
- March-  
April 1987      Recycling Contracts: Problem resolution
- Promotion: Spring kick-off campaign



CITY OF

# PORTLAND, OREGON

BUREAU OF ENVIRONMENTAL SERVICES

Dick Bogle, Commissioner  
 John Lang, Administrator  
 1120 S.W. 5th Ave.  
 Portland, Oregon 97204-1972

Hazardous & Solid Waste Division  
 Dept. of Environmental Quality

**RECEIVED**  
 DEC 15 1986

December 9, 1986

TO: Potential Bidders on Contracts for Recycling Service  
 and Interested Persons

FROM: Delyn Kies *DK*  
 Solid Waste Director

SUBJECT: City Council Hearing on Recycling Collection Contracts

On Wednesday, December 17, at 10:30 am (time certain) the Council will be considering an ordinance to call for bids on contracts for residential recycling collection service.

Since this ordinance was last considered by Council in mid-October, an alternative proposal by members of the waste hauling industry has been reviewed and evaluated. This method would require recycling collection by City-permitted waste haulers either directly or by the hauler subcontracting to a recycler in a series of 96 grids throughout the City.

The Bureau of Environmental Services is recommending the contracting method which was previously brought to Council because contracting continues to be the most cost-effective and efficient means of providing service. However, several significant changes have been made to the bidding requirements.

The enclosed Report and Recommendations explains the revisions to the ordinance and specifications, and reports on recent meetings with service providers and the issues raised in those meetings.

For further information, please contact Delyn Kies at 796-7010 or Ruth Selid at 796-7061

RBS:al  
 76:rs-bidders

Enc.



REPORT AND RECOMMENDATIONS  
ON OPTIONS TO PROVIDE  
RECYCLING COLLECTION SERVICE

BACKGROUND

In June, 1986 Council determined that contracting for monthly residential recycling collection service and requiring haulers to collect newspaper weekly for recycling was the preferred method of providing the "opportunity to recycle" in the City of Portland as required by State law. At that time, five options were presented to Council based on comments from public meetings and the advice of a 24-member Technical Advisory Committee and a consultant team which had worked for 10 months preparing information on how each option would work. These options were:

1. Option A: Contracting for collection of all recyclable materials monthly at curbside.
2. Option B: Contracting for collection of all recyclable materials, except newspaper, monthly at curbside and weekly collection of newspapers by waste haulers at the time and place of garbage collection.
3. Option C: Franchising garbage haulers into five to eight service areas and requiring weekly collection of newspapers by haulers and monthly collection of other recyclables for each service area.
4. Option D: Requiring monthly recycling collection service as a condition of each waste hauler's permit to collect garbage.
5. Option E: Franchising garbage collection and contracting monthly recycling collection as two separate programs.

Option B was selected for the following reasons:

1. It provides the most cost-effective recycling program; that is, the lowest cost system-wide and as high a recovery rate as other options.
2. It is easy to promote.
3. It can be implemented quickly.
4. It provides an opportunity for existing recycling firms to continue providing that service.
5. The existing "permit" garbage collection system remains in effect.

The Council directed the Bureau of Environmental Services to implement the plan. In September, an ordinance was adopted by Council executing an intergovernmental agreement with Multnomah County which transferred solid waste and recycling collection responsibilities in the unincorporated areas of the Urban Services Boundary to the City.

From July-September, 1986, a request for bids and specifications for the recycling collection contract services were prepared by Bureau staff with the assistance of approximately 30 members of the recycling and waste hauling industry. On October 8, 1986 an ordinance authorizing a call for bids and approving the specifications was considered by Council. At a second hearing on October 15, Council directed the Bureau to meet with waste hauling industry representatives to evaluate an alternative proposal which would revise permit Option D requiring garbage collection permittees to provide recycling collection.

A written proposal was submitted by the industry on November 2. On November 6, the Bureau organized a meeting of the Technical Advisory Committee and also invited all 120 City-permitted garbage hauling companies. Forty companies were represented at the meeting and concerns about both the contract and revised permit options were aired.

The permit option, Option D, was not recommended previously because it was more costly, more difficult to promote and expected less participation than the recommended contract option. This was due to the inefficiencies of 120 garbage haulers having to each provide service to their own customers in overlapping routes instead of one service provider in each of six service areas in the City as the contract option allowed. The Department of Environmental Quality, responsible for approving recycling plans, testified before Council in June that this option would be found unacceptable for virtually the same reasons.

To address these concerns, the hauling industry's revised permit option described a system for limiting the number of garbage haulers that would provide recycling service and assuring that all residents on a single street were offered recycling collection service on the same day.

Concurrently, representatives of the hauling industry and major recycling companies met several times to see if a compromise could be reached that would be acceptable to both interests and would result in an efficient and cost-effective recycling program for the City's residents.

At meetings with Bureau staff on November 24 and 26, it became clear that a compromise was not possible. Recyclers and haulers had worked diligently to improve the revised permit option or develop another acceptable alternative. While the haulers remained committed to the revised permit option, the recyclers could not support it as a practical plan that would increase recycling in the City.

Based on this impasse and an analysis of program implementation and cost factors, staff concluded that the contract option remained the most workable and cost-effective plan.

The following section describes and compares the recommended contract option and the hauling industry's revised permit option.

#### COMPARISON OF OPTIONS FOR RECYCLING

##### SERVICE AREAS

Contract - 6 areas, 25,000 households each

Revised Permit - 6 areas each with 16 grids totalling 96 subareas.

##### SERVICE PROVIDER

Contract - One City-hired contractor per area plus each garbage hauler will collect newspapers while on garbage route.

Revised Permit - Each of the 96 subareas serviced by a single designated hauler. Hauler has option to subcontract with one of two City-approved recyclers in each of six areas. Each hauler collects newspapers on garbage route.

##### CITY ADMINISTRATION

Contract - One contract administrator oversees conduct of 6 contractors, receives reports, resolves conflicts, monitors performance.

Revised Permit - One contract administrator to review permits and any subcontracts and monitor service in the 6 areas. All service providers in an area report to one of two field representatives who assigns service areas, compiles reports and responds to citizen questions.

##### LEGAL REQUIREMENTS

Contract - Required by contract to provide level of service; lack of service could result in termination of contract. City could award to other service provider.

Revised Permit - Haulers required to assure service through refuse collection permit. Lack of service would result in a series of fines and possible revocation of permit for one year.

##### FINANCING

Contract - City administration and promotion costs plus payments to contractors recovered by charges to refuse collectors (per truck and/or per ton fees).

Fees partially offset by revenues (to refuse collectors) from collection of newspapers. Remaining costs passed on to residents through hauler collection charges.

Revised Permit - City administration and promotion costs recovered by charges to refuse collectors (per truck and/or per ton fees).

Collection costs borne by refuse collector who does recycling or hires subcontractor for service.

Costs offset by revenue from materials sold, charges to other haulers whose customers are served and increased fees to residents.

#### EFFECTIVENESS & PARTICIPATION

Contract - Increased volume and participation encouraged by contract payments per household and per ton; contractor receives more money with increasing number of households participating and tons collected.

Larger volumes of material bring higher per ton prices at broker for increased revenue.

Estimated households participating is 20%

Revised Permit - Incentive to increase or to continue collection is threat of fines and revocation of refuse hauling permit. Some incentive if market prices increased dramatically.

Smaller volume of material per collector results in lower per ton prices at broker.

Estimated households participating is 15%

#### COSTS

	Contract Option <u>5 Areas</u> (1)	<u>30 Areas</u>	<u>60 Areas</u>	<u>90 Areas</u>
Per Ton	\$ 43.27	82.82	101.86	118.74
Per Household Per Month	.20	.28	.34	.40
Total Net Program Cost	\$289,576	\$415,771	\$511,321	\$596,071

(1) Assuming five areas inside the City boundary. Costs per ton and per household will be similar to those above for the sixth area east of the City and within the urban service boundary.

(2) For varying number of collectors serving more than one of the 96 subareas.

### RECOMMENDATIONS

An analysis of the waste hauling industry's revised permit option has led the Bureau to the following conclusions:

1. It is more costly.  
The program would require additional City staff to assign service routes and monitor compliance. At least 30 vehicles and up to 90 are possible in order to provide service.
2. It is more complicated to the resident.  
The system involves 96 grids each with a potentially different service provider and day of collection. Promotion materials potentially would be complex in order to address each area's service offerings.
3. It is more difficult for the City to administrator.  
The program relies on cooperation of every hauling company to work. It is not clear who would provide service and who would pay whom. The City would have difficulty assuring compliance of each permittee when the permittee may be subcontracting the actual service provision. Compliance relies on the threat of fines and permit revocation rather than an incentive to collect more recyclables.

As a result of these conclusions and the lack of mutual agreement between haulers and recyclers on an acceptable alternative, the Bureau continues to recommend contracting for monthly collection of recyclable materials and requiring garbage permittees to collect newspapers for recycling each week on the day of garbage collection for the following reasons:

1. It is the most cost-effective option in terms of least cost for as high a participation rate as other alternatives.
2. It is easy to promote.
3. It can be implemented quickly with a minimum of administration requirements.
4. It provides an equal opportunity for existing recycling firms to continue providing service.
5. It allows garbage haulers to collect newspapers and retain all revenue from this single largest revenue source in the recycling program.

It does, however, continue to have opposition from waste haulers.

In testimony to Council and subsequent meetings with Bureau staff, hauling and recycling industry representatives raised several concerns which have resulted in revisions to the ordinance and specifications for the contract recycling system.

These are:

1. Shouldn't all garbage haulers have the opportunity to bid on the recycling contracts?

The original request for bids limited qualified bidders to those with at least two years of experience in collecting recyclable materials from at least 1,000 customers. The Bureau felt that this requirement established a minimum level of experience a bidder should have in order to adequately service the 2,000-3,000 customers initially contemplated for each service area. Hauling industry representatives felt that it too severely limited the pool of qualified bidders and may not give them the "due consideration" required by State law.

While the requirement is legally permissible in the City Attorney Office's opinion, the Bureau now recommends revising the qualification requirements to allow any person lawfully providing recycling or garbage collection service continuously since June 1, 1983 and who has the equipment or means to secure the necessary equipment to be qualified to bid. This essentially allows all recyclers and haulers to bid.

2. Allowing "consortiums" to form to bid on contracts creates antitrust liability for bidders.

The City Attorney's Office opinion is that the recycling bid documents do not "create" any antitrust liability for bidders or require bidders to risk liability under federal antitrust laws.

However, language clarifying that individuals, firms or combinations thereof may form to bid is recommended for inclusion in the ordinance authorizing the call for bids and in the bidding documents.

3. It is possible for only 2 firms to serve the entire City and there are more firms currently providing recycling collection service.

The adopted plan allowed any bidder to bid on all six areas but only be awarded up to three service area contracts. This allowed at least two successful bidders for cost and service comparisons.

Since the qualification requirements are recommended to be revised to allow more potential bidders and there are several existing recycling firms, the Bureau recommends allowing bidders to still be able to bid on all six areas but only be awarded one service area contract. If an area

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Since the qualification requirements are recommended to be revised to allow more potential bidders and there are several existing recycling firms, the Bureau recommends allowing bidders to still be able to bid on all six areas but only be awarded one service area contract. If an area

receives no responsible bids, the City retains the right to select and negotiate a contract for serving the area from the pool of successful bidders in other areas or other qualified service providers. This allows more companies a chance to be successful in being awarded a contract.

4. What if the program doesn't work?

The waste hauling industry continues to oppose the contract method for providing service.

The Bureau recommends that after the second year of the three-year contract terms, a full evaluation of program costs, participation and impacts be made in a report to Council with recommendation for any desirable changes to be made after the contract terms are completed at the end of the third year. This responds to haulers concern that contracts will be awarded indefinitely.

5. Won't successful recycling contract bidders have an unfair competitive edge over haulers if they are also in the garbage hauling business?

The current contract specifications prohibit the promotion, provision or solicitation of any other business while performing contract services. The haulers remain concerned that because of overlapping service areas, recyclers will lure business away from them.

The City Attorney's opinion about the possibility and desirability of prohibiting contracted recycling collectors from being Portland garbage collectors is that it is not advised. While the City may impose conditions on a contractor or permit holder, they must be reasonably related to the purpose of the regulation; in this case, provision of recycling collection service.

State law provides that, in granting contracts and establishing service areas for recycling, conditions may be set for the quality and character of rates and minimum requirements to determine and maintain a level of service. These also include conditions seeking to increase efficiency, conserve energy, reduce truck traffic and improve safety. In their legal opinion, the City Attorney's Office says that it would be difficult to fashion a justification for prohibiting recyclers from acting as garbage haulers that reasonably relates to the validity of the recycling program.

#### FUTURE ACTIONS

If Council determines that it is appropriate to proceed with implementing the recycling collection program by requesting bids for contract service, further implementing actions requiring Council consideration and estimated dates for public hearings include:



Approval of Promotion Consultant Contract 12/31/86

Adoption of Code Revisions for: 1/28/87

~~Refuse Collection Permit Fees and~~  
Tonnage Fees

Refuse Collection Permit Requirement  
to Recycle Newspapers

Recycling Anti-Theft Provisions

Award of Recycling Contracts 3/11/87

124:report

Approval of Promotion Consultant Contract	12/31/86
Adoption of Code Revisions for: Refuse Collection Permit Fees and Tonnage Fees	1/28/87
Refuse Collection Permit Requirement to Recycle Newspapers	
Recycling Anti-Theft Provisions	
Award of Recycling Contracts	3/11/87

124:report

An Ordinance authorizing the Purchasing Agent to call for bids for the provision of residential recycling collection services within the Urban Services boundary of the City of Portland for the Bureau of Environmental Services and establishing a process for evaluating the effectiveness of the proposed recycling collection, and declaring an emergency.

The City of Portland ordains:

Section 1. The Council finds:

1. Oregon Revised Statute (ORS) Sections 459.165 through 459.200 stipulate solid waste recycling activities to be accomplished by Oregon cities and counties and ORS 459.180 specifically requires that cities with more than 4,000 population implement an opportunity to recycle and submit a recycling report to the Department of Environmental Quality (DEQ) by July 1, 1986.
2. The Council adopted Resolution No. 34115 on June 4, 1986 directing the Bureau of Environmental Services (BES) to implement a Dual Provider Residential Recycling System by contracting such services and submit a recycling report to the DEQ on July 1, 1986.
3. BES submitted the recycling report as directed and requested a six month time extension to implement the opportunity to recycle.
4. The Environmental Quality Commission (EQC) extended the time for implementation to January 31, 1987.
5. The Council passed Ordinance No. 158994 on September 17, 1986 executing an intergovernmental agreement with Multnomah County transferring solid waste and recycling collection responsibilities in the unincorporated areas within the Urban Services boundary to the City of Portland.
6. The provision of recycling collection by contracts competitively bid by individuals, firms or combinations thereof, will improve collection service efficiency, guarantee an adequate volume of material to improve the feasibility and effectiveness of recycling, increase the stability of recycling markets and encourage joint marketing of materials or joint education and promotion efforts, and comply with the policies and requirements of ORS 459.015 and ORS 459.165-.200.
7. The establishment of six service areas provides the opportunity to recycle, conserves energy, increases efficiency, reduces truck traffic, and should improve safety.

8. It is necessary to advertise and receive proposals for this service. As required by ORS 459.200, the Request for Bids gives due consideration to any recycler or garbage hauler who has lawfully provided service since July 1, 1983 and establishes minimum levels of qualifications which are necessary to ensure adequate provision of recycling services.

NOW, THEREFORE, the Council directs:

- a. The Purchasing Agent shall advertise for bids using specifications filed in his office, and in the event a satisfactory bid is not received, shall readvertise until a satisfactory bid is received.
- b. The Bureau of Environmental Services shall in September, 1989 submit a report with the Council detailing the effectiveness of the recycling collection program giving both the number of households participating and the tons of recyclable materials removed from the waste stream. The report shall also include recommendations for any changes to be made in providing recycling collection service.

Section 2. The Council declares that an emergency exists because a delay in calling for bids will delay commencement of services; therefore, this Ordinance shall be in force and effect from and after its passage by Council.

Commissioner Dick Bogle  
Dan Miller:al  
December 9, 1986  
44:ord-recybids

8. It is necessary to advertise and receive proposals for this service. As required by ORS 459.200, the Request for Bids gives due consideration to any recycler or garbage hauler who has lawfully provided service since July 1, 1983 and establishes minimum levels of qualifications which are necessary to ensure adequate provision of recycling services.

NOW, THEREFORE, the Council directs:

- a. The Purchasing Agent shall advertise for bids using specifications filed in his office, and in the event a satisfactory bid is not received, shall readvertise until a satisfactory bid is received.
- b. The Bureau of Environmental Services shall in September, 1989 submit a report with the Council detailing the effectiveness of the recycling collection program giving both the number of households participating and the tons of recyclable materials removed from the waste stream. The report shall also include recommendations for any changes to be made in providing recycling collection service.

Section 2. The Council declares that an emergency exists because a delay in calling for bids will delay commencement of services; therefore, this Ordinance shall be in force and effect from and after its passage by Council.

Commissioner Dick Bogle  
Dan Miller:al  
December 9, 1986  
44:ord-recy bids



CITY OF  
**PORTLAND, OREGON**  
 BUREAU OF ENVIRONMENTAL SERVICES

Bob Koch, Commissioner  
 John Lang, Administrator  
 1120 S.W. 5th Ave.  
 Portland, Oregon 97204-1972

January 6, 1987

Fred Hansen  
 DEQ  
 Executive Building  
 811 SW Sixth  
 Portland, OR 97204



Dear Mr. Hansen:

The City of Portland was to have implemented the opportunity to recycle by January 31, 1987, pursuant to ORS 459 and an extension granted by the Environmental Quality Commission.

Due to opposition from some individuals and questions regarding economic feasibility, the City Council did not pass implementing ordinances for the recycling collection plan as scheduled in the EQC extension conditions.

At the same time, two new members of Council have taken office and the Bureau of Environmental Services has been reassigned to Commissioner Bob Koch.

As a result, we are requesting a 90-day extension of time to review the recycling plan and alternative proposals, make a recommendation and allow the new City Council time to decide on how to proceed with implementation.

I would be happy to meet with you at your earliest convenience to discuss this request and any conditions for it that may be appropriate.

Sincerely,

John Lang  
 Administrator

JML:lld  
 129:hanson1/6

cc: Commissioner Bob Koch

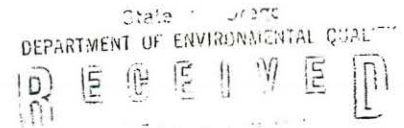


CITY OF  
**PORTLAND, OREGON**  
 DEPARTMENT OF PUBLIC UTILITIES

**Bob Koch, Commissioner**  
 1220 S.W. 5th Avenue  
 Portland, Oregon 97204  
 (503) 248-4151

January 21, 1987

James E. Petersen, Chairman  
 Mary V. Bishop, Member  
 Wallace B. Brill, Member  
 Arno H. Denecke, Member  
 A. Sonia Buist, M.D., Member  
 Environmental Quality Commission  
 811 SW 6th Avenue  
 Portland, OR 97204



OFFICE OF THE DIRECTOR

Dear Commission Members:

A request for an extension of time for the City of Portland to provide recycling collection service and a recycling education and promotion program as required by the Recycling Opportunity Act is on the agenda for your meeting on January 23.

The City's Bureau of Environmental Services requested the extension for two reasons. First, opposition to the plan adopted in June, 1986 surfaced during hearings in October on ordinances to implement the plan. Efforts over the next two months to reach agreement among affected persons failed. Consequently, implementation of the planned recycling program did not proceed as scheduled in the original extension granted by the Commission. Second, two new members of the Portland City Council have since taken office and the Bureau of Environmental Services, which has responsibility for solid waste activities, has been reassigned to Commissioner Bob Koch.

The City Council of Portland recognizes the need to proceed quickly toward implementation of a recycling program. We have reviewed and agree to the proposed conditions for an extension which include:

1. The City Council must make a decision by the first week in April on a method for providing recycling service and promotion and education.
2. The chosen program must be at least as effective in increasing participation in recycling and volumes recycled as the program adopted by the City Council in June, 1986.
3. Once chosen, the program must be implemented as quickly as possible. Within two weeks from the date the City Council decides upon the method for providing recycling, a schedule for implementation activities must be submitted to DEQ for approval.

January 21, 1987  
Page 2

4. If the chosen program is not operational by July 1, 1987, the city must establish an interim recycling program by July 1, 1987 which will offer at least monthly recycling service to each Portland household.

We ask that you grant the extension as recommended by Department of Environmental Quality staff so that we can implement an effective and successful recycling collection program for the City of Portland.


Sincerely,

  
\_\_\_\_\_  
Mayor Bud Clark

  
\_\_\_\_\_  
Commissioner Bob Koch

  
\_\_\_\_\_  
Commissioner Mike Lindberg

  
\_\_\_\_\_  
Commissioner Dick Bogle

  
\_\_\_\_\_  
Commissioner Earl Blumenauer

DK:a1  
81:cc-egc



0926 S.W. Palatine Hill Road  
Portland, Oregon 97219  
January 20, 1987

Environmental Quality Commission  
811 S.W. 6<sup>th</sup> Avenue  
Portland, Oregon 97204

Hazardous & Solid Waste Division  
Dept. of Environmental Quality  
**RECEIVED**  
JAN 22 1987

Dear Commissioners:

This letter is a request that you disapprove the City of Portland's desire for an extension of its garbage recycling program ~~and~~ initiation. Portland has dragged its heels already far too long and has already had one extension. Recycling needs to be implemented immediately.

Sincerely yours,  
Ann Porter, Member  
League of Women Voters  
of Portland

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
**RECEIVED**  
JAN 21 1987

OFFICE OF THE DIRECTOR

MEMO

Director

DEPARTMENT OF ENVIRONMENTAL QUALITY



1/21/87

Fred -

Dennis Mulvihill (Metro) called to find out what time the Commission will be on Item F (Metro's reduction plan) because Rena Cusma is going to try to attend. (CY said to let you know this.)

Haven't we set 9:15A? Dolores

→ 1/22

(Item M)

9:15 is the request to extend the recycling deadline for PDX - with Commissioner Koch.

I think Metro folks are interested in Item F - status of implementation of Metro's Waste Reduction Program.

(I told Metro it would probably be around 9:30 to 9:45 was my best estimate.)

D.

OREGON ENVIRONMENTAL QUALITY COMMISSION  
WITNESS REGISTRATION

Commissioner Bob Koch / John Lang  
NAME (PLEASE PRINT)

City of Portland  
ADDRESS OR AFFILIATION

I REQUEST APPROXIMATELY 5 MINUTES TO ADDRESS THE COMMISSION  
ON THE SUBJECT OF extension of time to imple-  
ment recycling program

AGENDA ITEM M

OREGON ENVIRONMENTAL QUALITY COMMISSION  
WITNESS REGISTRATION

Jeanne Roy  
NAME (PLEASE PRINT)

2450 SW Boundary St. 230 SE Nottingham  
ADDRESS Shawwood OR 97140

LWW rep. on Portland's Recycling Advisory Comm.  
AFFILIATION

I REQUEST APPROXIMATELY 6 MINUTES TO SPEAK.

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

JOHN CHARLES  
NAME (PLEASE PRINT)

2637 SW Water Portland OR 97201  
ADDRESS

OEC  
AFFILIATION

I REQUEST APPROXIMATELY 5 MINUTES TO SPEAK.

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

ESTLE HARLAN  
NAME (PLEASE PRINT)

OSSI  
ADDRESS OR AFFILIATION

I REQUEST APPROXIMATELY 2 MINUTES TO ADDRESS THE COMMISSION

ON THE SUBJECT OF Portland Recycling

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

Judy Dehen  
NAME (PLEASE PRINT)

2965 NW Verde Vista 97210  
ADDRESS Portland

Sierra Club  
AFFILIATION

I REQUEST APPROXIMATELY 5 MINUTES TO SPEAK.

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

Leanne MacColl  
NAME (PLEASE PRINT)

2620 S.W. Georgian Pl. Portland 97201  
ADDRESS

DEQ Joint S.A. Comm., Pres. LWW Portland  
AFFILIATION

I REQUEST APPROXIMATELY 2 MINUTES TO SPEAK.

OREGON ENVIRONMENTAL QUALITY COMMISSION  
WITNESS REGISTRATION

Jere Grimm  
NAME (PLEASE PRINT)

1734 N.W. Aspen Portland OR 97210  
ADDRESS OR AFFILIATION

I REQUEST APPROXIMATELY 2 MINUTES TO ADDRESS THE COMMISSION  
ON THE SUBJECT OF RECYCLING

OREGON ENVIRONMENTAL QUALITY COMMISSION  
WITNESS REGISTRATION

Estella Johnson  
NAME (PLEASE PRINT)

1717 SW Park # 1407 Portland 97201  
ADDRESS

League of Women Voters  
AFFILIATION

I REQUEST APPROXIMATELY 5 MINUTES TO SPEAK.

OREGON ENVIRONMENTAL QUALITY COMMISSION  
WITNESS REGISTRATION

MIKE Houck  
NAME (PLEASE PRINT)

Audubon Society of Portland  
ADDRESS OR AFFILIATION  
5151 NW Cornell Rd. Portland 97202

I REQUEST APPROXIMATELY 2-3 MINUTES TO ADDRESS THE COMMISSION  
ON THE SUBJECT OF City of Portland Recycling Program

OREGON ENVIRONMENTAL QUALITY COMMISSION  
WITNESS REGISTRATION

JEREMY SARANT  
NAME (PLEASE PRINT)

215 SW WASHINGTON # 200 Portland  
ADDRESS

PORTLAND RECYCLING / TECHNICAL ADVISORY COMM  
AFFILIATION

I REQUEST APPROXIMATELY 5 MINUTES TO SPEAK.



OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

DAVID MCMAHON

NAME (PLEASE PRINT)

PO Box 12106 PORTLAND OR 97212

ADDRESS

CRODIBURST RECYCLING

AFFILIATION

I REQUEST APPROXIMATELY 4 MINUTES TO SPEAK.

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

Sandra Gee

NAME (PLEASE PRINT)

4410 SW KANAW DR Portland 97221

ADDRESS

CITIZEN

AFFILIATION

I REQUEST APPROXIMATELY 35 MINUTES TO SPEAK.

OREGON ENVIRONMENTAL QUALITY COMMISSION  
WITNESS REGISTRATION

Betty McARDLE  
NAME (PLEASE PRINT)  
3740 S.W. Conus St. PORTLAND  
ADDRESS  
CITIZEN of PORTLAND  
AFFILIATION

I REQUEST APPROXIMATELY 3 MINUTES TO SPEAK.

OREGON ENVIRONMENTAL QUALITY COMMISSION  
WITNESS REGISTRATION

ROGER E. MAUDNE - PRESIDENT - EAGLE-PICHER MINERALS INC  
NAME (PLEASE PRINT) PAUL HARPER - CORP DIR ENVIRON AFFAIRS  
ROBERT PIEKALZ - VP-ENVR & ENVIRON AFFAIRS  
1755 E. PLUMB LANE - RENO, NV 89509  
ADDRESS OR AFFILIATION

I REQUEST APPROXIMATELY 10-15 MINUTES TO ADDRESS THE COMMISSION  
ON THE SUBJECT OF DIATOMACEOUS EARTH PROCESSING  
PLANT NEAR VALLE, OR.

OREGON ENVIRONMENTAL QUALITY COMMISSION  
WITNESS REGISTRATION

JEAN MEDDAUGIT  
NAME (PLEASE PRINT)

2147 NE 14th AVE, Portland, OR 97212  
ADDRESS

Oregon Environmental Council  
AFFILIATION

I REQUEST APPROXIMATELY 10 MINUTES TO SPEAK.

AGENDA ITEM L

OREGON ENVIRONMENTAL QUALITY COMMISSION  
WITNESS REGISTRATION

JOHN CHARLES  
NAME (PLEASE PRINT)

ADDRESS

OR  
AFFILIATION

I REQUEST APPROXIMATELY 5 MINUTES TO SPEAK.

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

Bruce W. White

NAME (PLEASE PRINT)

2076 NW Kearney St, #6, Portland

ADDRESS

Sierra Club (Oregon Chapter)

AFFILIATION

I REQUEST APPROXIMATELY (5-10) MINUTES TO SPEAK.

AGENDA ITEM

L

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

Mayor George Flitcraft

NAME (PLEASE PRINT)

City of Klamath Falls

ADDRESS OR AFFILIATION

I REQUEST APPROXIMATELY 5 MINUTES TO ADDRESS THE COMMISSION

ON THE SUBJECT OF proposed rules

OREGON ENVIRONMENTAL QUALITY COMMISSION  
WITNESS REGISTRATION

Bob Beech  
NAME (PLEASE PRINT)

Save Our Klamath Jobs  
ADDRESS OR AFFILIATION

I REQUEST APPROXIMATELY   5   MINUTES TO ADDRESS THE COMMISSION  
ON THE SUBJECT OF prepared rule

OREGON ENVIRONMENTAL QUALITY COMMISSION  
WITNESS REGISTRATION

Richard Glick  
NAME (PLEASE PRINT)

City of Klamath Falls  
ADDRESS OR AFFILIATION

I REQUEST APPROXIMATELY   8   MINUTES TO ADDRESS THE COMMISSION  
ON THE SUBJECT OF proposed rule

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

MURRAY TILSON, Environmental Manager  
NAME (PLEASE PRINT)

Water Solutions Corp  
ADDRESS

7200 NW. Frong Ave. Portland OR  
AFFILIATION

I REQUEST APPROXIMATELY \_\_\_\_\_ MINUTES TO SPEAK.

OREGON ENVIRONMENTAL QUALITY COMMISSION

WITNESS REGISTRATION

JOHN CHARLES  
NAME (PLEASE PRINT)

ADDRESS

OEZ  
AFFILIATION

I REQUEST APPROXIMATELY 5 MINUTES TO SPEAK.

*Law Offices*

*Duncan, Weinberg & Miller, P.C.*

WALLACE L. DUNCAN  
EDWARD WEINBERG  
FREDERICK L. MILLER, JR.  
JAMES D. PEMBROKE  
RICHMOND F. ALLAN  
J. CATHY LICHTENBERG  
PETER S. GLASER  
ROBERT WEINBERG  
CHARLES F. HOLUM  
JANICE L. LOWER  
JEFFREY C. GENZER  
GERALDINE M. CARR †

OF COUNSEL  
DANIEL H. SHEAR \*

JOHN R. LITTLE, JR.  
KARL F. ANUTA, OF COUNSEL  
DENVER OFFICE

\* ADMITTED IN MARYLAND ONLY  
† ADMITTED IN CALIFORNIA ONLY

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1615 M STREET, N.W.  
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TELECOPY (202) 467-6379

*Denver Office*

717 17TH STREET, SUITE 1670  
DENVER, COLORADO 80202  
(303) 292-2161

*Northeast Regional Office*

52 ELM STREET  
SPRINGFIELD, VERMONT 05156  
(802) 885-2582  
OF COUNSEL  
PARKER, LAMB & ANKUDA, P.C.

OF COUNSEL

BAILY & MASON, P.C.  
510 L STREET, SUITE 312  
ANCHORAGE, ALASKA 99501  
(907) 276-4331

January 21, 1987

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED

JAN 22 1987

OFFICE OF THE DIRECTOR

Fred Hansen  
Director  
Department of Environmental Quality  
811 S.W. 6th Avenue  
Portland, Oregon 97204

Dear Mr. Hansen:

Enclosed are eight copies of the written comments of the City of Klamath Falls with respect to the Public Hearing and Proposed Adoption of Modifications to Section 401 Certification Rules, OAR Chapter 340, Division 48, which is Agenda Item L for the January 23, 1987 EQC meeting.

Sincerely,



Peter Glaser

BEFORE THE OREGON  
ENVIRONMENTAL QUALITY COMMISSION

OFFICE OF THE DIRECTOR

IN THE MATTER OF THE )  
PROPOSED ADOPTION OF ) COMMENTS OF THE CITY OF KLAMATH  
MODIFICATIONS TO SECTION 401 ) FALLS  
CERTIFICATION RULES, O.A.R. )  
CHAPTER 340, DIVISION 48 )

The City of Klamath Falls submits these comments on the proposed adoption of modifications to the Section 401 Certification rules contained in O.A.R. Chapter 340, Division 48. The City believes that the proposed modifications, in major respects, bring the Section 401 certification rules into conformity with the Court of Appeals decision in Arnold Irrigation District v. D.E.Q., 790 Or. App. 136, 717 P.2d 1274 (1986). However, the City believes that in certain other respects the proposed modifications fail to comply with Arnold, are misguided as a matter of policy, and should not be adopted by this Commission.

The City's interest in the proposed modifications stems from the fact that the City has on file with DEQ an application for Section 401 certification for the City's proposed Salt Caves Hydroelectric Project. The City's application has been pending with DEQ since August, 1986. Despite the fact that the application provides all the information needed by DEQ to analyze the application under the Department's EPA-approved water quality criteria, the Department -- owing to disputes with the City over the proper interpretation of Arnold -- has not deemed the City's application complete. Thus, despite the passage of five months since the filing of the City's application, the Department has



not begun to substantively review that application under the water quality criteria.

The City will confine its comments to the portions of the proposed modifications potentially affecting the City's application. Where the City believes that the Department's proposed modifications are in error, the City proposes substitute language. The City comments on the following proposed modifications: <sup>1/</sup>

1. Proposed O.A.R. 340-48-020(2)(i), (j) and (k).

The City strongly endorses DEQ's proposed deletion of the existing regulation O.A.R. 340-48-020(2)(i) and (j). O.A.R. 340-48-020(2)(i) requires that an application for Section 401 certification include a land use compliance statement from the applicable local governing body. O.A.R. 340-48-020(2)(j) requires that the Section 401 application include "[s]pecific detailed documentation of compliance with the hydroelectric project standards established in Sections 3 and 5 of Chapter 569, Oregon Laws 1985 <sup>2/</sup> and rules adopted by the Water Resources Commission and Energy Facility Siting Council implementing such

---

<sup>1/</sup> Certain of the rules which the City comments on pertain to the potential establishment by DEQ of conditions in an issued Section 401 certificate requiring the applicant to meet water quality-related requirements of local land use plans or ORS 543.017 and ORS 469.371. The City's comments should not be read as a concession that the Klamath County land use plan, ORS 543.017 or ORS 469.371 contain water quality-related requirements that would be appropriate as conditions in an issued Section 401 certificate.

<sup>2/</sup> For convenience, this statute is referred to herein as the H.B. 2990 requirements.

standards." Under O.A.R. 340-48-020(3), failure to supply the information required by O.A.R. 340-48-020(2)(i) and (j) "shall be grounds for denial of certification."

These filing requirements flatly contradict Arnold, which held that DEQ can deny Section 401 certification only if an applicant fails to meet DEQ's EPA-approved water quality standards. As seen, under existing O.A.R. 340-48-020(2)(i) and (j) and O.A.R. 340-48-020(3), DEQ is required to deny certification if the applicant fails to supply a local body land use compliance statement and information showing compliance with the H.B. 2990 requirements. O.A.R. 340-48-020(2)(i) and (j), therefore, run afoul of Arnold, and DEQ has properly recommended their deletion.

However, the rules which DEQ proposes to replace these filing requirements, although less onerous than the existing filing rules, still do not quite measure up to Arnold. DEQ's new proposed O.A.R. 340-48-020(2)(i), (j) and (k), in essence, provide that a Section 401 application must identify applicable provisions of local government land use plans, H.B. 2990 (now codified as ORS 469.371 and 543.017), rules implementing H. B. 2990, and other state laws. The application must further discuss the relationship between the proposed project and these requirements and also must discuss any potential indirect and direct relationship between these requirements and water quality. Under existing O.A.R. 340-48-020(3), which would not be changed by DEQ's proposed modifications, failure of an application to include this information would lead to dismissal of such application.

The City understands DEQ's reason for desiring the information sought by proposed O.A.R. 340-48-020(2)(i), (j) and (k). Under Arnold, DEQ must place a condition in an issued Section 401 certificate requiring the applicant to meet any requirements of state law related to water quality. The City also presumes that an applicant, in order to present his input into the nature of the condition, if any, placed in his Section 401 certification, would want to submit the information required in DEQ's proposed new filing requirements.

Nevertheless, the new proposed filing requirements contradict Arnold for the same reason as the existing filing requirements. As stated, the new proposed filing requirements provide that DEQ must deny an application if it fails to include information relating to land use, H. B. 2990 and other state laws. Such information is not pertinent to DEQ's analysis of an application under the Department's EPA-approved water quality standards. DEQ's proposed regulations, therefore, by potentially requiring DEQ to deny an application for reasons not pertaining to the EPA-approved water quality criteria, are not consistent with Arnold.

DEQ's desire to have the applicant submit information on requirements of state law related to water quality can easily be harmonized with Arnold, however. To accomplish this result, the City proposes language under which DEQ would request, but would not require, the submittal of the information contained in the Department's proposed O.A.R. 340-48-020(2)(i), (j) and (k). The City suggests that the Department's proposed language be

incorporated in a new O.A.R. 340-48-020(3), which would read as follows:

3. Applicants are requested but not required to submit the following information:
  - (a) an exhibit which:
    - (1) Identifies and cites the specific provisions of the appropriate local land use plan and implementing regulations that are applicable to the proposed project;
    - (2) Describes the relationship between the proposed project and each of the provisions identified in subparagraph (1) above; and
    - (3) Discusses the potential direct and indirect relationship to water quality of each item described in paragraph (2) above.

If specific land use compatibility findings have been prepared by the local planning jurisdiction, these findings should be submitted as part of this exhibit and may be substituted for the requirements in subparagraphs (1) and (2) above.

- (b) For hydroelectric projects, an exhibit which:
  - (1) Identifies and cites the applicable provisions of ORS 469.371 and 543.017 and implementing rules adopted by the Energy Facility Siting Council and Water Resources Commission;
  - (2) Describes the relationship between the proposed project and each of the provisions identified in subparagraph (1) above; and
  - (3) Discusses the potential direct and indirect relationship to water quality of each item described in subparagraph (2) above.

- (c) An exhibit which identifies and describes any other requirements of state law applicable to the proposed project which may have a direct or indirect relationship to water quality.

This proposed language would accomplish the Department's purpose without creating any problems under Arnold.

- 2. Proposed O.A.R. 340-48-020(4); O.A.R. 340-48-025(1).

The City strongly objects to the Department's proposed O.A.R. 340-48-020(4). Under this proposed regulation, the Department would delay deeming a Section 401 application complete for up to sixty days in order to allow local governing bodies to make findings as to whether or not the proposed project complies with the local land use plan. If the local body does not supply the findings within sixty days, it can nevertheless submit such findings--or any comments it wishes to make--to DEQ at any time during the Section 401 process.

This sixty day delay provision is wrong as a matter of law and policy.

As a matter of law, as we have stated, under Arnold DEQ cannot deny a Section 401 application on grounds not pertinent to the EPA-approved water quality criteria. It follows, therefore, that DEQ cannot refuse to process a Section 401 application--even temporarily--for reasons having to do not with those criteria but with land use.

As a matter of policy, the proposed regulation builds in a potential sixty day delay in a Section 401 process for no good reason. Under the proposed regulation, a local body is free

to submit its input into the Section 401 at any time. Why then is it necessary to delay commencement of the Section 401 process for sixty days to allow the local body to act? Under Section 401, as interpreted by FERC, DEQ has up to one year from the time it deems an application complete to act on such application. Surely, such period is more than adequate time for the local bodies to submit their comments and, if they do not, for DEQ to undertake its own analysis of the local land use plan. The City understands that DEQ wishes to have the comments of local bodies in the Section 401 process, but it is simply not necessary for there to be a sixty day delay in order for DEQ to receive those comments.

To a developer desiring to move along with its project, sixty days is not an insignificant period of time. In the case of Klamath Falls, this requirement will mean that the City's Section 401 application will have been on file with DEQ for seven months or more without any substantive processing by DEQ. Surely, this situation is not fair to the City. The Commission should refuse to adopt O.A.R. 340-48-020(4).

The Department also proposes certain additions and deletions to O.A.R. 340-48-025(1) in order to reflect the Department's proposed changes to O.A.R. 340-48-020(4). Because of the City's position on O.A.R. 340-48-020(4), the City recommends that such additions and deletions not be made. Instead, to emphasize the need for expedition in the processing of Section 401 applications, the City recommends that the existing O.A.R. 340-48-025(1) be retained, with one change, as follows:

340-38-025 -- ISSUANCE OF A CERTIFICATE.

- (1) Within thirty (30) days from the time Immediately after the Department determines an application is complete, it shall so notify the applicant by certified mail. Within ninety (90) days of receiving a complete application for project certification, the DEQ shall serve written notice upon the applicant that the certification is granted or denied or that a further specified time period is required to process the application. Written notice shall be served in accordance with the provisions of O.A.R. 340-11-097 except that granting of certification may be by regular mail. Any extension of time shall not exceed 1 year from the date of filing a completed application.

As noted, the City strongly believes that the sixty day delay provision should not be adopted. However, if the Commission wishes to adopt it, the City would suggest one modification to the language of the fourth sentence of O.A.R. 340-48-020(4), which for self-evident reasons, could expedite Section 401 reviews in certain cases, as follows:

The application shall not be deemed complete until the local planning jurisdiction provides comments to the Department, indicates to the Department that it will not be providing comments within 60 days, or 60 days have elapsed, whichever occurs first.

3. Proposed O.A.R. 340-48-020(8).

The City proposes one minor change in O.A.R. 340-48-020(8), in order to conform that section to Arnold. This regulation states that the Department's evaluation of a Section 401 application may include consideration of nine factors in order to make the "findings" required by O.A.R. 340-48-025(2). Among the nine factors, in subsection i, are the H.B. 2990 requirements.

The "findings required by O.A.R. 340-48-025(2), which are contained in subsection (f) of that section, are findings that the project complies with DEQ's EPA-approved water quality criteria and the section of the Clean Water Act authorizing such criteria. Under O.A.R. 340-48-025(2)(f), DEQ would make these findings to determine whether to grant or deny a Section 401 application.

As stated, under Arnold, DEQ cannot consider factors not relating to the water quality criteria in making a grant or deny decision. Arnold, therefore, would forbid DEQ from considering the H.B. 2990 requirements, referred to in O.A.R. 340-48-020(8)(i), in making the findings required by O.A.R. 340-48-025(2)(f).

DEQ, however, would be able to consider the H.B. 2990 requirements referred to in O.A.R. 340-48-020(8)(i) in establishing the conditions stated in O.A.R. 340-48-025(2)(g). In order to accomplish this result and to eliminate the problem under Arnold referred to above, the City proposes that the Department's proposed additions and deletions to O.A.R. 340-48-020(8) and O.A.R. 340-48-025(2) be adopted and, in addition, that the following language be added to the first line of O.A.R. 348-020(8):

In order to make findings or establish conditions, as appropriate, required by O.A.R. 340-48-025(2)...

4. Proposed deletion of existing O.A.R. 340-48-025(2)(g).

The City strongly endorses the Department's proposed deletion of existing O.A.R. 340-48-025(2)(g). This rule states




that DEQ will place a condition in an issued Section 401 certificate for hydroelectric projects requiring the applicant to obtain a site certificate from the Energy Facility Siting Council (EFSC) and a water appropriation permit from the Water Resources Commission (WRC). This regulation obviously cannot stand up under Arnold which, as noted, requires that any conditions in a Section 401 certificate have a relationship to water quality. The only portions of the regulations of EFSC and WRC which relate to water quality are requirements that are identical to DEQ's EPA-approved water quality criteria. It would obviously be ridiculous for DEQ to place a condition in an issued Section 401 certificate requiring the applicant to meet the very same criteria that the applicant was required to meet in order to have the certificate issued in the first place. DEQ, thus, has properly recommended deletion of the requirement.

5. Conclusion

In conclusion, the City believes that the Department has come far in addressing the City's concerns. The City recommends that the changes proposed above be adopted to fully bring the regulations into conformity with Arnold.

Dated: January 21, 1987

Respectfully submitted,

  
\_\_\_\_\_  
Peter Glaser  
DUNCAN, WEINBERG & MILLER, P.C.  
1615 M Street, N.W.  
Suite 800  
Washington, D.C. 20036  
(202) 467-6370

Mike Huston

January 18, 1987

Fred Hansen  
Director  
Department of Environmental Quality  
522 S.W. Fifth Avenue, Box 1760  
Portland, Oregon 97207

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
RECEIVED  
JAN 20 1987

RE: 401 Rulemaking

OFFICE OF THE DIRECTOR

Dear Fred:

I have recently reviewed the Department's proposed modifications in the 401 Certification Rules (OAR 340-48-005 et seq.), on behalf of the Northwest Environmental Defense Center, the Oregon Wildlife Federation, and the Sierra Club. I would like to complement the Department's staff for producing, what is on balance, an exceptionally fair and well thought-out series of amendments. With only two exceptions, which are discussed below, these rules appear to accurately reflect the changes which the Arnold Irrigation decision requires while still maintaining the integrity of the State's participation in the FERC licensing process.

Although the rules are well drafted, there are two sections that we feel should be changed.

1. In subsection (c) of OAR 340-48-020(8) the words "or quantity" have been stricken. These words should not be taken out of the rule.

The quantity of water available has a direct effect on the quality of the water in any lake or stream. As DEQ is well aware, the water quality of any particular body of water in Oregon is directly related to the amount of pollutants which are being introduced to that water body, and, to the quantity of water which is available to dilute those pollutants. Thus changes in surface water quantity directly impact water quality, and DEQ's findings on a 401 application should include potential modifications in the quantity of water.

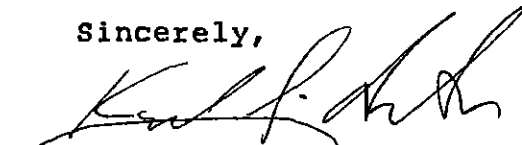
2. In section (3) of OAR 340-48-025 the rules only provide for a request for a contested case hearing by a dissatisfied applicant. This rule should be amended to also provide for a request for a contested case hearing by any interested group or individual who has participated in the comment process on a particular 401 application.

As this rule currently stands, only an applicant who objects to some condition attached to a certificate can obtain a contested case hearing on that application. This violates the equal protection and due process rights of the members of the public who

have participated in good faith in the 401 administrative process. If a 'dissatisfied' applicant is given an opportunity to request a contested case hearing, then fairness dictates that 'dissatisfied' members of the participating public should be given an equal opportunity to request a hearing. The current rule seems to encourage litigation, rather than participation in the administrative process.

With a small caveat for the two points expressed above, I would like to once again complement the Department on an excellent set of proposed rule modifications.

Sincerely,



Karl G. Anuta, on behalf of  
NEDC, OWF, and The Sierra Club

cc: Terry Thatcher  
Liz Frenkel  
Peter Glaser  
Rick Glick



**John Kitzhaber, M.D.**

Senate President

January 19, 1987

~~Mr. James E. Petersen  
Chairman, Environmental Quality Commission  
Johnson, Marceau, et. al.  
835 N.W. Bond Street  
Bend, Oregon 97701~~

Dear Mr. Petersen;

At last month's meeting of the Environmental Quality Commission (EQC) a discussion took place concerning the limits of Oregon's role in hydroelectric development under federal law. To insure that there are no misunderstandings concerning state policy between the Legislature and EQC, I would like to clarify for you what I believe to be Oregon's policy in this regard.

As you are aware, the 1985 Oregon Legislative Assembly addressed state hydro power policy in House Bill (HB) 2990. That legislation was enacted to place stringent standards on the siting of hydro power facilities. At the time of its enactment, it was argued by some that the state could not proceed to regulate in this area because of the role given the federal government under the Federal Power Act. By its passage of HB 2990 the Oregon Legislature rejected that position.

Section 2 (3) of HB 2990 states, "The Legislative Assembly declares that it is the policy of the State of Oregon: ... (3) To require the Water Policy Review Board, the Energy Facility Siting Council, the Department of Environmental Quality and other affected state agencies to participate to the fullest extent in any local, state or federal proceedings related to hydroelectric power development in order to protect the natural resources of Oregon."

As this policy statement makes it clear, the Assembly intended the state to pursue an aggressive hydro agenda when protecting Oregon's natural resources in local, state or federal proceedings. Not to challenge the federal government when decisions the federal government makes adversely effect Oregon's natural resources is in conflict with the policy directive of participating to the "fullest extent."

I believe that the policy behind HB 2990 was a recognition of the following points:

- 1) That the Federal Energy Regulatory Commission (FERC) under the federal power act cannot be relied upon to protect Oregon's natural resources--the history of hydro power regulation under FERC and its predecessor, the Federal Power Commission, is replete with examples of those federal hydro power authorities' disregard of the states legitimate hydro power concerns;
- 2) In view of that fact, the state of Oregon should not shy away from protecting its effected natural resources from degradation by FERC licensing activities, and;
- 3) That in areas where both state and federal government each have regulatory responsibility the bounds of state authority cannot always be prospectively determined and the state should not rely on federal agencies to determine those bounds.

If the state is to have a credible federal partner we will be required to gain recognition for our concerns by exerting our authority. By developing comprehensive management plans for the uses of our waters, plans which include a place for rational hydro development, we will be in a much better position to interact with the federal government. However, if we fail to exert our position the federal government will continue to guide Oregon down a policy path which has a development bias. The Federal Energy Regulatory Commission does not weigh other uses to which our water resources may be put. The Federal Energy Regulatory Commission simply does not have the credibility which a federal agency might attain if it developed a more comprehensive approach to management of water resources.

The EQC is responsible for one of the management components which is ignored by FERC. The EQC should make it's decision on hydro development in conjunction with it's water quality responsibility under section 401 of the Clean Water Act and related state policy. If the state fails to take firm stands against FERC, when information and policy indicate that it should, we will have abdicated our responsibility for Oregon waters.

Section 401 of the Clean Water Act is an integral part of Oregon's state's hydro power policy as is evidenced by reference to it in HB 2990. I would appreciate your consideration of this statement in implementation of section 401 and in the development of rules which establish the commissions' 401 permitting policies. I welcome your comments on this and any other issue before the commission.

Sincerely,



John Kitzhaber M.D.  
Senate President

c.c. The Honorable Neil Goldschmidt, Governor of Oregon  
Gail Achterman--Governor's Natural Resource Advisor  
Tom Imeson--Governor's Executive Assistant

Environmental Quality Commission Members:

Arno Deneke  
Mary Bishop  
Wallace Brill  
Sonia Buist M.D.

Water Policy Committee Members:

Sen. Jane Cease-- Co-Chair Water Policy Committee  
Rep. Dave McTeague-- Co-Chair Water Policy Committee  
Sen. Larry Hill  
Sen. Ken Jernstedt  
Sen. Eugene D. Timms  
Rep. Bill Bellamy  
Rep. Ray French  
Rep. Carl Hosticka  
Rep. Larry Sowa

Sen. Bill Bradbury--Senate Majority Leader  
Tom Throop--Deschutes County Commissioner  
Bill Young, Director, Water Resource Department  
David Kish, Acting Director, Oregon Department of Energy  
Fred Hansen, Director, Department of Environmental Quality  
Randy Fisher, Director, Department of Fish and Wildlife



## Department of Land Conservation and Development

1175 COURT STREET NE, SALEM, OREGON 97310-0590 PHONE (503) 378-4926

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
RECEIVED  
JAN 23 1987

January 22, 1987

OFFICE OF THE DIRECTOR

Fred Hansen, Director  
Department of Environmental Quality  
811 SW Sixth Avenue  
Portland, Oregon 97204

Dear Fred:

The purpose of this letter is to comment on DEQ's proposed amendments to your rules (OAR 340, Division 48) which govern the state's certification of projects subject to Section 401 of the Federal Clean Water Act.

The focus of our comments is land use and specifically the connection between the amendments and your agency's legal responsibilities under ORS 197.180 and OAR 660, Division 30.

First, despite a minor discrepancy in your preliminary notice, we are informed by your staff that the amendments do not intend to reverse your prior decision in you approved coordination program with LCDC that 401 certification is a program affecting land use. However, it is also clear that as a result of Arnold Irrigation District v. DEQ, in 401 certifications, DEQ's obligation to be compatible with acknowledged comprehensive plans has been reduced.

We have four specific comments concerning the amendments.

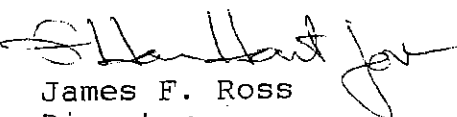
1. Under OAR 340-48-020(5), we believe the rule would be improved if the language could more clearly describe for the affected local government(s) the limitation the Arnold case imposes on DEQ to be compatible with an acknowledged comprehensive plan when evaluating a 401 certification request. The notice should also indicate: (1) that DEQ can only accept local land use information which relates to water quality; (2) the fact that DEQ cannot deny a certification request based on a denial.

from a local government; and (3) the need for findings, where appropriate, relating to compliance with the statewide goals in situations where the comprehensive plan does not apply to or is not affected by the project. It would also be helpful if the rule could require that local governments affected by the project be provided notice under -020(5).

2. While we understand that you are anxious to enact these amendments at the January EQC meeting, we urge that DEQ give active consideration to a future amendment which would define the term, "water quality related." Having such a definition in the rule will we feel make administration of the 401 process much clearer for all parties involved.
3. We also suggest consideration of a future amendment describing how the 401 certification process (post Arnold) and DEQ's duties under ORS 197.180 relate. We are having some difficulty understanding how DEQ will carry out its land use responsibilities under 401 certification when we read the proposed amendments.
4. Adoption of these amendments to your 401 rules may create an inconsistency with provisions in your approved LCDC coordination program. Therefore, once your final rule adoptions are complete, we would urge you to adjust your coordination program accordingly and forward them to us as provided under OAR 660, Division 30.

We appreciate having this opportunity to provide comments on these proposed amendments. Please feel free to call upon us if we can offer any additional information or assistance to assure DEQ's continued excellent coordination with the state land use program.

Sincerely,

  
James F. Ross  
Director

JR:JBK:sl

cc: Maggie Conley  
Harold Sawyer  
Michael Holstun  
Michael Huston  
Jim Knight





Reply to: 2202 SE Lake Road  
Milwaukie, OR 97222 (654-9533)

MEMBER  
**NSWMA**  
National Solid Wastes  
Management Association

OREGON SANITARY SERVICE INSTITUTE

January 23, 1987

TESTIMONY BEFORE THE ENVIRONMENTAL QUALITY COMMISSION, January 23, 1987

This testimony is given on behalf of the Tri-County Council (Clackamas County Refuse Disposal Association, Multnomah County Refuse Disposal Association, Oregon Sanitary Service Institute, Portland Association of Sanitary Service Operators, Teamsters Local 281, Washington County Refuse Disposal Association)

The Tri-County Council would support an extension to the City of Portland to develop and implement a curbside recycling program.

This issue is critical to the future of the solid waste industry and the city needs to have the additional time they have requested in order to attempt implementation of an appropriate system.

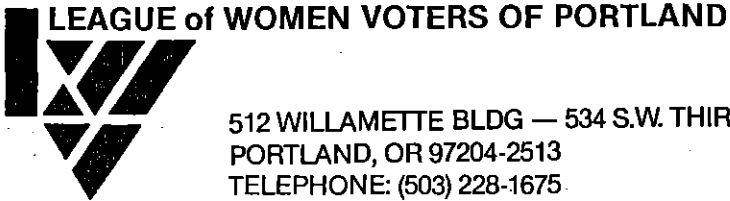
Most of the members of the Tri-County Council are in franchised areas and those areas adopted recycling programs long ago. However, all associations in the Tri-County Council also have members in the City of Portland, and because of the lack of regulation there over the solid waste industry, it is a much more difficult process to arrive at a decision. Unless the city develops a franchise system for the regulation of all solid waste management, including recycling, the problems are inherent for trying to regulate just the recycling portion of the system.

Respectfully submitted,

ESTLE HARLAN, Consultant

EH:e

Copies: OSSI  
TRI-COUNTY COUNCIL



512 WILLAMETTE BLDG — 534 S.W. THIRD  
PORTLAND, OR 97204-2513  
TELEPHONE: (503) 228-1675

TESTIMONY BEFORE THE ENVIRONMENTAL QUALITY COMMISSION Jan. 23, 1987  
Re: Portland's Recycling Plan

Good Morning, my name is LEEANNE MacColl, and I am President of the Portland League of Women Voters. The LWV of Portland believes the EQC should not grant a three month extension to Portland in order that the City Council have more time to review and study different recycling plans for the City.

This subject has been studied to death. There have been consultants, citizen advisory committees, involving all interested groups. What more can be gained by delay?

Garbage disposal is going to cost more - no matter what method we use to deal with it, but recycling appears to be one very important way to keep the costs down, furthermore the public needs to be educated by every means possible that these costs will be escalating.

As a member of DEQ's Facility Siting Advisory Committee, I feel like a real hypocrite having told citizen groups to really pitch in there and recycle and help solve the garbage problem, when the largest city in the area has no recycling plan.

N.Y. Times 1/11/87

# States Are Making Recycling a Must

By JOSEPH F. SULLIVAN

**R**ECYCLING, a fever of the 1970's that cooled when concern over shortages eased and markets for recycled materials were slow to develop, is on the rise again. New York, New Jersey and Connecticut are in various stages of implementing plans to recycle at least 25 percent of their solid waste and incinerate much of the rest to produce energy.

The New York State Department of Environmental Conservation last week unveiled a proposal to reduce waste by 50 percent over the next 10 years through a combination of recycling and such measures as expanding the bottle bill to cover wine bottles and restricting packaging that cannot be recycled.

The New Jersey Legislature is poised to put the final touches on one of the nation's first mandatory recycling bills, covering all of the state's 567 municipalities.

And Connecticut's Solid Waste Management Unit, cooperating with a special task force set up by the Legislature, sent Governor O'Neill a statewide recycling plan earlier this month for consideration by the Legislature this year.

Much of Connecticut's proposal is modeled after the plan drawn up for New Jersey, the nation's most densely populated state and a laboratory for solid waste problems. More than 100 landfills that were handling as much as 90 percent of New Jersey's waste a few years ago have been closed, according to Mary T. Sheil, chief of the Bureau of Recycling in the Department of Environmental Protection. She said the state has about 10 landfills still open — and half of those should be closed. Dumping fees have risen from \$9 a ton to as much as \$98 a ton.

As a result, six of the state's 21 counties either have initiated mandatory recycling programs or will have them in place this year. Mrs. Sheil said about 450 towns have

some kind of program, if only for newspapers, and 180 of them are mandatory. "The result," she said, "is that about 15 percent of the solid waste generated in New Jersey is already being recycled, and we expect to raise that to at least 25 percent with the passage of the new law."

The bill gives counties six months from the its signing to come up with plans for composting leaves and recycling at least three other materials. It also appropriates \$8 million to help defray state and local costs.

The counties must find markets for the recycled waste, and while it is relatively easy to sell paper and aluminum, work is needed to find uses for plastic containers. Mrs. Shell said the plastics industry has been told that the state may impose a surcharge on its products if new markets are not opened up, and an industry-backed study of the problem is under way.

Municipalities will not turn a profit through recycling, but they may see substantial cuts in the cost of trash disposal. John R. Purves, administrator of the Camden County Office of Solid Waste Management, said Voorhees Township saved \$100,000 on disposal last year and Haddonfield saved \$50,000 through their participation in the county's two-year-old mandatory recycling program.

The Camden plan is viewed as one of the country's most successful. Toby Goodrich, a senior environmental analyst in the Connecticut Department of Environmental Protection, said his people "look a lot to New Jersey — and especially Camden County — to see what's being done."

Mr. Purves said the county's program is a model of simplicity. "What makes it so easy is the fact that 83 percent of our 450,000 residents live in one-family homes," he said. "Three times a week, when they put their trash at the curb, they place bottles and cans in a bucket and newspapers in a grocery-store bag alongside the nonrecyclables."

The bottles, cans and newspapers are taken to the county's reclamation center, which has an aluminum smelter and equipment to prepare glass for reuse. The center also serves towns in Burlington and Gloucester Counties, and Mr. Purves said negotiations are in progress with Philadelphia to process bottles and cans for that city when its recycling program starts.

Both Mrs. Sheil and Lois B. Hager, director of the Connecticut Solid Waste Management Unit, said resource recovery plants are a vital part of their states' strategies, as are composting of leaves, recycling of motor oils and tires and reducing the volume of waste at the source. "People should be encouraged to find some way to dispose of things they no longer need," Ms. Hager said. "Instead of putting that old couch at the curb, they should try to give it to the Salvation Army."

# Curbside recycling plan needs OK

By JEANNE ROY 11/25/86

THE PORTLAND CITY COUNCIL must soon make an important decision: Will it move ahead to implement its curbside recycling plan? Or will it continue delaying because of pressure from outside groups?

In 1983, the Oregon Legislature required all cities to have curbside recycling programs in place by July 1, 1986. The goal is to preserve scarce landfill space. Curbside collection assures that waste that costs less to recycle than to landfill will be collected in a convenient manner.

Sixty-five cities in Oregon now have collection programs. Only Portland and four others do not. Portland has obtained an extension from the Department of Environmental Quality to January 1987.

Curbside recycling is not a new practice. Other cities have had successful programs for years. For example, Davis, Calif., diverts 20 percent of residential waste through a curbside collection program begun in 1974. In Islip, N.Y., 50 percent of households participate in a curbside program, diverting 15 percent of residential waste.

Marin County, Calif., which began its curbside program in 1981, now has more than 100,000 recycling customers and about the same participation and diversion rates as Islip. Nationwide, about 600 curbside programs are operating.

The impediment to curbside recycling in Portland has been our fragmented garbage collection system. Whereas other cities own, franchise or contract with garbage haulers, Portland has more than 100 independent haulers operating without regulation or protection. That is why some city streets are

*Jeanne Roy represents the League of Women Voters on Portland's Recycling Technical Advisory Committee.*

served by three or four haulers. Such a competitive system is precarious, and haulers feel threatened by any change that might disrupt it — such as a recycling program.

Past attempts by the city to establish curbside recycling have been thwarted by the haulers. If they were to invest in recycling, they wanted the protection of franchising. The City Council, however, has not been inclined to franchise, believing that residents are satisfied with the present system.

In 1980, the city developed a plan for curbside recycling by five contractors. However, funding for the contractors was undercut when garbage haulers said they would begin recycling newspapers themselves. In 1982, the city made a new attempt, negotiating with haulers in planning a program, this time considering franchising. However, the talks broke down when the haulers demanded commercial as well as residential franchising.

In 1985, the city was determined to avert another failure. City staff members spent more than a year studying alternative methods to achieve curbside recycling. A consultant was hired, a 24-member advisory committee met for 10 months, and public hearings were held. The opportunity was provided for all points of view to be heard.

As a result of this process, a compromise plan was developed and recommended to the council by city staff members: Existing haulers would collect newspapers weekly, and the city would contract with two to six recycling companies to collect segregated glass, metal, cardboard, office paper and motor oil on a monthly basis. This plan would provide incentives for private industry to increase recycling. The contractors would gain as many customers as possible to spread overhead costs. They would also receive fees from the city based on amounts collected as well as proceeds from sale of recyclables on the open market. The City Council approved this plan in June.

Now, after 18 months of preparation, haul-

ers have made a late appeal to City Council to abolish the approved plan. Some are complaining that they might lose customers. This is always a risk in a competitive marketplace. However, the contracts do specify that the recycler cannot "promote, provide, or solicit other services while providing recycling service."

Some haulers have proposed an alternative plan whereby all 120 haulers would be required to provide recycling services. This would be extremely inefficient and difficult for the city to promote and monitor. The minute amount of material collected by each hauler would be a nuisance to many and might end up in the landfill. Haulers would have no economic incentive to promote recycling since normal garbage levels would be reduced by recycling. Thus, it is likely that far less material would be recycled than under the approved plan. Moreover, the DEQ has indicated that such a plan would not meet requirements of state law.

Implementation of the curbside recycling plan should not be held up. The haulers had ample opportunity to be heard during the long planning process. Portland is already six months behind the rest of Oregon and years behind other cities nationally. By letting our present landfill fill up, we bring closer the day when disposal costs will double. The City Council must now show that Portland is willing to do its share in reducing the need for new landfills.

## Opinion guidelines

THE FORUM section's "In my opinion" column is available to readers desiring to comment on current issues.

The essays should be about 750 words — three double-spaced pages if typewritten. They must not have been published previously and must be submitted exclusively to The Oregonian. They belong to the authors after they are published.

CLOUDBURST RECYCLING  
COLLECTION SERVICE  
PO BOX 12106  
PORTLAND, OR 97212  
PHONE: 281-8075

January 22, 1986

Environmental Quality Commission  
811 SW 6th Ave  
Portland, Or 97204

Dear Commisioners:

My company, Cloudburst Recycling, has been providing recycling collection service in Portland for 12 years. I have been an active participant in Portland's "politics of recycling throughout that time.

Portland has exhaustively studied alternate approaches to meeting the requirements of the Sate "Opportunity to Recycle" Act over the past 18 months. The only barrier to implementing the plan adopted last June is lack of support from some members of the local hauling community. Unfortunately, if Portland refuses to franchise garbage collection, unanimity cannot be achieved on the recycling issue.

The only justification for granting more time for Portland to consider the problem is courtesy to Mr. Koch who now has the Bureau responsibilty. The only rationale for further consideration is the possibility for regulating Portland's solid waste system via franchising.

If EQC considers this courtesy and rationale to be "good cause" for granting an extension, it could save the City a great deal of pain by being as specific as possible about what alternatives it considers acceptable.

First, it should require an ordinance from the City which would automatically implement the adopted plan, unless the City can adopt an equally effective approach by March 1.

Second, it should be made clear that no variant of the so-called "permit approach" would be acceptable. In addition, EQC should spell out the requirements of an acceptable program. The following objectives should be specifically mentioned and agreed upon.

A) MAXIMIZE PUBLIC PARTICIPATION AND RECOVERY OF MATERIALS.

Comments: --The system must be simple enough for citizens to easily "plug in".

B) MINIMIZE THE COST OF PROVIDING SERVICE.

Comments: --System design must be based on a cost efficient model, with only one operator per district, and no more than 6 districts.

C) SIMPLICITY OF DESIGN ALLOWING THE PROGRAM TO BE EFFECTIVELY PROMOTED, MONITORED, ENFORCED, AND MODIFIED BY THE CITY.

Comments: --Operators must be directly accountable to the City.  
--Satisfactory recycling service should be the sole basis for evaluating continuation of service by an operator.  
--System must be simple enough to effectively promote.

D) TO OBTAIN CAPABLE, DEDICATED, EXPERIENCED, AND STABLE SERVICE PROVIDERS.

Comments: --Service providers should be selected on the basis of their ability to provide recycling service.

Thank you.

Sincerely,



David L. McMahon  
Owner/Manager  
Cloudburst Recycling

Chair:  
Sen. Bill Bradbury  
Vice-Chair:  
Sen. Joyce Cohen  
Staff:  
Peter F. Green, Committee Administrator  
Lisa Frost, Research Associate  
Jacque Greenleaf, Committee Assistant



Members:  
Sen. John Brenneman  
Sen. Jeannette Hamby  
Sen. Gratan Kerans  
Sen. Bob Kintigh  
Sen. Rod Monroe

SIXTY-FOURTH LEGISLATIVE ASSEMBLY

SENATE COMMITTEE ON  
AGRICULTURE AND NATURAL RESOURCES  
332 State Capitol  
Salem OR 97310  
(503) 378-8086

January 22, 1987

Mr. James Petersen  
Chairman, Environmental Quality Commission  
811 SW 6th Ave.  
Portland, OR 97205

Dear Mr. Petersen:

The Senate Committee on Agriculture and Natural Resources, which has oversight over recycling issues in Oregon, wishes to request that the Environmental Quality Commission deny the City of Portland's request to be granted another extension on its recycling report.

It is our opinion that the intent of Senate Bill 405 is clear. Every other affected local government has provided its citizens with the opportunity to recycle or is well on the way to that end. The City of Portland has resources at its disposal that are unequalled in the state.

We strongly believe that the Commission will send the wrong message about the importance it attaches to recycling programs if it grants the largest watershed in the state another extension.

Thank you for your attention to our concerns.

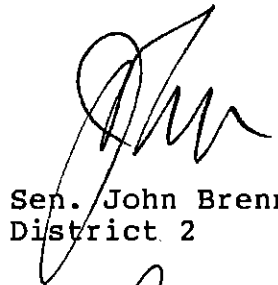
Sincerely,

A handwritten signature in cursive script, appearing to read "Bill Bradbury".

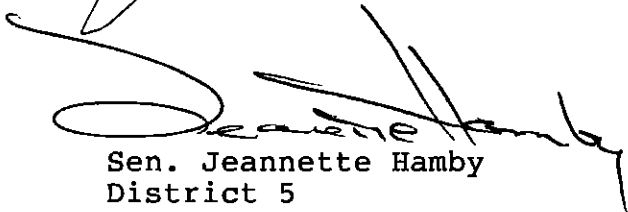
Bill Bradbury  
Chair



Sen. Joyce Cohen  
Vice-Chair  
District 13



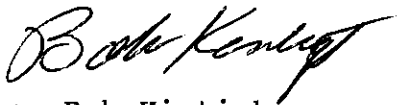
Sen. John Brenneman  
District 2



Sen. Jeannette Hamby  
District 5



Sen. Grant Kerans  
District 20

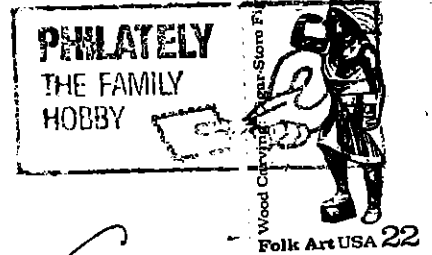


Sen. Bob Kintigh  
District 14



Sen. Rod Monroe  
District 7





*Quality Commission*

1906 S. W. Edgewood Road  
Portland, Oregon 97201  
January 19, 1987

Environmental Quality Commission  
811 S. W. Sixth Avenue  
Portland, Oregon 97204

Re: Portland Recycling Program

Dear Commission Members:

Another extension has been requested. Please use your authority to expedite the process. It's been 7 years. Please help to get recycling implemented in Portland.

Sincerely,

*Barbara Walker*  
Barbara Walker

cc: Fred Hansen, Director, DEQ

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
**RECEIVED**  
JAN 22 1987  
OFFICE OF THE DIRECTOR



OFFICE OF THE DIRECTOR

1/20/87.

Dear Commissioners,  
It's time for the City Council  
to make up their minds about  
the garbage recycling problem,  
now. Do not allow them  
a further extension.

Sincerely,  
Florence G. Hinckliff.

January 21, 1987

Environmental Quality Commission  
811 SW 6th  
Portland, OR 97204

Dear Commissioners,

We strongly recommend that you grant no more extensions to the City of Portland in complying with the state recycling program.

We find it contradictory that, at a time when we are running out of landfill space, the city continues to postpone alternative methods of dealing with waste. Despite the extensions allowed so far, Portland has made little progress toward resolving disputes about recycling problems. It appears to us that the city is doing nothing but "buying time".

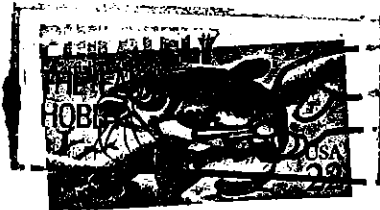
We therefore feel it is time for the state to demand compliance.

*Phillip Bass*

Phillip Bass

*Helena Petr Bass*

Helena Petr Bass  
37 NE 108th  
Portland OR 97220



State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
**RECEIVED**  
JAN 21 1987

OFFICE OF THE DIRECTOR

Rt 1 Box 1750  
Vale, Oregon 97918  
20 December 1986

A. Sonia Buist, M.D.  
Oregon Environmental Quality Commission  
Health Sciences University  
Room 2052  
3181 S.W. Sam Jackson Park Road  
Portland, Oregon 97201

Dear Dr. Buist:

In all due respect to your professional status and your efforts to assuage our fears, I feel that it is extremely important that I comment on what I believe to be an erroneous statement you made in response to my testimony regarding our concerns over the Eagle-Picher diatomaceous earth processing plant on the property next to us. Your statement that the visible emissions posed no danger to us is very misleading for several well documented reasons:

1. To demonstrate to yourself the fallacy regarding the visibility of hazardous particles, look at this paper. I am sure that everyone realizes that this paper is visible. This paper is made of atoms which are not visible. The atoms form molecules which are the smallest particles of an element or compound capable of retaining chemical identity with the substance in mass. The atoms of silica and oxygen form the molecules of silicon dioxide, the substance with which we are concerned. The molecules form the various crystals of silicon dioxide, and it is the shape of the crystals which identify the various forms, tridymite, cristobalite etc. Cristobalite is considered to be second only to tridymite in its ability to cause silicosis. The size of the crystals determine the degree of hazard and the visibility of a single crystal.

Crystals that are 5 microns or larger in size are expelled naturally by the lungs and are not considered to cause silicosis. Crystals smaller than 5 microns are not naturally expelled and deposit in the deepest recesses in the lungs to cause silicosis. It is these smaller crystals which concern us. A micron is one thousandth of a millimeter or about one twenty-five thousandth of an inch. I have not found any one who can give a clear picture of just when particles become visible because there are several variables including the size, light quality and quantity, the contrast, and the relationship of the viewer, the light, and the particle. However, when enough particles are present, in other words when the concentration is dense enough, they are visible as a mass such as this paper is visible even though individual particles may not be visible. A particle of one micron in size is not visible to the naked eye, but we are seeing such dense clouds of silicon dioxide particles that they are visible from five and ten miles away and farther. I submitted a photo for your viewing at the hearing.

2. I believe you implied that one would have to be locked up for years in a room in which the dust was so thick one could not see through it before contracting silicosis. This conflicts with medical texts, USPHS literature, and OSHA safety standards. OSHA, USPHS, EPA, and DEQ safety standards which limit the concentrations of this material in the air speak in themselves of the hazardous nature of this material.

3. The visible dust emissions contain a mixture of particles of hazardous size as well as larger and less hazardous particles. Therefore, the more dust that is visible, the more particles there will be in the air of the hazardous size.

4. The larger particles which may not present a hazard of silicosis in themselves do present a hazard by stressing the lungs and inhibit the bodies ability to defend against the damages caused by small, dangerous particles.

5. The Malheur Valley presents an entirely different atmosphere than the sites of the other diatomaceous earth processing plant locations, and the relationship of our homes to the plant creates a much more hazardous situation. For instance, the purpose of emitting waste gases and material through stacks is to disperse these emissions into the air where they will be diluted as they disperse in the air or fall to the ground. Since the top of the Eagle-Picher stack is lower than our property and home, emissions from this plant sometimes flow directly to our home in almost undiluted form. Eagle-Picher permitted illegal trash burns of hazardous substances on their property on at least two occasions. I photographed the streams of black smoke which rose approximately 100 feet vertically then made a 90 degree turn to flow parallel to the ground for many miles. Just by chance, a DEQ inspector viewed one of the burns and cited Eagle-Picher for their illegal activity.

6. There are so few people working with this product where it is released into the air that if every one of them developed silicosis, the disease would still be considered rare when compared to more common diseases.

Because the Eagle-Picher representatives have presented so much false and misleading information, all of their statements should be suspect. As examples, they made the following statements:

The only emission is steam. I presented photos of their Lovelock, Nevada plant which they stated emitted only steam. Diatomaceous earth dust was so deep on ledges on the plant structures that they could hold no more, the highway edges were white with the dust, and the ground for hundreds of feet around the plant was white with and was mixed with accumulations of the same material that had been gathering for decades. In only six months, the Oregon DEQ has cited E-P for numerous violations on each of several visits. The Oregon DEQ has found the plant here in violation for illegal collections of this material, illegal storage, illegal transportation, illegal leaks, and illegal emissions into the air to name just a few problems.

Their manager has stated in the newspaper that no dust is

visible in the air around the plant nor is it visible in their stack emissions, yet you have seen the dust in the air in the photos which I presented to you during the public forum.

He stated that their product does not contain the hazardous form of material, yet the DEQ presented testimony that Eagle-Picher's product contains up to 40% of cristobalite, the second most hazardous form of silicon dioxide (we have since been informed that their product contains between 40 and 50% cristobalite).

We were told that the plant would produce a noise level of 95 decibels which would diminish until it would be audible at our property line on a level of the human voice when talking normally. This level of sound was to be at our property line some five or six hundred yards from our home. We are awakened and kept awake by a noise level as high as 400 percent over the legal limit which is 38 decibels. In fact, the noise level at our front door as I write this letter is 54 to 56 decibels, and it is now 11:17 P.M. The DEQ has given this company months or possibly years to correct this problem.

Eagle-Picher representatives have made utterly false statements about the insecticidal affects of their products, boldly claiming that tests had been done by the entomologist from the University of Nevada, Reno "at their Lovelock plant." I testified to you that Dr. Harold Arnett stated to me that he has never spoken to an Eagle-Picher employee or officer about any such study, nor has he made such a study, and he further stated that the reason Eagle-Picher's plant at Lovelock may not affect the insect populations which are beneficial to agriculture is because that plant is not in an agricultural area of the Lovelock Valley.

Every one of these claims by Eagle-Picher has been proven false, so there is little question about the believability of this company's representatives. Is it any wonder then that former supporters of this company of Eagle-Picher now fear this company?

I'm sorry that I just don't know how to write a short letter about such a volume of material, and I appreciate your attention and consideration. Again, I respect your expertise, but everyone with whom I have discussed this question believes that there was an error made.

Sincerely,



Wm. C. Schneider

cc To each commission member  
Fred Hansen, DEQ



## WHAT IS A NEIGHBORHOOD PROTECTION PLAN?

### WHAT IS A "NEIGHBORHOOD PROTECTION PLAN"?

Because any landfill -- no matter how carefully sited -- will create some problems for the surrounding residents, we're going to produce Neighborhood Protection Plans for each of the three potential sites under consideration for the new tri-county landfill.

An NPP aims to make the landfill the best possible neighbor, by proper design, construction, operation, even eventual closure. Each NPP we devise will identify specific problems which may arise from creating and operating this new fill. Then we'll also add protective measures to minimize the impact of each potential problem.

Once our policy-making board, the Environmental Quality Commission, has chosen the site, we will incorporate the NPP into the site's operating permit. If the operator should fail to comply with our NPP, we have authority to enforce absolute compliance (under Senate Bill 662, the legislation which set this whole process in motion).

### WHAT TYPES OF NEIGHBORHOOD CONCERNS WILL OUR NPP ADDRESS?

Senate Bill 662 spelled them out fairly specifically. We'll examine possible impacts from:

- visual appearance
- odors and noise
- traffic
- bird and animal problems
- site screening
- safety and security risks
- dust and other air pollution
- damage to fish and wildlife habitat

We'll also look at such further concerns as flood potential, surface and groundwater, existing land uses, energy consumption, and historical/archaeological resources.

### HOW WILL NEIGHBORHOOD CONCERNS BE DETERMINED?

With your help. That's the reason behind the meetings and workshops we'll be hosting for each potential site. Our staff and engineering consultants will tell you about potential problems we've identified thus far, then we'll ask you to identify other community concerns over development of a landfill nearby, through participating in a survey we're conducting.

(over)



Our reports to you will cover traffic congestion and safety, visual impact, pollution of drinking water wells, slope stability, odors, litter, and birds and rodents.

### WHAT ABOUT THE "PROTECTION" PART?

DEQ has been charged by Oregon law to protect the quality of this state's water, air, and earth. We have three potential sites with good natural characteristics for a landfill. But we will also recommend to our Environmental Quality Commission a plan containing the most stringent protective measures for each potential site, measures reflecting modern technology's strides in coping with environmental problems.

The protection we'll suggest may include (but not be limited to) natural and synthetic liners to shield sub-surface groundwater from leaching; a system to detect leaks before any pollution escapes the site; berms (raised walls of soil) to buffer noise and reduce visual impact.

And we'll anticipate coping with new road construction or improvements; designating traffic routes for garbage trucks; a landfill gas collection system to minimize odors; daily soil cover to deter birds and rodents; a litter control method; scheduling times of operation--for receiving waste on-site; creating an end-use plan; and a groundwater monitoring plan.

Still other steps, other protective measures, may be identified by our staff, consultants, or by you.

### WILL THE DRAFT NPP BE AVAILABLE FOR PUBLIC REVIEW AND COMMENT?

Yes. We'll probably complete draft Neighborhood Protection Plans for all three prospective sites by March 1987. Before the Environmental Quality Commission chooses the site, hearings will be held on the draft NPP as well as on our Department's estimate of costs to develop the site, and on the technical merits of each site. This NPP will ultimately become part of the formal order EQC will issue by July 1, 1987 selecting the future landfill site.

### IS PUBLIC PARTICIPATION IMPORTANT?

YES! Your involvement in developing a NPP is vital to ensure that every potential problem is properly identified and addressed. Our staff is committed to providing the opportunity for everyone living near a prospective site to be part of this process.

If you have any questions about how to become involved in this landfill siting program, or about the sites, please write us or telephone our DEQ Landfill Hotline--229-5110.

November 1986





## **RAMSEY LAKE POTENTIAL LANDFILL SITE**

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**LOCATION** (A map of the site is on the back of this sheet.)

The site is in North Portland's Rivergate Industrial District. It is bordered by the Columbia slough to the east and North Lombard Street on the west.

**PROPOSED ACCESS ROADS**

Interstate 5 to Marine Drive Exit, then west 5.7 miles to the site.

**SITE SIZE WITH BUFFER AREA**

345 acres

**ESTIMATED LANDFILL LIFE**

15 - 30 years

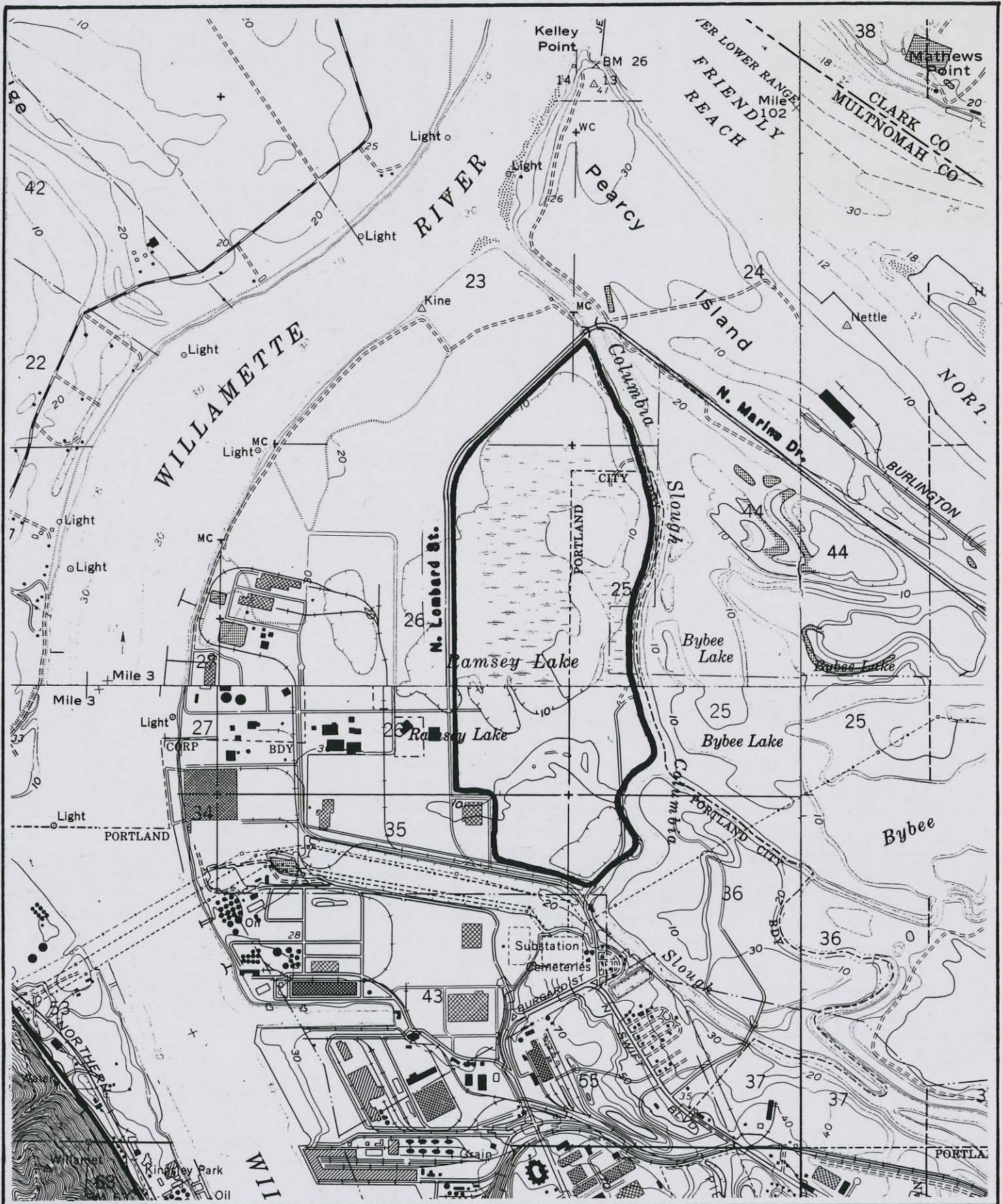
**SITE CHARACTERISTICS**

The Ramsey Lake site is located in an industrial district on flat land. It is near the confluence of the Columbia and Willamette Rivers, two hydrologic boundaries which limit potential impacts to groundwater users. The site is underlain by a thick section of clayey silt soil whose low permeability will also help protect regional groundwater. However, the shallow groundwater and location on a floodplain would require complex protective measures. The site is located on wetlands which have been partially filled by the Port of Portland for industrial development. The remaining wetlands, which are already scheduled to be filled, would require mitigation planning. Marine Drive, the direct access road to the site, has no residential development. The landfill may be visible from surrounding industrial properties. The cost of acquiring industrial property will increase overall site costs. The site is the closest to the center of garbage generation and has existing roads and sewer lines built to necessary standards. It wouldn't last as long as other sites.

FOR MORE INFORMATION, PLEASE CALL DEQ LANDFILL HOTLINE: 229-5110  
OR WRITE: 811 S W 6TH, PORTLAND, OREGON 97204

NOVEMBER 1986





U.S.G.S. QUADRANGLE  
 MAP SOURCE:  
**SAUVIE ISLAND**  
 SCALE: 1:24,000

**SITE  
 BOUNDARY  
 MAP**

**SITE NO.  
 M5**

NOTE: N. Lombard St. and N. Marine Dr. added to U.S.G.S. Map.



## INFORMATIONAL BULLETIN

# WILDWOOD POTENTIAL LANDFILL SITE

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**LOCATION** (A map of the site is on the back of this sheet.)  
On the northwest side of Portland, the site is located off Highway 30 approximately four miles northwest of the Sauvie Island bridge. It is situated above the old Wildwood Golf Course on the eastern slopes of the Tualatin Mountains.

### PROPOSED ACCESS ROADS

Interstate 5 to Interstate 405, then by truck route U.S. 30 to the site's access road, then .8 miles to the site.

### SITE SIZE WITH BUFFER AREA

340 acres

### ESTIMATED LANDFILL LIFE

30 - 75 years

### SITE CHARACTERISTICS

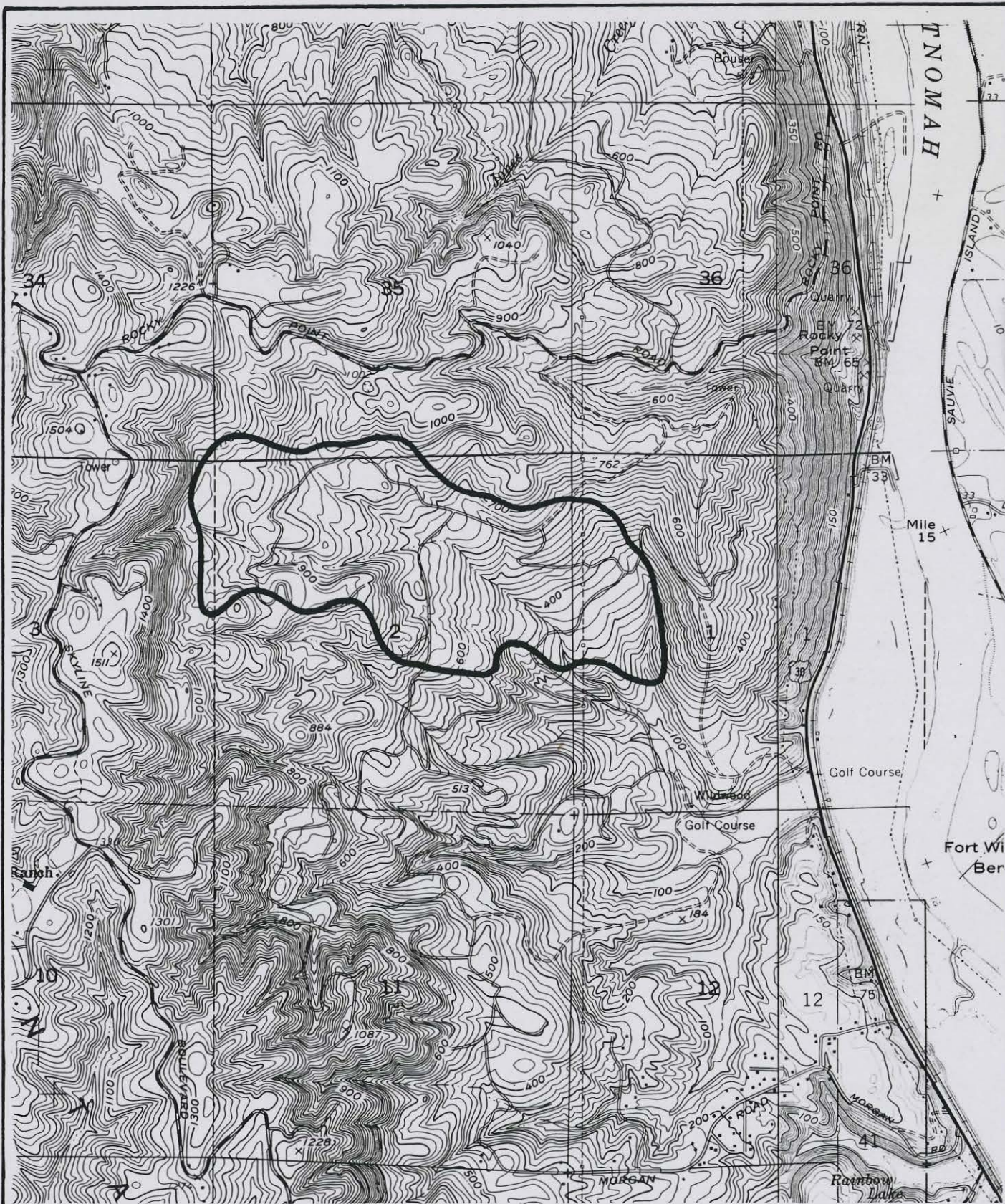
The Wildwood site is located in a canyon in rural northwest Multnomah County. The site proposed by DEQ is smaller and avoids some of the steeply sloped areas included in the landfill site previously proposed by the Metropolitan Service District. Nearby Multnomah Channel provides a hydrologic barrier for groundwater users. The potential landfill is a clearcut slope with no residences on site and few residences within a one mile radius of the site's center. The access road from Highway 30 would not pass by any residences. The underlying soil provides relatively good natural protection to drinking water wells. Potential instability and isolated steep slopes would require special engineering designs. A perennial stream would need diversion and protection. Wet soils would need a drainage system. The site is visible from Sauvie Island (one mile away) and for a short distance on Highway 30. Potential archaeological and historic resources will require additional study.

FOR MORE INFORMATION, PLEASE CALL DEQ LANDFILL HOTLINE: 229-5110  
OR WRITE: 811 S W 6TH, PORTLAND, OREGON 97204.

NOVEMBER 1986



DEPARTMENT OF ENVIRONMENTAL QUALITY • 811 S.W. SIXTH AVENUE • PORTLAND, OREGON 97204  
229-5696, OR 1-800-452-4011



U.S.G.S. QUADRANGLE  
 MAP SOURCE:  
**DIXIE MOUNTAIN**  
 SCALE: 1:24,000



**SITE  
 BOUNDARY  
 MAP**

**SITE NO.  
 M2**

**OCTOBER 1986**



## INFORMATIONAL BULLETIN

# BACONA ROAD POTENTIAL LANDFILL SITE

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### LOCATION (A map of the site is on the back of this sheet.)

The site is located in northern Washington County about 35 miles west of downtown Portland.

### PROPOSED ACCESS ROADS

State Highway 26 to the Vernonia Exit, then five miles north on State Highway 47 to Hoffman Road. The site is three miles to the east on Hoffman Road.

### SITE SIZE WITH BUFFER AREA

730 acres

### ESTIMATED LANDFILL LIFE

75 - 90 years

### SITE CHARACTERISTICS

The Bacona Road site is the most remote of the three potential sites. It is the highest elevation site and potential problems caused by winter weather will be addressed. The site is also the largest, with the longest expected life. Existing and adjacent land use is primarily commercial forest, with few residences located within two miles from the site's center. About half the site has been clearcut and portions of the remaining forest could provide a visual buffer. The site contains a natural bowl with moderate slopes that could be used as part of the active landfill. The site's engineering design will include a plan for diversion of the surface water on site and monitoring and protection of the groundwater. Access roads would need improvement with consideration for safety. Hoffman Road, the site's direct access road, is bordered by few residences. A sewer line to the site, or a leachate treatment system on site, would have to be constructed. A forest fire protection plan will be developed. Wildlife habitat will receive further study. The costs of transporting the wastes to the site will need to be carefully evaluated.

FOR MORE INFORMATION, PLEASE CALL DEQ LANDFILL HOTLINE: 229-5110  
OR WRITE: 811 S W 6TH, PORTLAND, OREGON 97204.

NOVEMBER 1986



DEPARTMENT OF ENVIRONMENTAL QUALITY • 811 S.W. SIXTH AVENUE • PORTLAND, OREGON 97204  
229-5696, OR 1-800-452-4011



U.S.G.S. QUADRANGLE  
 MAP SOURCE:  
**VERNONIA**  
 SCALE: 1:24,000



**SITE  
 BOUNDARY  
 MAP**

**SITE NO.  
 W29**

**OCTOBER 1986**

# A Trashy Story

a report from DEQ  
(if you have questions, call our Hotline: 229-5110)

Dealing with trash is easy. You get rid of it. And that's that. Right?

Not quite. Some folks drive by in a big truck on Tuesdays and pick it up. And that is that. Right?

Nope. 'Cause *they've* got to put it someplace, so their truck'll be empty to come back next Tuesday and do it all over again.

So they drive it to the good-old St. Johns landfill in north Portland, which has been graciously receiving that garbage for 54 years now, but which'll be full-up in less than 5 years.

So, by 1991 or before that *will* be that. For the St. Johns landfill.

## Whose Garbage Is It, Anyway?

All of us pitch-in to produce half of this whole state's solid waste—right here in Clackamas, Multnomah, and Washington counties. We toss away 962,000 tons a year; 755,000 of which go into landfill. That's enough gunk to fill Memorial Coliseum every month! (On a bad night for the Blazers you might prefer it.)

We are getting better about recycling stuff; putting it back into useful recirculation. Some 21% of our waste gets recycled, but the rest becomes part of north Portland's huge trash pile.

## If We Recycle More, We Dump Less

A lot more trash could be saved if it was separated before the garbage truck came along... newsprint, magazines, bottles and jars, cans. Used to make new paper, new glassware, new metal products, we'd save natural resources too.

But because we still toss more than we keep, there's this problem. Where do we put it after 1990?

## A Solution!

Oregon's 1985 Legislature told the Metropolitan Service District (Metro) to help us cutdown the waste we generate, and told the Department of Environmental Quality (DEQ—that's us) to find a new place to put what's left—the irreducible minimum. After starting a vigorous program to re-use all the stuff we can: glass, metals, paper, cardboard.

We wanted to get people... citizens like you... in on the action from day one, as participants not just observers. So we asked you to help

suggest the criteria we should use in evaluating potential landfill sites.

We held two hearings, convened a panel of experts, and during the whole public involvement process we met with 70 different community and civic groups. We found along the way agreement that there simply was no "perfect" place to dump our garbage.

## Enter The Siting Committee

Thus was born our Facility Siting Advisory Committee, in January, invited to serve by DEQ Director Fred Hansen—elected officials, a union officer, college president, business heads, civic group leaders.



To help them winnow sites we hired consulting engineers Brown & Caldwell of Eugene, who looked at every acre of land in the tri-counties, applied guidelines for judging if each "passed" or "failed," then put aside all but 142 as eligible for further in-depth study. The major qualifiers were that a new landfill must have the least impact on people and environment and be big enough so than another one wouldn't be needed just a few years from now. We decided 300 acres would be the minimum acceptable size, to serve our 1.3 million people for about 15 years.

## Analysis Was Thorough

Applying that basic size requirement and a bunch of other yardsticks took our engineers months. They considered flood potential, effect on wildlife, surrounding land uses, scenic values, traffic flow, groundwater depth... 41 criteria in all.

Then, in June, the consultants told our citizens committee their findings. The data was weighted numerically... so many points for this characteristic or that. Evaluating all the contenders, committee members finally chose the top 19 candidates for study this summer.

## The Winning Worked

A Marion County nomination was dropped when new research showed that the land sloped too steeply. The remaining 18 possible sites are candidates for a landfill which would have the least impact on densely populated urban areas and the environment.

Multnomah County contains 2 of the finalists; Washington County, 7, and Clackamas County, 9.

## Intense Scrutiny Underway

Starting August 11, we want your opinions and facts on these nominees. Meanwhile our engineers are exhaustively investigating each site. Geo-technicians are analyzing soils and groundwater. Biologists are studying fish and wildlife habitat. Land-use engineers are assessing such aesthetic problems as visibility, and whether additional buffer zones are needed. Landfill technicians are looking at drainage, lay-out, life expectancy. Traffic engineers are measuring access, potential road construction, traffic levels. And archeologists are looking for historical artifacts.

## Now... It's Your Turn

But your input is equally valuable. We're holding hearings near every site, beginning at 4pm, with a dinner break from 6 to 7. There'll be 3 hearings per evening, on August 11, 12, 13, 14, 18, and 20. Please phone 229-5110 for the exact meeting place nearest you.

## Then What?

When all the facts are in... yours and our engineers' scientific studies... DEQ will further reduce these 18 potential sites to a final 3 or 4. That short-list will go to our parent Environmental Quality Commission (citizens named by the Governor), which, with us, will supervise further, even more intensive study from approximately October 1st to March of 1987... 5 months of evaluation.

At which point we will choose a new site to replace St. Johns. And you will have been informed fully at every step of the way.

Our next column will talk about what makes a "good" landfill site. Meanwhile, call us with any questions, at any time: 229-5110.

*Thanks for joining-in.*

# A Trashy Story

the second landfill report from DEQ  
(if you have questions, please call our Hotline: 229-5110)

Here's the second article in our series on why and how Oregon's Department of Environmental Quality is approaching its unenviable job of finding a place to put our garbage, well into the 21st century.

We've said why we need a new landfill. St. Johns' is almost full. So what do we look for in picking a new site?

What would *you* consider? Least noisy, least smelly, least scenic, most accessible. The biggest empty lot you could find. And *not* near *you*. Right?

Same here. Except that it will have to be near somebody, else we'd all best prepare to store personal garbage in backyards, and/or discard nothing . . . which just won't work.

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## Some Musts

There are a couple of "musts". To become one of the study areas, a site must meet our pass-fail criteria: No landfills in a floodway, on a fault line, in dense housing, near an airport, on endangered species habitat, on an historic site, or on a steep slope. The site must be at least 300 acres and have a large buffer, to cut down the chance of seeing anything objectionable, hearing anything objectionable, or smelling anything objectionable.

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## The Critical Criteria

After we eliminated those sites which didn't meet our basic requirements, we selected 18 for study; areas in Multnomah, Clackamas, and Washington counties. How will we compare one with another? By the numbers. We assign each site characteristic a numerical value. A "perfect" site (there is none, we know) would rack-up 1950 points.

Points are assigned by looking at environmental, technical, and economic concerns. Let's break them down. That way, you can mentally apply these criteria to the sites we're looking at, or any others which you might feel are worthy prospects.

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## Maximum Protection

Environmentally, we first check water. Floods or year-round streams across the site are bad. Sites that might pollute nearby lakes, streams, or drinking water get a low score. Underneath we're looking for natural soil characteristics that will protect the groundwater from landfill pollution. Deep aquifers—at least 50 feet—are easier to protect than shallow ones, hence get more points. A site is better if no wells or springs are downgrade. High quality groundwater under the prospective site scores low.



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## Still More Yardsticks

How about flora and fauna? We'd prefer sparse vegetation, unfertile soil, and habitat that has already been "disturbed", with no endangered wildlife or flowers.

The best sites are heavy or rural industrial. Non-productive lands are more desirable than, say, productive crop or forest lands. What's next door? Pasture or industrial land is preferable to heavily built-up commercial/residential space.

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## Consider Air, History, Visibility

Will activity at the site have the minimum effect on air quality? Does the land have historic/archeological significance? If it's not visible from any existing homes, that's good. If visible to more than 20 homes within a mile, that's bad.

Top prospects shouldn't be in areas of "scenic importance". There should be no dwellings within 1000 feet. All truck access should be through non-residential areas.

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## It's Got To Last

The best site will last more than 30 years. Its soil won't let garbage-generated gas move off the site. It's best if a wastewater treatment plant is only a few miles away. (Rainwater that leaches through the landfill will be collected and treated.)

Landfill sites sloping only 5-10% are most desirable, with no sign of soil instability. Groundwater beneath the landfill should flow straight and be easy to monitor. Less than 50 inches of annual rain is better than, say, 80 inches, which increases leaching. Just as "normal" weather beats high winds and frequent snow/ice. Access roads without known traffic problems are preferred, as are locations near transfer stations.

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## Extra Dirt Is Good

There should be adequate "cover" (sandy soil works best) on site to spread over layers of garbage. Daily cover keeps odors, litter, and birds to a minimum. An arterial roadway up to truck-bearing standards, right by the site, would be ideal.

We'll be applying those considerations, plus your input, to the 18 study areas. Our consulting engineers' report will be delivered to DEQ and our Citizens Advisory Committee by October, at which time we aim to reduce the "eligible list" to 3 or 4 sites.

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## We'll Keep You Posted

Between October and March we'll "reach out and touch everyone" hopefully, with informational bulletins, during public meetings and by sharing our progress and problems with you in speeches and showing our newly-prepared audio-visual slidefilm.

If you'd like to ask a question, be added to our mailing list, or schedule our audio-visual presentation before your group, please phone us (DEQ) at 229-5110.

Next time we'll describe what our new landfill will look like, how it will operate, and what relief we'll all get from having it.



# A Trashy Story

the third landfill report from DEQ  
(please call us with any questions: 229-5110)

Let's see now. Where were we with the Forthcoming New Landfill Story? Oh yes, engineering consultants, and Department of Environmental Quality staff with help from our Citizens Advisory Committee, have winnowed down 142 possible sites to just 3.

We announced those on October 7th. They're the ones we'll now study through next spring, picking the finalist during summer, 1987.

Remember our groundrules? (A) There is *no* "perfect site"; (B) the best landfill sites are naturally sound environmentally... not too steep, with minimum potential to affect drinking water, wildlife, or people. That's what we have, three *good* sites.

Now what?

## "Mitigation" = "Protection"

All the time we'll be studying every foot of these three nominated sites we'll also be holding public meetings to help us prepare "mitigation plans"—a formal way of saying "neighborhood protection plans". Plans to minimize noise, odor, traffic and visual impacts.

The protection plan we adopt will become, in effect, law; part of the operating permit we'll grant to Metro to run the finally-chosen landfill.

## Construction Means Safeguards

After our Environmental Quality Commission has picked a final site, the Metropolitan Service District (under our continuously-monitored permit) will acquire the land, prepare it, plant buffer strips, install linings to protect groundwater and gas collection systems to control odor.

Now it's roughly July, 1990. The landfill's ready to accept waste. How will it work?

## Transfer Station Role

Your refuse haulers will dump waste at one of three "transfer stations"—intermediate stops, one each in Clackamas, Multnomah,

and Washington counties. Some of the waste may go to an incineration plant or composting facility now being considered by Metro. From there, large transfer trucks, which keep garbage completely enclosed, will move material to the new landfill.



## Small "Working Face"

Dumping at the new landfill will be limited to one small area at a time... only 1 to 5 acres will receive waste. After a certain volume of garbage has been received, bulldozers spread it into thin layers, tractors compact it, then dozers cover it with a sanitary soil layer, daily.

The size of our potential landfill sites—350 to 650 acres—may sound big. But, remember that much of that space is reserved for a visual buffer area. The rest of the landfill will be divided into "cells" about 40 acres in size. When full, that "cell" is closed and dumping moves to another small tract. There is no open dump burning.

Natural and man-made liners will protect groundwater. Uncontaminated surface water will be diverted around the site by drains and conduits. Leaching water will be collected, then treated or dispersed into sewer systems. Pipes inside the garbage will collect gases to control odors and produce energy.

## Then, One Day, It's Full

From the start we'll be planning its end... computing precisely how much garbage the site can handle, what its final height and acreage will be. We'll

specify what the final protective ground cover and plantings should be, and what *new* uses the land will be suitable for.

## The Watchful Eye Remains Open

But one doesn't simply walk away from a closed landfill. To keep it environmentally safe and useful in the future for other purposes, we'll prepare a monitoring plan. Metro engineers will have a system designed to alert them to any unusual fill activity calling for corrective measures... leaching into groundwater, excessive odor, gas escape.

## We'll Cut Garbage In Half

Pretend now the landfill is ready. Meantime, Metro and all tri-county cities over 4000 have recycling programs in place. So, together, we're putting about half of the 962,000 tons of waste we generate each year back into productive use.

Much of what's left could go to a burning or composting facility, further reducing waste for our new landfill.

## We All Win

As *The Oregonian* editors wrote: "The 'losers' (those unhappy about the final site locale) will be winners, when the dump eventually will be filled, for DEQ is proposing to leave the site better than it found it. Some community may find itself with a new park... or golf course, or some other community amenity."

By accommodating our own waste sensibly, and by reducing its volume dramatically—as we can—all of us will be winners.

## Call About Briefings

We'll be starting briefing meetings soon, to get your ideas on maximum protection for neighborhoods near a prospective landfill site. Please ask for our schedule by calling 229-5110.

# A Trashy Story

the fourth landfill report from DEQ  
(please call us with any questions: 229-5110)

We've devoted three previous columns to whys and wherefores of the solid waste landfill we'll site next year in our tri-county area.

Today we'll tell you, how, together, we can keep that landfill as environmentally inoffensive as possible.

Many still think landfill engineers simply dig a nice big hole and start dumping garbage in it. Wrong. Before one truckfull of waste is deposited on its surface, our job is to make that fill compatible with your neighborhood's scenic values, with your vehicular and pedestrian traffic flow, with your residential density . . . in short, with your lifestyle.

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## Enter — The 'NPP'

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That means our mutual challenge under Oregon law is to design Neighborhood Protection Plans for each of the three potential sites under consideration . . . Bacona Road in Washington County, and Wildwood and Ramsey Lake in Multnomah County . . . and to finish those NPPs by early spring.

To be sure we have your suggestions, DEQ is hosting workshops near each site (phone 229-5110 for the location closest to you) between November 17-20 and December 8-12. Additional workshops will be held in February.

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## What Is An 'NPP'?

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Our aim is to anticipate and solve problems arising from the fill's design, construction, operation, and even closure . . . before those problems materialize.

What, from engineering experience elsewhere and analysis

of each site's individual characteristics, will be the possible impact from odors, safety or security risks, noise levels, dust, scavenging birds or animals?

How can we minimize, or eliminate, potential damage to fish and wildlife habitat? How to best buffer the landfill from surrounding uses—roads, farms, forests, industrial, or residential neighbors?



Plus paying detailed attention to flood history, surface and ground water quality, existing land uses, and historical or archeological resources requiring protection.

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## How We'll Mitigate

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After identifying every conceivable site-specific problem, we must then list both problems and their solutions in our NPP. For example:

- the way we'll divert surface water during filling
- the way we'll vent, control, and dispose of landfill gas
- the way we'll line the landfill to protect subsurface water purity
- the way we'll control wind-blown litter
- the way truck traffic can interface safely with other vehicles
- the way we'll finally cover, seed, landscape, and close the fully

utilized landfill 20 years or more from now.

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## We Need Your Ideas

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Our consultants will be going over each of the 3 potential sites with, almost literally, a finetooth comb. But we still may not discover everything about each site that you already know.

So please come to one of our workshops. Pitch-in with your views and facts about potential problems and how you want them solved.

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## Here's Our Timetable

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We'll work first to complete Neighborhood Protection Plans for the 3 potential sites. In part, our policymaking body, the Environmental Quality Commission, will base its final site choice upon the merits or demerits of each NPP. We want our draft NPPs finished by next March. We need your input to prepare these drafts. Then it will be your time to review the report and tell your views to the Environmental Quality Commission at public hearings in April.

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## When Construction Begins

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Ultimately, this finally-approved NPP will become part of the EQC's formal order, to be issued by July 1, 1987, designating the new landfill site officially.

When the landfill opens in 1990-91, the reassuring thought is that you'll know, from day-one of that operation, that your quality of life is being protected, by a plan you helped create.

# A Trashy Story

the fifth landfill report from DEQ  
(please call us with any questions: 229-5110)

While we've been explaining the reason for a new solid waste landfill these past six months, a lot of you have kept saying "But can't you do something *else* with it?" (the 755,000 tons of garbage we toss away yearly).

So it's time to go back to basics.

Realistically, there are just four things you can do with 755,000 tons of junk, aside from jetting it to Venus, shipping it to Zanzibar, or letting it stack-up in the streets, a la Philadelphia and New York.

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## The Menu

**One:** re-use everything you can, by recycling it, for new glass, new metal, new paper and cardboard.

**Two:** compost it, *if* you can accommodate a hundred thousand tons.

**Three:** burn what's burnable, to make saleable steam or electricity.

**Four:** dump what's left; the unburnable, plus ash and cinders—in a well-chosen, well-tended landfill.

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## 'To Burn or Not to Burn?'

A lot of folks insist burning alone would take care of the whole garbage problem. Unhappily, not so.

It is one "alternative technology" which the 1985 Oregon Legislature told Metro to look into. You can burn to create energy (steam, electricity); you can convert waste into high-heat fuel for industrial boilers, or you

can turn it into a soil additive through composting.

But burning by itself does not completely dispose of the waste mass.

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## Not a Popularity Contest

And our tri-counties are apparently as sensitive about siting a huge incinerator as a landfill. Clackamas County residents passed six ballot measures in 1982 prohibiting a proposed Oregon City garbage burner. Marion County, however, built and operates a large burner only a few miles north of Salem.



Right now Metro is studying proposals from six engineering vendors to use "alternative technologies" to cut down our huge pile of waste, and Portland proper is fine-tuning a recycling program.

By next summer, most tri-county residents should have curbside pickup service available from their haulers—of recyclable newspaper, glass, metal, cardboard.

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## The Irreducible Minimum Remains

In time, then, our area may have a large garbage incinerator, may compost, may generate saleable steam, electricity, and/or gas from its waste. But even after *all* those applications (assuming we can afford them), there'll still be stuff left to bury.

Metals and broken china that don't vaporize at 1800-2500°; concrete, steel, rocky or excavation debris. This irreducible minimum—if we burned, say, 600,000 tons of nonrecyclable garbage a year—would total 120,000 tons... just of cinder and ash. And the contaminants left in garbage ash call for fullscale protective measures to defend and maintain surface and groundwater quality.

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## Best Site + Protection Plan = Goal

That's why we're doing what we're doing. With your help. Picking the best possible landfill site. Planning to protect you and it with the best conceivable Neighborhood Protection Plan. And engineering it to last well into the 21st century before a successor has to be sought.

DEQ favors Portland and Metro steps to reduce garbage volume with various new technologies. Meantime, your garbage keeps pouring in, must be disposed of, and demands that a new landfill open its gates no later than 3-4 years from now. We shall be ready with one.



## **LANDFILL SITING UPDATE**

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### THREE POTENTIAL SOLID WASTE LANDFILL SITES UNDER STUDY

In October 1986, the Department of Environmental Quality (DEQ) announced three potential landfill sites to serve the tri-county area after St. Johns Landfill closes in 1991. The sites are:

**Ramsey Lake** in North Portland's Rivergate Industrial District across the Columbia Slough from the existing St. Johns landfill;

**Bacona Road** in northern Washington County, about 35 miles west of downtown Portland near the Buxton Lookout on Green Mountain; and

**Wildwood** in northwest Multnomah County, about 15 miles from downtown Portland, across from Sauvie Island on the eastern flank of the Tualatin Mountains.

### WHAT IS A DRAFT SITE FEASIBILITY REPORT?

The Department of Environmental Quality siting process is following a 1985 legislative mandate outlined in Senate Bill 662. That bill requires the Environmental Quality Commission (EQC) to select the future tri-county landfill site by July 1, 1987. The EQC is a five member policy making board, appointed by the Governor for a four year term.

To assist the Commission in making the final landfill selection, a draft site feasibility report will be prepared for each site. These reports will include the results of DEQ's detailed site investigations conducted between October 1986 and February 1987. Each feasibility report will focus on three topics: 1) the technical feasibility of developing the site as a landfill; 2) a Neighborhood Protection Plan that will identify effects the landfill would have on the nearby community and how undesirable effects can be minimized; and 3) the cost of the site to acquire, develop, and operate as a landfill. A draft of each site's feasibility report will be available for public review in March 1987. The Commission will hold public hearings to hear your comments on the reports in April 1987.

### COMMUNITY OPEN HOUSE

The DEQ invites you to an open house for your site in February. An open house is an informal way to share information about the site's Neighborhood



Protection Plan --from identifying potential problems resulting from landfill use to discussing the range of measures available to safeguard both site and community from these problems. There will be displays and written materials outlining the protective measures being considered by DEQ. Department staff and its technical consultants will be available to discuss the site and answer questions.

An open house is not a public hearing. You are invited to attend at any time during the three hour gatherings.

### COMMUNITY OPEN HOUSE DATES

Wildwood  
February 4, 6-9 p.m.

Scappoose High School  
High School Way  
Scappoose, OR

Ramsey Lake  
February 10, 6-9 p.m.

St. Johns Community Center  
8427 North Central  
Portland, OR

Bacona Road  
February 12, 6-9 p.m.

Buxton Elementary School  
Fisher Road  
Buxton, OR

### PUBLIC REVIEW OF THE DRAFT SITE FEASIBILITY REPORTS

A summary of the draft site feasibility report will be available and mailed to you in early March 1987. Your comments on the reports may be presented at the April hearings or in writing to the DEQ.

The complete draft feasibility reports will be available for review by mid-March at the following locations:

St. Johns Branch, Multnomah County Library, 7510 N. Charleston, Portland; Banks Community Library, 450 Main, Banks; Vernonia Public Library, 919 Bridge, Vernonia; Scappoose Public Library, 52497 S.E. 2nd Street, Scappoose; and DEQ, (8th floor) 811 S.W. Sixth, Portland.

### APRIL PUBLIC HEARINGS

Public hearings will be held in April by the Environmental Quality Commission to receive review comments on the draft feasibility reports. There will be one hearing for each site. The dates and locations of the hearings will be included in the summary report you will receive in March. The hearing dates will be advertised at the February open houses and mailed to DEQ's siting mailing list.

FINAL SITE SELECTION

Following its April public hearings, the Commission will evaluate each site for suitability as a regional landfill. The EQC must select a site, or sites, by July 1987. The final selection will be made from the three potential sites identified in this newsletter.

COMMUNITY INVOLVEMENT

We urge you to attend a February open house. If you are unable to attend, please use our request form below to obtain more information.

If you have questions about the program or would like to schedule a DEQ speaker for group presentations, please call the Landfill Siting Hotline --- 229-5110. If your call is long distance, please leave a message on the toll-free number (1-800-452-4011) and we will return your call as soon as possible.

FOR MORE INFORMATION  
CLIP-AND-MAIL

-----  
DEQ, please mail for site: \_\_\_\_\_

\_\_\_\_\_ Add my name to DEQ's  
Landfill Siting Mailing List

\_\_\_\_\_ DEQ Landfill Siting  
Criteria Report

\_\_\_\_\_ Executive Summary (Oct. 86):  
Selection of 3 Potential Sites  
for Feasibility Analysis

\_\_\_\_\_ Other:

\_\_\_\_\_ Site Information Packet (Oct. 86):  
(rating sheets explaining  
each site's criteria rating)

\_\_\_\_\_  
\_\_\_\_\_

PLEASE PRINT:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

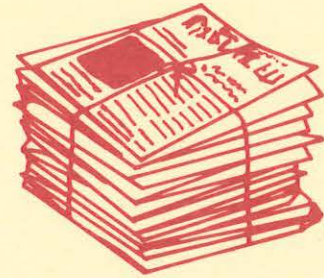
\_\_\_\_\_ Zip: \_\_\_\_\_

MAIL TO: DEQ, Landfill Siting Program, 811 S. W. Sixth Avenue, Portland, OR 97204

## TRASHY TALK

Each of us throws out about 4.5 pounds of trash each day -- which adds up to about one million tons in the Portland Tri-County area annually. It's a problem that we need everyone's help to solve.

A new landfill is only a part of the solution. The Metropolitan Service District and your local government are working to recycle waste to reduce the amount that must be buried. Each of us can help by reducing the amount of garbage that we throw "away", because there is no magical "away". Garbage will always have to go somewhere and that somewhere is going to be near someone. So . . . get involved in our siting program and also in reducing and recycling your own garbage.



January 1987

### **Department of Environmental Quality**

811 S. W. Sixth Avenue  
Portland, OR 97204

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# IMPORTANT . . . . .

# LANDFILL SITING UPDATE





1/9



Cow1

Director

DEPARTMENT OF ENVIRONMENTAL QUALITY

Please send copies to the EQC.

Cow1 - 1/19

Please put with my EQC

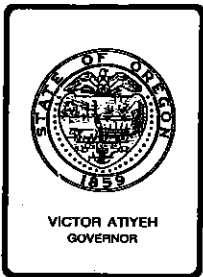
things for Friday.

Done  
PJ

JL

Thanks  
JL





## Department of Environmental Quality

1244 WALNUT STREET, EUGENE, OREGON 97403 PHONE (503) 686-7837

January 5, 1987

Howard Baker  
39409 Crawfordsville Dr.  
Sweet Home, OR 97386

Dear Mr. Baker:

I'm responding to your comments on field burning presented in the public forum at the Environmental Quality Commission meeting on December 12, 1986.

You indicated you never received a reply to a letter you sent to this office inquiring about the content of field burning smoke particulate and the public health implications.

I have reviewed our records for 1986 and have not found any letter from you on file. I did find a letter (undated) received at our Salem office on August 8, 1985 complaining about heavy smoke between Halsey and Brownsville on an unspecified day. A response to that letter was promptly sent.

I want you to know that we make every effort to respond to questions from the public as promptly as we can.

With regard to your question, a little is known about the physico-chemical characteristics of field burning smoke. I've enclosed a fact sheet containing information developed through research and monitoring over a period of several years. I've also enclosed an excerpt from our 1986 annual field burning report which describes our efforts to date to assess the health effects of burning.

While it is clear that many people are bothered by smoke, quantifying the health effects or risks of environmental pollutants is a costly and difficult task. Field burning smoke is particularly difficult to evaluate because of its localized and intermittent (short-term) characteristics. There has been very little study of this source at the federal level or by other states from which to draw information.

Nonetheless, we are currently conducting an analysis of the smoke from field and slash burning. Advancements in analytical techniques have made it feasible to measure a number of new chemical constituents associated with smoke in order to supplement what we already know. In addition, we will be evaluating any herbicide-related emissions which would be of particular health concern. An independent contractor will be assessing health risks based on this and other available information. A preliminary report is expected in March.

Sincerely,

Sean K. O'Connell, Manager  
Field Burning Program

SKO:pd



## STATE OF OREGON

## INTEROFFICE MEMO

TO: Fred Hansen

DATE: January 15, 1987

FROM: Tom Bispham *Tom Bispham*SUBJECT: AQ - Proposed Field Burning Rule Changes and  
Program Improvements

The attached letter and summary of proposals was sent to the Smoke Management Committee in December. It was sent with the intent of serving as a proposal for the Committee's review and our interest in considering any recommendation they might suggest. We plan to review this with you on February 3, 1987.

We are sensitive to the possibility that the proposal concerning propaning could be taken as a strong step to tighten control on this alternative. Some may comment that this represents unreasonable over-regulation; to the point that it isn't a viable alternative. Our point, very simply, is that problems with propaning are growing, they need to be corrected, and if Department or industry initiative isn't taken to prevent these problems, somebody else is going to dictate unreasonable changes. Our intent is to solve this ourselves. I do not believe the industry would argue that problems do not exist. Last season they recognized the problem and sent out a mid-season letter asking for cooperation.

The stack burning issue has some SIP/EPA implications which Sean is trying to clarify. By our February 3 meeting we should have a better understanding which hopefully allows us to define where we can go with this issue.

The above represents the most significant issues, however, we will be prepared to discuss the other items at our meeting with you.

TB:dj

Attachment



## Department of Environmental Quality

1244 WALNUT STREET, EUGENE, OREGON 97403 PHONE (503) 686-7837

December 12, 1986

Joe Jacobs, Chairperson  
Seed Council Smoke Management Committee  
Box 238  
Tangent, OR 97389

Dear Joe:

I've enclosed for discussion purposes the Department's proposed rule changes and program improvements for the next field burning season. Most of the regulatory changes we're tentatively recommending here don't directly deal with field burning at all, but instead deal with the related issues and problems of propane flaming, stack burning and preparatory burning.

This is not to say that smoke management doesn't have problems. Improved communications and consolidation of fire districts is needed. We're also concerned with the continued problem of residents in the outlying areas of the Valley experiencing a disproportionate share of the smoke. Residents in these areas have made the Environmental Quality Commission aware of their health concerns, and the Commission is becoming increasingly sensitive to this. And while we are not now proposing any major regulatory changes, I think that the industry and the Department should seriously discuss and consider Valley-wide performance standards, reduced burning of annuals and cereals, and any other options we have that would significantly reduce smoke impacts in the Valley. These issues are certain to be raised in the future.

With regard to the proposed rule changes, propane flaming has been a growing concern to us for several years. In 1984, we agreed to withdraw a proposed rule that would have allowed us to prohibit smoky propane operations on a case-by-case basis. Last year, at the industry's urging, we agreed to a voluntary approach in which a set of guidelines were developed and circulated to growers. While many growers have diligently tried to comply with these guidelines, the use of propaning and the associated problems continue to increase and, in our opinion, the regulations clearly need to be refined. We're proposing that several of the criteria listed in those guidelines be adopted as rule. We also propose that acreage to be propaned first be registered in the usual manner, requiring the \$1 per acre fee. This is to ensure that propaners pay their fair share of the costs of permitting (fire districts) and regulation (DEQ).

With regard to stack burning, we've been satisfied with the temporary approach of allowing straw stacks or bales to be burned under 4th priority status. While we are still awaiting results of this summer's testing of smoke emissions from stack burns, we believe only minimal restrictions are necessary at this time.

Preparatory burning proved to be a valuable activity this year when closely managed. With some limits, a special exemption for preparatory burning is proposed. A strict reading of the present rules (humidity restrictions) would not allow preparatory burning during the morning hours when it is best suited.

Finally, we have concerns about burning fields in which some of the straw has been removed. These fields tend to burn slowly and with poor plume rise which inevitably reduces the overall rate of burning. Another problem with a similar result is when growers try to burn with inadequate lighting or fire control capabilities, thereby slowing their neighbors. While everyone should have a reasonable opportunity to burn their share of the acres, it is also our policy to maximize burning under the best weather conditions and it is clear that grower response time and burning capabilities in some areas are impeding that effort.

In closing, we believe the proposed rule changes are reasonable and necessary to address current problems without unduly discouraging useful practices such as propane flaming, stack burning, and preparatory burning. We urge your consideration and endorsement of these proposals. I would hope to meet with the Smoke Management Committee after the first of the year to discuss these items. We must have our final proposals drafted by the first week of February in order to comply with the Environmental Quality Commission's meeting schedule.

Sincerely,



Sean K. O'Connell, Manager  
Field Burning Program

SKO:pd

cc: Dave Nelson  
Duane Hofer  
John Duerst  
Howard Mader

This is a list of DEQ proposed rule changes and program improvements for 1987.

PROPOSED RULE CHANGES:

1. Propane Flaming (PF)

Problem: Propane flaming (PF) activity has increased dramatically in the past 2 years due in part to the straw export market and minimal DEQ regulation. Nearby and downwind smoke impacts occur fairly frequently. Problems are attributed to the sheer number and density of PF, incomplete field preparation or excessive regrowth, improper operation (too fast, allowing fire to run), and meteorological factors (air stagnation, seabreeze).

Facts: Interpretation of the DEQ grower survey in June suggests that up to one-third of the growers use propaning and about 30-60,000 acres are treated at an average cost of \$16 per acre (excl. straw removal costs). An OSU study estimated costs at \$12 per acre. At least 70 complaints against PF were received this summer. At least 6 light intrusions from PF were measured in cities. PF curtailment "advisories" were issued by DEQ on 5 days with apparently good compliance. The majority of PF acreage is probably registered for FB although no records are available on this. Most of the removed straw is probably sold or used (not burned). Some fire districts require permits or notification, others don't. The Seed Council survey on stack burning gave similar estimates of propaning activity. Most respondents said they plan to increase their use of PF.

Needs: Awaiting results of emission/impact tests by OMNI.

Rule Changes:

1. Set basic criteria for flammers (e.g., must have deflector shield of minimum size).
2. Require propaned acreage to be registered (\$1 per acre) with other fields.
3. DEQ to issue daily propaning authorizations (allowed or prohibited) based on meteorological forecast criteria. Propaning will be prohibited on stagnant air days or when pollutant build-up is excessive.
4. Restrict propaning hours to 9 am - 6 pm.
5. Methods: maximum speed limit 5 mph (unless previously burned)  
require overlapping strips, beginning on downwind side  
require regrowth exceeding 6" be clipped and removed
6. All other current requirements for field preparation, fire permit, no open flames, etc., will remain in effect.

These rule changes would primarily address the problem operators: those that go too fast, skip passes, allow the fire to run, try to flame fields with excessive regrowth, and continue to PF under adverse meteorological conditions. The registration requirement will ensure that payments to districts will not decline as acreage shifts from open burning to PF. Monitoring PF will continue to use DEQ and district resources. Also, acreage to be PF will be mapped along with other fields so district agents can be aware of field location and owner. DEQ's daily authorizations are intended to prohibit PF only under strong persistent inversions when particulate levels are very high (nephelometer readings

above 1.0 - 1.5). This will probably affect 10 percent of the days or less. These rules do not require DEQ permits for PF nor do they intensively regulate the times, places and amounts of PF as is the case for field burning (except on a daily and Valley-wide "burn/no-burn" basis, similar to the way 4th priority ag burning is regulated).

## 2. Stack Burning (SB)

**Problem:** Increases in propane flaming (PF) and general restrictions on field burning have increased the need for disposing of baled straw by open burning. Allowing stack burning (SB) would result in a potential overall increase in emissions from grass seed residue because regulations do not now exempt SB from FB requirements (Attorney General opinion). DEQ has temporarily been allowing SB on 4th class burn days but a permanent regulatory strategy not resulting in a net increase in emissions is needed. This is important because federal EPA approval is required and will be difficult to attain if the regulatory changes relax control of overall emissions.

**Facts:** SB appears to burn cleanly when not too wet. Few complaints against SB are received except from neighbors or when stacks are burned with a field burn (not allowed). Seed Council survey had a somewhat low response rate but suggests that stack burning may not be very prevalent, although propane flaming is used by most of the respondents who burn stacks.

**Needs:** Awaiting emission tests taken this summer by OMNI.

### Rule Changes:

1. Set basic criteria for stacks (size, density, moisture) and lighting method if OMNI data shows these factors important to emissions.
2. Declare stack burning an approved alternative to field burning.
3. Allow stack burning on 4th class burn days, with fire permit, as has been allowed on a temporary basis the past two years.
4. No DEQ registration, permit, or fees to be required.

These loose controls are predicated on adoption of tighter controls on propane flaming to offset overall increases in emissions. EPA may view this as a relaxation of emission controls, requiring technical justification to the contrary.

## 3. Preparatory Burning

**Problem:** Preparatory burning of small areas (around bldgs., etc) has been encouraged and allowed in the mornings on problem fields so that rapid ignition can be employed when FB is later allowed. Few smoke problems or complaints were noted. Prep burning does appear to improve smoke management, however, technically it's not exempt from rules restricting burning under high humidity and poor ventilation index (typical during the morning when prep burning is allowed).

Facts: About 100 preparatory burns were allowed in 1986 on 22 days and experience indicates this was very helpful in speeding up regular burns and reducing ground smoke. DEQ authorizes each prep burn from a master list, developed when fields are phoned in by permit agents. Decisions are made based on meteorology and burns are generally allowed at 9-11 am, 1-3 acres in size, and burned by backfiring only.

Needs: None.

Rule Changes:

1. Re-define preparatory burning to include 5 acre limit (or as otherwise specified by DEQ) and backfiring requirement.
2. Exempt preparatory burning from ventilation index and humidity limits applicable to field burning (i.e., treat same as "experimental burning").

These changes should correct current rules which unduly restrict preparatory burning. EPA may view this as a relaxation of continuous emission controls (humidity exemption), requiring technical justification to the contrary, but the size restrictions may be sufficient to offset those concerns.

#### 4. Field Condition and Grower Lighting/Extinguishing Capabilities

Problem: There is a trend toward "gleaning" or removing part of the straw load from fields to either sell the straw or reduce crop burn-out, resulting in slow burns and low-energy ground smoke. Also a few growers chop straw off the combine or leave it in windrows rather than using straw spreaders, resulting in poor burns. Also, some growers lack equipment necessary to extinguish or control their fires or to burn at a reasonable rate. These can result in problem burns, too much ground smoke, and inefficient utilization of burn opportunities.

Facts: No information available on extent of partial straw removal followed by burning. DEQ '85 grower survey indicates half of respondents have only 1 lighting vehicle (actual number of torches may be higher) and 20% have less than 500 gal water capacity.

Needs: Information on extent of partial straw removal and agronomic effects if these fields were not allowed to be burned.

Rule Changes:

1. Add general requirement that fields be in good burnable condition including sufficient amount, condition, and distribution of residue to allow acceptable rate of burn and plume rise.
2. Add general requirement that growers have sufficient lighting (recommended minimum 2 igniters) and extinguishing (recommended minimum 500 gal water capacity) capabilities to expedite burning.

These rules are intended to be non-specific but should shore-up some weaknesses and inequity in the program by urging problem growers to improve their capabilities. Perhaps a policy that fields without a full straw load be burned only under general quota releases should be considered.



5. Miscellaneous Rule Changes

1. Re-define "Field Reference Code" to include crop type designation for perennial types (i.e., bluegrass, bentgrass, etc.).
2. Re-define "Fluffing" to specify what does and doesn't constitute adequate equipment/treatment (e.g., no harrowing, chains, etc.).
3. Clarify "Grower Allocation" definition to reflect straight percentage (100%) which is now used.
4. Clarify monitoring requirement specifying need to have a radio receiver in the field.
5. Clarify Director's authority to consider and incorporate into civil penalties any required fees that were avoided by the violation (e.g., burn fees if field was burned without a permit).
6. Rules should reference OAR 340-26-047 Section 5.2 (Visibility Protection Plan for Class I Areas) which are the new visibility regulations.

PROGRAM IMPROVEMENTS:

1. Consolidate Fire Districts

This is needed to improve efficiency and performance at the district level in many areas of the North Valley. Small districts receive inadequate compensation to give the attention necessary to do the job right. In several districts, agents can't be found when burning is opened up or are slow to issue permits or are unaware or insensitive to the basic rules, procedures, and objectives of the program. Many of the problems of communication, inequity and inefficiency can be improved with a shift toward fewer permit agents. Some suggestions for consolidation are:

Combine: McMinnville, Carlton, Yamhill, Dayton  
Move: Spring Valley to Marion #1/Salem  
Combine: Aurora, Canby, Molalla  
Combine: Mt. Angel, Monitor  
Move: Aumsville to Turner  
Move: Lyons to Stayton

These improvements will not work without active Seed Council and grower support.

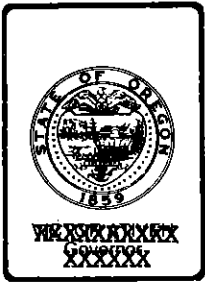
## 2. Improve Communication

Direct radio communications should be extended to nearly all agents within the Valley, which will be more feasible by consolidating districts. This speeds information to the agent for more efficient response to burn opportunities and opens up much needed dialogue between DEQ/Skywatch and the agent.

Toward this end, a professional communication system analysis is in order to review what equipment is available and appropriate for enhancing communications at 3 levels: Valley-wide broadcasts, communication between management team only, and communication between the local agent and the grower. The current radio system is at the end of its useful life and further expenditures on it are probably not warranted.

## 3. Miscellaneous

1. Evening "rapid ignition" burning needs refinements to eliminate problem burns and the better match number of burns to the conditions.
2. Weekend burning forecast procedure for visibility regulations will need to be worked out in detail. Complete involvement and coordination with DEQ and Forestry is essential.
3. Correct problems of collecting weather data and satellite pictures.
4. Discuss and prioritize modifications to the met/neph network.
5. Discuss and make changes to releases (modified charlie for Linn Co.) and zones (e.g., split Polk-Yamhill zone 1, Marion zone 3).



## Department of Environmental Quality

522 S.W. FIFTH AVENUE, BOX 1760, PORTLAND, OREGON 97207 PHONE: (503) 229-5696

Neil Goldschmidt  
Governor

January 20, 1987

Representative Nancy Rust, Chair  
House Environmental Affairs Committee  
Washington State Legislature  
State Capitol  
Olympia, Washington 98504

Dear Representative Rust:

We are writing to strongly support the 1987 wood stove legislation as drafted in House Bill 16.

Enabling legislation is essential to effectively reduce emissions from residential woodheating appliances. We believe a multi-pronged approach as outlined in this bill is the most practical way of dealing with both the long term and short term impacts from residential woodheating.

We strongly advocate adoption of DEQ/EPA compatible emission performance standards for new woodstoves to become effective July 1, 1988. A statewide program would also benefit Oregon's Woodstove Certification Program in that uncertified woodstoves are currently being sold to Oregon residents at several border areas in and near Vancouver and Walla Walla, Washington, delaying and diluting to some extent, the effectiveness of appliance conversion in Oregon to cleaner burning woodheaters.

We are also aware of some Oregon woodstove retailers who are wholesaling older, uncertified woodheaters to Washington retailers since they are now unable to market them in Oregon. The sooner emission standards are put into effect, the sooner "dumping" of cheaper dirty burning units will cease in Washington.

We urge inclusion of the following provisions in your statute adoption:

1. Curtailment authority - voluntary programs have not been successful, therefore, mandatory programs may be the most effective short term solution to airshed episode control. We believe woodheating curtailment programs will become a crucial control strategy to meet the new Federal PM-10 compliance requirements.
2. Opacity and fuel standards - these will help lessen the nuisance conditions frequently found in neighborhood "downwash" situations.
3. Surcharge on new stove sales - this will help finance necessary educational support programs.

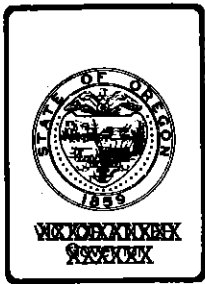
Representative Nancy Rust, Chair  
January 20, 1987  
Page 2

And finally, we support adopting these measures as part of the State of Washington's Clean Air Act to provide adequate authority to the State's local air pollution control agencies.

Sincerely,

Fred Hansen  
Director

FH:d  
AD126



## Department of Environmental Quality

522 S.W. FIFTH AVENUE, BOX 1760, PORTLAND, OREGON 97207 PHONE: (503) 229-5696

Neil Goldschmidt  
Governor

January 20, 1987

Senator Phil Talmadge  
Senate Parks and Ecology Committee  
Washington State Legislature  
State Capitol  
Olympia, Washington 98504

Dear Senator Talmadge:

We are writing to strongly support the 1987 wood stove legislation as drafted in House Bill 16.

Enabling legislation is essential to effectively reduce emissions from residential woodheating appliances. We believe a multi-pronged approach as outlined in this bill is the most practical way of dealing with both the long term and short term impacts from residential woodheating.

We strongly advocate adoption of DEQ/EPA compatible emission performance standards for new woodstoves to become effective July 1, 1988. A statewide program would also benefit Oregon's Woodstove Certification Program in that uncertified woodstoves are currently being sold to Oregon residents at several border areas in and near Vancouver and Walla Walla, Washington, delaying and diluting to some extent, the effectiveness of appliance conversion in Oregon to cleaner burning woodheaters.

We are also aware of some Oregon woodstove retailers who are wholesaling older, uncertified woodheaters to Washington retailers since they are now unable to market them in Oregon. The sooner emission standards are put into effect, the sooner "dumping" of cheaper dirty burning units will cease in Washington.

We urge inclusion of the following provisions in your statute adoption:

1. Curtailment authority - voluntary programs have not been successful, therefore, mandatory programs may be the most effective short term solution to airshed episode control. We believe woodheating curtailment programs will become a crucial control strategy to meet the new Federal PM-10 compliance requirements.
2. Opacity and fuel standards - these will help lessen the nuisance conditions frequently found in neighborhood "downwash" situations.
3. Surcharge on new stove sales - this will help finance necessary educational support programs.

Senator Phil Talmadge  
January 20, 1987  
Page 2

And finally, we support adopting these measures as part of the State of Washington's Clean Air Act to provide adequate authority to the State's local air pollution control agencies.

Sincerely,

Fred Hansen  
Director

FH:d  
AD126

FINAL DRAFT 12/86

1987 WOOD STOVE LEGISLATION

AN ACT Relating to wood stoves; adding new sections to chapter 70.94 RCW; creating a new section; and repealing RCW 70.94.770.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF WASHINGTON:

NEW SECTION. Sec. 1. In the interest of the public health and welfare and in keeping with the objectives of RCW 70.94.011, the legislature declares it to be the public policy of the state to control, reduce, and prevent air pollution caused by wood stove emissions. The legislature further declares it to be the public policy of the state to reduce wood stove emissions by encouraging the department of ecology to continue efforts to educate the public about the effects of wood stove emissions, other heating alternatives, and the desirability of achieving better emission performance and heating efficiency from wood stoves.

NEW SECTION. Sec.2. Unless the context clearly requires otherwise, the definitions in this section apply throughout sections 2 through 10 of this act.

(1) "Department" means the department of ecology.

(2) "Wood stove" means a solid fuel burning device other than a fireplace, including any fireplace insert, wood stove, wood burning heater, wood stick boiler, coal-fired furnace, coal stove, or similar device burning any solid fuel used for aesthetic or space-heating purposes in a private residence or commercial establishment, which has a heat input less than one million British thermal units per hour.

(3) "Fireplace" means any permanently installed masonry or factory-built metal appliance for burning solid fuel, designed with an open combustion chamber and without features to allow control of the combustion rate.

(4) "New wood stove" means a wood stove that has not been (a) sold at retail, bargained, exchanged, given away, or has had its ownership transferred from the person who first acquired the wood stove from the manufacturer, the manufacturer's dealer or agency, or a retailer, and (b) has not been so used to have become what is commonly known as "second hand" within the ordinary meaning of that term.

(5) "Solid fuel burning device" means any device for burning wood, coal, or any other non-gaseous and non-liquid fuel, including a wood stove and fireplace.

NEW SECTION. Sec.3. The department of ecology shall establish a program to educate wood stove dealers and the public about:

(1) The effects of wood stove emissions on health and air quality;



(2) How to achieve better efficiency and emission performance from wood stoves;

(3) Wood stoves that have been approved by the department;

(4) The benefits of replacing inefficient wood stoves with stoves approved according to Section 4 or of retrofitting inefficient wood stoves with emission control devices.

NEW SECTION. Sec. 4. Before January 1, 1988, the department of ecology shall establish by rule:

(1) Emission performance standards for new wood stoves. In developing the rules, the department shall consider regulations adopted by the federal government and other states. Emission standards, testing procedures, calculation and reporting methods, and labeling requirements should be compatible with federal regulation, as far as is practical, remaining consistent with the department's objectives of protecting human health and preventing injury to life and property from air pollution.

(2) A program to: (a) Determine whether a wood stove complies with the emission performance standards established in subsection (1) of this section; and (b) approve the sale of stoves that comply with the emission performance standards;

(3) Reasonable opacity limitation for residential solid fuel burning devices, including fireplaces, and provisions for its enforcement. The limitation shall not be more stringent than the state-wide requirement for industrial emission

points. Opacity shall be determined by a certified smoke reader, according to the method established by the department of ecology;

(4) Procedures for the designation, announcement, and enforcement of residential<sup>nc-</sup> burning days, in concert with the air pollution episode procedures established through RCW 70.94.715. Such procedures shall include voluntary curtailment of residential burning in devices which do not meet the emission performance standards established in paragraph (1) of this section, during periods of meteorologic conditions which are conducive to high ambient wood smoke levels, and mandatory curtailment of residential wood burning during forecast, alert, warning, and emergency conditions as defined in RCW 70.94.715. Residences which have no adequate source of heat except through the burning of wood shall be exempted from curtailment provisions. \*

NEW SECTION. Sec. 5. After July 1, 1988, no person shall advertise to sell, offer to sell, or sell a new wood stove in this state unless the wood stove has been approved by the department under the program established under section 4 of this act.

NEW SECTION. Sec. 6. If, after July 1, 1988, a person who advertises to sell, offers to sell, or sells a new wood stove in this state in violation of section 5 of this act shall be subject to the penalties and enforcement actions provided in

RCW 70.94.425, RCW 70.94.430, 70.94.431, and 70.94.435.

NEW SECTION. Sec. 7. The department shall establish a fund for the public education program on wood burning defined in Section 3 of this act. The department, with the advice of the advisory committee, shall set a flat fee for each solid fuel burning device sold at retail after January 1, 1988, excluding masonry fireplaces. The fee may be adjusted according to the Consumer Price Index. The fee will be collected by the department of revenue.

NEW SECTION. Sec. 8. The department shall establish an advisory committee to participate in the development of wood stove regulations, the design and implementation of the public education program specified in Section 3, and in establishing the fee and budget for the public education program. This committee shall include, but not be limited to, representatives of the wood heating industry, environmental groups, concerned citizens, the chimney cleaning industry, and affected government agencies.

NEW SECTION. Sec. 9. A person shall not cause or allow to be burned the following materials in any residential solid fuel burning device:

- (1) Garbage;
- (2) Treated wood;
- (3) Plastics;

- (4) Rubber products;
- (5) Animals;
- (6) Asphaltic products;
- (7) Waste petroleum products;
- (8) Paints; or
- (9) Any substance, other than properly seasoned fuel wood, which normally emits dense smoke or obnoxious odors.

NEW SECTION. Sec. 10. Coal shall not be burned in any residential solid fuel burning device, unless such device is a coal-fired furnace, is not designed for manual fueling, is the sole source of heat in a residence or commercial establishment, and was installed prior to July 1, 1987.

NEW SECTION. Sec. 11. Section 8, chapter 193, Laws of 1973 1st ex. sess. and RCW 70.94.770 are each repealed.

NEW SECTION. Sec. 12. Sections 2 through 10 of this act are each added to chapter 70.94 RCW.

NEW SECTION. Sec. 13. If any provision of this act or its application to any person or circumstance is held invalid, the remainder of the act or the application of the provision to other persons or circumstances is not affected.

NORMAN J. WIENER  
ATTORNEY AT LAW  
III S. W. FIFTH AVENUE  
PORTLAND, OREGON 97204-3699

January 15, 1987

224  
5050

Mr. Arno Denecke  
3890 Dakota Road, S.E.  
Salem, Oregon 97302

Dear Arno:

Yesterday I talked with your son, David, which prompts this letter.

If you are now about through with your Redwood case, please keep in mind that you still owe me a dinner. I haven't forgotten your prior invitation and you will recall I took a raincheck until your Redwood case was over.

On another matter, our mutual friend, Clair Nelson, was instrumental in my being appointed to the Standing Committee on Environmental Law of the American Bar Association. I am one of 11 members of that committee, and the only one from the West Coast. Enclosed is a copy of program which our committee is sponsoring to be held in Brussels in February. Mary and I will attend and then spend a week or so in Portugal. I thought you might be interested because David tells me that you are active in our state's environmental program and the Brussels one might be of interest to someone in your group.

In any event, happy new year.

Very truly yours,

*Norman*

*Fred*  
*If you want to get any information from conference call Wiener*  
*Arno*

*The American Bar Association  
and  
The Institute for European Environmental Policy  
Are Pleased to Announce  
a Conference on*

## **Environmental Regulation in The European Economic Community and the United States**

*A Program for Europeans Who Do Business in the U.S., Americans Who Do  
Business in Europe, and Those Interested in Comparative Policies and Laws  
Respecting Environmental Regulation in the EEC and the U.S.*

**February 26-27, 1987  
Brussels, Belgium**

*With the assistance of  
the Commission of the European Community  
The Bureau of National Affairs, Inc.  
and the  
International Environment Reporter*

Kim L. Vaughn  
AMERICAN BAR ASSOCIATION  
Standing Committee on Environmental Law  
1800 M Street, N.W.  
Washington, D.C. 20036 U.S.A.

**ENVIRONMENTAL REGULATION  
IN THE EUROPEAN ECONOMIC COMMUNITY  
AND THE UNITED STATES**

February 26-27, 1987 Brussels, Belgium

## **ENVIRONMENTAL REGULATION IN THE EUROPEAN ECONOMIC COMMUNITY AND THE UNITED STATES**

Environmental regulation in Europe and the United States deals with similar problems in different ways. Moreover, within the European Economic Community there exist both community-wide directives and national systems of regulation. Increasingly, American and European firms have occasion to do business in each other's countries—in jurisdictions with unfamiliar environmental requirements. This conference is designed to expose both Europeans and Americans to the others' systems of environmental regulation and to promote dialogue on these systems. It is designed to introduce the subject to the legal practitioner, to affected industry officials, and to those interested in comparative understanding of the differing environmental regulatory systems.

Specific program topics include introductions to the environmental regulatory systems of selected European Economic Community nations and of the United States, as well as the role played by the EEC itself. Separate panels or speakers discuss the contrasting institutional and administrative frameworks and their implications for environmental policymaking; the role of law and lawyers in environmental regulation; and the role of technical and economic analysis in environmental regulation. Further panels will be devoted to specific topics of mutual concern, including chemicals regulation, chemicals accident prevention, cleanup, and liability, environmental impact assessment laws, and the regulation of air emissions from power plants and from automobiles.

The speakers and panelists include distinguished practitioners, public officials, and legal scholars. The proceedings will be simultaneously translated into English, French, and German. The conference is designed to allow ample interchange between the speakers and the conference attendees.

# PROGRAM

## THURSDAY, FEBRUARY 26

8:00 a.m. to 9:00 a.m.  
**REGISTRATION**

9:00 a.m. to 9:15 a.m.  
**OPENING SESSION**

*Prof. Ernst U. von Weizsäcker*  
Director, Institute for  
European Environmental Policy  
Bonn, West Germany

*William H. Coldiron, Esquire*  
Gough, Shanahan, Johnson & Waterman  
Former Solicitor, U.S. Department of the Interior  
Chairman, Standing Committee on  
Environmental Law, American Bar  
Association (ABA SCEL)  
Helena, Montana, U.S.A.

9:15 a.m. to 9:30 a.m.  
U.S. ENVIRONMENTAL LAW—  
AN OVERVIEW

*Prof. Richard B. Stewart*  
Harvard Law School  
Member, ABA SCEL  
Cambridge, Massachusetts, U.S.A.

9:30 a.m. to 9:45 a.m.  
EEC ENVIRONMENTAL LAW—  
AN OVERVIEW

*Dr. Ludwig Krämer*  
Commission of European Communities  
Environment and Consumer Protection  
Department  
Brussels, Belgium

9:45 a.m. to 10:00 a.m.  
GERMAN ENVIRONMENTAL LAW—  
AN OVERVIEW

*Prof. Dr. Eckard Reh binder*  
Faculty of Law  
Frankfurt University  
Frankfurt, West Germany

10:00 a.m. to 10:15 a.m.  
FRENCH ENVIRONMENTAL LAW—  
AN OVERVIEW

*Prof. Christian Huglo*  
Avocat à la Cour  
Chargé d'Enseignement à l'Université  
de Paris I  
Paris, France

10:15 a.m. to 10:30 a.m.  
**BREAK**

10:30 a.m. to 10:45 a.m.  
BRITISH ENVIRONMENTAL LAW—AN  
OVERVIEW

*Prof. Richard Macrory*  
M. A., Barrister  
Centre for Environmental Technology  
Imperial College of Science & Technology  
London, England

10:45 a.m. to 11:00 a.m.  
DUTCH ENVIRONMENTAL LAW—AN OVERVIEW

*Dr. Piet Gilhuis*  
Senior Lecturer in Constitutional, Administrative,  
and Environmental Law  
Tilburg University  
Tilburg, The Netherlands

11:00 a.m. to 12:30 p.m.  
**PANEL DISCUSSION**  
CONTRASTING CONSTITUTIONAL,  
INSTITUTIONAL, AND ADMINISTRATIVE  
FRAMEWORKS—THE IMPLICATIONS FOR  
ENVIRONMENTAL POLICYMAKING

Moderator:  
*Turner T. Smith, Jr., Esquire*  
Hunton & Williams  
Former Chairman, ABA SCEL  
Richmond, Virginia, U.S.A.

Panel Members:  
*Prof. Richard B. Stewart*  
*Dr. Ludwig Krämer*  
*Prof. Dr. Eckard Reh binder*  
*Prof. Christian Huglo*  
*Prof. Richard Macrory*  
*Dr. Piet Gilhuis*

12:30 p.m. to 2:00 p.m.  
**LUNCH**

2:00 p.m. to 2:30 p.m.  
**LUNCHEON ADDRESS**

THE ROLE OF LAW AND LAWYERS IN  
ENVIRONMENTAL REGULATION

*Lord Nathan*  
Chairman, Subcommittee F (Environment)  
Select Committee on the European Community  
House of Lords  
London, England

2:30 p.m. to 4:00 p.m.  
**PANEL DISCUSSION**  
THE ROLE OF TECHNICAL AND ECONOMIC  
ANALYSIS IN ENVIRONMENTAL REGULATION

Moderator:  
*Prof. Richard B. Stewart*

Panel Members:  
*William F. Pedersen, Jr., Esquire*  
Verner, Lipfert, Bernhard, McPherson & Hand  
Former Associate General Counsel  
U.S. Environmental Protection Agency  
Washington, D.C., U.S.A.

*Nigel Haigh*  
Director, London Office  
Institute for European Environmental Policy  
London, England

*Dermot Glynn*  
Managing Director  
National Economic Research Associates, Inc.  
London, England

*Louis Jourdan*  
Conseil Européen des Fédérations de  
l'Industrie Chimique (CEPIC)  
Brussels, Belgium

4:00 p.m. to 4:15 p.m.  
**BREAK**

4:15 p.m. to 5:30 p.m.  
**PANEL DISCUSSION**  
CONTRASTING ENVIRONMENTAL POLICY  
CHOICES—POWER PLANTS AND AUTOMOBILES

Moderator:  
*Prof. Ernst U. von Weizsäcker*

Panel Members:  
*Chalmers Carr, Solicitor*  
Central Electricity Generating Board  
London, England

*Henry V. Nickel, Esquire*  
Hunton & Williams  
Washington, D.C., U.S.A.

*Ernst R. Klatte*  
Secretary General  
European Environmental Bureau  
Brussels, Belgium

*Dr. Siegfried de Witt*  
Attorney at Law  
Freiburg, West Germany

5:30 p.m. to 7:00 p.m.  
**RECEPTION**

Sponsored by *Hunton & Williams*  
and *nie/rla*

## FRIDAY, FEBRUARY 27

9:00 a.m. to 10:45 a.m.  
**PANEL DISCUSSION**  
CHEMICALS REGULATION—U.S. AND EEC

Moderator:  
*Dr. Ludwig Krämer*

Panel Members:  
*Dr. Goffredo Del Bino*  
Head, Chemicals Branch, DG-XI  
Commission of European Communities  
Brussels, Belgium

*David Zoll, Esquire*  
Vice President and General Counsel  
Chemical Manufacturers Association  
Washington, D.C., U.S.A.

*Louis Jourdan*  
CEPIC  
Brussels, Belgium

*José N. Uranga, Esquire*  
Director of Environmental Permitting/  
Environmental Counsel  
IT Corporation  
Member, ABA SCEL  
Torrance, California, U.S.A.

*Jan Henselmans*  
Stichting Natuur en Milieu  
Utrecht, Holland

*Cynthia Whitehead*  
Editor  
*European Environment Review*  
Brussels, Belgium

10:45 a.m. to 11:00 a.m.  
**BREAK**

11:00 a.m. to 12:00 noon  
**A DIALOGUE**  
ENVIRONMENTAL IMPACT ASSESSMENT  
LAWS IN EUROPE AND  
THE UNITED STATES

*Nicholas C. Yost, Esquire*  
Dickstein, Shapiro & Morin  
Member, ABA SCEL  
Former General Counsel, U.S. Council on  
Environmental Quality  
Washington, D.C., U.S.A.

*Myles McSwiney*  
Commission of European Communities  
Brussels, Belgium

12:00 noon to 1:30 p.m.  
**LUNCH**

1:30 p.m. to 2:00 p.m.  
**LUNCHEON ADDRESS**  
THE FUTURE OF ENVIRONMENTAL LAW  
IN EUROPE

*Prof. Alexandre Kiss*  
Centre du Droit de l'Environnement  
Strasbourg University  
Strasbourg, France

2:00 p.m. to 3:30 p.m.  
**PANEL DISCUSSION**  
CHEMICALS ACCIDENT PREVENTION and  
CLEANUP—THE SEVESO DIRECTIVE,  
SUPERFUND, and LIABILITY ISSUES

Moderator:  
*Norton F. Tennille, Jr., Esquire*  
Arnold & Porter  
Member, ABA SCEL  
Washington, D.C., U.S.A.

*Turner T. Smith, Jr., Esquire*

*Dr. Ludwig Krämer*  
*Richard G.P. Hawkins, M.A.*  
Barrister, FRSA, FRSC, MinstWM  
Cleanaway Limited  
Essex, England

*Dr. jur. Bernhard M. Maassen*  
Mueller, Weitzel, Weisner  
Frankfurt, West Germany

*Jean-Marie Devos*  
Conseiller Juridique  
Conseil Européen des Fédérations de  
l'Industrie Chimique (CEPIC)  
Brussels, Belgium

3:30 p.m. to 3:45 p.m.  
**CLOSING REMARKS**  
*William W. Falsgraf, Esquire*  
Baker & Hostetler  
Immediate Past President, American Bar  
Association  
Former Chairman, ABA SCEL  
Cleveland, Ohio, U.S.A.

3:45 p.m.  
**ADJOURNMENT**



# CONFERENCE INFORMATION

**CONFERENCE CHAIRMAN:** Turner T. Smith, Jr., Hunton & Williams, Richmond, VA

**REGISTRATION FEE:** \$225 U.S. (\$175 U.S. if received by January 26, 1987)  
450 Deutsche marks (DM 350 before January 26, 1987)

Fee includes all sessions, materials, lunches and a reception. Registrations by mail must be accompanied by full payment in U.S. currency for U.S. participants, and West German currency for non-U.S. participants. See registration form for further details. Telephone and Telex registrations must be paid in full before the symposium or during the symposium registration period on February 26. A limited number of discounted fees may be available for students and low-income registrants.

## HOTEL ACCOMMODATIONS

A block of sleeping rooms at the Hotel Astoria has been set aside for registrants at a special group rate of 2500 Belgian Francs (approximately \$60 U.S., DM 119) plus tax. Breakfast is available at 380 BF (\$9 U.S., DM 18). This block of rooms will be held until February 9. Registrants must make their own reservations, and early reservations are recommended. Please mention the Institute for European Environmental Policy when contacting the hotel for reservations. For additional information or reservations, contact: L. Bosch, Directeur Général, Hotel Astoria, 103 rue Royale, 1000 Bruxelles, Belgium (tel. 02.217.62.90; telex 250.40).

## RECEPTION

A reception will be hosted on February 26 by the Washington, D.C., Richmond, VA, and New York law firm of Hunton & Williams and by the London office of National Economic Research Associates, Inc. (n/e/r/a), consulting economists.

## CANCELLATION POLICY

Full refunds less a \$20.00 charge for administration and materials will be given for cancellations received no later than February 17. Thereafter, a \$50 service charge will be assessed. No refunds will be made after the opening session. Substitutions may be made at any time. Requests for refunds must be made in writing, addressed to the American Bar Association's Washington, D.C., office. Registrants will be responsible for hotel and all other charges resulting from cancellations.

## CLE CREDIT

U.S. attorneys admitted to the Bar of states with mandatory CLE should so indicate on the registration form so that this program can be filed for accreditation in the appropriate jurisdictions.

## THE SPONSORS

### American Bar Association

The American Bar Association (ABA) is the national organization of the legal profession in the United States. The ABA carries out a wealth of public and professional service projects including publications, conferences, seminars, and model legislation; develops policy and testifies before the U.S. Congress; and promotes ethics and continuing education within the legal profession. Association goals include advancement of the rule of law in the world and provision of leadership in improvement of the law.

The Standing Committee on Environmental Law (SCEL) is an 11-member committee of environmental lawyers selected by the ABA President. Operating since 1970, the Committee conducts an annual law and policy conference, publishes a quarterly newsletter distributed worldwide, carries out special projects in environmental law, and facilitates communication among over twenty ABA environmental law committees.

### Institute for European Environmental Policy

The Institute for European Environmental Policy (Bonn, Paris, London) is an independent body for the analysis of environmental policies in Europe. It seeks to increase awareness of the European dimension of environmental protection and to advance policymaking. It is characterized by a close involvement with parliaments, by a wide network of contacts, and by an ability to operate in several countries simultaneously. The Institute is an integral part of the European Cultural Foundation, but it has its own Board responsible for priorities and programs.

In order both to increase its information base and thus enable it to analyze different aspects of environmental policy, and to complement the financial contribution made by the European Cultural Foundation, the Institute regularly undertakes research and comparative studies. This work is funded by European and national public authorities and also by private foundations. The results are made public.

## APPLICATION FOR REGISTRATION

*In U.S. Return to:*  
Kim L. Vaughn  
American Bar Association  
1800 M Street, N.W.  
Washington, D.C. 20036

*Outside U.S. Return to:*  
Ernst U. von Weizsäcker  
IEEP  
Aloys-Schulte Strasse 6  
D-5300 Bonn 1  
Federal Republic of Germany

Register me for the Conference on Environmental Regulation in the EEC and the United States, to be held February 26-27, 1987, in Brussels, Belgium.

*(Please type or print)*

Name \_\_\_\_\_

Title \_\_\_\_\_

Organization \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State or Country \_\_\_\_\_ Postal Code \_\_\_\_\_

Telephone (Area Code) \_\_\_\_\_

Admitted to the following U.S. State Bar(s) \_\_\_\_\_

Signed \_\_\_\_\_

Registration Fee: U.S. \$225 (or DM 450) (\$175 U.S. or DM 350 if received by January 26, 1987). Fee due upon application.

In U.S., make checks payable to American Bar Association. Outside of the U.S., make check or money order payable to IEEP, and return to IEEP. To transfer payment directly to IEEP, advise in a letter accompanying registration application, and transfer your payment to account no. 256463, Commerzbank Bonn (Bank no. BLZ 38040007).

To register by phone in the United States, call Kim Vaughn at (202) 331-2276. To register by phone in Europe, call IEEP at (2-28) 21 38 10 in Bonn. To register by Telex, use Telex No. 886885 FEC D.

Note: Registrations received by February 17, 1987, will be confirmed by return mail.



# News Release

DECEMBER 21 1987

OFFICE OF THE DIRECTOR

87-7

Contact: Mike Gearheard  
EPA/Portland  
(503) 221-3280

Carolyn Young  
DEQ/Portland  
(503) 229-6271

January 22, 1987

## FOR IMMEDIATE RELEASE

Allied Plating Inc., a chrome plating facility located at 8235 NE Union Street in Portland, Oregon, was proposed today by the U.S. Environmental Protection Agency for eligibility in the national Superfund program to clean up hazardous waste.

For more than 25 years--until the company closed in January 1984 claiming bankruptcy--electroplating wastes were discharged into an unlined 1.5 acre pond adjacent to the Columbia Slough.

Metals from the chrome plating process have settled into the soil beneath the pond, according to records of EPA and the Oregon Department of Environmental Quality. An analysis of water in the pond shows small amounts of heavy metals. However, sludges on the bottom of the pond have high concentrations of copper, nickel and chromium. Soil under the pond is also contaminated with wastes including nickel, copper, chromium, lead, zinc, barium, cyanide and arsenic.

Since the ground water level is close to the surface in this area, a potential threat to water supplies exists. Chromium and barium have been detected in the groundwater under the Allied property at levels above those recommended for drinking; also, radiation above normal background levels has been detected in the groundwater. However, preliminary testing of drinking water and industrial wells near the site have not found any contamination.

Superfund designation would make money available for all necessary investigation and clean-up work at the Allied Plating site, if the owners of Allied Plating are unwilling or unable to pay for those activities themselves.

Allied Plating was among 64 new sites around the country proposed today by EPA for Superfund designation. It was the only site in the Pacific Northwest to be proposed today.

There are now 11 sites in Oregon, Idaho and Washington that have been proposed for the Superfund list. Twenty-seven other sites in those three states have already gone through the proposal process and have received final superfund designation (see attachment). Nationally, there are a total of 248 proposed sites and 703 designated sites.

Today's announcement of the new proposals opens up a 60-day public comment period. Final Superfund designation can be made only after EPA reviews and responds to comments made by the public.

Anyone wishing to submit comments or additional information concerning the Allied Plating site should send them to the following address:

Russel H. Wyer, Director  
Hazardous Site Control Division (NPL Staff)  
Office of Emergency and Remedial Response  
U.S. Environmental Protection Agency  
401 M Street SW (WH-548E)  
Washington, D.C. 20460

January 22, 1987

## SUPERFUND SITES IN THE PACIFIC NORTHWEST

As of today, there are now 27 sites in Washington, Idaho and Oregon that have already gone through the EPA proposal-public comment process and have been officially designated as being eligible for participation in the Superfund clean-up program.

## In Washington (19)

Northwest Transformer	Everson	Whatcom County
Midway landfill	Kent	King County
Western Processing	Kent	King County
Queen City Farms	Maple Valley	King County
Harbor Island	Seattle	King County
Commencement Bay-South	Tacoma Channel	Tacoma Pierce County
Commencement Bay-Nearshore/Tideflats	Tacoma	Pierce County
Ponders Corner	Lakewood	Pierce County
American Lake Gardens	Tacoma	Pierce County
Toftdahl Drums	Brush Prairie	Clark County
Frontier Hard Chrome	Vancouver	Clark County
Pesticide experimental laboratory	Yakima	Yakima County
FMC Corporation	Yakima	Yakima County
Silver Mountain Mine	Loomis	Okanogan County
Mica landfill	Mica	Spokane County
Northside landfill	Spokane	Spokane County
Greenacres landfill	Greenacres	Spokane County
Kaiser Aluminum	Mead	Spokane County
Colbert landfill	Colbert	Spokane County

## In Idaho (4)

Bunker Hill smelter complex	Kellogg	Shoshone County
Union Pacific sludge pond	Pocatello	Bannock County
Pacific Hyde & Fur Recycling	Pocatello	Bannock County
Arrcom (Drexler Enterprises)	Rathdrum	Kootenai County

## In Oregon (4)

Gould	Portland	Multnomah County
Martin-Marietta	The Dalles	Wasco County
Teledyne Wah Chang	Albany	Linn County
United Chrome Products	Corvallis	Benton County

\*\*\*\*

With today's proposal to add one more location to the Superfund list, there is now a total of 11 places in the Pacific Northwest where Superfund designation is pending. The complete list of proposed sites:

## In Washington (9)

Hidden Valley landfill (Thun Field)	Puyallup	Pierce County
Old Inland pit	Spokane	Spokane County
Wyckoff Company	Bainbridge Island	Kitsap County
(*)Naval Undersea Warfare Station	Keyport	Kitsap County
(*)Landfill No. 5	Fort Lewis	Pierce County
(*)Wash rack/treatment area	McChord AFB	Pierce County
(*)Ault Field	Whidbey Island NAS	Island County
(*)Seaplane base	Whidbey Island NAS	Island County
(*)Ordnance Disposal	Bangor	Kitsap County

## In Oregon (2)

(*)Umatilla lagoon	Umatilla Army Depot	Umatilla County
Allied Plating	Portland	Multnomah County

(Asterisks indicate the sites are Department of Defense facilities)

D.E.O.

We have been recycling cans, bottles, news papers for ~~three~~ years and newspaper for about five years. The records we have sent are for 1985 because our 1986 records are with our tax account right now. We have been getting a good turn out and are getting more recycling all the time.

Thank you

Jud Wemont  
Sanitary Service

Jack Young Secretary

DEC 23 1938