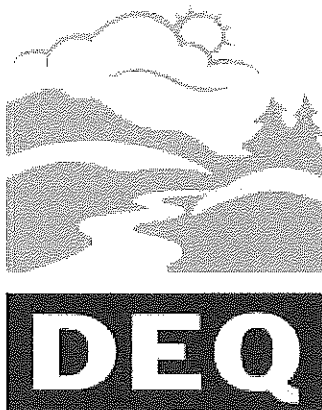


OREGON  
ENVIRONMENTAL QUALITY  
COMMISSION MEETING  
MATERIALS 01/21/1994



State of Oregon  
**Department of  
Environmental  
Quality**


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State of Oregon  
Department of Environmental Quality

Memorandum

Date: January 21, 1994

**To:** Environmental Quality Commission  
**From:** Harold Sawyer   
**Subject:** Petition for Rulemaking -- EEE ZZZ Lay Drain Company

Attached is a Petition for Rule Amendment filed by EEE ZZZ Lay Drain Company on January 19, 1994.

Statute requires the Commission to either deny the petition in writing or initiate rulemaking within 30 days. This effectively requires the Commission to either act at the January 28 meeting or hold a special meeting. The petitioner is pressing for consideration at the January 28 meeting.

I have advised the petitioner's attorney that the matter may be considered as the last agenda item on January 28, 1994. I will notify him on Monday if that is not possible.

I have asked that a brief staff report be prepared along with a recommendation as soon as possible. Assuming the item will be on the agenda, the staff report will be sent to you next week.

Thanks.

1                   BEFORE THE ENVIRONMENTAL QUALITY COMMISSION  
2                   OF THE STATE OF OREGON

3 In the matter of the petition of Northwest            )  
4     EEE ZZZ Lay Drain Co. to amend                    )     PETITION FOR RULE AMENDMENT  
5     340-71-100(53) and modifying OAR 340-71-260    )  
6     thru 340-71-360, and OAR 340-73-060(2)        )     (ORAL PRESENTATION  
7     of Oregon, Administration Rules, Chapter 340,    )     REQUESTED)  
8     Divisions 71 & 73                                    )

9                                   I. INTRODUCTION AND SUMMARY

10                   Pursuant to ORS 183.90 and OAR 137-01-070, Northwest EEE ZZZ Lay Drain  
11     Company respectfully petitions the Commission to amend OAR 340-71-100(53) page 71-6  
12     and modify OAR 340-71-260 thru 360 and page 71-57 thru 71-93 and OAR 340-73-060(2) ,  
13     page 73-17 thru 20 of the On-Site Sewage Disposal Rules at or before the Commission's  
14     scheduled January 27 and 28, 1994 meeting.

15                   OAR 340-71-100 (53) establishes a definition for "Filter Material" for use in septic  
16     drain field systems. The definition is intended to give regulators and installers a guideline  
17     for acceptable filter material to be used in on-site septic effluent disposal systems.  
18     Specifically, OAR 340-71-100(53) provides:

19                   "Filter material" means clean washed gravel ranging from three quarters ( $\frac{3}{4}$ )  
20     to two and one half ( $2\frac{1}{2}$ ) inches in size, or clean crushed rock ranging in size  
21     from one and one half ( $1\frac{1}{2}$ ) to two and one half ( $2\frac{1}{2}$ ) inches.

22                   The difficulty posed by this definition is that it excludes other scientifically proven  
23     material, in particular, recycled Expanded Polystyrene Aggregate (EPS). Although the  
24     current definition is intended to provide high-quality septic effluent drainage and to maintain  
25     the quality of public waters and to protect the public health, the definition prohibits all other  
26     filter material, including drain material scientifically proven to be demonstrably a better  
27     effluent filter material. The absolute nature of the definition has a substantial negative effect  
28     for recycling efforts for EPS throughout Oregon. In addition, there is a significant negative  
29     economic effect to the State of Oregon due to the barrier to job creation because EPS

1 recycled material is unavailable in the marketplace. Furthermore, the rule negatively effects  
2 the state's environment by increasing the amount of EPS in the waste stream and  
3 unnecessarily burdening the state's landfills.

4 OAR 340-71-260 establishes criteria for Alternative Systems, General. The advent of  
5 new drain material and sound engineering practice used for construction design should allow  
6 for this rule to be modified to include a new section that provides for the use of Expanded  
7 Polystyrene Aggregate Systems. OAR 340-71-260(1)(2)(3)(4) provides:

8 (1) For the purpose of these rules "Alternative System" means any  
9 Commission approved on-site sewage disposal system used in lieu of the  
10 standard subsurface system.

11 (2) "Sewage Stabilization Ponds" and "Land Irrigation of Sewage" are  
12 alternative systems available through the Water Pollution Control Facilities  
13 (WPCF) permit program.

14 (3) Unless otherwise noted, all rules pertaining to the siting,  
15 construction and maintenance of standard subsurface systems shall apply to  
16 alternative systems.

17 (4) General Requirements:

18 (a) Periodic Inspection of Installed Systems. Where required by  
19 rule of the Commission, periodic inspections of installed alternative  
20 systems shall be performed by the Agent. An inspection fee may be  
21 charged.

22 (b) A report of each inspection shall be prepared by the Agent.  
23 The report shall list system deficiencies and correction requirements  
24 and timetables for correction. A copy of the report shall be provided  
25 promptly to the system owner. Necessary follow-up inspections shall  
26 be scheduled.

27 In June of 1992, Northwest EEE ZZZ Lay Drain Company submitted to the  
28 Department of Environmental Quality scientific information and documentation for approval  
29 of Expanded Polystyrene Aggregate Systems for drain field application. Since that time the  
30 company has submitted additional support for utilization of recycled EPS and answered all  
31 questions addressed to it by the Department. Furthermore, the Director of the Department  
32 has created a Technical Advisory Committee to revise the On-Site Sewage Disposal Rules.



1 This Committee has made significant progress on revising the existing rules but has not  
2 developed any proposed rules to address recycled expanded polystyrene applications.

3 The Advisory Committee work to date has been commendable. However, further  
4 delay in addressing the use of recycled EPS will continue the negative economic and  
5 environmental consequences stated above.

6 For these reasons, Northwest EEE ZZZ Lay Drain Company respectfully asks the  
7 Commission to adopt proposed amendments to OAR 340-71-100(53) and to modify OAR  
8 340-71-260 thru 340-71-360 to add a new section and to modify 340-73-060 (2).

9 The effect of the proposed amendments and modifications would, as a practical  
10 matter, provide new tax revenues, jobs and a major recycling facility in the State.

## 11 II. PETITIONER

12 Petitioner's full name and address is:

13 Northwest EEE ZZZ Lay Drain Company  
14 P.O. Box 654  
Gresham, Oregon 97030

15 Northwest EEE ZZZ Lay Drain Company is an Oregon, woman business enterprise (WBE),  
16 an Emerging Small Business (ESB), and a Disadvantaged Business Enterprise (DBE) as  
17 recognized by the Oregon Department of Consumer and Business Services, Office of  
18 Minority, Women and Emerging Small Business, operating under a licensing agreement from  
19 EEE ZZZ Lay Drain Company, Inc., whose address is P.O. Box 867 Pisgah Forest, NC  
20 28768.

21 Northwest EEE ZZZ Lay Drain Company is represented in this  
22 matter by:

23 Vincent P. Salvi, OSB No. 78479  
24 Weiss, Jensen, Ellis & Botteri  
25 2300 US Bancorp Tower  
111 SW Fifth Avenue  
Portland, Oregon 97204

26 Northwest EEE ZZZ Lay Drain Company is an "interested person" as that term is

1 used in ORS 183.90 and OAR 137-01-070(1), because it is an applicant for amendments to  
2 existing rules. The proposed amendments would allow the Department to prioritized a rule  
3 change.

### 4 III. OTHER INTERESTED PERSONS

5 The proposed amendments would be limited, as a practical matter, to material  
6 recycled at Northwest EEE ZZZ Lay Drain Company's proposed recycling facility.  
7 Northwest EEE ZZZ Lay Drain Company is not aware of any other person who might be  
8 affected by the proposed amendments.

### 9 IV. RULES TO BE AMENDED

10 Petitioner asks the Commission to amend, at its scheduled January 27 and 28, 1994  
11 meeting, OAR 340-71-100(53) Page 71-6 of the ON-SITE SEWAGE DISPOSAL RULES,  
12 State of Oregon Department of Environmental Quality, Oregon Administrative Rules,  
13 Chapter 340-Divisions 71 and 73 as follows (the proposed amendment is shown by underling  
14 with new proposed rules following):

15 340-71-100(53) Delete existing.

16 Replace with:

17 "Drain material" means clean, washed gravel, clean crushed  
18 rock, or other distribution media approved by the Director or  
19 designee for the purpose of distributing effluent throughout the  
20 soil disposal system. When gravel or crushed rock is used it  
21 should range from three quarters ( $\frac{3}{4}$ ) to two and one-half ( $2\frac{1}{2}$ )  
22 inches in size and no more that 1% by weight shall pass a  $\frac{3}{4}$   
23 inch sieve. Whatever material is used shall be durable and inert  
24 so that it will maintain its integrity and not collapse or  
25 disintegrate with time. (See Diagrams 6, 7, 9, 12, 14, 15, 16,  
26 and 17)

1 340-71-\_\_\_ Conventional Expanded Polystyrene Aggregate (New)

2 (1) For the purpose of these rules

3 (A.) "Conventional Expanded Polystyrene Aggregate"

4 means an on-site sewage disposal system consisting of a septic  
5 tank, distribution unit and gravity-fed absorption facility  
6 constructed in accordance with section (2) of OAR 340-71-220  
7 rules as modified by (2) below, utilizing expanded polystyrene  
8 aggregate for the purpose of filtering and distributing the  
9 effluent back into the soil.

10 (2) Expanded Polystyrene Aggregate Systems shall be constructed  
11 pursuant to OAR 340-71-220(2) and the manufacture's installation and sizing  
12 criteria, Exhibit A.

13 (3) Expanded Polystyrene Aggregate Systems may be permitted on any  
14 site that fully complies with the criteria for the installation of a standard  
15 subsurface sewage disposal system, as identified in OAR 340-71-220(2) and  
16 (3) as modified by Section (2) above, and 340-71-260(3).

17 340-73-060 PIPE MATERIALS AND CONSTRUCTION (New)

18 . . .

19 (2) .  
20 .

21 (g) Expanded Polystyrene Aggregate Systems (EPSAS)  
22 shall be constructed using a four inch perforated corrugated  
23 plastic pipe with three holes ASTM F 405 standard specification  
24 for corrugated polyethylene (PE) tubing, surrounded by EPS  
25 aggregate, held in a cylindrical shape by a ten inch diameter,  
26 high strength polyethylene netting. Aggregate tubes shall be

1 constructed using a cylindrical ten inch netting filled with EPS  
2 aggregate.

3 The EPS aggregate tubes and the pipe surrounded by  
4 EPS shall be in ten foot sections.

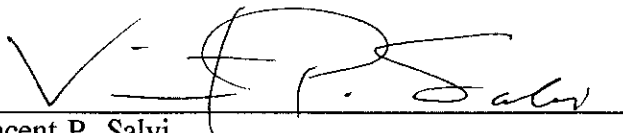
5 (h) When four or six inch diameter corrugated plastic  
6 tubing is used for EPSAS, it shall be certified as complying with  
7 applicable ASTM standards, F405 and F2412. The corrugated  
8 tubing shall have three rows of holes, each hole between one-  
9 half inch and three fourths inch in diameter, and spaced  
10 longitudinally approximately four inches on center, the rows of  
11 holes may be equally spaced 120 degrees on center around the  
12 peripher, or three rows may be located in the lower portion of  
13 the tubing, the outside rows being approximately on 120-degree  
14 centers. All pipe shall be surrounded by the EPS aggregate as  
15 stated above.

16  
17 Conclusion

18 For the reasons set forth above, Northwest EEE ZZZ Lay Drain Co. requests the  
19 Commission to initiate expedited rule making to adopt the proposed rule amendments and  
20 modifications.

21 DATED: January 18, 1994.

22 WEISS, JENSEN, ELLIS & BOTTERI

23  
24 

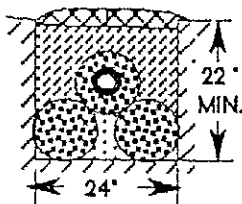
25 Vincent P. Salvi  
26 Of Attorneys for  
Northwest EEE ZZZ Lay Drain Co.

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**SIZING BY PANKOW'S EQUATION**

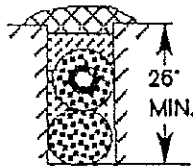
FOR OREGON APPLICATIONS

Note: \*Required linear feet is based on a 2' wide by 1' deep stone trench as determined from Table 4 and 5 of the Oregon rules.



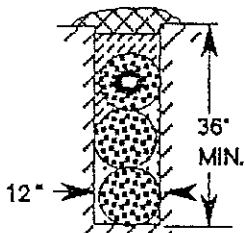
**2003 TRIANGULAR INSTALLATION**

linear ft. X 0.67 = \_\_\_\_\_ linear ft.  
 EXAMPLE - 125 linear ft. required.\*  
 125 X 0.67 = 84 linear ft.  
Use 90 ft.



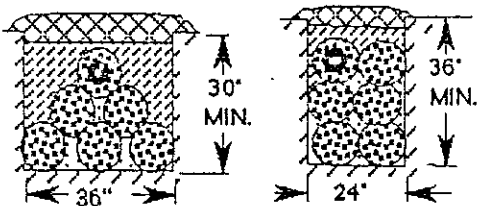
**2002 VERTICAL INSTALLATION**

linear ft. X 0.73 = \_\_\_\_\_ linear ft.  
 EXAMPLE - 125 linear ft. required.\*  
 125 X 0.73 = 91 linear ft.  
Use 100 ft.



**2003 VERTICAL INSTALLATION**

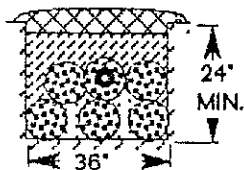
linear ft. X 0.39 = \_\_\_\_\_ linear ft.  
 EXAMPLE - 125 linear ft. required.\*  
 125 X 0.39 = 49 linear ft.  
Use 50 ft.



**2005 TRIANGULAR INSTALLATION**

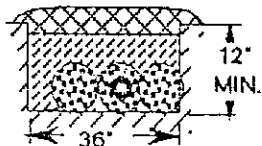
**2006 VERTICAL INSTALLATION**

linear ft. X 0.30 = \_\_\_\_\_ linear ft.  
 EXAMPLE - 125 linear ft. required.\*  
 125 X 0.30 = 38 linear ft.  
Use 40 ft.



**2006 HORIZONTAL INSTALLATION**

linear ft. X 0.42 = \_\_\_\_\_ linear ft.  
 EXAMPLE - 125 linear ft. required.\*  
 125 X 0.42 = 53 linear ft.  
Use 60 ft.



**2003 SHALLOW INSTALLATION**

linear ft. X 1.00 = \_\_\_\_\_ linear ft.  
 EXAMPLE - 125 linear ft. required.\*  
 125 X 1.00 = 125 linear ft.  
Use 130 ft.

THIS SIZING IS SUPPORTED BY

EEE ZZZ LAY DRAIN ONSITE WASTE WATER DISPOSAL SYSTEMS EXPERIENCE AND ENGINEERING SUPPORT

BY KENNETH O. PANKOW, PE AS PRESENTED AT

THE NATIONAL ENVIRONMENTAL HEALTH ASSOCIATION 57TH ANNUAL EDUCATIONAL CONFERENCE

JULY 1993

TESTIMONY OF ALEX MAUCK  
IN SUPPORT OF  
PETITION FOR RULE AMENDMENT

TESTIMONY PRESENTED TO THE  
ENVIRONMENTAL QUALITY COMMISSION

By  
Alex S. Mauck  
President  
Northwest EEE ZZZ Drain Co.  
January 27, 1994

PURPOSE:

Northwest EEE ZZZ Lay Drain Co. is petitioning the Environmental Quality Commission for expeditious change to OAR 340-71-100 (53), 340-71-260 thru 360 and 340-73-060 which will allow for the installation of recycled expanded polystyrene (EPS) as a replacement for rock in standard septic drain field systems.

BACKGROUND:

Northwest EEE ZZZ Lay Drain Co. is a Woman Business Enterprise (WBE), an Emerging Small Business (ESB), and a Disadvantaged Business Enterprise (DBE), operating in Oregon under a licensing agreement from EEE ZZZ Lay Drain Company, Inc. of Pisgah Forest, North Carolina. The parent company was founded in 1987 by brothers Michael and Randy Houck to produce recycled expanded polystyrene (EPS) aggregate as a replacement for or alternate to gravel and stone in drainage applications. All of the EPS used in the assembly process is scrap material from consumer, commercial or industrial uses which would otherwise go into landfills. The consumption of foamed and expanded polystyrene in the United States is about 6 pounds per capita per year. About 1 pound (or one cubic foot) per capita per year of EPS or other

**DESCRIPTION OF PRODUCT:**

In EEE ZZZ Lay Drain products the lightweight EPS aggregate is held in a cylindrical shape by a 10 inch diameter high strength polyethylene netting. Ten foot long assemblies are manufactured filled with EPS aggregate only, or with a four inch perforated, corrugated plastic pipe surrounded by EPS aggregate. The ten foot long assemblies are provided with means to connect the cylinders during installation end to end to form a continuous pipe surrounded by EPS aggregate. A single assembly with pipe is termed EEE ZZZ Lay Drain 2001. If an application requires that more EPS aggregate be installed in a single trench than is provided with the 2001, additional cylinders without pipe are added and the installation is termed 2002, 2003, etc., depending on the total number of cylinders installed in each trench. The products and manufacturing methods have resulted in two patents and three patents pending.

**DESCRIPTION OF ASSEMBLY PLANT:**

Due to the lightweight of EPS, the manufacturing plant can be located anywhere within 500 miles of end shipping destinations. Because of this advantage, Northwest EEE ZZZ Lay Drain Co. plans to locate in a Severely Affected Community (SAC) as defined by the State of Oregon. Senior management has met with city officials and House Majority Leader, Beverly Clarno regarding site location. Ex. D, E. Construction consists of a 60' X 120' building with adequate space for parking and storage. Several dozen construction jobs will be created with a full time work force of 15-20 people. Northwest EEE ZZZ Lay Drain Co. is committed to the extent feasible to hire local displaced timber workers as minimal training is necessary. The plant



expects to gross \$750,000 in 1st year sales with an increase in sales of 25% per year for the first five years resulting in 5th year sales of approximately \$1,800,000.00. The plant is expected to be the largest recycler of EPS waste in the Northwest at its inception. As mentioned previously, there are no adverse environmental impacts and significant environment gains.

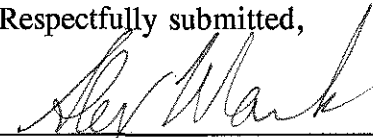
REASONS FOR PROMPT DEQ ACTION:

Northwest EEE ZZZ Lay Drain Co. has been approached by neighboring states to locate its facility elsewhere but desires to locate in Oregon. It is senior management's, the City of Maupin's and House Majority Leader Clarno's position that further delay in approving use of recycled EPS would be a big loss to Oregon not only economically but environmentally. Prompt action is needed for:

- Completion of financing activities
- Completion of site evaluation and plant engineering
- Market development
- Training procedures
- Construction of manufacturing plant

After approval by DEQ, a period of at least 9 to 18 months is needed for construction and installation of special manufacturing equipment. The plant and job opportunities can only be realized by prompt DEQ action.

Respectfully submitted,



---

Alex Mauck

## EXHIBITS

- (A) Kenneth O. Pankow, P.E., EEE ZZZ Lay Drain On Site Waste Water Disposal Systems Experience and Engineering Support.
- (B) Ruling No.92-10P, Oregon Building Codes Agency
- (C) Kenneth O. Pankow, P.E., The Use of Expanded Polystyrene as an Aggregate in Drainage
- (D) Sherry Holiday, Mayor, City of Maupin, letter dated December 16,1993
- (E) Majority Leader, Beverly Clarno, House of Representatives, letter dated December 15,1993

## SUPPLEMENTAL INFORMATION

- (F) Ade O. Oke, Principal Engineer Environmental Health Section, Georgia Department of Human Resources, December 16, 1992
- (G) Donald E. Williamson, M.D., State Health Officer State of Alabama Department of Public Health, June 8, 1993
- (H) State of Florida Department of Health and Rehabilitative Services Environmental Health Services, Two Year Alternate System Permits
- (I) Southern Building Code Report No. 8971
- (J) Allen M. Hurst, Jr., District 2 B, Litter Coordinator, Oregon Department of Transportation, letter dated April 13, 1993
- (K) Paul Egly, Location Manager, Western Insulfoam, April 8, 1993
- (L) Terry Youngs, Sales Manager, Marko Foam Products, Inc., letter dated April 8, 1993
- (M) Cindy A. Tyree, Vice President, Northwest Foam Products, Inc., April 14, 1993
- (N) Jean Haedrich, Purchasing Agent, Vtech Computers, Inc., April 15, 1993
- (O) Dick Poulson, Building Services Supervisor, Building Services Section, Clackamas County, November 23, 1993
- (P) Ray Huff, R.S., Director, Malheur County Environmental Health Department, December 27, 1993
- (Q) Stanley E. Petrasek, R.S., Environmental Health Division, Lane County, December 21, 1993
- (R) Mike Mahoney, Home Owner, Troutdale, Oregon, December 6, 1993
- (S) Jesus Borboa, Certification Specialist, Oregon Department of Consumer and Business Services, letter dated January 18, 1994

**EEE ZZZ LAY DRAIN  
ONSITE WASTEWATER DISPOSAL SYSTEMS  
EXPERIENCE AND ENGINEERING SUPPORT**

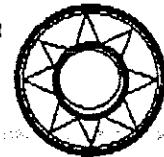
**BY KENNETH O. PANKOW, PE**



**PANKOW ENGINEERING COMPANY  
1278 HENDERSONVILLE ROAD  
ASHEVILLE, NC 28803  
704-274-8218**

MANUFACTURED BY

**EEE ZZZ LAY DRAIN COMPANY, INC.  
P.O. BOX 867  
PIGGAH FOREST, NC 28769  
704-283-2130**



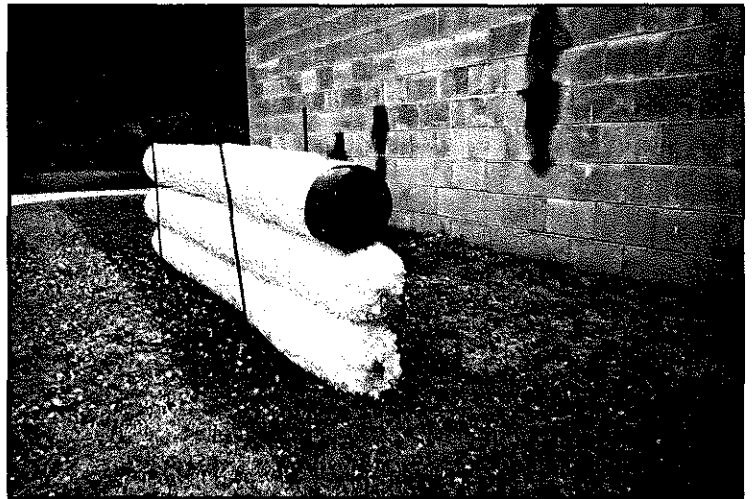
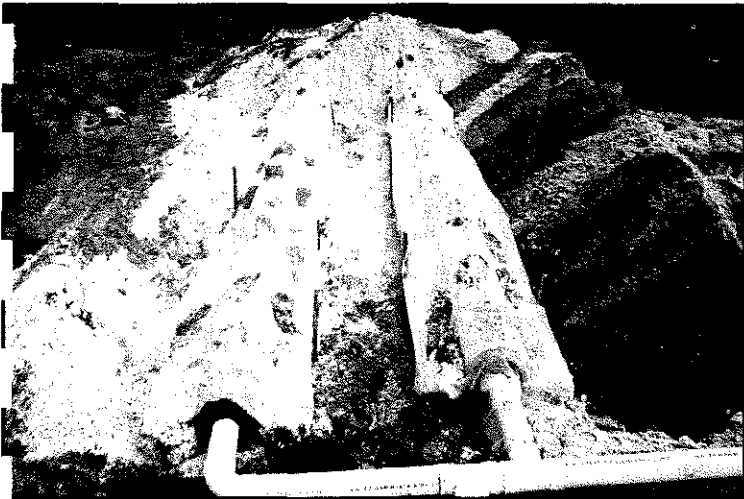
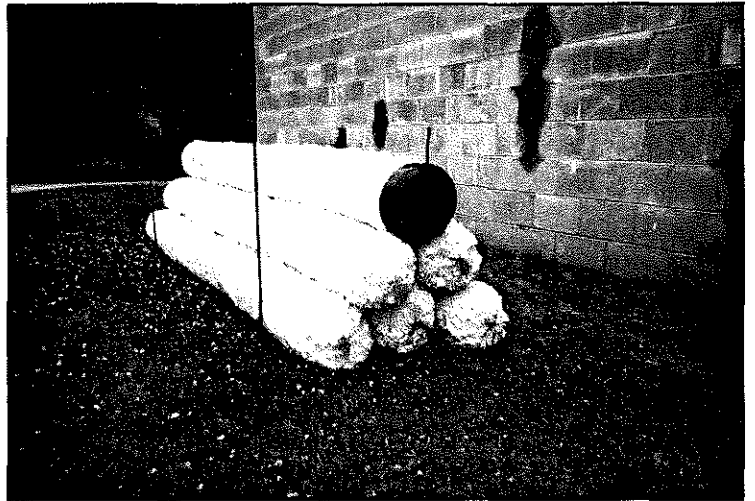
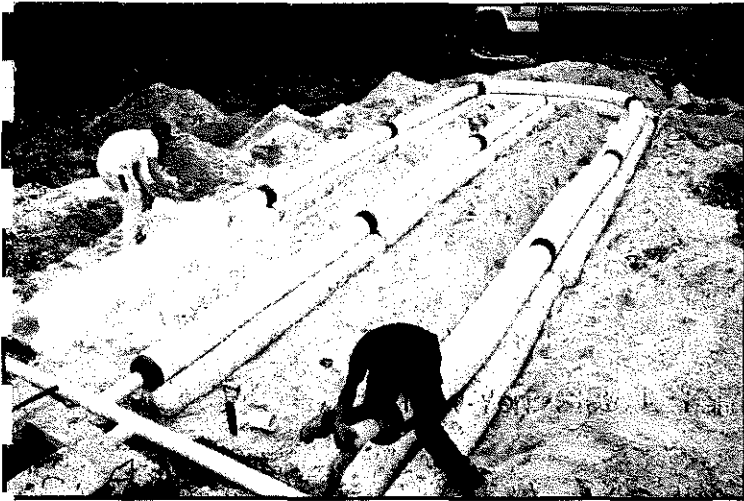
AS PRESENTED AT  
THE NATIONAL ENVIRONMENTAL HEALTH ASSOCIATION  
57TH ANNUAL EDUCATIONAL CONFERENCE  
JUNE 1993  
EDITED JULY 1993

**ABSTRACT**

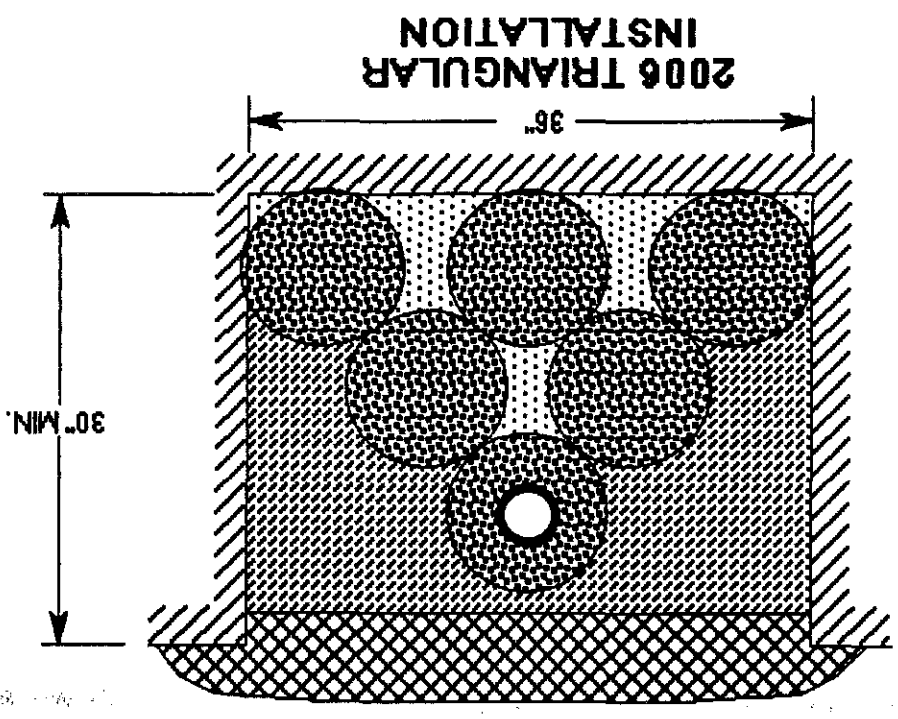
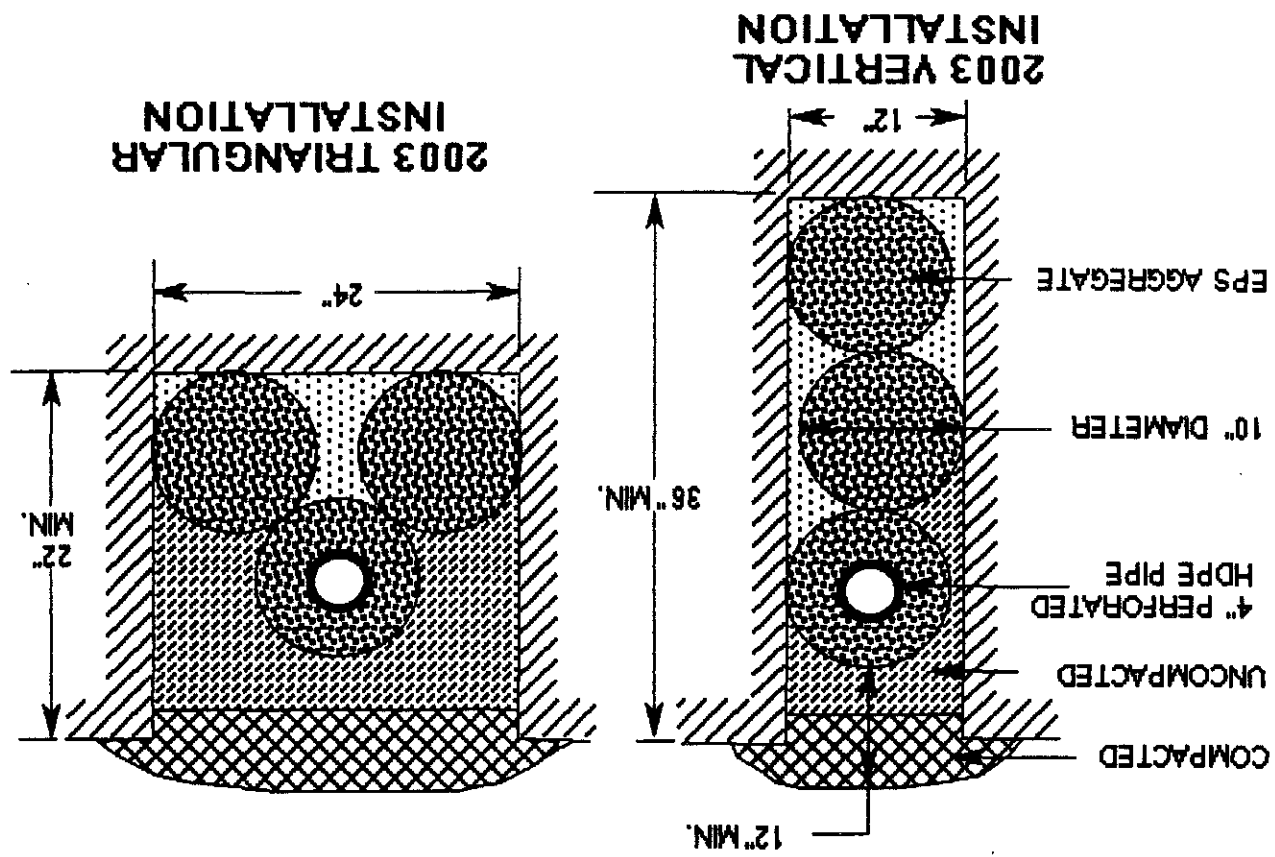
The EEE ZZZ Lay Drain Company, Inc., offers an unprecedented ten year warranty on superior performing septic fields made of recycled material. New technology has produced innovative systems which preserve the environment by saving land for the future. The combination of experience and engineering has resulted in an outstanding, labor saving, quality product.

EEE ZZZ LAY DRAIN EXPERIENCE AND ENGINEERING SUPPORT

Page 2.



TRENCH CROSS SECTIONS OF EEE ZZZ LAY DRAIN SYSTEMS



### EEE ZZZ LAY DRAIN WASTEWATER DISPOSAL SYSTEMS

The EEE ZZZ Lay Drain ground absorption system is like a conventional trench system except that expanded polystyrene (EPS) aggregate is used in place of stone aggregate and the overall shape is modified. EPS is a material commonly used in products such as hot drink cups and protective packaging. The EPS used in EEE ZZZ Lay Drain is manufactured from recycled material.

The EPS aggregate is held in a cylindrical shape by polyethylene netting. The cylinders are 10" in diameter and 10' long. Some of the assemblies are completely filled with EPS aggregate while others have a standard 4" perforated HDPE pipe surrounded by EPS aggregate. The cylinder assemblies with pipe have end cap connectors so that the pipe in the assemblies can be connected end to end during installation.

Unlike most alternative systems, EEE ZZZ Lay Drain installations can be varied to best suit conditions at each site. A few of the various installations are shown on the previous pages. This versatility can result in up to a 70% land area savings at some sites.

### HISTORY OF ALTERNATIVE SYSTEMS

In recent years, a number of different ground absorption systems have been introduced which do not use stone aggregate. Some of these alternative systems have shown limited success, but some have experienced catastrophic failure. Alternative systems are often undersized, so that the systems will be cost competitive with conventional systems. When alternative systems are written into rules without benefit of past experience and proper engineering analyses, no one takes responsibility for failures and innocent property owners bear the expense of failed system replacement. Failures can be minimized by an understanding of the engineering technology of alternative systems as can be seen in the LTAR (Long Term Acceptance Rate) Analysis in Appendix A.

### EEE ZZZ LAY DRAIN'S UNPRECEDENTED TEN YEAR WARRANTY

From first introduction, EEE ZZZ Lay Drain systems have been marketed in a manner conceived to protect system owners by providing an unprecedented ten year manufacturer's warranty. This is invaluable not only to system owners; but also, to designers, regulators, installers, and the manufacturer. Feedback on failure, invited by warranty, provides the opportunity to make corrections and to prevent mistakes in future systems. During the first six years, the failure rate of EEE ZZZ Lay Drain systems has been less than one tenth of one per cent. Investigations of the few failures which have occurred showed that all failures were caused by bad site evaluation or improper installation. Even though these failures were not caused by the product, the EEE ZZZ Lay Drain Company has assisted in the repair of all failures. This resulted in more training for regulators and installers by the manufacturer when EEE ZZZ Lay Drain is marketed in a new area.

This unprecedented ten year warranty by the EEE ZZZ Lay Drain Company is a challenge which has gone unanswered by the manufacturers of other alternative systems. Other manufacturers have issued meaningless warranties with no protection

for the owner if the system fails. When required by regulators, some manufacturers have issued warranties for a period of two to five years; however, often times manufacturers find reasons not to fix failed systems by claiming improper site evaluation or improper installation. The aggressive marketing of an inferior product can lead to disastrous results for the consumer and the ruin of the manufacturer. The best example of this is Large Diameter Pipe which is no longer allowed by the Florida rules.

#### ENGINEERING SUPPORT, TESTING, AND EVALUATIONS

The manufacturer has provided additional assurance for proper performance by adopting a continuing program of engineering analyses and testing. The primary engineering support began with a 1988 Technical Support Paper (ref. 1). This engineering support, along with testing and evaluation by the U.S. Testing Company, Inc. (ref. 2), EEE ZZZ Lay Drain Company (ref. 3), ARCO Chemical Company, Inc. (ref. 4), and the North Carolina Department of Insurance (ref. 5) was reviewed by a group of engineers from the Southern Building Code Congress International, Inc. (SBCCI). The SBCCI's primary function is to write specifications and codes for the governing of all types of construction. In 1989, the SBCCI issued their report no. 89719 (ref. 6) which endorsed the use of EEE ZZZ Lay Drain in accordance with the manufacturer's specifications.

Since the 1989 SBCCI endorsement of the product, additional product support has been gained from the testing, evaluations, and analyses by Pankow Engineering Company (ref. 7), North Carolina Department of Transportation (ref. 8), Georgia Department of Human Resources (ref. 9), GA Department of Agriculture (ref. 10), South Carolina Department of Health and Environmental Control (ref. 11), Alabama Department of Public Health (ref. 12), Florida Department of Health and Rehabilitative Services (ref. 13), New York State Department of Environmental Conservation (ref. 14), United States Testing Company (ref. 15), ARCO Chemical Company, Inc. (ref. 16), Penn State - Department of Agriculture (ref. 17), Western North Carolina Environmental Council (ref. 18), RKN Environmental, Inc. (ref. 19), and The EEE ZZZ Lay Drain Company (ref. 3).

Some have suggested that EEE ZZZ Lay Drain systems should be sized by bottom area only, due to the similarities to stone systems. This led to a thorough evaluation by engineers and others with extensive knowledge of EEE ZZZ Lay Drain systems. Dr. J. P. Giroud presented an extensive analysis of sizing and other properties of EEE ZZZ Lay Drain systems (ref. 20). The highly qualified Dr. Giroud holds a Ph. D. in geotechnical engineering and is head of a consulting engineering firm called Geo-Syntec Consultants which employs about 60 engineers. According to Dr. Giroud's analysis, EEE ZZZ Lay Drain systems should be sized smaller than recommended by the manufacturer. His input was invaluable for the LTAR Analysis in Appendix A.

#### ENVIRONMENTAL BENEFITS AND COST SAVINGS DUE TO RECYCLED MATERIAL

The aggregate used in EEE ZZZ Lay Drain systems is re-manufactured from scrap expanded polystyrene (EPS) which would otherwise go to landfills. The consumption of foamed and expanded polystyrene in the United States is about 6



## **EEE ZZZ LAY DRAIN EXPERIENCE AND ENGINEERING SUPPORT**

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pounds per capita per year (ref 21). About one pound (or one cubic foot) per capita per year of EPS or other suitable plastic could be collected and re-manufactured for use in septic fields. A 1992 research paper (ref. 22) showed that the use of recycled EPS septic fields can not only save local governments a significant amount in landfill space but also a significant amount in landfill cost. Because landfill tipping fees are ordinarily based on weight, the extreme light weight of EPS allows it to be landfilled with little contribution to the cost of operating the landfill. If all suitable EPS were recycled for septic field use, the saving in landfill space would be about one cubic foot per capita per year and the savings in cost about \$1 per capita per year or a nationwide savings of about \$300 million each year. This amount of recycled EPS could be used in about 10% of the septic fields constructed. It is interesting to note that EPS can be re-manufactured and sold at a price which is about equal to the cost of landfilling the EPS if it is not recycled (ref. 23). The use of recycled EPS also conserves land at gravel quarries and EEE ZZZ Lay Drain systems can conserve land at sites of installation.

### **LABOR SAVINGS AND COST EFFECTIVENESS**

As the name EEE ZZZ Lay Drain implies, the light weight of the product allows for quick and easy installation of systems resulting in a significant saving in labor cost. This saving is especially substantial where stone would otherwise be transported by shovel and wheelbarrow such as up a steep hill or across a well landscaped yard. Generally, EEE ZZZ Lay Drain systems are cost competitive with stone aggregate systems; however, in many instances EEE ZZZ Lay Drain systems are more cost effective. This cost advantage is quite apparent in many costal areas where stone aggregate must be imported from some distant source. Due to its light weight, EEE ZZZ Lay Drain can be transported great distances with little increase in cost. EEE ZZZ Lay Drain systems hold a cost advantage at sites where deeper and narrower systems can be installed. This reduces system costs and saves land area required for the smaller system.

### **SIMILARITIES TO CONVENTIONAL STONE TRENCHES**

Unlike many alternative systems, EEE ZZZ Lay Drain systems are very similar to and have maintained many of the desirable characteristics of conventional stone trenches. Aggregate provides some treatment of the effluent before the soil interface, which is especially important if septic tanks are not pumped or grease carry over is likely. The flexibility of the system allows easy installation along contours or even around corners. When required by terrain, step downs can easily be constructed. The size of the aggregate and the HDPE perforated pipe used in EEE ZZZ Lay Drain is comparable to conventional stone systems.

### **ADVANTAGES OVER STONE SYSTEMS**

The light weight and flexibility of the EPS provide advantages over conventional stone systems and most other alternative systems. In clay soils with a delicate interface, the light weight and flexibility prevent compaction of the soil at the interface. The light weight provides for less force on the interface after installation, even when the aggregate is very deep. Heavy machinery which can cause compaction problems

is not required to install the EEE ZZZ Lay Drain assemblies. An uneven trench bottom or lack of the required aggregate depth can not be hidden during inspection. The ten year warranty protects the system owners and also designers, installers, and inspectors.

**QUESTIONS OFTEN ASKED ABOUT EEE ZZZ LAY DRAIN**

**1. Can EEE ZZZ Lay Drain installations be damaged if run over with a heavy vehicle after installation?**

**Answer:** Field tests and six years of experience have shown that the EEE ZZZ Lay Drain installation can not be damaged by extremely heavy vehicle loading. The reason for this is that as the vehicle load is applied, the EPS aggregate compresses slightly which causes the load to be transmitted to the surrounding soil which does not compress (ref. 1)

**2. Will EEE ZZZ Lay Drain assemblies float out of the ground when ponding reaches full depth in the system?**

**Answer:** Buoyance calculations easily show that this is not a problem (ref. 1), even if the area becomes flooded.

**3. Will the backfilling of clay type soils around the EEE ZZZ Lay Drain affect performance?**

**Answer:** Although it is not considered good practice to install conventional stone systems in fill of clay type soils and is prohibited by rules; six years of experience has proven that this is not a problem. Of course, this was already proven with Large Diameter Pipe systems. The reason for this is that clay type soils have cohesive strength and do not easily become compacted to the density of the original soil. The less dense, uncompacted soil at the critical interface has a higher permeability than the original soil.

**4. Where have EEE ZZZ Lay Drain systems been installed?**

**Answer:** Installations have been made in six southeastern states and probably in other states. There has been much interest from other areas, but marketing has been limited to these six states.

**5. What does the EEE ZZZ Lay Drain ten year warranty cover and how does the owner take advantage of the warranty?**

**Answer:** The failure rate of EEE ZZZ Lay Drain systems installed over the last six years has been less than one tenth of one per cent (ref. 6). This low failure rate has allow the EEE ZZZ Lay Drain Company to be very lenient concerning warranty coverage. No system has ever failed when installed in accordance with the manufacturer's specifications; however, the EEE ZZZ Lay Drain Company has covered all failures. The EEE ZZZ Lay Drain Company provides additional material at no charge for the repair of a failed system. Most installers have seen the advantage of this superior product and have also agreed to provide free labor and equipment for the repair of their EEE ZZZ Lay Drain installations. At the time of installation, a certificate of warranty is issued with information as to how to take advantage of the warranty. If the certificate is lost, the owner can call the EEE ZZZ Lay Drain Company and they will welcome the opportunity to please another customer.

## EEE ZZZ LAY DRAIN EXPERIENCE AND ENGINEERING SUPPORT

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### CONCLUSIONS

1. The unprecedented ten year warranty offered on EEE ZZZ Lay Drain systems has protected and will continue to protect the public against septic system failure. This protection is not available with other alternative or conventional systems.
2. The EEE ZZZ Lay Drain system failure rate of less than one tenth of one per cent over the last six years is also unprecedented and proves the superiority of the product.
3. The use of recycled material in EEE ZZZ Lay Drain helps to fill an ever increasing need to reduce solid waste and is a cost saving to local governments.
4. Through a combination of thorough engineering analyses, testing, data collection, practical experience, innovative thinking, and other technical support the EEE ZZZ Lay Drain Company has produced a product which saves land at sites of installation.
5. The extreme light weight of the EPS aggregate used in EEE ZZZ Lay Drain has made it a labor saving, cost competitive, superior product with a very bright future.

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## APPENDIX A - LTAR ANALYSIS

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### SUMMARY

Introduction of the EEE ZZZ Lay Drain ground absorption system led to the development of sizing methods based on past experience and scientific principles. The methods led to a variety of different EEE ZZZ Lay Drain installations which can be selected to best suit a specific site. Where conditions allow, the land area required can be reduced by as much as 70%.

### ENVIRONMENTAL NEEDS

With the ever increasing development of land which is not served by public sewer systems, there is a great need for ground absorption waste disposal systems which require less land area. Septic system designs and regulations must consider alternative systems which protect the environment by preserving land. In considering new alternative systems, of utmost importance is the assurance that new systems will not cause pollution of ground or surface waters. This goal is best accomplished by the development of new technology which is based on past experience and scientific principles.

### EXPERIENCE

The best source of general experience is the 1980 EPA Manual On-Site Wastewater Treatment and Disposal Systems. This manual provides a good general description of proven practices and scientific principles; however, the manual is lacking in specifics as to the latest technology and the application of scientific principles. Other sources of experience are the rules used to regulate systems; however, caution must be exercised because rules sometimes allow alternative systems which do not perform adequately.

### CONVENTIONAL STONE TRENCHES

Conventional stone trenches are the most commonly used and best proven systems. Usually, the trenches are three feet wide and the stone aggregate is one foot deep. Sizing is based on the daily flow, the surrounding soil's permeability, and the bottom area of the trenches. Generally, the smallest systems are allowed in soils with a perc rate of 5 minutes per inch and an application rate of 1.2 gallons per day (GPD) per square foot (SF). For residential applications, the daily flow used in determining size is usually 120 GPD per bedroom (GPD/BR); however, some rules require sizing based on 150 GPD/BR. For ease of comparing experience, all application rates will be based on 120 GPD/BR.

### CONVENTIONAL STONE BEDS

Rules often allow bed systems which are identical to trench systems except that they have a width of greater than 3 feet. The maximum allowable application rate for the smallest system is about 0.8 GPD/SF. Bed systems require less land area for initial installation; however, if future repair is considered, beds eventually require more area.

### STONE TRENCHES WITH DEEPER AGGREGATE

The EPA manual recommends and various rules allow smaller trench systems

## APPENDIX A - LTAR ANALYSIS

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using aggregate deeper than one foot. As an example, trenches with a stone depth of 30 inches allow a reduction of system size by 40%.

### NARROWER TRENCHES

For many years in Florida, the maximum trench width allowed was two feet. The maximum application rate allowed based on 120 GPD/BR was 1.6 GPD/SF. The narrow trenches at the higher application rates performed well and reduced the area required by about 25%.

An extreme example of narrower trenches is the Low Pressure Pipe (LPP) system as permitted in North Carolina. Trenches are 8 inches wide by about 12 inches deep and systems are sized with a maximum application rate based on bottom area of 4.5 GPD/SF. The systems require about 40% less space than conventional stone trench systems; however, these systems have not performed as well as conventional stone trench systems (Hoover, 1989).

Another form of narrower trenches is the Large Diameter Pipe (LDP) system which has been permitted in several states. Generally, 10 inch LDP was sized with the same trench length required for a three foot wide stone trench system. Testing at the University of Minnesota (Anderson 1983) showed that in sandy soils these systems were undersized. These systems have a record of catastrophic failure in field practice. In Florida, the smallest systems were sized at 25 feet per BR. Failure rate was 60% within 2 years. The smallest systems should have been 60'/BR. LDP systems have performed poorly in sandy soils, but better in other soils. The primary reason for this difference is that backfill of soils with cohesive strength does not compact easily and maintains a higher permeability than undisturbed soil.

### SEEPAGE PITS

The EPA manual recommends and some rules allow the use of seepage pits. These systems are sized based on sidewall area with an application rate of up to 1.2 GPD/SF. A typical seepage pit is 4 feet in diameter and 5 feet deep. Where soil depth will allow these systems, 50% or more land area can be saved.

### WESTERN AUSTRALIAN SYSTEMS

A report from Western Australia (WA) (Caldwell Connell Engineers Pty., Ltd. , 1986) provides information about alternative systems used there. A house is served by a single leaching chamber which is 1.3' wide by 2' deep by 30' to 50' long. Also a house can be served by two seepage pits which are 4' feet in diameter and 5' deep. The sidewalls of these systems are lined with brick and no stone aggregate is used. These systems are installed in sandy soil. This experience shows that where soils will allow, alternative systems can save up to 80% of the land area required by conventional stone trenches.

### INFILTRATOR AND OTHER CHAMBER SYSTEMS

Field experience (Barranco, 1991) and testing (Tyler 1991) tend to show that the Infiltrator and other chamber systems are not effective at reducing the land area required as compared to conventional stone trench systems. This type of system could be effective if sidewall area were increased and width decreased.

## APPENDIX A - LTAR ANALYSIS

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In Maine, chamber systems have been reported to be effective at reducing bottom area by 50% as compared to conventional bed systems (Hoxie 1990). This and the WA report are used to support claims that bottom area can be reduced by 50% with plastic chambers having a sidewall depth of 6 to 9 inches. Totally disregarded is the fact that, in Maine and in WA, the chamber systems have sidewalls which are 24 inches deep.

### RUCK AND OTHER PRETREATMENT SYSTEMS

Pretreatment can be used to reduce system size (Laak 1970, 1974); however, the added cost of pretreatment tends to make these systems practical only when space is very limited or the cost of land very high. Due to the smaller size, it is important that surge storage of effluent be considered in the sizing of these systems.

### REVIEW OF THE LITERATURE

#### COMPARISON OF SIDEWALL TO BOTTOM AREA INFILTRATION

Literature on ground absorption systems has always recognized that sidewalls are an effective infiltrative area. Qualified researchers have concluded that sidewalls may be more effective than bottom area (Winneberger 1964). Indirect measurements of sidewall and bottom infiltration were reported (Bouma 1975); however, the data was erratic and no conclusions could be made. The best comparison of sidewall to bottom infiltration is in the WA report. After equilibrium or LTAR has been reached in the French Drain or gravel filled model, sidewall infiltration was about 45 mm/d (1.1 GPD/SF) as compared to 20 mm/d (0.5 GPD/SF) for bottom area. The perc rate of the sandy soil used was 15 m/d (2.5 min./in.). If these infiltration rates are used to size a 3' by 1' stone trench, system size is precisely the same as the long term practice of using an application rate of 1.2 GPD/SF on bottom area only.

#### INITIAL INFILTRATION COMPARED TO LTAR

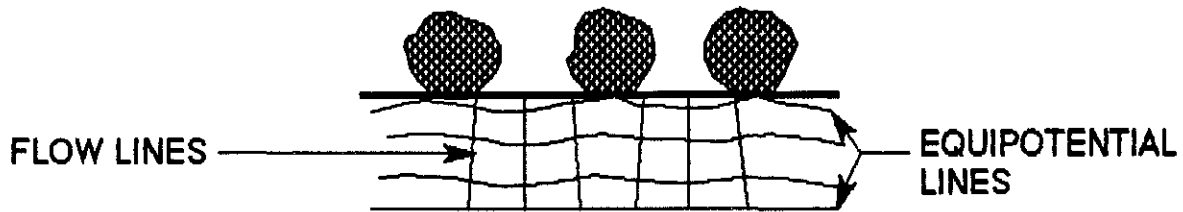
As can be observed in the WA report, LTAR in sandy soils is about 1000 times less than the initial infiltration rate. This is consistent with long term field practice and is supported by a wealth of testing. As systems are generally sized, the LTAR can be 100 to 1000 times less than the initial rate of infiltration. LTAR is controlled by clogging at or very near the soil interface. Beyond this point, unclogged soil offers no resistance to the small flow allowed by the clogging.

#### MASKING OF THE BOTTOM AREA

When properly analyzed, the much debated phenomena of stone shadow or masking can reduce the effectiveness of a system, but only by a small amount. When a system is first put into service, before clogging occurs, all resistance to flow is due to the soil beyond the soil/aggregate interface. Since the stone aggregate before the interface provides no resistance, it can have no effect on flow. This is supported in the literature and is illustrated in Fig. 1 on the next page.

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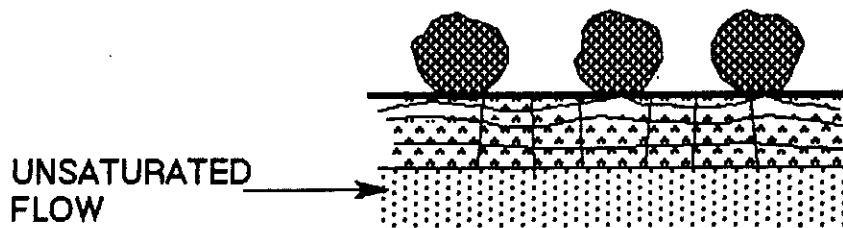
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FLOW BEFORE ANY CLOGGING

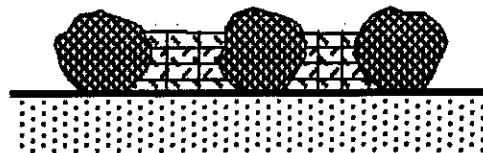
FIG. 1

After a system has matured, theory dictates limits. If clogging were totally in the soil beyond the aggregate/soil interface, then the stone would still cause no resistance to flow and masking would cause no reduction in LTAR as illustrated in Fig. 2. If resistance to flow were caused only by a thick clogging mat before the soil/aggregate interface, then flow would be controlled by the porosity of the aggregate as illustrated in Fig. 3. Masking would reduce LTAR by about 65%.



RESISTANCE BY SOIL CLOGGING ONLY

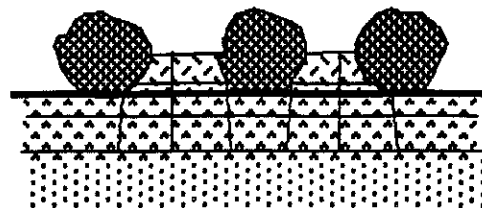
FIG. 2



RESISTANCE BY CLOGGING MAT ONLY

FIG. 3

From field inspection of systems and from the literature, it should be obvious that reality is between the extremes in Fig. 2 and Fig. 3. A clogging mat forms before the interface and clogging occurs in the soil beyond the interface as illustrated in Fig. 4.



RESISTANCE BY SOIL CLOGGING AND CLOGGING MAT

FIG. 4



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Data in the WA report confirms and quantifies this. The LTAR with aggregate before the interface as compared to systems with no aggregate is reduced by about 40% for the bottom area only.

### MASKING OF THE SIDEWALLS

In WA, leaching chambers and seepage pits that have brick sidewalls with soil against the brick are in general use. If a clogging mat with appreciable resistance to flow formed before the soil interface in the small cracks between bricks, then infiltration through the sidewalls would be a very small amount. A careful review of the WA report and general practice in WA make it obvious that there is no masking effect at the sidewalls, even when bricks are the masking media.

### HEAD AS RELATED TO LTAR

There is apparently unanimous agreement in the literature that increased ponding depth or head will increase LTAR. In the Technical Support Paper for EEE ZZZ Lay Drain systems (Pankow 1989), it was incorrectly suggested that flow through a clogging mat would be similar to flow through an orifice and proportional to the square root of the head. Flow through clogging mats is controlled by Darcy's equation and is proportional to the head. However, clogging mats that are formed due to higher flow caused by greater heads should have greater resistance. By inspection of the WA test data, it is apparent that the square root of the ponding head is appropriate for the determination of the LTAR of infiltrative surfaces with different heads.

### THE EQUATION

An equation was developed for the purpose of sizing EEE ZZZ Lay Drain systems and was presented in the Technical Support Paper. Field and laboratory experience with EEE ZZZ Lay Drain and other alternative systems, additional research and analyses of the literature, and scientific input for others have led to refinements of the equation. The refined equation is better at predicting the performance of all alternative systems. The equation with variables as illustrated in Fig. 5 on page 6, is as follows:

$$E = KV \int_0^H [1 - \cos a (SL + ML)] h^{1/2} dA$$

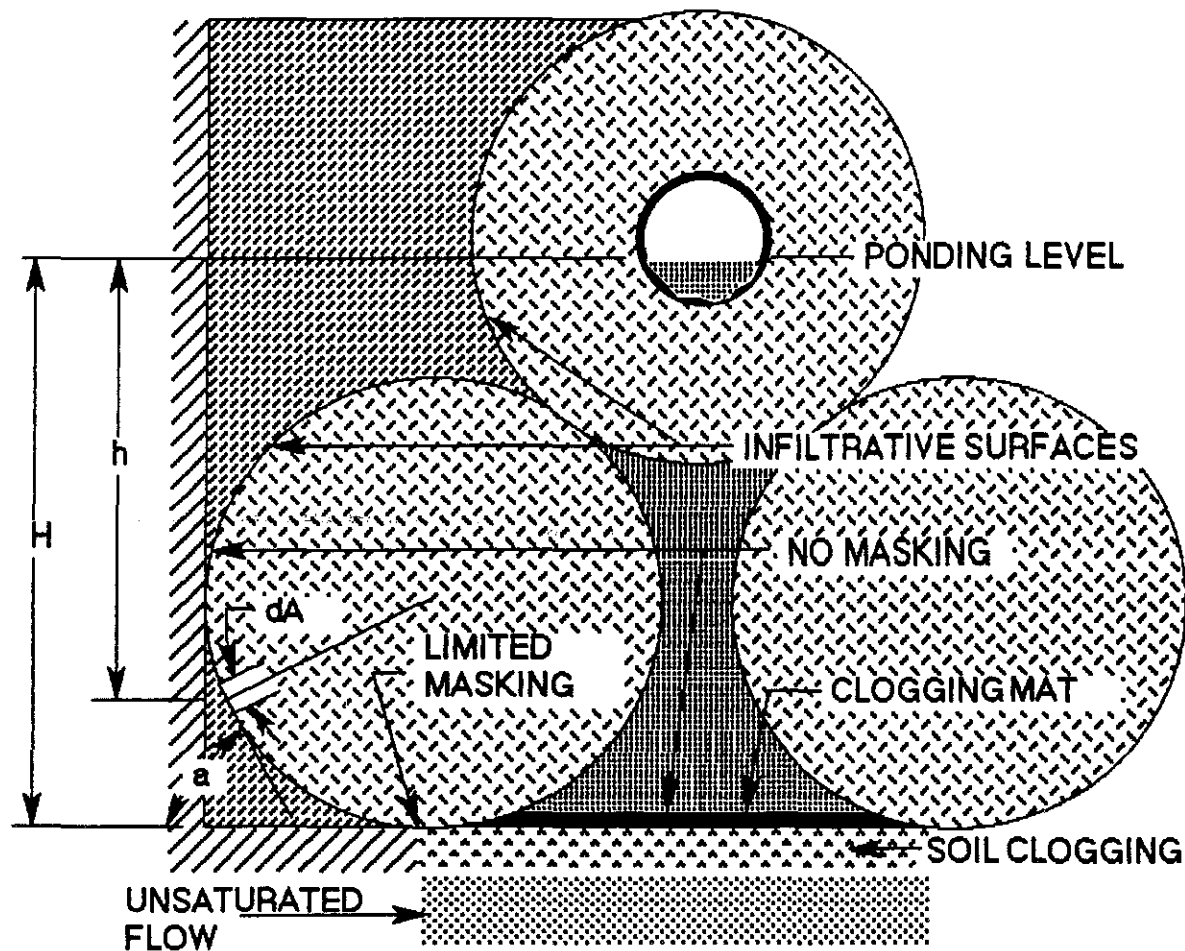
where:

- E = the effective area in SF/FT as compared to a conventional 3 foot by 1 foot deep stone trench. By definition, E for the 3 foot stone trench is 3.0 SF/FT
- K = a constant (for usual calculations K = 1.35)
- V = a factor which is usually 1 but may be varied for some systems. As an example, pretreatment such as sand filtering of septic tank effluent before the soil interface will cause an increased LTAR.
- H = upper limit of ponding to be considered in sizing. Usually, H is the maximum head in feet that can be applied to the lowest infiltrative surface. For a 3 by 1 stone trench, usually H = 1 foot.

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- a = the angle of inclination of an infiltrative surface above horizontal. COS a causes losses to be full value for the trench bottom and decreases to 0 for a vertical surface.
- SL = loss of effectiveness of a trench bottom as compared to sidewall due to lack of aeration, lack of sloughing, and sedimentation. As determined from data in the WA report and general experience, a loss of 0.5 is used.
- ML = loss due to stone shadow or masking. As determined from data in the WA report, a loss of 0.2 is appropriate.
- h = the ponding head above an infiltrative surface. For a 3 by 1 stone trench, h = 1 foot for the trench bottom and 1/2 foot for the mid point on the sidewall.
- dA = the segment of infiltrative surface being considered.



VARIABLES IN PANKOW'S EQUATION

$$E = KV \int_0^H [1 - \text{COS } a (SL + ML)] h \, dA$$

FIG. 5

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for a stone trench 1 foot deep the equation:

$$E = KV \int_0^H [1 - \cos a (SL + ML)] h^{1/2} dA$$

for the bottom area:

$$E = 1.35 \times 1 [1 - 1(1 - 0.5 - 0.2)] 1^{1/2} = 0.40 \text{ SF / SF}$$

for a sidewall integration of the equation results in:

$$E = 1.35 \times 1 [1 - 0(1 - 0.5 - 0.2)] 1.0^{1.5} / 1.5 = 0.90 \text{ SF / FT}$$

considering the total bottom and sidewall infiltrative area for a 3 by 1 stone trench:

$$E = (3 \times 0.40) + (2 \times 0.90) = 3.0 \text{ SF / FT}$$

### RESULTS FOR VARIOUS ALTERNATIVE SYSTEMS

The calculations were performed on various alternative systems where experience has shown a problem with sizing or that systems are adequately sized. The results for the smallest size of each system are shown in the following table

TYPE OF SYSTEM (ALL AT MINIMUM SIZE)	E	TOTAL E	REMARKS
3'by1' stone trench @ 33' / BR	3.0	100	The Standard.
10" LDP @ 25' / BR (as previously sized in Florida)	2.0	50	About 60% failure in 2 yrs.
LPP 8" by 12" deep @40'/BR (as allowed in North Carolina)	2.1	84	Up to 61% failure in 6 yrs. (Hoover, 1989)
11" high Infiltrator @ 20'/BR (as previously sized in Florida)	3.0	60	18% failure in 1.5 yrs. (Barranco, 1991)
1.3' x 2' dp. leaching chamber @ 16'/BR	6.3	100	General practice in WA
4' dia. x 5' dp. seepage pit @ 2 pits / 3BR	156/pit	104	General practice in WA

### ALLOWING FOR SURGE STORAGE REQUIREMENTS

The above results show that the equation correctly predicts the performance of a variety of systems, except for the narrow trenches used in LPP systems in North

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Carolina. In laboratory testing of various systems, usually a constant ponding level is used to determine a LTAR. In actual systems, constant ponding is not the case. Due to inflow primarily during day time and infiltration at all times, ponding will be at a minimum during early morning. For systems which have smaller storage capacities than a conventional stone trench, it is important to consider ponding at some level below the upper limit of void space. This consideration is most important for the smallest system of each type. In the results in the following table, the lower ponding level was determined by allowing for one-half day (60 gallons/BR) surge storage above that level.

### RESULTS CONSIDERING SURGE STORAGE

TYPE OF SYSTEM (ALL AT MINIMUM SIZE)	E SF/FT	TOTAL E SF/BR	COMPARED TO 3 x 1 STONE SYSTEM
3' by 1' stone trench @ 33'/BR			
@ 12" of ponding	3.0		
@ 9" of ponding	2.1		
Average	2.55	84	100%
8" by 12" LPP trench @40'/BR			
@ 12" of ponding	2.1		
@2" of ponding	0.2		
Average	1.15	46	55%

This explains the 61% failure rate reported (Hoover, 1989)

### EEE ZZZ LAY DRAIN INSTALLATIONS

2002 Vertical @ 30'/BR *			
@ 20" of ponding	4.6		
@ 10" of ponding	1.4		
Average	3.05	92	110%
2003 Triangular @ 25'/BR *			
@ 16" of ponding	5.6		
@ 8.5" of ponding	1.1		
Average	3.35	84	100%
2003 Vertical @ 20'/BR *			
@ 30" of ponding	8.6		
@ 15" of ponding	2.8		
Average	5.7	114	135%
2006 Triangular @ 15'/BR *			
@ 22" of ponding	10.9		
@ 12" of ponding	4.1		
Average	7.5	113	133%

\* The sizes shown are smaller than recommended by the EEE ZZZ Lay Drain Company.

### CONCLUSION

The equation and the results presented show that properly applied scientific principles which are confirmed by a broad range of past experience can be used to

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properly predict the performance of alternative ground absorption systems. The equation is most useful in the correction of problems with the regulation of existing and new alternative systems.

The minimum sizes recommended by the EEE ZZZ Lay Drain Company result in an increase of 150% of the effective area of the conventional stone trench. This explains the extremely low failure rate (less than one tenth of one per cent in 6 years) experienced with EEE ZZZ Lay Drain Systems. All of the failures can only be attributed to poor site conditions and improper installation. EEE ZZZ Lay Drain Systems will continue to out perform conventional and other alternative systems when sized in accordance with the EEE ZZZ Lay Drain Company's recommendations.

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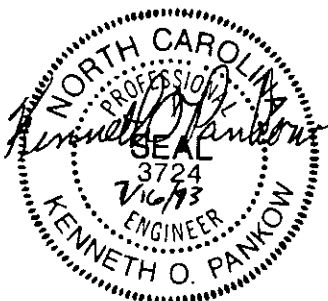
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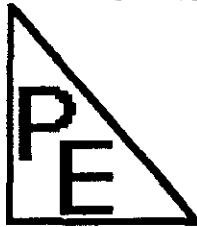
Pankow, K.O., 1988 Addendum 1989, Technical Support Paper for the EEE ZZZ Drain Ground Absorption Disposal System.

Tyler, E.J. et. al., 1991, Wastewater Infiltration from Chamber and Gravel Systems, Proceedings of the Sixth National Symposium on Individual and Small Community Sewage System.

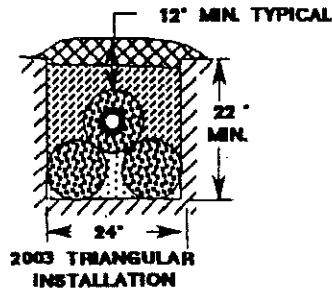
Winneberger, J.H., et. al., 1964, Causes and Prevention of Failure of Septic-Tank Percolation Systems, Federal Housing Administration.

By **Kenneth O. Pankow, PE**  
**Pankow Engineering Company**  
**1278 Hendersonville Road**  
**Asheville, NC 28803**  
**(704) 274-9219**



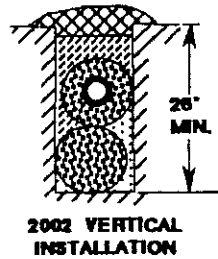


**EEE ZZZ LAY DRAIN SIZING BY  
PANKOW'S EQUATION  
FOR THE STATE OF NORTH CAROLINA**



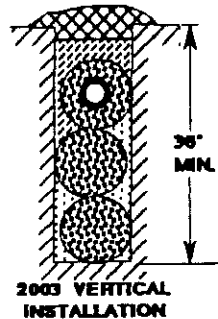
\_\_\_\_\_ sq. ft. X 0.25 = \_\_\_\_\_ linear ft.

EXAMPLE - 375 sq. ft. required.  
375 X 0.25 = 94 ft.  
Use 100 ft.



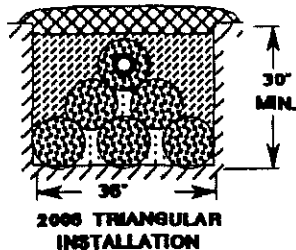
\_\_\_\_\_ sq. ft. X 0.30 = \_\_\_\_\_ linear ft.

EXAMPLE - 375 sq. ft. required.  
375 X 0.30 = 113 ft.  
Use 120 ft.



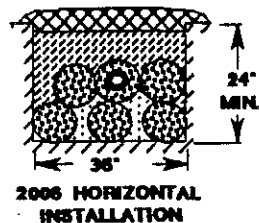
\_\_\_\_\_ sq. ft. X 0.15 = \_\_\_\_\_ linear ft.

EXAMPLE - 375 sq. ft. required.  
375 X 0.15 = 56 ft.  
Use 60 ft.



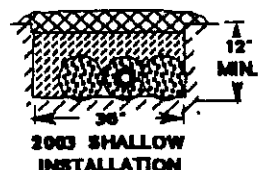
\_\_\_\_\_ sq. ft. X 0.12 = \_\_\_\_\_ linear ft.

EXAMPLE - 375 sq. ft. required.  
375 X 0.12 = 45 ft.  
Use 50 ft.



\_\_\_\_\_ sq. ft. X 0.20 = \_\_\_\_\_ linear ft.

EXAMPLE - 375 sq. ft. required.  
375 X 0.20 = 75 ft.  
Use 80 ft.



\_\_\_\_\_ sq. ft. X 0.40 = \_\_\_\_\_ linear ft.

EXAMPLE - 375 sq. ft. required.  
375 X 0.40 = 150 ft.  
Use 150 ft.

# BUILDING CODES AGENCY RULING ON ACCEPTABILITY OF MATERIAL, DESIGN OR METHOD OF CONSTRUCTION

RULING No. 92-10P

INITIATED BY:

ALEX MAUCK  
MAUCK BROTHERS INC  
P.O. Box 654  
Gresham, Oregon 97030  
503-492-2500

RE: ALTERNATE METHOD OF INSTALLATION-EEE ZZZ LAY DRAIN SYSTEM

REQUEST: Approval of alternate method of installation for corrugated ployethlene (CPE) exterior storm drain piping.

APPLICABLE CODE SECTIONS OR STANDARDS: Chapters 2, 3, 14 and Installation Standard 1A, 1992 Oregon State Plumbing Specialty Code; 1990 Oregon One and Two Family Dwelling Code, Chapters 20 and 25.

TECHNICAL AND SCIENTIFIC FINDINGS: Test results have been submitted showing that this alternate method of installation for CPE exterior building storm drainage piping is equivalent, as an alternative, to that specified in the 1992 Oregon State Plumbing Specialty Code and the 1990 Oregon One and Two Family Dwelling Code in quality, strength, effectiveness, durability and safety.

CONDITIONS OF APPROVAL:

1. To be installed per the applicable code sections or standards as noted above.
2. For use as exterior building storm footing, foundation, subsurface and absorption drain only.
3. An approved filter membrane shall be used with this piping system.
4. The minimum ground cover shall be 12 inches.

Ronald H. Besspflug  
Ronald H. Besspflug, Chairman  
Plumbing Board

10-19-92  
Date

RULING: After consideration of the standards and interpretations of the International Association of Plumbing and Mechanical Officials and the Council of American Building Officials and related technical and scientific findings by the State Plumbing Board, I approve the EEE ZZZ Lay Drain System listed above, with the following restrictions:

Gary J. Wicks  
Gary J. Wicks, Administrator  
Building Codes Agency

10/20/92  
Date

# **The Use of Expanded Polystyrene as an Aggregate in Drainage**

May 15, 1992

by

Kenneth O. Pankow, P.E.  
Pankow Engineering Company  
1278 Hendersonville Road  
Asheville, NC 28803  
(704) 274-9219

Michael Houck  
EEE ZZZ Lay Drain Company, Inc.  
P.O. Box 867  
Pisgah Forest, NC 28768  
(704) 883-2130

Submitted by

Alex Mauck, President  
NW EEE ZZZ Lay Drain Co.  
P.O. Box 654  
Gresham, OR 97030  
(503) 492-2500

## **SUMMARY**

Information is presented on the recycling of expanded polystyrene by using it as a substitute for gravel in septic systems and other drainage applications. Proven products, with the trade name of EEE ZZZ Lay Drain, can be used to accomplish a significant amount of recycling in Florida.

## **INTRODUCTION**

In 1987, brothers Michael and Randy Houck founded the EEE ZZZ Lay Drain Company to make a product which allows expanded polystyrene (EPS) aggregate to replace gravel in drainage applications. All of the EPS used in the manufacturing is scrap material which would otherwise go to landfills. In drainage applications, gravel or stone aggregate is commonly placed around a (perforated) plastic pipe. In the EEE ZZZ Lay Drain products, the lightweight EPS aggregate is held in a cylindrical shape by a 10 inch diameter, high strength polyethylene netting. Ten foot long assemblies are manufactured filled with EPS aggregate only, or with a four inch perforated, corrugated, plastic pipe surrounded by EPS aggregate. The ten foot long assemblies are provided with means to connect the cylinders during installation end to end to form a continuous pipe surrounded by aggregate. A single assembly with pipe is termed EEE ZZZ Lay Drain 2001. If an application requires that more aggregate be installed in a single trench than is provided with the 2001, additional cylinders without pipe are added and the installation is termed 2002, 2003, etc., depending on the total number of cylinders installed in each trench. The products and manufacturing methods have resulted in two patents and three patents pending.



## **MANUFACTURING OPERATION**

The waste EPS received at a manufacturing site is in many different forms. Some, such as rejected Christmas balls and peanut type packing material can be used as aggregate without size modification. Most of the raw material requires only that the size be reduced which is done with an inexpensive hot wire cutting machine. Due to the nature of EPS, the machinery for compaction and assembly of the product is comparatively light weight and inexpensive. The first plant in Western North Carolina has the capacity to produce 6,000 feet of the EEE ZZZ Lay Drain assembly during an eight hour shift of 10 unskilled laborers (1). When this plant is at full two shift production, it will use about 70 acre feet of waste EPS per year. At this production, the plant will produce about 600 miles of the assembly per year with a sales value of about \$4 million (1) (2).

## **FLORIDA MARKET**

With the cost of stone at \$20 per ton or more, Florida is a ready market for products which replace stone. Some products, such as large diameter perforated plastic pipe wrapped with filter fabric, have been marketed as a substitute for stone in drainage applications. Generally, these products have been found to be unsuitable because the technology used was not proven and/or the products were over promoted (5) (6).

Since 1987, EEE ZZZ Lay Drain products have been subjected to thorough laboratory, field, and market testing. EEE ZZZ Lay Drain products have been successfully tested and evaluated by United States Testing Company (7), Pankow Engineering Company (3) (4), ARCO Chemical Company (8), Penn State University (9), and S.B.C.C.I. (10). The products have been field tested in several southeastern states (1) (2). Currently, the products enjoy appreciable market in southern Georgia where site conditions and applications are like Florida (1). No doubt, Florida will be a viable market for the products.

The machinery for a plant which is equal to the present plant in North Carolina can be obtained for less than \$400,000 (1). Adding the necessary land, building, and vehicles for product transportation; the total cost for a complete facility would be \$1 to \$1 1/2 million (1). The plant could use about one half of the scrap EPS available in Florida. Sales required to support a two shift operation would be about 5 percent of the available Florida market (2).

## **REFERENCES**

(1) Information provided by the EEE ZZZ Lay Drain Company. Collected and verified from multiple sources.

(2) Information provided by Pankow Engineering Company. Collected and verified from multiple sources.

(3) Kenneth O. Pankow, P.E. , Technical Support Paper for the EEE ZZZ Lay Drain Company Ground Absorption Disposal System, dated October 1988 and July 1989.

(4) Pankow Engineering Company, Tests, Analysis, Engineering Specifications, Design and other engineering too numerous to list, 1987-1992.

(5) Dr. J.H.T. Winneberger, Technical Reflections on Today's Gravelless System, dated 1992.

(6) Kenneth O. Pankow, P.E., Failure of Large Diameter Pipe (LDP) Septic System Disposal Fields, dated May 15, 1992.

(7) U.S. Testing Company, Test Report No. 97206 dated October 2, 1987 and Test Report Lab No. 4112-437, dated December 3, 1991.

(8) ARCO Chemical Company by RNK Environmental, Inc., Evaluation of Impacts on Plastics used in Filtration Beds of Septic Tank Systems, dated September 29, 1989.

(9) A. R. Jarrett and B. W. Engle, Penn State University, Improve Sediment Retention Efficiencies of Sedimentation Basins ASAE Paper No. 90-2629, dated 1990.

(10) Southern Building Code Congress International, Inc., Report No. 8971, dated December 1, 1989.

CITY OF MAUPIN

P. O. Box 308  
MAUPIN, OREGON 97037  
(503) 395-2698  
Fax: (503) 395-2499

December 16, 1993

Northwest EEE ZZZ Lay Drain Co.  
P.O. Box 654  
Gresham, OR 97030

Dear Alex,

As per our conversation earlier this week, I have at your request contacted Mr. Mike Shadboldt of OEDD. He related the conversation that you and he had and said that he had advised you to contact an attorney with the first name of Gabriela. I'm sorry I missed her last name. He was confident that she would be able to help once she had determined that you had followed through with all the requests made by DEQ for information from you. He advised me that at this point the best we could do is give her some time to research the project and make recommendations on what the next step should be.

I did tell Mr. Shadboldt the City of Maupin was very interested in having your company locate in Maupin and that I would be willing to lend any support to the project that I could. He was very appreciative of my offer and felt that City of Maupin support would carry some weight.

As promised I also talked to the council at last nights meeting. Our city attorney was in attendance. Council was very interested in your project and felt that they would be better able to make solid decisions about the property owned by the city when your business plan was fully developed. They agreed with me that the property in question should be developed into an industrial site if at all possible. We all know the effects that BM 5 has had on our budget and felt that if at all possible we would like to work with OEDD for application of grant funds to carry out the installation of whatever infrastructure you would not be able to provide.

I feel very confident that the city council will work with us to do all they can to further your project and welcome you to the City of Maupin. Perhaps when things are a little closer to happening you and Nan can come to a council meeting and make a presentation. I think you would be pleasantly surprised at the warm welcome you would receive.

Please let me know if there is anything in the near future that I can do to help. If you are in the area stop and see us. We have moved from east Maupin but ask anywhere and someone will direct you to us.

Cordially,

*Sherry*  
Sherry Holliday,  
Mayor



**BEVERLY CLARNO**  
Majority Leader  
HOUSE OF REPRESENTATIVES

December 15, 1993

William Wessinger, Chair  
Environmental Quality Commission  
811 SW 6th  
Portland, OR 97204

Dear Mr. Wessinger:

I am writing to ask the Environmental Quality Commission to prioritize a request for a rule change within the Department of Environmental Quality. The proposed change would affect a project which should enhance economic development in Oregon and provide additional recycling opportunities.

Alex Mauck, president of Northwest EEE ZZZ Lay Drain Company, has been pursuing since June 1992 a permit to use his product in Oregon. DEQ has informed Mr. Mauck that his product is under consideration, however there have been a long series of delays and approval still appears to be some time away.

According to Mr. Mauck his production facility will be located in an Economic Development Department designated severely affected community and will employ from 15-20 people. His estimated gross first year sales are \$750,000 with an increase of 25% per year for the first five years. The plant is expected to be the largest recycler of post consumer, commercial and industrial expanded polystyrene waste in the Northwest.

If Oregon is to benefit from this new industry it is important that the DEQ take action in a timely manner.

Sincerely,

Bev Clarno  
House Majority Leader

BC/ps

James G. Ledbetter, Ph.D. / Commissioner



878 PEACHTREE STREET, N.E. / ATLANTA, GEORGIA

December 16, 1992

Mr. Michael Houck  
EEE ZZZ Lay Drain Company, Inc.  
P.O. Box 867  
Pisgah Forest, NC 28768

Dear Mr. Houck:

We have completed our final review of EEE ZZZ Lay Systems 2003 Triangular, 2003 Vertical, 2003 Shallow, 2006 Vertical, 2002 Vertical and 2006 Horizontal as requested. By copy of this letter, we are recommending to district and local authorities that they consider these systems as alternatives in situations they deem appropriate when sized in accordance with the enclosed chart. Installation of each system must comply with applicable local rules and regulations.

Under our current system, Georgia State Department of Human Resources sets the minimum standards for on-site, individual sewage management systems and the local authorities may be more stringent. The Local Board of Health determines which on-site sewage disposal systems can be utilized in each respective county.

If we can be of any further assistance, please feel free to contact us.

Sincerely,

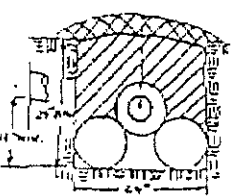
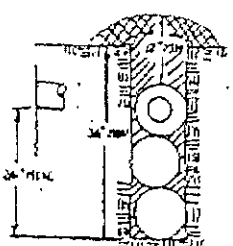
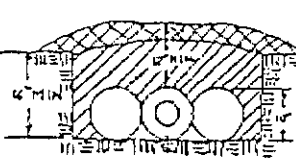
A handwritten signature in black ink, appearing to read "Ade O. Oke", written over a horizontal line.

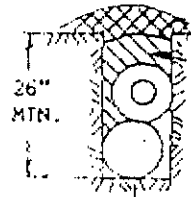
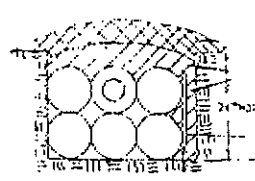
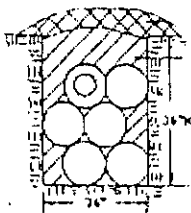
Ade O. Oke  
Principal Engineer  
Environmental Health Section

AD/ww

cc: Mr. Jim Drinnon

EEK 2ZZ LAY DRAIN SIZING AS AN ALTERNATIVE SYSTEM IN THE STATE OF GEORGIA

Perc Rate Minutes/In.	Total Trench Length Required		
	2 Bedrooms Feet	3 Bedrooms Feet	
2003 Triangular Installation			
5	80	120	
10	110	160	
15	120	180	
20	130	200	
30	160	240	
45	190	280	
50	200	300	
60	210	320	
70	230	340	
80	240	360	
90	250	380	
2003 Vertical Installation			
5	70	100	
10	80	120	
15	100	140	
20	110	160	
30	130	190	
45	150	230	
50	160	240	
60	170	260	
70	180	270	
80	190	290	
90	200	300	
2003 Shallow Installation			
5	100	150	
10	130	190	
15	150	220	
20	170	250	
30	200	290	
45	230	350	
50	250	370	
60	260	390	
70	280	420	
80	290	440	
90	310	460	

Perc Rate Minutes/In.	Total Trench Length Required		
	2 Bedrooms Feet	3 Bedrooms Feet	
2002 Vertical Installation			
5	90	130	
10	110	170	
15	130	190	
20	150	210	
30	170	250	
45	200	300	
50	210	320	
60	230	340	
70	240	360	
80	250	380	
90	270	400	
2006 Horizontal Installation			
5	70	110	
10	90	130	
15	100	150	
20	110	170	
30	130	200	
45	160	230	
50	170	240	
60	180	260	
70	190	280	
80	200	300	
90	210	310	
2006 Vertical Installation			
5	60	90	
10	70	110	
15	80	120	
20	90	140	
30	110	160	
45	130	200	
50	140	210	
60	150	220	
70	160	240	
80	170	250	
90	180	260	

(2)



STATE OF ALABAMA  
DEPARTMENT OF PUBLIC HEALTH

DONALD E. WILLIAMSON, M.D. • STATE HEALTH OFFICER

June 8, 1993

Mr. Randy Houck, President  
EEE ZZZ Lay Drain Company, Inc.  
P. O. Box 867  
Pisgah Forest, NC 28768

Re: Variance Modification and  
Extension

Dear Mr. Houck:

Based upon your company's request, we hereby modify and extend the variance previously issued for your system subject to the following conditions:

1. The EEE ZZZ Lay System may be installed on conventional sites (5 to 60 minutes per inch percolation rates) or on repair sites, subject to a two (2) year minimum warranty being provided to the owner of any system that has been permitted and approved by the local health department. Such warranty shall comply with the provisions of the Code of Alabama, 1975 - §7-2-316(2), 7-2-714 (2)(3) and 7-2-318 under which replacement of a defective or failed effluent disposal field would be guaranteed at no cost to the owner. A criteria for failure determinations is included as Attachment 1.
2. EEE ZZZ Lay Drain Company shall provide a specifications and design chart for your various installation configurations which you warranty and for which you have requested be approved under this variance. The configurations include 2002 Vertical, 2003 Triangular, 2003 Vertical, 2003 Shallow, 2006 Horizontal and 2006 Vertical. Your chart should contain your company name, address, phone number and the name of your firm's engineer and/or other contact personnel you authorize. Upon receipt and acceptance by our Division of Community Environmental Protection, your chart will be

Mr. Houck  
Page 2  
June 8, 1993

included as an attachment to this variance.

3. EEE ZZZ Lay Drain Company, or it's authorized representatives or it's certified installers, shall maintain a list of EEE ZZZ Systems installed under this variance. The list shall, at minimum, show the owner's name, property location, date of installation, size and configuration of system installed and EEE ZZZ Lay Drain Company's certified installer's name. EEE ZZZ Lay Drain Company shall provide the noted list to the Division of Community Environmental Protection each six (6) months. The first reporting period will be June 5, 1993 through December 4, 1993 and each six (6) months thereafter.
4. Written acknowledgement is required of your acceptance of the conditions of this variance before any individual permits can be issued by local health departments.

We look forward to the continued installation and assessment of your systems.

Sincerely,



Donald E. Williamson, M.D.  
State Health Officer

DEW/wp  
Attachment  
cc: Mr. Melvin Maraman  
Mr. Wade Pitchford  
Mr. John R. Wible, Legal Counsel  
Area Environmental Directors  
County Health Departments



RECEIVED (3)

NOV 16 1992

STATE OF FLORIDA  
DEPARTMENT OF HEALTH AND REHABILITATIVE SERVICES  
ENVIRONMENTAL HEALTH SERVICES

TWO YEAR ALTERNATIVE SYSTEM PERMIT

THIS ALTERNATIVE SYSTEM PERMIT is issued by the State of Florida, Department of Health and Rehabilitative Services (HRS), Environmental Health Services (HSEH), hereinafter referred to as the "Department", to the EEE ZZZ Lay Drain Company, hereinafter referred to as the "Applicant".

I. APPLICANT'S CONDITIONS:

A. To conduct the installation of an unlimited number of EEE ZZZ LAY DRAIN ALTERNATIVE SYSTEMS (EZLAS) in accordance with the conditions specified in EXHIBIT I.

B. To provide the HSEH with a list of the systems installed up to the first 100 systems, as required in EXHIBIT I.

C. To provide a limited warranty or warranties as required in EXHIBIT I.

D. Applicant may install an approved system whenever a county public health unit has approved the installation site for a standard or alternative system.

II. DEPARTMENT'S CONDITIONS:

A. The Department may monitor and inspect selected EEE ZZZ Lay installations. Ports for viewing and monitoring may be requested by the Department in 25 EEE ZZZ Lay systems when there are different installation configurations and different soil types.

B. The Department shall notify Applicant, in advance, of each monitoring visit to be made by staff of the Department. Advance notice shall be sufficient to allow enough time for a representative of Applicant to be present at the visit.

C. Provide, upon completion of the monitoring period, as defined in EXHIBIT I, a final disposition on the status of the EZLAS (i.e., re-test, denial or approval as a permanent OSDS for use in the State of Florida). EXHIBIT I defines failure for each EZLAS installed and specifies how disputes regarding failure of EZLAS will be resolved.

### III. GENERAL CONDITIONS:

#### A. Effective Date:

1. This ALTERNATIVE SYSTEM PERMIT shall begin on November 1, 1992.

2. This ALTERNATIVE SYSTEM PERMIT shall end as specified in EXHIBIT I, or on the date the Department issues a final disposition (section II, E.) or two years after the 100th system is installed, whichever is first.

#### B. Notice and Contact:

The name, address and telephone number of the manager for the Department of this ALTERNATIVE SYSTEM PERMIT is:

Kevin Sherman  
1317 Winewood Blvd.  
Tallahassee, FL 32399-0700  
904/488-4070

The name, address and telephone number of the representative of the Applicant responsible under this ALTERNATIVE SYSTEM PERMIT is:

RANDALL J. HOUCK  
P.O. Box 867  
Pisgah Forest, NC 28768  
(704) 883-2130

In the event that different representatives are designated by either party after the execution of this ALTERNATIVE SYSTEM PERMIT, notice of the name and address of the new representative will be rendered in writing to the other party and said notification attached to originals of this ALTERNATIVE SYSTEM PERMIT.

#### C. Approvals and disapprovals:

If at the conclusion of the monitoring period, the Department approves the use of the EZLAS, a PERMANENT ONSITE SEWAGE DISPOSAL SYSTEM PERMIT shall be issued to the existing EZLAS as provided in EXHIBIT I. If the Department denies the use of the EZLAS, the parties shall follow the procedures outlined in EXHIBIT I.

#### D. Modifications:

Modifications of provisions of this ALTERNATIVE SYSTEM

PERMIT shall only be valid when they have been reduced to writing and duly signed..

E. All Terms and Conditions Included

This ALTERNATIVE SYSTEM PERMIT and EXHIBIT I, contain all the terms and conditions agreed upon by the parties.

F. Failure to comply with EXHIBIT I and this section, may result in the termination of this ALTERNATIVE SYSTEM PERMIT.

IN WITNESS WHEREOF, the parties hereto caused this 15 page TWO YEAR ALTERNATIVE SYSTEM PERMIT to be executed by their undersigned officials as duly authorized.

APPLICANT:

STATE OF FLORIDA, DEPARTMENT OF  
HEALTH AND REHABILITATIVE SERVICES

EEE ZZZ LAY DRAIN CO.

BY: 

RANDALL J. HOUCK  
President

BY: 

EANIX POOLE  
CHIEF, Environmental Health  
Services

DATE: 11/12/92

DATE: 1 Dec 92

## EXHIBIT 1

ALTERNATIVE SYSTEM PROTOCOL FOR EEE ZZZ DRAIN  
SYSTEM CONFIGURATIONS 2003 AND 2006

September 28, 1992

The undersigned representatives of EEE ZZZ LAY Drain Company, Inc., and the Department of Health and Rehabilitative Services agree as follows:

1. The Department of Health and Rehabilitative Services agrees to issue EEE ZZZ LAY Drain a two year alternative system permit for purposes of introduction of its product within the State of Florida. The effective date of the alternative system permit will be the date this protocol is executed by both parties but the two year period will begin on the date the 100th system is installed. EEE ZZZ LAY Drain will provide, on a weekly basis beginning the first week systems are installed after this protocol is executed, the Department of Health and Rehabilitative Services with a list of the systems installed up to the first 100 systems.
2. In order to ensure proper installation of the first 100 systems, from which 25 systems will randomly be selected for monitoring, the installation of the first 100 systems will be supervised and approved by a representative of EEE

ZZZ LAY Drain Company. Such supervision and approval of the installation of these first 100 systems will constitute a waiver of any issues surrounding the proper installation of the system, unless a county public health unit requires EEE ZZZ LAY Drain to install its systems contrary to the EEE ZZZ LAY Drain design specifications or Rule 10D-6, Florida Administrative Code, March 17, 1992.

3. EEE ZZZ LAY Drain may, under this permit, install an unlimited number of systems in the state. EEE ZZZ LAY Drain may install an approved system whenever a county public health unit has approved the installation site for a standard or alternative system.
4. EEE ZZZ LAY Drain agrees that the Department of Health and Rehabilitative Services may monitor and inspect selected installations. Ports for viewing and monitoring may be requested by the Department of Health and Rehabilitative Services for installation by EEE ZZZ LAY Drain in 25 systems where there are different installation configurations and different soil types. The Department of Health and Rehabilitative Services agrees to notify, in advance, EEE ZZZ LAY Drain of each monitoring visit to be made by staff of the Department. Advance notice shall be sufficient to

allow enough time for a representative of EEE ZZZ LAY Drain to be present at the visit.

5. EEE ZZZ LAY Drain Company, Inc., will warrant the product to the homeowner or contractor, where there is no homeowner, of any new single family residential system, installed in accordance with the manufacturers guidelines, for a period of two years (see Attachment A). If the drain field fails to function within the two year period, EEE ZZZ LAY Drain Company, Inc., will provide additional drainfield at no cost. EEE ZZZ LAY Drain will be responsible for providing a certified EEE ZZZ LAY Drain installer who will provide to the homeowner or contractor, where there is no homeowner, equipment and labor necessary to install the additional drain field.
6. A representative of EEE ZZZ LAY Drain Company will contact, demonstrate and train the appropriate staff of the Office of Environmental Health and the appropriate staff of the county public health unit in the proper installation of the 2003 Triangular Configuration and the 2006 Horizontal Configuration of the EEE ZZZ LAY Drain System. Training will include video tapes, training sessions and actual onsite installations.
7. EEE ZZZ LAY Drain Company will train and certify each installer on the proper use and installation

of the 2003 Triangular Configuration and the 2006 Horizontal Configuration of the EEE ZZZ LAY Drain System. Only certified installers trained by an EEE ZZZ LAY Drain representative and possessing an installers certificate (see Attachment B) will be allowed to install an EEE ZZZ LAY Drain System.

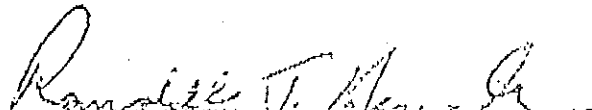
8. EEE ZZZ LAY Drain Company may, in addition to the two year warranty described above, issue to the homeowner or contractor, where there is no homeowner, a written warranty for five years (see Attachment C) for additions, replacements or repairs and ten years (see Attachment D) for new systems. A copy will be provided to the installer and county public health unit, if requested.
9. The 2003 Triangular Configuration of the EEE ZZZ LAY Drain System will be sized according to the linear foot sizing requirements for a three foot trench. The 2006 Horizontal Configuration will be sized at a 30% reduction of the required linear foot sizing requirements for a three foot trench. For example, if the sizing for a three foot trench, Rule 10D-6, Florida Administrative Code, March 17, 1992 and subsequent amendments thereto, requires 100 linear feet of trench, the 2003 Triangular Configuration will be sized at 100 linear feet and the 2006 Horizontal Configuration will be sized at 70 linear feet.

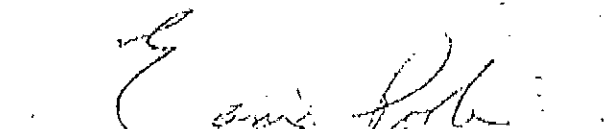
10. Upon completion of the two year alternative system permit, the Department of Health and Rehabilitative Services shall issue EEE ZZZ LAY Drain Company a permanent onsite sewage disposal system permit for the 2003 Triangular Configuration and the 2006 Horizontal Configuration of the EEE ZZZ LAY Drain System, provided that the unresolved failure rate of the EEE ZZZ LAY Drain product shall not be in excess of five (5%) percent. The term "failure" is defined herein to mean the following: any failure of the drainfield, even though installed in accordance with EEE ZZZ LAY's design specifications, to function properly, so that the drainfield causes the discharge of untreated or partially treated waste water onto the ground surface solely and proximately as a result of a design defect or the failure of the drainfield to function for its intended purpose. It shall not be an unresolved failure if a county public health unit requires EEE ZZZ LAY Drain to install its systems contrary to the EEE ZZZ LAY Drain design specifications or Rule 10D-6, Florida Administrative Code, March 17, 1992.
11. If there is a dispute between the parties over the circumstances concerning the unresolved failure of an EEE ZZZ LAY product or system, a professional



develop a rule which exclusively affects the EEE  
ZZZ LAY Drain products and installations.

This protocol is agreed to this 1<sup>st</sup> day of  
October, 1992, as represented by the signatures  
below.

  
Randall J. Houck, President  
EEE ZZZ LAY Drain Co. Inc.

  
Eamix Poole, Chief  
Office of Environmental Health  
Department of Health and  
Rehabilitative Services

# TWO YEAR WARRANTY

## EEE ZZZ Lay Drain<sup>™</sup> Pre-Fabricated Nitrification Field

CERTIFIED INSTALLER

\_\_\_\_\_

HEALTH DEPARTMENT CERTIFICATE OF  
COMPLETION DATE:

\_\_\_\_\_

LOCATION OF INSTALLATION:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SIGNATURE:

\_\_\_\_\_

PERCOLATION RATE \_\_\_\_\_

\* OF BEDROOMS \_\_\_\_\_

LINEAR  
FEET INSTALLED

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- 2002 VERTICAL
- 2003 VERTICAL
- 2003 TRIANGULAR
- 2003 HORIZONTAL
- 2006 VERTICAL
- 2006 HORIZONTAL

The EEE ZZZ Lay Drain Company will warrant for a period of TWO YEARS to the homeowner for any new system for a single family residential drain field. The drain field shall be installed in accordance with Pankow Engineering on minimum sizing for the drain field.

If the drain field fails to function for a period of TWO YEARS, EEE ZZZ Lay Drain Company will provide additional drain field at no cost. A certified EEE ZZZ Lay Drain installer will provide, at no cost to the homeowner, equipment and labor to install the additional drain field, if such a failure occurs.

(DRAIN FIELD MUST BE UNDER NORMAL USE AS THE DEPARTMENT OF PUBLIC HEALTH, STATE OF ~~FLORIDA~~ PERMIT ALLOWS.)

FLA.

COPY DISTRIBUTION: White - Homeowner; Yellow - Health Dept.; Pink - Installer

ATTACHMENT "A"

WIN: KATNY

**Certified**  
**EEE ZZZ Lay Drain**  
**INSTALLER**

This Certificate certifies that \_\_\_\_\_  
has met the requirements to issue warranties for the  
EEE ZZZ Lay Drain Company.

\_\_\_\_\_ Date

\_\_\_\_\_ Company

\_\_\_\_\_ EEE ZZZ Lay Drain Company  
Authorized Agent

3655  
Certified Installer #

ATTACHMENT "B"

10.7

# FIVE YEAR WARRANTY

## EEE ZZZ Lay Drain<sub>™</sub> Pre-Fabricated Nitrification Field

CERTIFIED INSTALLER

\_\_\_\_\_  
\_\_\_\_\_

HEALTH DEPARTMENT CERTIFICATE OF  
COMPLETION DATE:

\_\_\_\_\_

LOCATION OF INSTALLATION:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SIGNATURE:

\_\_\_\_\_

DATES SEPTAGE REMOVED  
3RD TO 5TH YEAR

(1) \_\_\_\_\_

PERCOLATION RATE \_\_\_\_\_

\* OF BEDROOMS \_\_\_\_\_

LINEAR  
FEET INSTALLED

- |  |       |
|--|-------|
| <input type="checkbox"/> 2002 VERTICAL   | _____ |
| <input type="checkbox"/> 2003 VERTICAL   | _____ |
| <input type="checkbox"/> 2003 TRIANGULAR | _____ |
| <input type="checkbox"/> 2003 HORIZONTAL | _____ |
| <input type="checkbox"/> 2006 VERTICAL   | _____ |
| <input type="checkbox"/> 2006 HORIZONTAL | _____ |

The EEE ZZZ Lay Drain Company will warrant for a period of FIVE YEARS to the homeowner for any new system for a single family residential drain field. The septic system shall be installed in accordance with Pankow Engineering percolation rates for the minimum allowable rate of 20 minutes.

If the nitrification field fails prematurely (within the FIVE YEAR period) and all requirements of this warranty have been met, a pro-rated replacement of the nitrification field will be made.

(DRAIN FIELD MUST BE UNDER NORMAL USE AS THE DEPARTMENT OF PUBLIC HEALTH, STATE OF ~~MISSISSIPPI~~ PERMIT ALLOWS.)

FIA.

*See reverse for additional information.*

COPY DISTRIBUTION: White - Homeowner; Yellow - Health Dept.; Pink - Installer

ATTACHMENT "C"

# TEN YEAR WARRANTY

## EDE ZZZ Lay Drain™ Pre-Fabricated Nitrification Field

CERTIFIED INSTALLER

\_\_\_\_\_  
\_\_\_\_\_

HEALTH DEPARTMENT CERTIFICATE OF  
COMPLETION DATE:

\_\_\_\_\_

LOCATION OF INSTALLATION:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SIGNATURE:

\_\_\_\_\_

DATES SEPTAGE REMOVED

1 \_\_\_\_\_  
2 \_\_\_\_\_  
3 \_\_\_\_\_

PERCOLATION RATE \_\_\_\_\_

# OF BEDROOMS \_\_\_\_\_

LINEAR  
FEET INSTALLED

- |  |       |
|--|-------|
| <input type="checkbox"/> 2002 VERTICAL   | _____ |
| <input type="checkbox"/> 2003 VERTICAL   | _____ |
| <input type="checkbox"/> 2003 TRIANGULAR | _____ |
| <input type="checkbox"/> 2003 HORIZONTAL | _____ |
| <input type="checkbox"/> 2006 VERTICAL   | _____ |
| <input type="checkbox"/> 2006 HORIZONTAL | _____ |

The EDE ZZZ Lay Drain Company will warrant for a period of  
TEN YEARS to the homeowner for any new system for a single  
family residential drain field. The drain field shall be installed  
in accordance with Pankow Engineering percolation rates of  
~~table below:~~ 20 min

If the nitrification field fails prematurely (within the TEN YEAR  
period) and all requirements of this warranty have been met, a  
pro-rated replacement of the nitrification field will be made.

(DRAIN FIELD MUST BE UNDER NORMAL USE AS THE  
DEPARTMENT OF PUBLIC HEALTH, STATE OF ~~ALABAMA~~  
PERMIT ALLOWS.)

FLA

See reverse for additional information.

COPY DISTRIBUTION: White - Homeowner; Yellow - Health Dept.; Pink - Installer

ATTACHMENT "D-1"

**EEE ZZZ LAY DRAIN COMPANY  
NITRIFICATION FIELD  
WARRANTY AGREEMENT  
BETWEEN THE EEE ZZZ LAY DRAIN CO. AND**

---

The EEE ZZZ Drain Company will warrant EEE ZZZ Lay Nitrification field to the homeowner or contractor for any new system in a single family residential drain field. The drain field shall be installed by a certified EEE ZZZ Lay Drain installer in accordance with Pankow Engineering on EEE ZZZ Lay Drain sizing for the drain field for the expressed TWO YEAR, FIVE YEAR, and the TEN YEAR warranties.

**TWO YEAR WARRANTY:**

If the drain field fails to function in the TWO YEAR period, EEE ZZZ Lay Drain Company will provide additional drain field at no cost. The certified installer will provide, at no cost to the homeowner, equipment and labor necessary to correct the failure.

**FIVE YEAR WARRANTY:**

The drain field for the five year warranty SHALL be sized for not less than 20 minute percolation rate in accordance with Pankow Engineering on EEE ZZZ Lay residential field requirements.

**TEN YEAR WARRANTY:**

All conditions of the TEN YEAR warranty must be met, including a minimum of 70 feet per bedroom of 2003 triangular design installed or its equivalent.

(DRAIN FIELD MUST BE UNDER NORMAL USE AS DIRECTED BY THE DEPARTMENT OF PUBLIC HEALTH, STATE OF ~~ALABAMA~~ PERMIT ALLOWS.)

FLA

\_\_\_\_\_  
DATE

\_\_\_\_\_  
COMPANY

\_\_\_\_\_  
OWNER

COPY DISTRIBUTION: White - Installer; Yellow - EZZL Drain Co.

ATTACHMENT "D-2"

**WARRANTY ELIGIBILITY:**

Contractor or homeowner is eligible for this warranty provided all conditions of this agreement are adhered to strictly.

**CONDITIONS AND EXCEPTIONS:**

This warranty shall only apply when the EEE ZZZ Lay drain field is installed:

- (i) In accordance with local plumbing and building codes, ordinances and regulations.
- (ii) Pursuant to and strictly in accordance with the rules and regulations of the State of Florida Department of Health and Rehabilitative Services; and
- (iii) Strictly in accordance with the permitting procedures for the EEE ZZZ Lay drain field systems adopted by the State of Florida and EEE ZZZ Lay Drain Company.

**WHAT IS WARRANTED AND FOR HOW LONG:**

The EEE ZZZ Lay prefabricated nitrification field is warranted for two years from septic tank installation date (date signed on completion form by State of Florida Department of Health and Rehabilitative Services). If the nitrification field fails prematurely (within the two year period) and all requirements of this warranty have been met, EEE ZZZ Lay Drain Company shall provide additional drain field at no cost to homeowner. Pursuant to an agreement between EEE ZZZ Lay Drain Company and EEE ZZZ Lay Drain Company installers, a certified EEE ZZZ Lay Drain Company installer shall provide, at no cost to the homeowner, equipment and labor to install the additional drain field, should a failure occur within the two year period.

**WHAT IS NOT COVERED BY THE WARRANTY:**

1. Septic tank
2. Effluent distribution boxes
3. Improper installation

(The drain field with a two year limited warranty must be installed in accordance with the agreement between the State of Florida Department of Health and Rehabilitative Services and EEE ZZZ Lay Drain Company, the protocol thereto, pertinent and prevailing Florida regulations and rules, local or county Rules and regulation, and the design specifications of Pankow Engineering as they are approved by the State of Florida Department of Health and Rehabilitative Services, Division of Environmental Health.

4. Plastic pipe not used with EEE ZZZ Lay Drain
5. Failure due to excessive use or improper use
6. Equipment and labor
7. Landscaping costs

**WARNING:**

Introduction of certain chemicals into a septic tank system may be harmful. Dispose of chemicals in the proper manner according to the manufacturer's directions.

**EEE ZZZ LAY DRAIN COMPANY'S OBLIGATIONS:**

Replacements qualifying under this warranty can only be made by an EEE ZZZ Lay Drain Company representative. Write:

EEE ZZZ Lay Drain Company, Inc.  
P.O. Box 867  
Pisgah Forest, North Carolina 28768  
Telephone (704) 883-2130

**OWNER'S OBLIGATION (CONTRACTOR):**

1. Must have Certificate of Completion from State of Florida Department of Health and Rehabilitative Services.
2. Must have Warranty Certificate from EEE ZZZ Lay Drain certified installer.

**LIMITATION ON IMPLIED WARRANTY:**

LIMITED WARRANTIES, INCLUDING ANY WARRANTY OF MERCHANTABILITY IMPOSED ON THE SALE OF THE EEE ZZZ LAY DRAIN FIELD TO THE HOMEOWNER UNDER FLORIDA LAW, ARE LIMITED TO TWO YEAR DURATION FOR THE EEE ZZZ LAY DRAIN FIELD OR ITS CONSTITUENT PARTS.

**DISCLAIMER:**

No other express warranty has been made or will be made on behalf of EEE ZZZ Lay Drain Company with respect to the EEE ZZZ Lay drain field or the installation operation, repair or replacement of the drain field unless you have also received a separate five year or ten year warranty from EEE ZZZ Lay Drain Company. In the event you have received a five year or ten year warranty, the terms of said warranty shall not govern this warranty. EEE ZZZ Lay Drain Company as warrantor shall not be responsible for water damage or other damage or loss or use of EEE ZZZ Lay Drain Company, inconvenience, loss or damage to personal property, whether direct or indirect and whether arising in contract or tort.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. FLORIDA LAW MAY GIVE YOU CERTAIN SPECIFIC OTHER RIGHTS WHICH ARE NOT MENTIONED HEREIN.



**SOUTHERN BUILDING CODE CONGRESS INTERNATIONAL, INC.**  
900 Montclair Road  
Birmingham, Alabama 35213

**The Committee on Compliance in review of the data submitted finds that, in their opinion, the product, material, system or method of construction specifically identified in this report conforms with or is a suitable alternate to that specified in the standard codes, SUBJECT TO THE LIMITATIONS IN THIS REPORT.**

The Committee on Compliance has reviewed the data submitted for compliance with the Standard Building, Plumbing, and the CABO One and Two Family Dwelling Codes and submits to the Building Official or other authority having jurisdiction the following report.

REPORT NO.: 8971

EFFECTIVE DATE: 12-1-89

EXPIRES: See current SBCCI COMPLIANCE REPORT LISTING

CATEGORY: FOUNDATION SYSTEMS

SUBMITTED BY:

EEE ZZZ LAY DRAIN COMPANY, INC.  
POST OFFICE BOX 867  
PISGAH FOREST, NORTH CAROLINA 28758  
OR N.W. EEE ZZZ LAY DRAIN CO (503)492-2500

**I. PRODUCT TRADE NAME**

- 2001 Drain System (F.D.)
- 2003 Drain System (S.T.)

**II. PERFORMANCE OF PRODUCT FOR WHICH EVALUATION IS REQUESTED**

Footing drain and septic tank drain lines.

**III. USES**

Footing and foundation drainage and septic tank drain lines.

**IV. DESCRIPTION**

The 2001 Drain System is used for foundation drains. It consists of a common 4" diameter perforated flexible plastic pipe surrounded with 3" of an expanded polystyrene aggregate. The polystyrene aggregate varies in size from 3/4" to 2-1/2" and is held in place with a plastic netting. It is supplied in 10'-0" long sections.

The 2003 Drain System is used for septic tank drain lines. It is supplied with two 10" diameter bundles of the polystyrene

aggregate without the 4" diameter perforated pipe in addition to the standard section used in the 2001 Drain System.

**V. INSTALLATION**

For foundation drains, the standard section with the 4" diameter drain pipe is used alone. The sections are placed next to the foundation and connected together according to manufacturers recommendations.

For septic tank drain lines, the sections without the 4" drain pipe are used in addition to the standard section. These two sections are placed side by side with a 4" clear space between them and the standard section is centered on top of them. Or for shallow applications, these two sections are placed on each side of the standard section with no gaps.

The manufacturer's published installation instructions shall be strictly adhered to and a copy of these instructions shall be available at all times on the jobsite during installation.

**VI. SUBSTANTIATING DATA**

1. Manufacturer's descriptive literature and installation instructions.
2. Report on Comparative Testing of Drain Installations, prepared by United States Testing Company, Inc., Report No. 97206, dated October 2, 1987, signed by Robert Wojciechowicz and D. Richard Franconeri.
3. Technical support paper for EEE ZZZ Lay Drain Company's ground absorption disposal system, by Pankow Engineering Company in Asheville, NC, dated October, 1988, signed by Kenneth O. Pankow, P.E.

**VII. REFERENCES TO THE STANDARD CODES**

Standard Building Code - 1988 Edition - 1989 Revisions

- Section 102.6 Alternate Materials and Methods
- Section 1312.3 Dampproofing



Standard Plumbing Code - 1988 Edition - 1989 Revisions

- Section 102.6 Alternate Materials and Methods of Construction
- Section E106 Disposal Fields

CABO One and Two Family Dwelling Code - 1989 Edition

- Section R-108 Alternate Materials and Systems
- Section R-305 Foundation Drainage
- Section P-2508 Drain Lines

VIII. COMMITTEE FINDINGS

The Committee on Compliance in review of the data submitted finds that, in their opinion, EEE ZZZ Lay Drain Company's 2001 and 2003 Drain Systems as described in this report conform with or are suitable alternates to that specified in the Standard Building, Plumbing, and CABO One and Two Family Dwelling Codes or Supplements thereto.

IX. LIMITATIONS

1. An approved filter membrane shall be used with the 2001 Drain System in accordance with the code.
2. The 2001 Drain System shall have a minimum earth cover of 12".

X. IDENTIFICATION

All packaging of EEE ZZZ Lay Drain Company's 2001 and 2003 Drain Systems shall bear the manufacturer's name and/or trademark, the Seal of the Southern Building Code Congress International and the number of this report for field identification.

XI. PERIOD OF ISSUANCE

SEE CURRENT SBCCI COMPLIANCE REPORT LISTING FOR STATUS OF THIS COMPLIANCE REPORT.

Report prepared by:

Woods F. McRoy  
 Woods F. McRoy, P.E.  
 Senior Engineer

Certified by:

Billy R. Manning  
 Billy R. Manning, P.E.  
 Director of Engineering and Education

COMMITTEE ON COMPLIANCE  
 Southern Building Code Congress International

C. Curtis Mann  
 C. Curtis Mann, P.E., Chairman  
 New Orleans, Louisiana

David E. Buck  
 David E. Buck, P.E.  
 Alcoa, Tennessee

Freeman L. Wood  
 Freeman L. Wood  
 Fayetteville, Arkansas

April 13, 1993

DEPARTMENT OF  
TRANSPORTATION

Alex S. Mauck  
P.O. Box 654  
Gresham, OR 97030

Highway Division  
District 2B

FILE CODE:

Dear Alex:

I have been looking for the past six months for some alternative to landfilling the polystyrene foam we separate from our roadside litter stream. To date, I have not been able to locate a user for our contaminated material. After much research, no one presently seems to be taking foam in the Portland area. As a last resort, last week, I was able to deliver the foam to the Environmental Learning Center at Clackamas Community College where it will supposedly be baled and shipped. I have curtailed the separation of this material from our recycling project until we know for sure that it can be used locally.

As I shared with you on the phone, for the last four years our District has been involved in an extensive program to separate various materials out of the litter stream for markets, waste reduction, and diversion credits. Polystyrene foam appears very frequently in the litter stream and it is easily separated and stored until we have a sizeable quantity for shipment. I would estimate that we process several thousand cubic-feet or more each year. The material we process is contaminated only by roadside dust and dirt. From your description of the material you are looking for, our material would be ideal for your needs.

Should your project find approval from the various agencies allowing you to proceed, we will both greatly benefit from it. Therefore, please keep me informed as to its outcome. Thanks again for your call.

Sincerely,



ALLEN M. HURST, JR.  
District 2B Litter Coordinator

AMH/lra



9200 SE Lawnfield Rd.  
PO Box 1339  
Clackamas, OR 97015  
(503) 653-3086  
FAX 653-5655



(6)

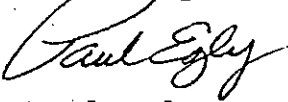
April 8, 1993

Mr. Alex Mauck  
P.O. Box 654  
Gresham, OR 97030

Mr. Mauck,

In our phone conversation today we discussed the possibility of Western Insulfoam supplying recycled expanded polystyrene (EPS) to your company. As a manufacturer of EPS we generate a lot of in house regrind which we are unable to process back into our blocks on a consistent basis. We always have plenty of recycled EPS coming back from our customers or being generated in house. If you can help us by taking some of our recycled EPS it would greatly benefit our business.

Sincerely,



Paul Egly  
Location Manager

PE/lis

marko

foam products, inc.

9740 S.W. Hillman Ct., Ste. 200 • Wilsonville, Ore. 97070 • 503-682-8719

April 8, 1993

Alex Mauck  
NW Easy Lay Drain Co.  
PO Box 654  
Gresham, OR 97030

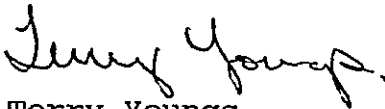
Dear Alex,

In regards to excess scrap EPS foam, we possibly might have some for your use. We have several companies that provide us with their scrap EPS foam. We densify this foam and send it to the NPRC in Corona, CA.

On occasion, we are over loaded with foam and can not keep up in densifying it. In this event, we would call you for pick up of this foam.

Please give me a call if you have any further questions.

Sincerely,



Terry Youngs  
Sales Manager  
Marko Foam Products, Inc.

8

Northwest Foam Products, Inc.  
9565 SW Ridder Road, Suite 290  
Wilsonville, OR 97070

April 14, 1993

Mr. Alex Mauck, President  
EEEEZZZ Lay Drain Co.  
P.O. Box 654  
Gresham, OR 97030

Dear Mr. Mauck:

While Northwest Foam Products, Inc. is able to recycle and reprocess most of our waste material, at times we do have more than we are able to use, or the quality and cleanliness of the material is such that we are unable to use it. Your proposal for an alternative manner in which to dispose of our expanded polystyrene scrap could benefit us and our customers.

We also have requests from the general public to provide recycling for their EPS waste material, something we are unable to do. Perhaps your proposal could also provide an opportunity to recycle this source of waste.

Sincerely,



Cindy A. Tyree  
Vice President  
Northwest Foam Products, Inc.



Technology you can afford

9

**VTECH COMPUTERS, INC.**

10430 S.W. Fifth Street  
Beaverton, OR 97005-3447  
(503) 646-3424

April 15, 1993

Alex Mauck  
Northwest Eeezzz Lay Drain Company  
Post Office Box 654  
Gresham, OR 97030

Dear Mr. Mauck:

I am writing this letter to reiterate Vtech's interest in Northwest Eeezzz Lay Drain as a possible source for foam recycling. We generate a substantial 6-10, 48 foot trailer loads per month of EPS foam. The foam is hauled away and recycled. However, we are looking for a more cost effective solution.

Please keep me informed of your company's growth in the foam recycling business. I am confident that with the volume of EPS we generate, we could enter into a business relationship that would prove beneficial to both parties.

Sincerely,

*Jean Haedrich*  
Jean Haedrich  
Purchasing Agent



# CLACKAMAS COUNTY

## Department of Transportation & Development

THOMAS J. VANDERZANDEN  
EXECUTIVE DIRECTOR

November 23, 1993

Alex Mauck  
% NW EEE-ZZZ Lay Drain Co.  
PO Box 654  
Gresham, Oregon 97030

Dear Alex:

You have asked whether or not we have noted any trends with regard to drain rock filter material availability for onsite sewage disposal construction. Clearly, the last few years have seen increased difficulties in obtaining rock suitable for onsite sewage disposal construction. A number of gravel extraction operations within Clackamas County have ceased to do business. Further, the existing quarry sites have had some difficulty in maintaining or expanding their operations to assure a continuous supply of material. While the gravel resource certainly exists within the confines of Clackamas County to supply most needs for the foreseeable future, environmental and regulatory requirements have placed restrictions on the number of sites that can be developed and the speed at which such sites can be developed or expanded.

We believe that the long term interests of the construction industry and the residents of Clackamas County would best be served by ensuring a reliable supply of aggregate material for a number of uses. If that resource is not available, the use of alternative such systems such as the one you are currently marketing may hold some potential. Clackamas County, however, is not in a position to either endorse or deny the use of your system. The Department of Environmental Quality, through it's rule making procedures, has the power to approve or disapprove of your system.

We hope that the above information proves useful. If you have any questions concerning this letter, please feel free to contact me.

RICHARD L. POLSON - Building Services Supervisor  
Building Services Section

/ep



# Malheur County

---

**Environmental Health Department  
251 B Street West, #9  
Vale, OR 97918**

**(503) 473-5186  
Fax (503) 473-5168**

December 27, 1993

Mr. Alex Mauck, President  
EEE ZZZ Lay Drain Company  
P. O. Box 654  
Gresham, OR 97030

RE: Drain Rock Availability - Your Memo of 12-17-93

Dear Mr. Mauck:

We currently have no shortage of drain rock in northern Malheur County. Our geologic condition here would not dictate a long term problem or shortage. Zoning issues might create more of a problem in future years.

The southern part of the county, Jordan Valley area, and the Juntura area does have a problem with getting adequate drain rock because of transportation cost and no local supplies.

We have in the past recommended some graveless trench systems, but the cost in this area seems prohibitive.

Sincerely,

Ray Huff, R.S.  
Director  
Malheur County Environmental Health Department

RH:am



12

Lane  
County



December 21, 1993

Alex Mauck  
c/o Northwest EEE ZZZ Lay Drain Company  
P.O. Box 654  
Gresham, OR 97030

Dear Mr. Mauck:

I am responding to your December 17, 1993, inquiry regarding the short and long term availability of drainfield rock. Lane County has not experienced any shortage of drainfield rock and there is no indication that there would be a shortage in the foreseeable future.

Drainfield rock does have to be transported to the costal area of Lane County from the Eugene area at considerable cost, therefore your product may be a practical alternative in that area.

Sincerely,

Stanley E. Petrasek, R.S.  
MANAGER

ENVIRONMENTAL HEALTH DIVISION

SEP:rm

December 6, 1993

To Whom it may concern,

My wife and I own 1.87 acres next to the Sandy River in Troutdale, Oregon. We purchased the property in February, 1965, immediately after the Christmas Floods of 1964, also referred to as the 100 Year Flood. We saw the high water marks very vividly, before we made the decision to purchase, and made our decision with confidence that the river was going to be a friend to us into our retirement years.

We have enjoyed our park-like setting in spite of ice storms and loss of electric power for up to eight days at a time. We have nurtured the property in such a way as to provide us with green vegetables, summer and winter squash and lots of grapes and fruit trees in our mini-orchard. Occasionally we add fresh salmon, steelhead, and about five times, smelt to our menu.

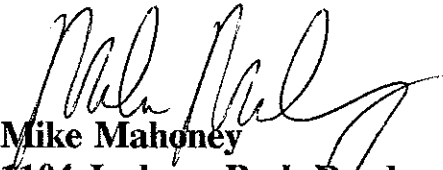
1992 we accomplished a minor partition to our place and now we have three single family residential lots exceeding twenty thousand square feet each. We have plans selected for two additional houses. One to be a one level fourteen hundred square home with an existing double garage. The other to be a sixteen hundred square foot two story with eleven hundred feet on the main floor and a detached double garage.

We need sanitary systems and water to accomplish our goal. We hired Alex Mauch to assist us with the sanitation problem. We laid out the required drain fields and backup drain fields complying with the necessary and reasonable set-backs; re: well heads, water lines, property lines, etc. It didn't take long to consume most of the available lot space. Since my property is river glacial sand for at least thirty feet deep that I know of, I asked for information on an alternative sanitary system because the one outlined for me would work in clay. It appears that technology has come up with a system that is not only guaranteed for ten years ( as opposed to the one approved that is not guaranteed), but the material used in the EEE ZZZ Lay Drain field is made from recycled material. Also, we do not need to use any aggregate, which is not only redundant in my soil conditions, but costly to acquire and heavy to move about in my yard. The aggregate could be put to a better use by crushing for cement aggregate. Most importantly to me is the engineer's

report stipulating that, "Where conditions allow, the land area required can be reduced by as much as 70%."

The material presented to me by EEE ZZZ Lay Drain authored by Kenneth O. Pankow, PE, of Asheville, NC, has convinced me that a better system for me, for the environment, for the Sandy River and for Troutdale, Oregon, now exists on the market and steps should be implemented to offer the EEE ZZZ Lay Drain System to homeowners.

Sincerely,



**Mike Mahoney**  
1104 Jackson Park Road  
Troutdale, Oregon 97060  
(503) 665-7424

c/c City of Troutdale, Troutdale, OR  
c/c Multnomah County, Portland, OR  
c/c State of Oregon, Salem, OR

# Oregon

January 18, 1994

Nanette Mauck  
Northwest EEE ZZZ Lay Drain Co.  
P.O. Box 654  
Gresham, OR 97030

DEPARTMENT OF  
CONSUMER AND  
BUSINESS  
SERVICES

OFFICE OF MINORITY,  
WOMEN AND  
EMERGING SMALL  
BUSINESS

Dear Ms. Mauck:

Congratulations! Effective the date of this letter, the Oregon Office of Minority, Women and Emerging Small Business has certified your firm as a **DISADVANTAGED BUSINESS ENTERPRISE (DBE)** and **WOMEN BUSINESS ENTERPRISE (WBE)**.

**THIS CERTIFICATION EXPIRES ON February 1, 1995.**

As a certified business, your firm will be listed in the State of Oregon, Office of Minority, Women & Emerging Small Business Certified Directory based on the information you provided in your application. We will list up to eight capability descriptions within the Directory and circulate it to over 160 subscribers including public and state agencies, as well as private industry and prime contractors.

Certification with the State of Oregon will not guarantee bid or contracting information. Please contact the purchasing divisions in your city and county, as well as the Department of General Services (Vendor Information Program); and the Department of Transportation (highway construction).

**CHANGES IN BUSINESS OWNERSHIP, CONTROL, OPERATIONAL MANAGEMENT, ADDRESS OR TELEPHONE NUMBER MUST BE PROVIDED TO THIS OFFICE WITHIN 30 DAYS OF THE CHANGE.**

Approximately one month prior to the expiration date listed above, you will be sent information regarding the annual update and re-certification of your firm.

The following description table indicates the areas in which your firm has been approved to perform work as a DBE. If there are any discrepancies or you have questions regarding the descriptions, please contact the office immediately.

Barbara Roberts  
Governor



Labor & Industries Bldg  
Salem, OR 97310  
(503) 378-5651  
FAX (503) 373-7041  
TDD (503) 378-8915

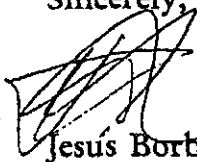
Northwest EEE ZZZ Lay Drain Co.  
Page 2.

**FIRM'S CAPABILITIES:**

Code #	Code Description	Firm's Capability Description
1-01-64	Sewer/Water Systems	Provides installation services for water and sewer systems.

Good luck in your future business endeavors!

Sincerely,



Jesus Borboa  
Certification Specialist

**YOUR FIRM'S CERTIFICATION #: 2831**

NPDES PERMITS IN CLACKAMAS R. BASIN

102509/B 21332/A	36350 INDUSTRIAL WAY 900 NW MILL RD.	SANDY ESTACADA	CLACKAMAS CLACKAMAS	22N-TICK 22N-CLAC	3.9 IND PACIFIC RIM PRODUCTS, INC. 24 IND RSG FOREST PRODUCTS, INC.	100 GEN01 100 GEN01	12-FEB-91 ACTIVE 13-JUN-91 ACTIVE	100 6 260 2
107682/A 83240/A	9100 SE MANGAN DR	CLACKAMAS OREGON CITY	CLACKAMAS CLACKAMAS	22N-CLAC 22N-CLAC	3.8 IND CLACKAMAS WATER DISTRICT 2 IND SOUTH FORK WATER BOARD	200 GEN02 200 GEN02	18-MAR-93 ACTIVE 08-MAR-91 ACTIVE	400 2 500 1
17150/A 84442/A 91035/A	18820 SOUTH RIDGE ROAD 24500 S. ENTRANCE RD.	OREGON CITY ESTACADA EAGLE CREEK	CLACKAMAS CLACKAMAS CLACKAMAS	22N-CLEA 22N-CLAC 22N-EAGL	8.3 AGR CLEAR CREEK RAINBOW RANCH, INC. 22.6 AGR OREGON DEPARTMENT OF FISH AND WILDLIFE 13 AGR U. S. DEPARTMENT OF THE INTERIOR - FISH	300 GEN03 300 GEN03 300 GEN03	01-MAY-91 ACTIVE 27-MAY-91 ACTIVE 22-JAN-91 ACTIVE	700 2 1200 1
108004/A 2005/A 27874/A 107055/A	MOLALLA RIVER 23790 SE HWY 224 29400 RIVER MILL ROAD 16741 S STONEHILL DRIVE	MOLALLA BORING ESTACADA MOLALLA	CLACKAMAS CLACKAMAS CLACKAMAS CLACKAMAS	UNKNOWN 22N-DEEP 22N-CLAC 22K-MILK	999.9 IND ROHRS, MAX 2 IND ALTHAUER, GLENN L. AND JOHN T. 23 IND ESTACADA ROCK PRODUCTS INC. 999.9 IND PARKER-NORTHWEST PAVING CO. - DBA	700 GEN07 1201 GEN12A 1201 GEN12A 1201 GEN12A	13-AUG-93 ACTIVE 19-FEB-93 ACTIVE 30-OCT-92 ACTIVE 18-MAR-93 ACTIVE	1200 1 1200 1
North Clackamas School District @ SE 152nd Scott's Yard Waste Recycling @ SE 102th & Capps JC Reeves Construction for Echo Valley Meadows Subdivision @ SE 122nd and SE Summer Lane Stonegate Golf Course @ 21203 S Highway 213 Oregon Underground Company for Beautiful Savior Lutheran Church @ SE 92nd and Otty Place Ray's Food Service @ 126th & SE Hwy 212 Sieben Cr. Estates Subdivision @ SE 142nd Shelloren Estates @ 14166 SE 122nd, Clackamas Wilhems Farms Subdivision @ 6001 SW Meridian Way	July 30, 1992 August 8, 1992 July 6, 1992 April 22, 1993 July 27, 1992 October 27, 1992 November 4, 1992 January 22, 1993 February 8, 1993	GEN12C GEN12C GEN12C GEN12C GEN12C GEN12C GEN12C GEN12C GEN12C	} Basin not confirmed - need to contact Clack. Co our contract agency					
107006/A 106772/A	MULTIPLE SITES	MILWAUKIE	CLACKAMAS CLACKAMAS	UNKNOWN UNKNOWN	999.9 IND CLACKAMAS COUNTY 999.9 IND OREGON DEPT. OF TRANSPORTATION	1203 GEN12CA 1203 GEN12CA	20-AUG-92 ACTIVE 27-MAY-92 ACTIVE	
106748/A	11500 SE HIGHWAY 212	CLACKAMAS	CLACKAMAS	22N-CLAC	5 IND FRED MEYER, INC.	1204 GEN12D	13-MAY-92 ACTIVE	
106964/A 107216/A 105405/A	10448 HWY 212 23123 SE EAGLE CREEK ROAD 16795 SE 130TH	CLACKAMAS EAGLE CREEK CLACKAMAS	CLACKAMAS CLACKAMAS CLACKAMAS	22N-CLAC 22N-CLAC 22N-CLAC	5 IND CONSOLIDATED METCO, INC. 17 IND EAGLE FOUNDRY CO. 5 IND MORSE BROS., INC.	1207 GEN12H 1207 GEN12H 1207 GEN12H	29-JUL-92 ACTIVE 09-OCT-92 ACTIVE 09-OCT-92 ACTIVE	
26788/A 100548/A 105217/A 100556/A	13626 S. FREEMAN RD. 800 NW THIRD AVENUE 12805 SE CAPP'S ROAD 19701 SE HWY 212	MULINO CANBY CLACKAMAS BORING	CLACKAMAS CLACKAMAS CLACKAMAS CLACKAMAS	22K-MILK 22K-MOLA 22N-CLAC 22N-CLAC	8 IND ELECTRONIC CONTROLS DESIGN, INC. 2.5 IND JOHNSON CONTROLS BATTERY GROUP, INC. 5 IND POFKO, INC. 12.5 IND WESCOTT ENTERPRISES, INC.	1208 GEN12L 1208 GEN12L 1208 GEN12L 1208 GEN12L	24-AUG-92 ACTIVE 13-JUL-92 ACTIVE 30-OCT-92 ACTIVE 23-OCT-92 ACTIVE	
107181/A 72634/A	16225 SE 106TH AVENUE 419 MAIN ST.	CLACKAMAS OREGON CITY	CLACKAMAS CLACKAMAS	22N-CLAC 22N-WELL	3.8 IND FORTIFIBER CORPORATION 27.5 IND SMURFIT NEWSPRINT CORPORATION	1210 GEN12P 1210 GEN12P	07-OCT-92 ACTIVE 23-JUN-92 ACTIVE	
107688/A 108048/A 107146/A	15628 SE 102ND ROAD 15800 SE 130TH STREET 453 SW SECOND AVENUE	CLACKAMAS CLACKAMAS ESTACADA	CLACKAMAS CLACKAMAS CLACKAMAS	22N-CLAC 22N-CLAC 22N-CLAC	3.8 IND GORDON TRUCKING, INC. 5.8 IND RUAN LEASING COMPANY 24 IND UNION OIL COMPANY OF CALIFORNIA	1213 GEN12T 1213 GEN12T 1213 GEN12T	12-MAR-93 ACTIVE 03-SEP-93 ACTIVE 25-SEP-92 ACTIVE	
92680/A	EAST END OF WALLY ROAD	BORING	CLACKAMAS	22N-DEEP	1.5 IND VANPORT MANUFACTURING, INC.	1214 GEN12W	12-MAY-93 ACTIVE	

Total  
100 6  
260 2  
400 2  
500 1  
700 2  
1200 1  
1200 1

105886/A	245 SE HIGHWAY 224	ESTACADA	CLACKAMAS	22N-CLAC	2.5 IND MOBIL OIL CORP	1500 GEN15	20-MAY-91	ACTIVE
100747/A	11843 SE HWY 212	CLACKAMAS	CLACKAMAS	22N-CLAC	4.5 IND SAFETY KLEEN CORP.	1500 GEN15	16-FEB-93	ACTIVE
106487/A	10560 SE HIGHWAY 212	CLACKAMAS	CLACKAMAS	22N-CLAC	4 IND STEIN OIL CO., INC.	1500 GEN15	06-JAN-92	ACTIVE
102806/A	16540 SE 130TH STREET	CLACKAMAS	CLACKAMAS	22N-CLAC	5.5 IND SAFETY KLEEN CORP.	1700 GEN17	02-SEP-93	ACTIVE
26014/B	27300 SE JUDD RD	EAGLE CREEK	CLACKAMAS	22N-DEEP	2.2 IND AMERICAN SAND & GRAVEL INC.	100915 NPDES	04-NOV-92	SUSPENDED
16592/A	13305 RICHEY RD	BORING	CLACKAMAS	22N-DENF	3 DOM CLACKAMAS COUNTY SERVICE DISTRICT #1	100968 NPDES	16-SEP-92	ACTIVE
27866/A	TULIP RD OFF LAKE SHORE DR	ESTACADA	CLACKAMAS	22N-CLAC	23.6 DOM ESTACADA, CITY OF	100913 NPDES	28-MAY-92	ACTIVE
78615/A		SANDY	CLACKAMAS	22N-TICK	3.4 DOM SANDY, CITY OF	100884 NPDES	20-APR-92	ACTIVE
90948/A		TIMBERLAKE	CLACKAMAS	22N-CLAC	52 DOM U. S. DEPARTMENT OF AGRICULTURE - MT HOO	100894 NPDES	30-APR-92	ACTIVE

NPDES PERMITS IN MCKENZIE R. BASIN upriver of Hayden Br.

28391/A	Leaburg Project	EUGENE	LANE	22D-MCKE	34 IND EUGENE WATER & ELECTRIC BOARD	100 GEN01	19-FEB-91	ACTIVE
28393/A	Trailbridge	EUGENE	LANE	22D-MCKE	82.5 IND EUGENE WATER & ELECTRIC BOARD	100 GEN01	10-JAN-91	ACTIVE
28395/A	Walterville Project	EUGENE	LANE	22D-MCKE	23 IND EUGENE WATER & ELECTRIC BOARD	100 GEN01	22-JAN-91	ACTIVE
64490/A	90700 FISH HATCHERY ROAD	LEABURG	LANE	22D-MCKE	29 AGR OREGON DEPARTMENT OF FISH AND WILDLIFE	300 GEN03	27-MAY-91	ACTIVE
64500/A	43863 GREER DR.	LEABURG	LANE	22D-MCKE	35 AGR OREGON DEPARTMENT OF FISH AND WILDLIFE	300 GEN03	27-MAY-91	ACTIVE
107373/A	586 SWEETGUM LN.	EUGENE	LANE	UNKNOWN	999.9 IND MOORE, JOHN	700 GEN07	27-OCT-92	ACTIVE
96244/A	785 N 42ND STREET	SPRINGFIELD	LANE	22D-MCKE	14.7 IND WEYERHAEUSER COMPANY	1202 GEN12C	10-JUL-92	ACTIVE
106769/A	LANE COUNTY MOBILE	EUGENE	LANE	UNKNOWN	999.9 IND LANE COUNTY	1203 GEN12CA	27-MAY-92	ACTIVE
102639/A	632 SHELLEY STREET	SPRINGFIELD	LANE	22D-MCKE	15 IND BLUEWATER BOATS, INC.	1208 GEN12L	21-AUG-92	ACTIVE
107821/A	5280 HIGH BANKS RD	SPRINGFIELD	LANE	22D-MCKE	16 IND BLUEWATER BOATS, INC.	1208 GEN12L	18-JUN-93	ACTIVE
106565/B	2885 OLYMPIC ST	SPRINGFIELD	LANE	22D-MCKE	15.4 IND MILL TEK, INC.	1208 GEN12L	24-NOV-92	ACTIVE
104563/A	3855 MARCOLA ROAD	SPRINGFIELD	LANE	22D-MCKE	11.7 IND LEAVITTS FREIGHT SERVICE, INC.	1213 GEN12T	20-OCT-92	ACTIVE
106911/A	4080 COMMERCIAL AVE.	SPRINGFIELD	LANE	22D-MCKE	14.5 IND REED'S FUEL COMPANY	1213 GEN12T	13-JUL-92	ACTIVE
107256/A	3600 COMMERCIAL	SPRINGFIELD	LANE	22D-MCKE	14.5 IND OREGON CEDAR PRODUCTS CO.	1214 GEN12W	29-OCT-92	ACTIVE
107271/A	3950 MARCOLA ROAD	SPRINGFIELD	LANE	22D-MCKE	15 IND OREGON INDUSTRIAL LUMBER PRODUCTS, INC.	1214 GEN12W	23-OCT-92	ACTIVE
107401/A	1001 NORTH 35TH STREET	SPRINGFIELD	LANE	22D-MCKE	14 IND SUNDANCE LUMBER COMPANY, INC.	1214 GEN12W	02-NOV-92	ACTIVE
96244/A	785 N 42ND STREET	SPRINGFIELD	LANE	22D-MCKE	14.7 IND WEYERHAEUSER COMPANY	1214 GEN12W	14-DEC-92	ACTIVE
105878/A	5720 E. MAIN STREET	SPRINGFIELD	LANE	22D-MCKE	15 IND B.P. OIL COMPANY	1500 GEN15	09-MAY-91	ACTIVE
105879/A	5737 MAIN	SPRINGFIELD	LANE	22D-MCKE	1.5 IND SUNNY SERVICE STATIONS	1500 GEN15	09-MAY-91	ACTIVE
96244/A	785 N 42ND STREET	SPRINGFIELD	LANE	22D-MCKE	14.7 IND WEYERHAEUSER COMPANY	1500 GEN15	28-JUL-93	ACTIVE
106911/A	4080 COMMERCIAL AVE.	SPRINGFIELD	LANE	22D-MCKE	14.5 IND REED'S FUEL COMPANY	1700 GEN17	08-APR-93	ACTIVE
96244/A	785 N 42ND STREET	SPRINGFIELD	LANE	22D-MCKE	14.7 IND WEYERHAEUSER COMPANY	1700 GEN17	08-APR-93	ACTIVE
103425/A	3600 COUNTY FARM ROAD	EUGENE	LANE	22D-MCKE	6.2 IND WILDISH LAND CO.	1700 GEN17	22-JUN-93	ACTIVE
63883/B	88700 MARCOLA ROAD	SPRINGFIELD	LANE	22D-MCKE	15 AGR-ALLECO FINANCIAL CORP.	100275 NPDES	19-JUN-91	ACTIVE
96244/A	785 N 42ND STREET	SPRINGFIELD	LANE	22D-MCKE	14.7 IND WEYERHAEUSER COMPANY	101081 NPDES	03-MAY-93	ACTIVE

*all permits below line are below Hayden Bridge*

*Prod wro hydr if fo is rec in Spr Most if not a of Springfield drains to Will*



NPDES PERMITS IN N. SANTIAM BASIN

105550/A	40580 CEDAR MILL RD	LYONS	LINN	22G-SAN	30.1 IND FRERES LUMBER CO. INC.	100 GEN01	31-DEC-90	ACTIVE
64495/A		IDANHA	LINN	22G-HORN	.2 AGR OREGON DEPARTMENT OF FISH AND WILDLIFE	300 GEN03	27-MAY-91	ACTIVE
31045/A	141 14TH ST	LYONS	LINN	22G-SAN	34.5 IND FRERES LUMBER CO.,INC.	400 GEN04	31-DEC-90	ACTIVE
106380/A	40873 24TH STREET	LYONS	LINN	22G-SAN	27 IND YOUNG & MORGAN LUMBER, INC.	400 GEN04	12-DEC-91	ACTIVE
105550/A	40580 CEDAR MILL RD	LYONS	LINN	22G-SAN	30.1 IND FRERES LUMBER CO. INC.	500 GEN05	27-OCT-92	ACTIVE
106984/A	W. SIDE OF NEAL PARK RD,1/8 MI. INT	LYONS	LINN	22G-SAN	27.4 IND FRERES LUMBER CO. INC.	1201 GEN12A	12-AUG-92	ACTIVE
107763/A	LINN COUNTY		LINN	UNKNOWN	999.9 IND LINN COUNTY ROAD DEPARTMENT	1203 GEN12CA	10-MAY-93	ACTIVE
105550/A	40580 CEDAR MILL RD	LYONS	LINN	22G-SAN	30.1 IND FRERES LUMBER CO. INC.	1214 GEN12W	25-AUG-92	ACTIVE
31045/A	141 14TH ST	LYONS	LINN	22G-SAN	34.5 IND FRERES LUMBER CO.,INC.	1214 GEN12W	20-AUG-92	ACTIVE
106380/A	40873 24TH STREET	LYONS	LINN	22G-SAN	27 IND YOUNG & MORGAN LUMBER, INC.	1214 GEN12W	05-FEB-93	ACTIVE
35072/A	ADJACENT TO HWY 22 IN EAST IDANHA	IDANHA	MARION	22G-SAN	31 IND GREEN VENEER INC.	100 GEN01	24-DEC-90	ACTIVE
61727/A	47842 LYONS-MILL CITY DRIVE	MILL CITY	MARION	22G-SAN	35 IND NORTH SANTIAM PLYWOOD CO.	100 GEN01	24-DEC-90	ACTIVE
66614/A		MILL CITY	MARION	22G-SAN	35.5 IND MILL CITY, CITY OF	200 GEN02	31-DEC-90	ACTIVE
64565/A		STAYTON	MARION	22G-SAN	16.5 AGR OREGON DEPARTMENT OF FISH AND WILDLIFE	300 GEN03	27-MAY-91	ACTIVE
30904/A	47983 LYONS-MILL CITY DR.	MILL CITY	MARION	22G-SAN	34.5 IND FRANK LUMBER CO. INC.	400 GEN04	28-FEB-91	ACTIVE
35072/A	ADJACENT TO HWY 22 IN EAST IDANHA	IDANHA	MARION	22G-SAN	31 IND GREEN VENEER INC.	400 GEN04	31-DEC-90	ACTIVE
106962/B	FOREST SERVICE RD 2207, DETROIT RAN	WILLAMETTE NAT.	MARION	UNKNOWN	999.9 IND KINROSS COPPER CORPORATION	1202 GEN12C	27-SEP-93	ACTIVE
100831/A	1075 WILCO ROAD	STAYTON	MARION	UNKNOWN	999.9 IND GOSHEN SASH & DOOR CO., INC.	1208 GEN12L	29-OCT-93	ACTIVE
107251/A	1620 WILCO ROAD	STAYTON	MARION	22G-SDD	8 IND TOMKINS INDUSTRIES, INC.	1208 GEN12L	15-OCT-92	ACTIVE
101947/A	2120 W WASHINGTON	STAYTON	MARION	22G-SDD	1 IND UNION OIL COMPANY OF CALIFORNIA	1213 GEN12T	11-SEP-92	ACTIVE
30904/A	47983 LYONS-MILL CITY DR.	MILL CITY	MARION	22G-SAN	34.5 IND FRANK LUMBER CO. INC.	1214 GEN12W	08-OCT-92	ACTIVE
35072/A	ADJACENT TO HWY 22 IN EAST IDANHA	IDANHA	MARION	22G-SAN	31 IND GREEN VENEER INC.	1214 GEN12W	09-NOV-92	ACTIVE
61727/A	47842 LYONS-MILL CITY DRIVE	MILL CITY	MARION	22G-SAN	35 IND NORTH SANTIAM PLYWOOD CO.	1214 GEN12W	23-OCT-92	ACTIVE
106757/A	N. SANTIAM HWY. MILE MARKER 20.5		MARION	22G-SANT	25 IND DELK'S VALLEY OIL, INC, & GULL INDUSTRIE	1500 GEN15	22-MAY-92	ACTIVE
107697/A	1099 45TH AVE. N.E.	SALEM	MARION	UNKNOWN	999.9 IND AZURE ENTERPRISES, INC.	1700 GEN17	20-MAY-93	ACTIVE
107813/A	1508 CLYDESDALE DR. S.E.	SALEM	MARION	UNKNOWN	999.9 IND CORDELL R. HUBER JR.	1700 GEN17	22-JUN-93	ACTIVE
107812/A	443 MUNKERS ST. S.E.	SALEM	MARION	UNKNOWN	999.9 IND CORDELL R. HUBER SR. DBA	1700 GEN17	22-JUN-93	ACTIVE
107673/A	1275 MANDY CT. S.E.	SALEM	MARION	UNKNOWN	999.9 IND KLEEN KING OF SALEM	1700 GEN17	18-MAR-93	ACTIVE
84781/A	1/2 MI S OF INTERSECTION OF IDA & W	STAYTON	MARION	22G-SAN	15 DOM STAYTON, CITY OF	101016 NPDES	26-DEC-92	ACTIVE

State of Oregon  
Department of Environmental Quality

Memorandum

Date: January 27, 1994

To: Environmental Quality Commission  
From: Fred Hansen  
Subject: Director's Report

Vehicle Inspection Boundaries

The Portland area Vehicle Inspection Boundary Expansion is an important part of the 10 year ozone maintenance plan. About 13 percent additional vehicles need to be included in the program to provide the needed emission reduction credit. An advisory committee has helped develop criteria that will be used to draw the expanded boundary. The proposed new boundary is now being finalized and will be released for public comment next month. Public hearings will be held in April with EQC adoption scheduled for the July meetings. The start up for the new boundary is targeted for April 1995.

Title V Permit Pilot Program

As a first step in implementing the new federal operating permit program for new major sources, 10 facilities have volunteered to participate in a process to develop title V permits ahead of the federal deadlines. Experience from this pilot program will help identify any modifications needed in the program prior to full implementation. Over the next year several rule revisions will be proposed relating to permanent emission fees, hazardous pollutants and emission trading.

Forest Health Memorandum of Understanding

Agreement has been reached at the staff level among Blue Mountain forest land managers in Eastern Oregon, the state Department of forestry and the Department on how the forest health program and the need to increase prescribed burning will meet the Clean Air Act and other environmental requirements. A Memorandum of Understanding has been drafted which relies on a "no net increase in emission" concept. The Department expects to brief the Commission on this issue at its April meeting in LaGrande. A tour of the forest health problem may be included.

Memo To: Environmental Quality Commission  
December 11, 1992  
Page 2

### Environmental Equity

The Environmental Equity Advisory Committee held its first organizing meeting this week. Committee members will be asked to advise the Department on rules and procedures that may have a disproportionate effect on minority or low income groups.

### Legislative Update

We'll be appearing before the Senate Agriculture Committee next Friday to provide updates on several issues including implementation of HB 2214 and plastics recycling. The Joint Task Force on Orphan Site Financing will hold its first meeting on February 18. The Department will be bringing a preliminary list of new legislative proposals to the EQC at the April meeting.

## HEARING AUTHORIZATIONS

### Solid Waste Permits

The proposed rules make changes that were allowed or required by the 1993 legislature. The rule amendments would change the Solid Waste annual permit fee from an annual billing by the Department, to self-reporting either quarterly or annually (for all permittees except transfer stations). It would also establish a new soil treatment permit with a fee of \$2,500. Hearings will be held in March with EQC action expected in April.

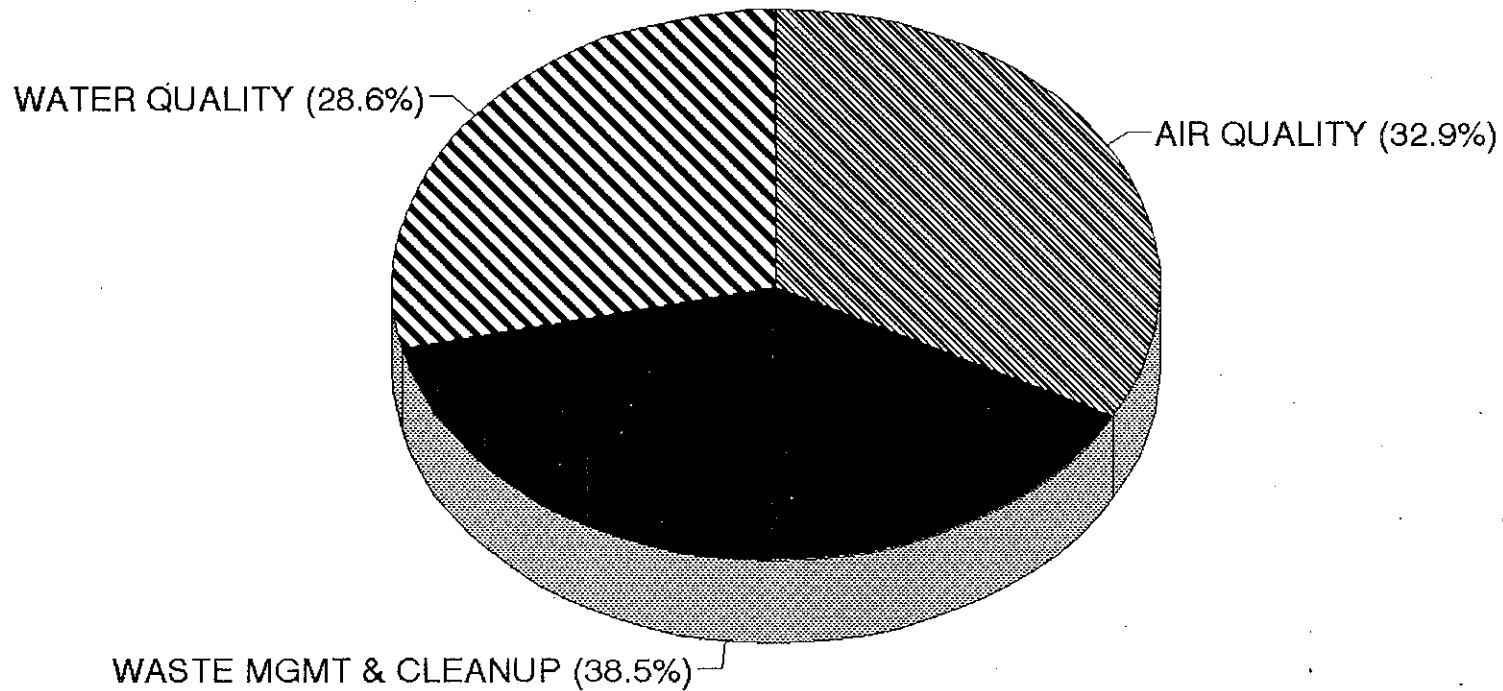
### Hazardous Waste

The proposed rule adopts by reference federal hazardous waste regulations through July 1, 1993, including new used oil management standards. The proposed rule amendments would also establish special waste management standards for treated wood waste and sandblast grit waste, require hazardous waste generators to meet specific container and tank management standards during accumulations of hazardous waste, and to maintain hazardous waste determination records. The proposal would also update and amend the toxic use reduction regulations.

### Field Burning

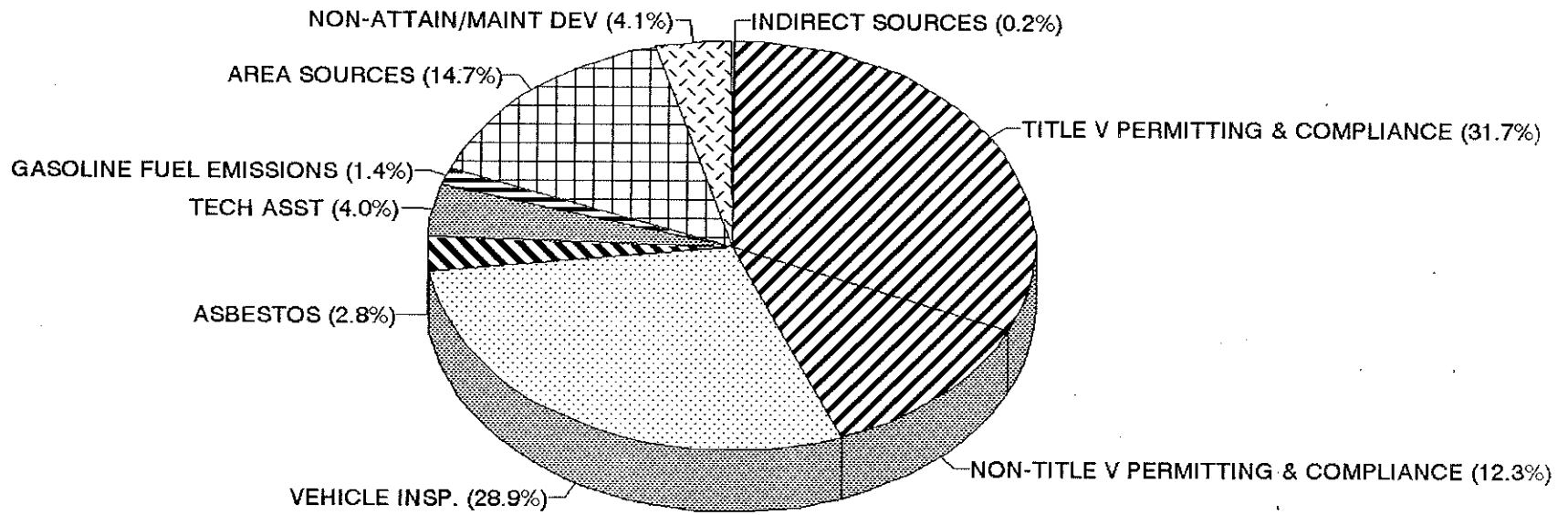
The proposal updates and amends rules to conform with new legislation that requires a simplified and flexible acreage reregistration system for propane flaming and open field burning.

**DEPARTMENT OF ENVIRONMENTAL QUALITY  
FTE BY PROGRAM  
1993 - 95 LEGISLATIVELY ADOPTED BUDGET**

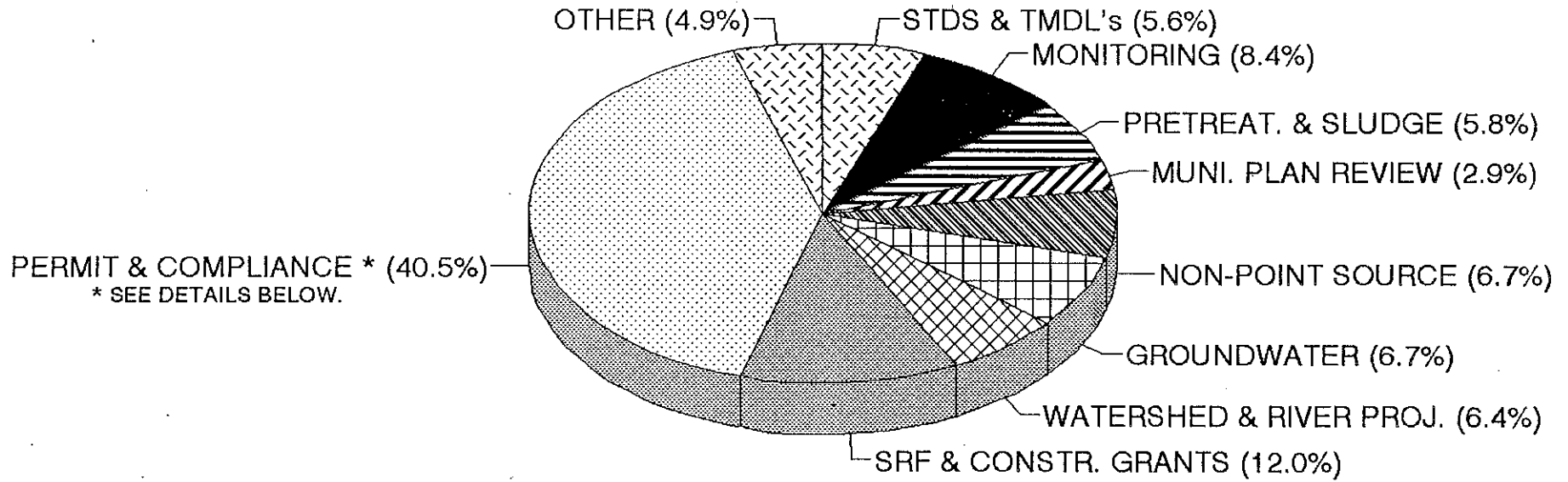


DEPARTMENT OF ENVIRONMENTAL QUALITY

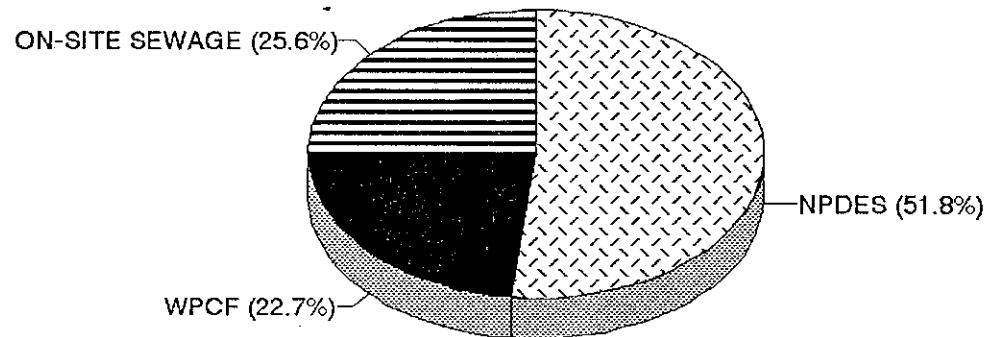
# AIR QUALITY FTE BY ACTIVITY



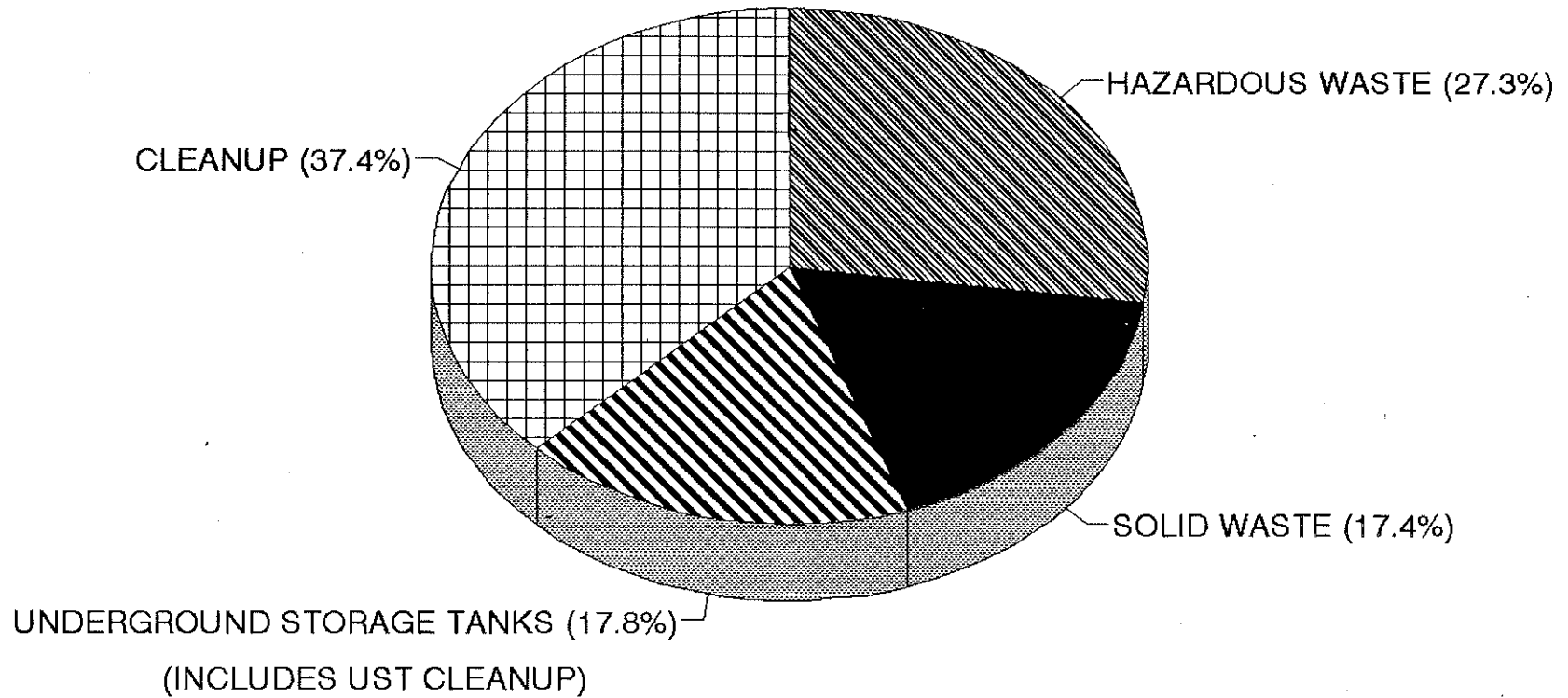
# WATER QUALITY FTE BY ACTIVITY



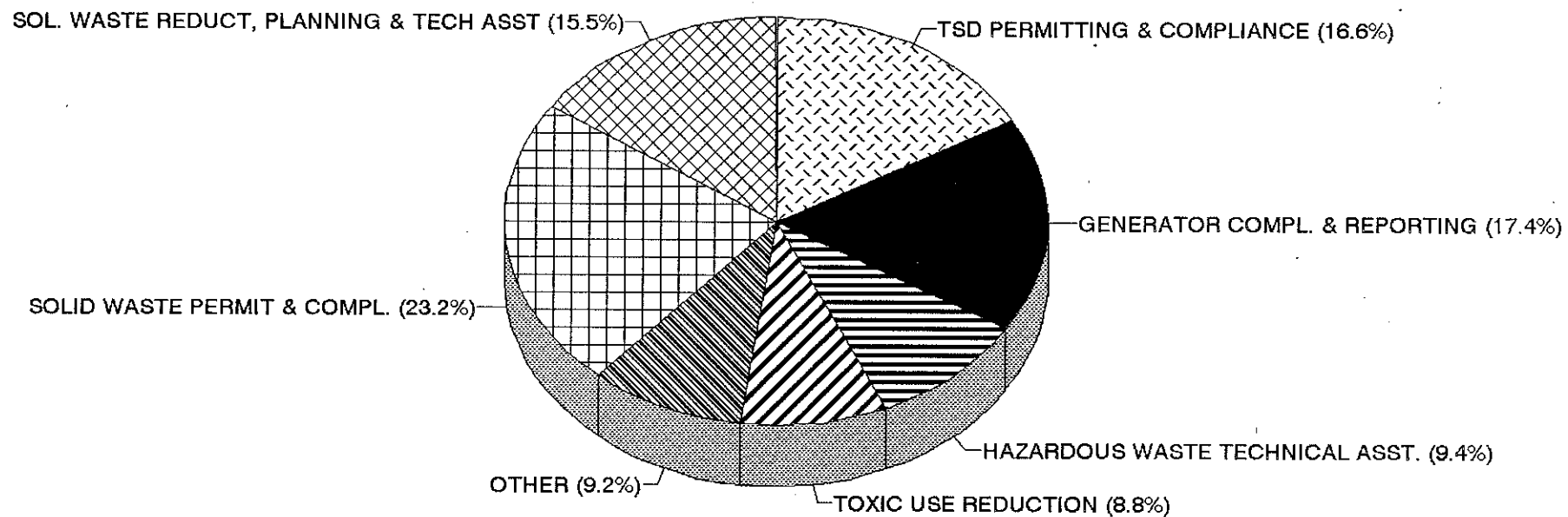
## DETAIL OF PERMITTING & COMPLIANCE FTE BY PERMIT TYPE



# WASTE MANAGEMENT & CLEANUP FTE BY ACTIVITY

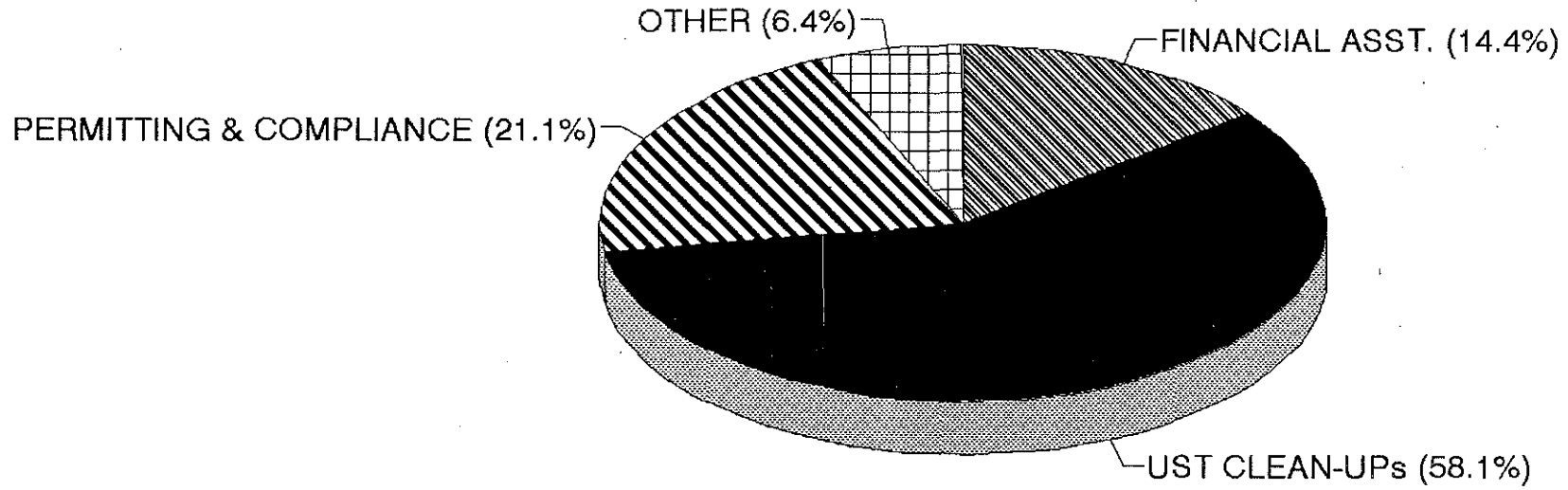


# HAZARDOUS & SOLID WASTE PROGRAMS FTE BY ACTIVITY

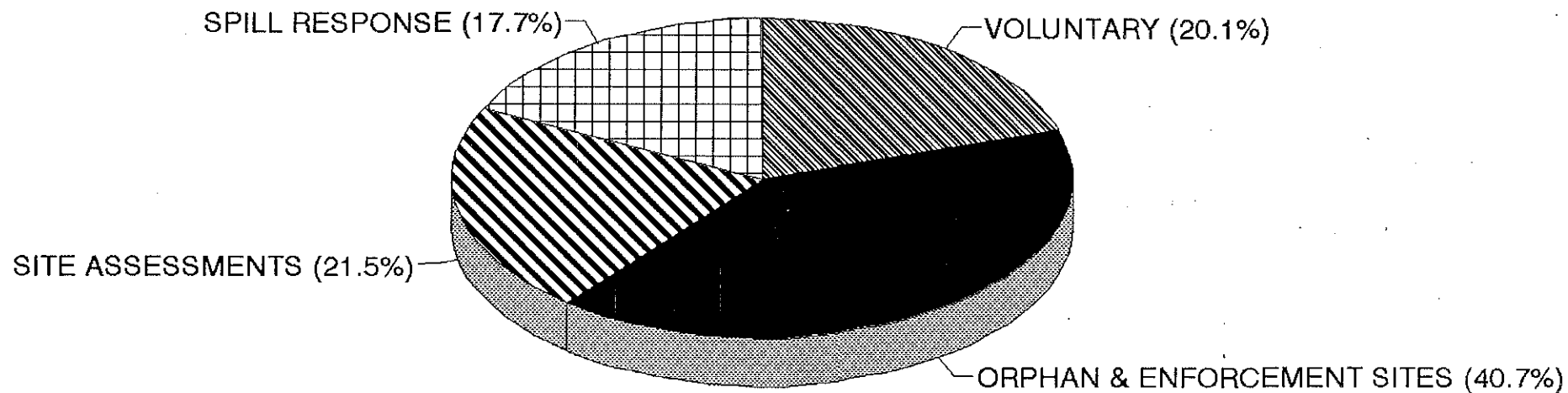




# UNDERGROUND STORAGE TANKS FTE BY ACTIVITY



# CLEANUP PROGRAM FTE BY ACTIVITY



SUPPLEMENTAL EXHIBITS  
TO THE TESTIMONY OF ALEX MAUCK  
IN SUPPORT OF PETITION FOR RULE AMENDMENT  
BEFORE THE  
ENVIRONMENTAL QUALITY COMMISSION

January 28, 1994

600 NORTHEAST GRAND AVENUE | PORTLAND, OREGON 97232 2736  
 TEL 503 797 1700 | FAX 503 797 1797



**METRO**

January 27, 1994

Mr. William Wessinger, Chair  
 Environmental Quality Commission  
 811 SW Sixth Avenue  
 Portland, OR 97204

Dear Mr. Wessinger:

Northwest EEE ZZZ Lay Drain Company has requested an amendment to DEQ's on-site sewage disposal rules to allow for the use of expanded polystyrene (EPS) aggregate in septic drain field systems. As part of Metro's interest in diverting materials from the waste stream and developing recycling markets, we support regulations which encourage emerging recycling technologies.

Markets for recovered plastics generally are weak. There are currently five companies in the Metro area that process recovered EPS for secondary uses. Two of these accept EPS from the public, but because of location, costs and other factors, these services are not convenient and practical for most citizens in the Metro area. There are markets out of state, but they are generally uneconomical for Oregon recyclers.

The recycling rate for EPS (i.e., percentage of waste generated that is recycled) in the Metro area cannot be calculated precisely at this time. However, the best available data indicate that it is very low. In 1992, more than 16,500 tons of EPS and rigid polystyrene waste (of all forms) were generated in the Metro area and 451 tons were recycled, according to Metro's and DEQ's most recent material recovery and waste composition studies. Based on the conservative assumption that EPS accounts for one-quarter by weight of all polystyrene in the waste stream, more than 4,100 tons -- or 8.2 million cubic feet -- of this light-weight, bulky material were generated in 1992. This suggests that the recycling rate for this material is in the neighborhood of 10 percent.

Andy Sloop in Metro's Recycling Market Development Section has been working closely with Northwest EEE ZZZ Lay Drain to assess local conditions pertinent to developing markets for this company's recycled-content products. Some material supply and demand questions raised in this process cannot be answered at this time because of insufficient market data. Nevertheless, the target markets -- including on-site septic disposal -- appear to have significant potential from a recycling standpoint. Realization of these markets would add a valuable dimension to the Metro area's recycling system.

Sincerely,

Bob Martin  
 Solid Waste Director

BM:AS:ay

cc: Rena Cusma, Executive Officer  
 Fred Hansen, Director, Department of Environmental Quality



P.O. Box 970 1216 W. 1st Street  
The Dalles, Oregon 97058  
Phone (503) 298-4136

January 25, 1994

Mr. Vincent Salvi  
Attorney at Law

Dear Mr. Salvi:

Western Insulfoam is a manufacturer of Expanded Polystyrene (EPS) and we are also actively engaged in recycling of our products. We recycled 626,688 board feet of EPS in 1992. This is the equivalent of 17.4 trailer loads of foam, based on a 40' trailer with the approximate load of 36,000 board feet per trailer. In 1993, we increased our recycling to 1,006,250 board feet of EPS, an equivalent of 27.8 trailer loads.

Following is a sampling of our customers from whom we accept our foam for recycling on a regular basis.

Beaverton Packaging	-	Beaverton, OR
Packaging Resources	-	Tualatin, OR
Dealers Supply	-	Portland, OR
Thermal Laminates	-	Stevenson, WA

Even considering the number of board feet currently being recycled, we have not yet met the demand of the EPS market.

Our greatest challenge is the fact that, according to industry standards we cannot use recycled EPS in the majority of the products we manufacture. In fact, only about 25% of our products may contain ReMat (recycled material). We are constantly searching for other uses for ReMat. When these new products can be found, we estimate that our recycling efforts can be increased threefold.

Western Insulfoam plants are also located in Alaska, Washington, California (2), Arizona, New Mexico and Nebraska. All of these plants are involved in recycling. I do not have the recycling figures for the other plants, however, the Washington plant produces 4 to 5 times the amount of EPS than our Oregon plant. As a corporate unit Western Insulfoam is contributing a substantial effort in the recycling of EPS.

EPS does not contain CFC's or HCFC's, it does not create a hazard to the ozone.

E-Z Lay Drain Systems would provide a "use" for a ReMat product. This would result in an increase of recycled EPS and an increase in jobs for both the EPS industry and the installers.

If you have any more questions or need any explanations please do not hesitate to call me, or come by and visit our plant.

Bob D. Thomas

A handwritten signature in cursive script that reads "Bob D. Thomas".

WESTERN INSULFOAM  
Location Manager

salvi

DIVISION OF PREMIER INDUSTRIES, INC.

PAGE 1 EXHIBIT u

Post-It™ brand fax transmittal memo 7671

# of pages

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To	Vince Sdvi	From	Alex Manck
Co.		Co.	
Dept.		Phone #	
Fax #	241-8014	Fax #	

THE USE OF RECYCLED EXPANDED POLYSTYRENE AS AN AGGREGATE  
 IN SEPTIC FIELDS AND OTHER DRAINAGE APPLICATIONS  
 IN NORTH CAROLINA

by

Kenneth O. Pankow, P.E.  
 Pankow Engineering Company  
 1278 Hendersonville Road  
 Asheville, NC 28803  
 704-274-9219

Michael Houck  
 EEE ZZZ Lay Drain Company, Inc.  
 P.O. Box 867  
 Pisgah Forest, NC 28768  
 704-883-2130

July, 1992

## SUMMARY

Information is herein presented on the recycling of expanded polystyrene by using it as a substitute for gravel in septic systems and other drainage applications. Proven products, with the trade name of EEE ZZZ Lay Drain, can accomplish a significant amount of recycling in North Carolina. Annual savings in landfill space could be about 140 acre feet (one cubic foot per capita) or about four percent of total landfill requirements. This recycling could save North Carolina's city and county governments about \$6 million per year in landfill costs. A most interesting aspect of this research is that the cost of landfilling EPS waste is greater than the cost of manufacturing the waste into EEE ZZZ Lay Drain products.

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## INTRODUCTION

In 1987, brothers Michael and Randy Houck founded the EEE ZZZ Lay Drain Company, Inc., to make a product which allows expanded polystyrene (EPS) aggregate to replace gravel in drainage applications. All of the EPS used in the manufacturing is scrap material which would otherwise go to landfills. In drainage applications, gravel or stone aggregate is commonly placed around a perforated plastic pipe. In the EEE ZZZ Lay Drain products, the lightweight EPS aggregate is held in a cylindrical shape by a 10 inch diameter, high strength polyethylene netting. Ten foot long assemblies are manufactured filled with EPS aggregate only, or with a four inch perforated corrugated plastic pipe surrounded by EPS aggregate. The ten foot long assemblies are provided with means to connect the cylinders during installation end to end to form a continuous pipe surrounded by aggregate. A single assembly with pipe is termed EEE ZZZ Lay Drain 2001. If an application requires that more aggregate be installed in a single trench than is provided with the 2001, additional cylinders without pipe are added and the installation is termed 2002, 2003, etc., depending on the total number of cylinders installed in each trench. The products and manufacturing methods have resulted in two patents and three patents are pending.

## PRODUCT USES

EEE ZZZ Lay Drain products are used in underground applications to promote drainage such as needed is in foundation drains, interceptor drains, and other ground water control applications. Generally, the product can be used anywhere gravel is used and the type of installation can vary to suit the particular need. In road and bridge construction, the products are used as interceptor drains for slope protection, shoulder

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drains, ground water lowering drains for surface stabilization, abutment and retaining wall drains, and foundation drains. Ground water lowering and improved subsurface drainage is often necessary and desirable in golf courses and athletic fields. Land used for agricultural purposes often requires subsurface drainage, as well.

A major use of the product is in septic system absorption fields. In North Carolina, about 40,000 new septic systems are installed each year(1)(2). If all of these systems were built with recycled EPS, it would require about 5,000 miles of the EEE ZZZ Lay Drain assembly(2). The amount of scrap EPS used would reduce landfill requirements by about 600 acre feet and reduce collection/landfill costs by about \$25 million(2).

Another use of the product is to provide erosion control during grading operations. The EEE ZZZ Lay Drain assemblies without pipe can be used in place of silt fences or washed stone to slow stormwater run-off and filter out silt. For this above ground application, the assemblies are secured in the path of stormwater run-off by using stakes of L-shaped r'bar. An advantage of the product is that the assemblies may be moved for the removal of collected silt or for re-use at another site.

#### SOURCES OF MATERIAL FOR RECYCLING

The consumption of foamed and expanded polystyrene in the United States is about six pounds per capita per year(12). Of this amount, about four pounds is used for purposes where disposal after a short period of use is expected(12)(2). A pilot plastics recycling program in Pennsylvania tends to show that recycling of polystyrene separately from the domestic waste stream is not practical(11) so that a good portion of polystyrene is lost to mixed plastic recycling or to landfills. A significant portion of polystyrene scrap is produced from



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manufacturing, industrial, and commercial operations where large quantities are scrapped at one location and recycling is practical(12). It is estimated that the solid waste stream contains about one pound (or one cubic foot) per capita per year of EPS or other suitable plastics which could be collected and recycled(2). Scrap from large block EPS molding operations and installation board manufacture is often available in large quantities at one location. Scrap from the manufacturing of EPS consumer products such as rejected Christmas balls and molded shipping protection are available. Assembly and other manufacturing plants receive packaging materials which are scrapped after initial use. Due to the extreme light weight of the material, it can be economically transported from as far as 500 miles to the point of manufacturing the EEE ZZZ Lay Drain products(1)(2).

A common practice is that landfill tipping fees are based on weight. The cost of landfilling waste is primarily dependent on compacted volume. The weight of compacted EPS is about one pound per cubic foot as compared to 40 or 50 pounds per cubic foot for average landfilled waste(2). This means that tipping fees for EPS should be 40 or 50 times greater to reflect costs. Tipping fees vary greatly but average about \$40 per ton(13). Some landfills do have provisions for higher tipping fees for bulky materials. Tipping fees on EPS scrap in Atlanta are as high as \$400 per ton(1), which sounds extremely high; however, to reflect true cost tipping fees should be \$1500 or more per ton(2). Consideration of inadequate tipping fees by EPS scrap producers and landfill management will increase material sources.

A most interesting comparison can be made between the cost of landfilling EPS scrap and the cost of converting EPS scrap into EEE ZZZ Lay Drain products. The cost for local governments to collect and landfill EPS waste is about one dollar per cubic

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foot. When EPS scrap is re-manufactured into EEE ZZZ Lay Drain, the sales price is about one dollar per cubic foot. Since the sales price includes the cost of marketing and delivery, it is safe to conclude that it is less costly to re-use EPS waste than it is to throw it away.

#### PRODUCT ADVANTAGES

The properties of the EPS aggregate used are very much like the stone aggregate it replaces except for its extreme light weight. This light weight allows for the prefabrication of assemblies which greatly reduces labor and equipment required for installation. The preassembly of pipe and aggregate eliminates special order arrangements and dump trucks to transport stone to the installation site. The light weight saves labor during installation, especially at sites where limited access may cause stone to be transported by wheelbarrows and/or by shovels. The lightweight allows transportation from the point of manufacture to site of installation over distances of 500 miles or more without a significant cost increase. Presently, the product is manufactured in Western North Carolina for installation in all parts of North Carolina. The cost of transporting stone aggregate across the state is obviously prohibitive.

The light weight combined with the compressibility of the EPS aggregate is quite an advantage. Because compacted soil has a lower permeability than uncompacted soil, in drainage applications it is important that soil is not compacted at the soil/aggregate interface. As compared to gravel, greater depths of aggregate can be installed without compacting the underlying soil. After backfill is placed over the aggregate, machine compaction from above causes less compaction at the soil/aggregate interface because the EPS compresses and reduces

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the pressure on the adjacent soil(3)(4).

The strength of the EPS aggregate is of little concern when installed underground due to its compressibility. With as little as six inches of ground cover, the assembly is unaffected by heavy vehicle loading because the EPS flexes and protects the pipe. Also, the relative compressibility of the assembly, as compared to soil, causes nearly all loading to be borne by the soil at the sides of the installation(4).

The particle size of the EPS aggregate is approximately the same size as the stone aggregate it replaces in drainage applications; however, due to the manufacturing process, the size is more uniform. This is an advantage because the uniformity increases the porosity and permeability of the aggregate which is desirable in drainage applications(3).

#### ENVIRONMENTALLY ADVANTAGEOUS

The need for recycling is based on concerns for preserving the environment for future generations. In North Carolina, if one cubic foot per capita per year of EPS or other suitable plastics were collected and recycled for drainage applications, the annual saving in landfill space would be about 140 acre feet or about four percent of total landfill requirements.(2) This recycling would also reduce collection/landfill costs by about \$6 million(2). Earlier, under the category Product Use, it was pointed out that the use of EPS aggregate in all septic systems would require about 600 acre feet per year. As compared with other locations, gravel in coastal North Carolina is a precious resource which should be preserved whenever possible. Due to the light weight of EPS, scrap material could be imported for the purpose of saving gravel for other uses. The use of recycled EPS in septic fields only would result in an annual saving of 1½ million tons of stone(2). Because most stone used

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in coastal North Carolina is imported, it is important to consider shipping weight and the cost to highway and railway infrastructure. The annual need of 1,500,000 tons of stone could be replaced by about 12,000 tons of EPS which is a reduction of 99% in shipping weight(2).

#### MANUFACTURING OPERATION

The waste EPS received at a manufacturing site is in many different forms. Some, such as rejected Christmas balls and peanut type packing material can be used as aggregate without size modification. Most of the raw material requires only that the size be reduced which is done with an inexpensive hot wire cutting machine. Due to the nature of EPS, the machinery for compaction and assembly of the product is comparatively light weight and inexpensive. The first plant in Western North Carolina has the capacity to produce 6,000 feet of the EEE ZZZ Lay Drain assembly during an eight hour shift of 10 unskilled laborers(1). When this plant is at full two shift production, it will use about 70 acre feet of waste EPS per year. At this production, the plant will produce about 600 miles of the assembly per year with a sales value of about \$4 million(1)(2).

#### NORTH CAROLINA MARKET

With the cost of stone at \$15 per ton or more, coastal North Carolina is a ready market for products which replace stone. Some products, such as large diameter perforated plastic pipe wrapped with filter fabric, have been marketed as a substitute for stone in drainage applications. Generally, these products have been found to be unsuitable because the technology used was not proven and/or the products were over promoted(5)(6).

Since 1987, EEE ZZZ Lay Drain products have been subjected to thorough laboratory, field, and market testing. EEE ZZZ

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## REFERENCES

- (1) Information provided by the EEE ZZZ Lay Drain Company. Collected and verified from multiple sources.
- (2) Information provided by Pankow Engineering Company. Collected and verified from multiple sources.
- (3) Kenneth O. Pankow, P.E., Technical Support Paper for the EEE ZZZ Lay Drain Company Ground Absorption Disposal System, dated October 1988 and July 1989.
- (4) Pankow Engineering Company, Tests, Analysis, Engineering Specifications, Design, and other engineering too numerous to list, 1987-1992.
- (5) Dr. J.H.T. Winneberger, Technical Reflections on Today's Gravelless System, dated 1992.
- (6) Kenneth O. Pankow, P.E., Failure of Large Diameter Pipe (LDP) Septic System Disposal Fields, dated May 15, 1992.
- (7) U.S. Testing Company, Test Report No. 97206 dated October 2, 1987 and Test Report Lab No. 4112-437, dated December 3, 1991.
- (8) ARCO Chemical Company by RNK Environmental, Inc., Evaluation of Impacts on Plastics used in Filtration Beds of Septic Tank Systems, dated September 29, 1989.
- (9) A. R. Jarrett and B. W. Engle, Penn State University, Improve Sediment Retention Efficiencies of Sedimentation Basins ASAE Paper No. 90-2629, dated 1990.
- (10) Southern Building Code Congress International, Inc., Report No. 8971, dated December 1, 1989.
- (11) Dr. Ronald L. Mersky, P.E., Analysis of Delaware County, PA Pilot Plastic Recycling Program Final Report, dated July, 1991.
- (12) Provided by ARCO Chemical Company from Chemical Economics Handbook - SRI International - 1990 data.
- (13) Provided by ARCO Chemical Company from a 1990 report for the Council For Solid Waste Solutions by Resource Integration Systems Ltd.

1                   BEFORE THE ENVIRONMENTAL QUALITY COMMISSION  
2                   OF THE STATE OF OREGON

3 In the matter of the petition of Northwest            )  
4 EEE ZZZ Lay Drain Co. to amend                    ) SUPPLEMENT TO PETITION FOR  
5 340-71-100(53) and modifying OAR 340-71-260    ) RULE AMENDMENT  
6 thru 340-71-360, and OAR 340-73-060(2)        )  
7 of Oregon, Administration Rules, Chapter 340,    ) (ORAL PRESENTATION  
8 Divisions 71 & 73                                    ) REQUESTED)

9                   I. INTRODUCTION AND SUMMARY

10 Northwest EEE ZZZ Lay Drain Co. respectfully supplements its Petition for Rule  
11 Amendment herein and concurs with the recommendation from the Department of  
12 Environmental Quality that the Commission accept the petition herein and direct the  
13 Technical Rule Revision Committee and the Department of Environmental Quality to  
14 consider the proposal as one alternative in the current rule making process. Petitioner  
15 understands that the Committee and the Department may develop and recommend alternative  
16 language to that presented in the petition herein.

17                   II. DEPARTMENT OF ENVIRONMENTAL QUALITY  
18                   STATEMENT OF ALTERNATIVES AND EVALUATION

19 In the Department's Statement of Alternatives and Evaluation, the Petitioner is  
20 represented as requesting that its particular proprietary material be allowed by rule to be used  
21 to replace rock at *any* installation. This is not a correct statement of the Petition. The  
22 Petition was drafted specifically to require that any use of recycled expanded polystyrene  
23 (EPS) be consistent with OAR 340-71-220(2) **Criteria for Standard Subsurface System**  
24 **Approval**. Thus, it is not a Petition for use of recycled expanded polystyrene at any  
25 location, but *only* those locations consistent with the foregoing rule.

26 In addition, the Department stated a concern that under certain conditions where the  
leach field area is subjected to surface loads which might have a tendency to compact  
polystyrene material that the EPS may be compressed to the point that flow of sewage

1 affluent would be severely limited causing premature failure. Again, the petitioner herein is  
2 requesting that only uses consistent with OAR 340-71-220(2) **Standard Surface Systems** be  
3 approved. Section 2(g) states:

4 "The site of the initial and replacement absorption facility shall not be covered  
5 by asphalt or concrete, or subject to vehicle traffic, livestock, or other activity  
which would adversely affect the soil."

6 As the proposal is only to utilize recycled EPS consistent with the above rule, the stated  
7 concern in the Department's recommendation is unfounded. No drain field could be  
8 permitted or allowed in any area subject to compaction due to surface use.

9 **III. CONCLUSION**

10 Northwest EEE ZZZ Lay Drain Co. concurs with the recommendation of the  
11 Department of the Environmental Quality and asked the Commission to act to accept its  
12 petition and direct the Department to add the language proposed as one of the alternatives to  
13 the On-Site Disposal rules currently being considered by the Technical Advisory Committee  
14 to the Department.

15 **DATED:** January 28, 1994.

16 Respectfully submitted,

17 **WEISS, JENSEN, ELLIS & BOTTERI**

18   
19 \_\_\_\_\_  
20 Vincent P. Salv  
21 Of Attorneys for  
22 Northwest EEE ZZZ Lay Drain Co.  
23  
24  
25

26 F:\VPS\MAUCK\EZLAY\PETITION.002 [74059.1]



METRO

January 27, 1994

Mr. William Wessinger, Chair  
Environmental Quality Commission  
811 SW Sixth Avenue  
Portland, OR 97204

Dear Mr. Wessinger:

Northwest EEE ZZZ Lay Drain Company has requested an amendment to DEQ's on-site sewage disposal rules to allow for the use of expanded polystyrene (EPS) aggregate in septic drain field systems. As part of Metro's interest in diverting materials from the waste stream and developing recycling markets, we support regulations which encourage emerging recycling technologies.

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Sincerely,

Bob Martin  
Solid Waste Director

BM:AS:ay

cc: Rena Cusma, Executive Officer  
Fred Hansen, Director, Department of Environmental Quality



Revised

A G E N D A

Revised

**ENVIRONMENTAL QUALITY COMMISSION MEETING**

January 27-28, 1994  
DEQ Conference Room 3a  
811 S. W. 6th Avenue  
Portland, Oregon

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**Thursday, January 27, 1994: Work Session and Rulemaking Hearing**

**11:00 a.m.**

Work Session: Strategic Budget Planning

**3:00 p.m.**

**Public Hearing on Proposed Rule Amendment:** Proposed Modification to the Special Policy Rule Which Prohibits Further Waste Discharges to the Clackamas River Subbasin, the McKenzie River Subbasin above Hayden Bridge, and the North Santiam River Subbasin (OAR 340-41-470(1))

*Note: The public hearing will continue until all testimony is received. A decision on the proposed rule will be made during the regular meeting on Friday, January 28, 1994. No public testimony will be received during the Friday meeting.*

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**Friday, January 28, 1994: Regular Meeting beginning at 8:30 a.m.**

*Notes:*

*Because of the uncertain length of time needed for each agenda item, the Commission may deal with any item at any time in the meeting. If a specific time is indicated for an agenda item, an effort will be made to consider that item as close to that time as possible. However, scheduled times may be modified if agreeable with participants. Anyone wishing to be heard or listen to the discussion on any item should arrive at the beginning of the meeting to avoid missing the item of interest.*

**Public Forum:** *The Commission will break the meeting at approximately 11:30 a.m. for the Public Forum if there are people signed up to speak.*

*The Public Forum is an opportunity for citizens to speak to the Commission on environmental issues and concerns not a part of the agenda for this meeting. Individual presentations will be limited to 5 minutes. The Commission may discontinue this forum after a reasonable time if an exceptionally large number of speakers wish to appear.*

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- A. Approval of Minutes
- B. Approval of Tax Credits
- C. ~~†Rule Adoption: Amendments to UST Financial Assistance Rules to Implement HB 2776~~
- D. ~~†Rule Adoption: Proposed Amendment of UST Permit Fee Rule~~
- E. †Rule Adoption: Proposed Adoption of Base Hazardous Waste Generation Fee
- F. Approval of Confined Animal Feeding Operation (CAFO) Memorandum of Agreement
- G. Pulp Mill Contested Case: Proposed Order Dismissing Case
- H. Proposed Review and Approval of City of Portland Proposal for Interim Control Measures for Combined Sewer Overflows
- I. Proposed Adoption of State Integrated Resource and Solid Waste Management Plan
- J. Fifth Annual Environmental Cleanup Report
- K. Commission Deliberation and Action on (1) Proposed Modification to the Special Policy Rule Which Prohibits Further Waste Discharges to the Clackamas River Subbasin, the McKenzie River Subbasin above Hayden Bridge, and the North Santiam River Subbasin (OAR 340-41-470(1)), and (2) Potential Findings to Allow a Discharge into Cedar Creek in the North Santiam Subbasin

*Note: No testimony will be taken on this item at this time; all testimony must be presented at the public hearing before the Commission on Thursday, January 27, 1994, beginning at 3:00 p.m.*

- L. Commission Member Reports (Oral)
- M. Director's Report (Oral)
- N. Petition for Rule Amendment from EEE ZZZ Lay Drain Company

*†Hearings have already been held on the Rule Adoption items; therefore any testimony received will be limited to comments on changes proposed by the Department in response to hearing testimony. The Commission also may choose to question interested parties present at the meeting.*

*The Commission has set aside March 10-11, 1994, for their next meeting. The location has not been established.*

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

*If special physical, language or other accommodations are needed for this meeting, please advise the Director's Office, (503)229-5395 (voice)/(503)229-6993 (TDD) as soon as possible but at least 48 hours in advance of the meeting.*

*January 21, 1994*

State of Oregon  
Department of Environmental Quality

Memorandum<sup>†</sup>

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Date: January 21, 1994

To: Environmental Quality Commission  
From: Fred Hansen, Director  
Subject: Work Session Item, January 27, 1994 EQC Meeting

Strategic Budget Planning

Background

This report was prepared to serve as the basis of the Commission's work session discussion of the Department's use of resources to meet its goals. This discussion is taking place in the context not only of the state's General Fund constraints for future biennia, but also in an atmosphere of uncertainty about what changes the citizens of Oregon expect from state government in general, and the Department in particular. Some are indicating that government programs should be less expensive, while others believe existing government services should be continued at current or expanded levels and are willing to pay for them. Some simply want less government and still others have lost confidence in government at all levels.

It is clear that, with the final phase-in of Measure 5 property tax reductions, the Department will be required to take substantial additional General Fund cuts in the budget for the 1995-97 biennium. The State's total estimated General Fund reduction ranges from \$500 million to \$1.6 billion, depending upon economic conditions and a number of other variables. Although specific budget directions and targets will not be available from the Department of Administrative Services until the end of February, we are assuming, for the purposes of this exercise, that the cuts will be in the neighborhood of 20 to 25% of General Funds, which equates to approximately \$4 million.

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<sup>†</sup>Accommodations for disabilities are available upon request by contacting the Public Affairs Office at (503)229-5317(voice)/(503)229-6993(TDD).

Memo To: Environmental Quality Commission  
Work Session Item  
January 27, 1993 Meeting  
Page 2

To prepare for managing a cut of that magnitude and to begin budget preparation for the 1995-97 biennium, we have already taken several steps. **First**, effective the first of January, we began hiring all new staff as limited duration hires, ending no later than the end of the current biennium. This should position us to avoid layoffs, protecting our loyal employees. It also discloses truthfully to new employees the risk that their position may be eliminated in the future.

**Second**, we have already made General Fund reductions of \$650,000, as directed by the Governor, in the current budget, including the elimination of two administrative positions funded with General Funds. In addition, we have unscheduled \$1.3 million in Other Fund limitation, although we will propose rescheduling the funds so that those savings may be redirected to other investments and priorities.

**Third**, and most important for this work session, we have asked all DEQ Divisions, managers and staff alike, to suggest ways of doing our jobs differently, to get more results for resources spent or to place a different emphasis in what we do. More than 150 suggestions were made and discussed. We have summarized them into categories for this work session discussion. The results of effecting these changes could range from opportunities to reduce the budget to refocussing some existing staff into other areas, such as increased enforcement, more nonpoint or area source effort, or more technical assistance and pollution prevention efforts.

### **Statement of Purpose**

The report provides a listing of possible alternatives to the Department's current programs and modifications to the way programs are delivered. The alternatives emerged from an agencywide review of the Department's role and priorities, and include suggestions from all levels of the agency's management and staff, and from all divisions. They are not, however, formal Department recommendations, but rather ideas that seem to merit further consideration.

Although the impetus for this discussion is the anticipated statewide budget reduction, the alternatives presented are not intended as a substitute for consideration of budget priorities. In this discussion the Department seeks the Commission's guidance on these issues prior to forming budget recommendations.

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Work Session Item  
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Page 3

Consequently, this list does not include any proposals, many of which have been explored previously, to eliminate major programs or to return delegation to the Environmental Protection Agency, although there are several suggestions that the Department's responsibilities might be more appropriately carried out by other state or local entities. Similarly, there is no discussion of the impact of simply reducing resources devoted to existing programs, without changing the way the programs are conducted. (For example, permit staff could be decreased, with a resulting increase the time to process permits.) Finally, because the emphasis was on different ways of achieving program goals, the ideas may seem to focus more on program implementation, rather than on planning, monitoring and other program support elements. **Each of these categories may be considered, however, along with the alternatives listed herein, in developing the Department's 1995-97 budget request.**

The alternatives are presented in categories, with a brief presentation of the general concept, followed by specific areas in which they might be implemented. The goal of the majority of the suggestions included is to provide sufficient environmental protection in a less resource-intensive way. However, some of the items under consideration are investments we can make now in order to achieve environmental goals more efficiently and effectively over a longer horizon. Also included is a group of alternatives that relate to fee revenues, and particularly to the way in which fees influence behavior.

Consideration of these items is expected to occur in two phases. The January 27th work session will be primarily informational, including more in-depth presentations of the concepts and discussions among staff and Commission members to more fully explore the alternatives and their implications. This will be followed by a second work session on March 10. By that time, we expect to have more information about the Governor's budget instructions, and the discussion would focus more on potential budget impacts of the various alternatives. At that meeting, the Commission would provide direction to staff relative to the proposals.

#### **Authority of the Commission with Respect to the Issue**

Some of alternatives require a change in state law which the Department might propose that the Governor support during the next Legislative session. Many require substantial modifications or additions to the agency's administrative rules. Some would change Department policy or program emphasis and still others would alter permit conditions. Additional information about actions necessary to institute the alternatives will be provided during staff presentations.

## Alternatives

### **I. Streamline permitting processes, related compliance reviews, and other regulatory functions**

1. In several programs, consideration has been given to reducing the workload associated with writing a specific permit for each permitted source. This could involve one of two possible approaches: writing general permits for certain categories of permittee or eliminating permits for those sources and setting conditions by rule.

--Many air quality permits, other than major sources (Title V), might be issued as general permits. This would involve eliminating Plant Site Emission Levels (PSELs) for these sources. As a less radical alternative, the shift to general permits might apply only for small- and medium-sized sources in noncritical airsheds.

--In Water Quality, both NPDES and WPCF permits could be issued as general permits for all minor sources, although special requirements might dictate that some sources would continue to receive individual permits.

--Solid waste sites that are not subject to federal Subtitle D regulation (those not receiving municipal solid waste) would be subject to standards contained in rule, rather than those contained in individual permits. The rules would be comprehensive and include minimum standards for all aspects of landfill siting, construction, pre-use construction, quality assurance certification, operation, groundwater monitoring, closure and post-closure. Operators would be required to self-certify that they have complied with all applicable laws and rules. Possible consequences of this approach include a decline in the quality of construction, operation, and closure, and a lack of public involvement.

2. Lengthen permit periods.

This recommendation is applicable to both the air and water quality programs. It could take the form of issuing permits for 10 year periods, instead of the current 5 years, with a possible requirement for an interim audit. Alternatively, permits could be issued for 5 years, with a condition that they would be renewed automatically for another 5 years if there is no need to change permit conditions. This could apply to Air Quality Non-Title V permits, and Water Quality WPCF and NPDES permits (although the latter only if allowed by the Clean Water Act Reauthorization). In most cases, state law would need to be amended.

3. Reduce permit and other regulatory requirements.

--Eliminate individual source test requirements for Non-Title V facilities if there are representative tests on like equipment (e.g., crematories).

--Simplify Water Quality permit conditions, particularly discharge limitations, basing limitations on the minimum required to meet federal standards or the Department's minimum design criteria. Basing winter time mass limits on wet weather conditions should also be considered.

--Eliminate state-specific hazardous waste requirements in areas where there are federal rules, thus allowing the EQC to adopt EPA's RCRA rules by reference. This would eliminate areas where state law and rules have addressed regulatory gaps in federal rules, and areas where Oregon has adopted more protective requirements. Examples include the regulation of pesticide residues, nerve agents, hazardous waste mixtures and the siting of hazardous waste facilities. Changes in state law would be required.

--Revise the site assessment scoring process, so that the only sites scored are those that do not fall clearly into the high or low priority category, based on initial screening.



4. Change or reduce reporting required of permitted sources

--Limit reporting required of Air Quality Non-Title V sources to information necessary to demonstrate compliance. This would reduce the Department's record-keeping workload. The source would still be required to maintain other monitoring records, which would be made available to the Department as needed.

--For air quality sources, under both the Title V and Non-Title V programs, limit mandatory reporting of excess emissions to when required by the source's permit.

--Change the notice of construction plan review requirement in Non-Title V permits to a simpler process for notification of potential increase in emissions.

5. Eliminate some permits types

--Remove the requirement that waste tire storage sites and carriers be permitted. Waste tires would not be regulated any differently than any other solid waste. Tire pile size could be set by rule or statute. Would require change in statute.

--Replace Portland area hardship burning program with a ban on all backyard burning.

6. Perform general, rather than detailed review, in compliance determination; simplify enforcement, where appropriate. The ideas generated concern the Hazardous Waste program, but may have applications in other programs.

--Complete only a checklist for hazardous waste generator inspections not required by EPA and which do not result in a formal enforcement action. On inspections requiring formal enforcement, the report could be limited to the items necessary to prepare the enforcement action. Inspections required by EPA would continue to need detailed inspection reports.

--Develop a field citation procedure that would be used instead of Notice of Noncompliance for low priority violations discovered during hazardous waste generator inspections and complaint investigations. The generator could agree to the citation, agreeing to correct the violation, and pay a fine. This would reduce the effort of processing enforcement actions and assessing civil penalties. This procedure is currently in use in several states.

**II. Rely upon certification compliance by third party or self-audit or certification by regulated party (often requiring regulated party to contract with a licensed or registered professional)**

1. Require that compliance be certified by a third party (licensed professional) or allow external systems, such as financial or legal institutions to force owners and operators to comply. In some cases, the Department's resources would be shifted from inspection to certifying professionals and/or performing spot audits. Some alternatives would retain Department enforcement responsibilities, including reliance on criminal authority, while others rely on other interested parties, such as lending institutions, insurance companies or citizens to ensure compliance.

--In the Air Quality Non-Title V program, the responsibility for performing proper source tests could be placed on the source tester, who would be certified by the Department. This would replace the agency's expenditure of resources to review and evaluate source test reports. Source tester work would be audited to assure accuracy.

--Require hazardous waste TSDs and generators to contract with a DEQ certified auditor for an annual compliance audit. Audit results would be added to annual reporting requirements. The results could trigger inspections or technical assistance visits by the Department, or owners could agree to correct violations without Department enforcement.

--For the sub-surface/onsite sewage treatment program, there were several variations on the third party certification/enforcement concept, ranging from:

Discontinue the Department's review and inspection. Instead, issue the construction permit to licensed installers, who would be responsible for selection of appropriate system for the site and certification that the system complies with standards set by rule.

Rather than issue individual site permits, as suggested in the above alternative, DEQ could license installers who would then have the same responsibilities to certify compliance on each installed system. The Department's activity would then be licensing, which would carry a fee, rather than permitting.

"Privatize" the functions of the current program, which includes site evaluations, construction plan review, inspections, existing systems evaluation and enforcement. In this alternative, all liability for complying with standards would fall on the owner or operator of the system. Compliance would be assured by civil lawsuits among property owners or by other interested parties for system noncompliance or failure.

2. In other programs, the regulated party could be required to certify or demonstrate compliance with rules, laws, standards and/or permit requirements. These options could eliminate plan review (except as required by federal law) and reduce inspection activity. Random audits by the Department would replace regular inspections as the method of assuring compliance. Criminal penalty authority could provide added incentive for the permittee to report accurately.

--Elimination of plan review, either by requiring the permittee to submit plans with a certification that the plans are in compliance with rule and laws, or eliminate the plan requirement entirely and simply rely on corrective action if not in compliance, could apply to:

Wastewater control facility plans, both municipal and industrial (although federal law requires plan review where State Revolving Funds are involved).

Industrial sludge management plans. (Currently, a portion of the permit fee is intended to pay for this review. Such a change could affect fee revenue.)

Solid Waste site plans

--Requiring certification by the permittee that they have complied with rules, laws or requirements was suggested in other program areas:

Self certification of leak detection by prospective UST Financial Assistance sites (while enjoying compliance deferral), which would eliminate resources performing inventory control audits.

Require facilities applying for UST financial assistance to periodically certify compliance with manual inventory control and monthly reconciliation requirements. Failure to certify would cause the facility to become ineligible for financial assistance. This would enable the Department to discontinue inventory control audits.

For soil-only UST cleanups, require the responsible party to obtain certification from a professional engineer or geologist that the cleanup has complied with state standards. The Department would audit sample sites, but would not perform cleanup oversight.

--Require Water Quality permitted sources with assigned mixing zones to conduct mixing zone studies, with an audit performed by the Department's Laboratory. Currently the Department's Laboratory performs these tests to determine if effluent limitations and other permit conditions have protected the receiving water and its beneficial uses, which provides information used by permit writers in permit renewals.

--Require that local governments perform their own recycled material data collection and measure their compliance with recycling laws.

**III. Utilize Department resources more effectively, including consolidating similar efforts conducted in more than one program.**

1. Perform combined inspections when a source is regulated by several programs, such as:

--Gas stations are currently regulated and inspected by several DEQ programs - underground storage tanks, oxygenated fuels, stage II vapor recovery, and water quality stormwater permits - as well as by EPA for leaded fuels Weights and Measures for pump inspections. DEQ efforts could be combined into one program and consolidation could be explored with the other entities.

--Perform stormwater and pretreatment inspections along with NPDES/WPCF inspections at major wastewater treatment facilities

2. Take other actions to reduce level of effort

--Take advantage of the efficiencies made possible by computerization of Vehicle Inspection basic testing equipment to reduce staff utilization, rather than improve customer service as planned. Actual staff levels would probably not go down, but rather the increase necessitated by increasing boundaries or enhanced testing would be diminished.

--Use the state superfund cleanup process to perform hazardous waste corrective actions, which are currently done under RCRA authority. This would reduce the Department's efforts resulting from performing cleanups under two processes; it would also simplify the programs for owners and operators. EPA approval would be required.

--Develop uniform soil and groundwater cleanup standards for all DEQ programs: hazardous waste, environmental cleanup, USTs, spill response, water quality, etc.

--Consolidate Confirmed Release List with cleanup Inventory List.

--Reduce administration of advisory committee processes, by centralizing staff work or, where appropriate, combining committees with a similar focus.

**IV. Consolidate efforts and eliminate duplication with other governmental bodies, including transferring functions to another agency**

1. Combine redundant or related activities

--Centralize air ventilation forecasts currently performed by DEQ and the Oregon Departments of Agriculture and Forestry.

--Continue to explore ways to make the issuance of Vehicle Inspection certificates and Motor Vehicle registrations more efficient for both the public and DEQ and Department of Motor Vehicles (DMV). This might involve expansion of the Medford pilot program, in which routine DMV business can be transacted at the Vehicle Inspection station, to the Portland area.

--Combine gas station inspections with EPA and Weights and Measures, as mentioned in the previous section.

VI. **Alternatives relating to revenue generation were proposed to meet a variety of aims. Some change the basis on which fees are administered, thereby reducing staff effort. Others seek to relate the charges to the regulatory effort involved, or to improve the connection with the "polluter pay" principle. These suggestions would entail imposing fees on groups not previously charged, or might cause fee increases for some existing fee payers. Other alternatives are intended to create a market incentive to reduce pollution.**

1. Change the basis of the Vehicle Inspection fee, so that the charge is for the test, rather than for the certificate. This would enable the Department to, for example, charge for the first test, allow one free re-test, and charge for all subsequent tests. The Department would then be paid more in line with the resources utilized. This concept might also provide an incentive for customers to reduce their demand for re-tests.
2. Establish a broad-based water fee which would provide a strong economic incentive for point and nonpoint sources to reduce their pollutant loadings to the waters of the state.
3. Evaluate other program areas where goals are not being achieved and adjust fee mechanisms accordingly.
4. Charge recipients of technical assistance for the service, rather than paying for resources with General Fund or fees.
5. Establish a single environmental fee billing, to eliminate possible conflicting signals of existing fees on different media and processes. This would also reduce the administrative burden of billing and collecting multiple fees.
6. Develop a natural resources damage assessment matrix, similar to that developed by the State of Washington, on which to base assessment of spill damage. This would replace or enhance the method of damage assessment in existing Oregon law, which places a value on fish and wildlife impacted and which, because of its complexity, has rarely been used. Funds could be used according to existing law to rehabilitate damaged resources, or a change could be sought allowing broader uses, such as enhancement or protection of resources in the area.

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7. Change statutes so that LUST cleanup oversight can be charged on a flat rate basis, rather than the current administratively burdensome actual cost reimbursement method.
8. Convert the TSD permit fee to a cost recovery method
9. Impose a fee on open burning as a market incentive to reduce emissions.

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**Intended Future Actions**

A second work session on this item is scheduled for the March 10, 1994 meeting. The Department will provide the budget context for the alternatives at that time, as well as provide any additional information the Commission may request. It is expected that the Commission will provide direction as to which alternatives should be pursued at that time.

**Department Recommendation**

It is recommended that the Commission accept this report, discuss the matter, and provide advice and guidance to the Department as appropriate.

**Attachments**

Because much of this report focusses on the permit process, Attachment 1 provides data about the number of Air and Water Quality permits by type.

Approved: *Hydrea Saylor*

Section: Budget Office

Division: Management Services

Report Prepared By: Beth Woodrow

Phone: 229-6270

Date Prepared: January 21, 1994

stratbud



Attachment 1  
Work Session Item - Strategic Budget Planning  
January 27, 1994 EQC Meeting

**PERMITTEES BY PROGRAM AND TYPE**

**WATER QUALITY**

NPDES Majors	71
NPDES Minors	296
WPCF	375
General	<u>1,767</u>
	<b>2,509</b>

**AIR QUALITY**

(figures are approximate)

A-2 Minimals	250
A-2 Synthetic Minors	250
A-1 Title V	130
Minimals *	<u>600</u>
	<b>1,230</b>

\*Similar to general permits

--More fully integrate oil and hazardous material response and planning under similar, but slightly different statutes and rules. DEQ carries out its spill planning and response duties using authorities principally found in the hazardous waste and environmental cleanup statutes and rules. The State Fire Marshal and many industries plan and respond to spills primarily under authorities found in Community Right to Know (SARA Title III) laws and rules.

2. Transfer DEQ responsibilities to other governmental units, where they are more logically or effectively implemented.

--Rely more on local governments to continue implementing solid waste recycling and source reduction programs.

--Transfer subsurface/on-site variance responsibility to the contract counties performing other parts of the onsite program.

--Amend the subsurface/onsite statutes to require that the program be implemented at the local level, rather than allowing the counties the option of running the program under contract. This would reduce the Department's role to setting statewide construction, installation and operation standards. Local actions could be appealed, possibly to the court system.

--Transfer the UST Financial Assistance Program to the Department of Economic Development

--Transfer the oil heat cleanup oversight program to the privatized successor to the Oil Heat Commission.

--Allow federal agencies to prepare oil spill geographic response plans without the Department's input and our coordination of other Oregon agency efforts

--Transfer enforcement of field burning rules to the Oregon Department of Agriculture.

--Transfer open burning enforcement to local governments.

--Eliminate air quality indirect source permits, converting to the parking ratio program, possibly to be administered by local governments.

3. Some certification and licensing programs could be eliminated, assuming the Department could rely on other states' programs. This was suggested for both asbestos training certification and the UST supervisor licensing programs.

**V. Investments in new programs or technology that would enhance the Department's ability to meet environmental goals or to perform existing functions more efficiently**

1. Improving the Department's records management, and especially creating an electronic system would have at least two beneficial outcomes: It would enable much more efficient public access, requiring fewer staff resources and it would also provide better staff access to records statewide.
2. Continue to develop the Department's information management systems to enable better tracking and decision-making.
3. Increase support of local governments in their efforts to attain environmental goals, including expanding the Environmental Teams (Livable Communities) program. This could also involve forming partnerships with local entities to look at future environmental concerns, to avoid the need for corrective action at a later date.
4. Continue to develop programs which encourage pollution prevention, in preference to traditional regulation of emissions.
5. Focus on reducing pollution from nonpoint sources in both the Air and Water Quality programs.
6. Provide economic incentives to individuals to reduce pollution, such as loans to encourage replacing older models of woodstoves.
7. Invest in building an information base that would allow the development of an effective market-based incentives program.
8. Create additional opportunities to fast track Voluntary Cleanup sites.

**Environmental Quality Commission  
Telephone Conference Call Minutes  
December 30, 1993**

Chair Wessinger opened the conference call meeting at 9:00 a.m. All Commission members were connected during the call. Public members were in attendance in the DEQ Director's conference room. Director Hansen stated the reason for the meeting was to allow action on tax credit requests from firms having a tax year that corresponds to the calendar year, allowing the applicants to apply the approved credits to this year's taxes.

Chair Wessinger asked that the minutes show that the Summary Memorandum reflect that five credits were evaluated, not four. Chair Wessinger asked the Commission members how they wished to proceed. The Commission decided that the Lamb Weston issue which was considered at the last regular commission meeting should be discussed after action on the five new applications.

It was moved by Commissioner Lorenzen that the five applications be approved as recommended by the Department in the staff report for this item. The motion was seconded by Commissioner Castle and unanimously approved.

The Lamb Weston issue centered on the Commission's concern expressed during the December 10 meeting that the firm claimed no revenues as the result of their agreement to irrigate Madison Ranch, Inc. Commissioner Lorenzen indicated that representatives from Lamb Weston had contacted him in his office in Pendleton. He explained that, after reevaluating the matter, he was certain that what Lamb Weston indicated is true and that the project is, in general, very worthwhile. He recommended that their tax credit application No. 3922, certificate No. 3227, be approved. Chair Wessinger asked whether Lamb Weston expected that at any time their provision of irrigation water would exceed 1,950 gallons per minute. [Lamb Weston's contract with Madison Ranch, Inc. indicated that if Madison Ranch requested irrigation water at higher than that rate, Lamb Weston could charge them at the rate of \$43 per acre.] Tom Wamsley of Lamb Weston indicated that the irrigation rate already exceeded that rate but that it is Lamb Weston's need to dissipate nitrate permeated water and not as a result of Madison Ranch's request; therefore, Madison is not being charged. Mr. Wamsley indicated and Commissioner Lorenzen concurred that according to Lamb Weston's calculations the cost to irrigate an acre of Madison Ranch land is \$49 per acre and if the amount stated in the contract were charged, it would not cover the cost which would not result in positive cash flow.

Harold Sawyer of the Department noted for the record that the recommendation in the staff report relative to Lamb Weston should be corrected to read "approve the Department recommendation on Application TC 3922 as presented in the staff report at the December 10 meeting". The Commission deferred action at the December 10 meeting pending receipt of further information.

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Telephone Conference Call  
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It was moved by Commissioner Castle that Application TC 3922 be approved as recommended in the staff report at the December 10, 1993 meeting. The motion was seconded by Commissioner Whipple and unanimously approved.

Chair Wessinger indicated that he found the data on the costs of the pollution control tax credit program very interesting and potentially useful in his discussions with the legislature. He asked Director Hansen if additional data could be provided on the stratification of program benefits for 1993, for example, who received most credits, etc. Director Hansen indicated that this could be done expeditiously.

There was no further business, and the telephone conference call was adjourned.

Approved \_\_\_\_\_  
Approved with Corrections \_\_\_\_\_

*Minutes are not final until approved by the EQC*

## ENVIRONMENTAL QUALITY COMMISSION

Minutes of the Two Hundred and Thirty Third Meeting  
December 10, 1993

### Work Session

The Environmental Quality Commission work session was convened at 8:30 a.m. on Friday, December 10, 1993, in Conference Room 3A, Oregon Department of Environmental Quality (DEQ), 811 S. W. Sixth Avenue in Portland, Oregon. The following commission members were present:

William Wessinger, Chair  
Dr. Emery Castle, Vice Chair  
Henry Lorenzen, Commissioner  
Linda McMahan, Commissioner  
Carol Whipple, Commissioner

Michael Huston, Assistant Attorney General, Oregon Department of Justice, was present for the regular meeting; Mike Downs, Administrator, Water Quality Division substituted for Fred Hansen, Director, who was attending a hearing in Salem until about 11:00 a.m. and other DEQ staff.

**1. Work Session: Portland Central City Transportation Plan/Portland Carbon Monoxide Maintenance Plan.**

The purpose of this work session item was to provide information about transportation related air quality problems in the Portland region, with a focus on recent planning efforts for the Central City, known as the Central City Transportation Management Plan (CCTMP).

Elsa Coleman, City of Portland, and Ruth Scott, President of Portland Progress, spoke to the Commission. They discussed the problems, strategies, results and future of Portland's build out and the affects on air quality, parking and the economy. G. B. Harrington of Tri-Met also spoke to the Commission about how the parking lid had affected mass transit.

Ms. Coleman said that partnerships were very important and that the business community was well informed and educated. She indicated that the major challenge would be informing the public that the lid was being replaced.

Neil Moyer of Texaco, Inc. told the Commission that his company supported the last rule amendments for oxygenated fuels. He indicated that he would not like to see the benefits of a parking lid squandered by transferring emission reductions.

Jeanne Roy spoke to the Commission about how the lid balanced long- and short-term parking. She asked what would control other parking. John Kowalczyk, acting Air Quality Division Administrator, indicated that protection mechanisms would be in place and that an effort would be made to eliminate any loopholes in the plan. Ms. Coleman said that the policy document of the plan deals with parking management in downtown and other districts.

The Commission asked questions about various issues such as parking in regard to older and newer buildings, taxi regulation, street design and growth and improved train service throughout Oregon.

Ms. Coleman indicated that the City of Portland would be supportive of the Department's efforts. Mr. Kowalczyk concluded by saying that besides lifting the parking ratio, employer reduction plans and high-speed rail are being considered.

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**Note:** Staff reports presented at this meeting, which contain the Department's recommendations, are on file in the Office of the Director, DEQ, 811 S. W. Sixth Avenue, Portland, Oregon 97204. Written material submitted at this meeting is made a part of this record and is on file at the above address. These written materials are incorporated into the minutes of the meeting by reference.

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### **Regular Meeting**

Chair Wessinger called the meeting to order at approximately 10:10 a.m.

**A. Approval of minutes.**

Commissioner Whipple moved that the minutes of the October 28, 1993, retreat and of the October 29, 1993, regular meeting be approved; Commissioner Lorenzen seconded the motion. The October 28, 1993, retreat and October 29, 1993, regular meetings minutes were unanimously approved.

**B. Approval of tax credits.**

The Department recommended the issuance of the tax credits listed below:

Application Number	Applicant	Description
TC 3832	BP Oil Company	Doublewall fiberglass piping, spill containment basins, automatic shutoff valves, line leak detectors and Stage I and II vapor recovery piping.
TC 3836	BP Oil Company	Four fiberglass underground storage tanks and doublewall fiberglass piping, spill containment basins, line/turbine leak detectors, monitoring wells, automatic shutoff valves and an oil/water separator.
TC 3918	Jeld-Wen	A Clark 95-20 Pneu-Air primary filter baghouse and support equipment.
TC 3946	Texaco Refining & Marketing, Inc.	Five fiberglass underground storage tanks, fiberglass piping, spill containment basins, line leak detectors, in-tank gauges, float vent valves, overflow alarms, monitoring wells and Stage I and II vapor recovery equipment.
TC 3986	Precision Castparts Corporation	An alkaline wash cleaning system that replaces a trichloroethylene vapor steel castings cleaning system preventing the emission to the atmosphere of trichloroethylene, a Volatile Organic Compound (VOC).



Application Number	Applicant	Description
TC 4032	Chevron USA, Inc.	Spill containment basins and Stage II vapor recovery hoses and nozzles.
TC 4066	Atlantic Richfield Company	An above-ground Stage II vapor recovery balance type system.
TC 4074	Atlantic Richfield Company	An above-ground Stage II vapor recovery balance type system.
TC 4102	D & G Rentals	Three STI-P3 underground storage tanks and fiberglass piping, spill containment basins, a tank gauge system, line leak detectors, overfill alarm, monitoring wells and automatic shutoff valves.
TC 4118	Willamette Industries, Inc.	Two baghouses and support equipment to control particulate emissions to the atmosphere generated by PSKM refiner cyclones.
TC 4121	Oregon Metallurgical Corporation	Two Duall scrubbers and associated support equipment for controlling atmospheric emissions from four titanium reduction furnaces.
TC 4123	Oregon Metallurgical Corporation	A caustic scrubber constructed in series with an existing HCL burner to control atmospheric emissions from the applicant's MgCL2 separation process.
TC 4126	Minimart of Vernonia	Three composite (Buffhide) underground storage tanks and doublewall fiberglass piping, spill containment basins, tank gauge system, sumps, automatic shutoff valves, and Stage I and II vapor recovery piping.

Application Number	Applicant	Description
TC 4131	Texaco Refining and Marketing, Inc.	Five doublewall fiberglass tanks and piping, spill containment basins, a tank gauge system, sumps, automatic shutoff valves, overfill alarm, line/turbine leak detectors, monitoring wells and Stage I and II vapor recovery equipment.
TC 4143	Cornelius Auto Repair Service, Inc.	A CFC facility consisting of a machine which removes and cleans automobile air conditioner coolant, preventing emissions to the atmosphere.
TC 4144	Hilltop Chevron, Inc.	A CFC facility consisting of a machine which removes and cleans automobile air conditioner coolant, preventing emissions to the atmosphere.
TC 4147	Miles Oil Company, Inc.	A UST-related facility consisting of fiberglass piping, spill containment basins, overfill alarm, sumps, automatic shutoff valves, line leak detectors, monitoring wells and Stage II vapor recovery piping.
TC 4148	Dennis Thompson Tigard Arco	One fiberglass underground storage tank and piping, spill containment basin, line leak detector and monitoring well.
TC 4149	Chris and Joan Horton	A grass seed straw baling, processing and transportation equipment and storage facility consisting of a Squeeze (Roadrunner), Freeman balers 330-T (2), a freightliner and trailers (2), a New Holland Rake 216, a Ford 7710 tractor, an International Hydro 100 tractor and a 22'x 106'x 144' shed for the storage of grass seed straw.

Application Number	Applicant	Description
TC 4151	Applegate Automotive	A CFC facility consisting of a machine which removes and cleans automobile air conditioner coolant, preventing emissions to the atmosphere.
TC 4152	Phillip Atkinson	A grass seed straw baling, processing and transportation equipment facility consisting of Freeman balers (2), an International 966 tractor, a Lely 300 rake, a New Holland rake, an air compressor, bale counters and a Ford service pickup.
TC 4153	CJ's Alpine Services, Inc.	Three fiberglass underground storage tanks and doublewall enviroflex piping, spill containment basins, a tank gauge system, sumps, automatic shutoff valves, overflow alarm, line leak detectors, monitoring wells and Stage I and II vapor recovery equipment.
TC 4155	Emery's Texaco	Three STI-P3 underground storage tanks and doublewall fiberglass piping, spill containment basins, a tank gauge system with interstitial line monitoring, overflow alarm, monitoring well, sumps, automatic shutoff valves and Stage I vapor recovery equipment.
TC 4156	Orient Auto Service, Inc.	A CFC facility consisting of a machine which removes and cleans automobile air conditioner coolant, preventing emissions to the atmosphere.
TC 4158	Powerhouse Engines	A CFC facility consisting of a machine which removes and cleans automobile air conditioner coolant, preventing emissions to the atmosphere.

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Application Number	Applicant	Description
TC 4160	EDCO Sheet Metal, Inc.	A CFC facility consisting of a machine which removes air conditioner or commercial refrigerant coolant, preventing emissions to the atmosphere.
TC 4161	Sister's Oil Company, Inc.	Two 2-compartment STI-P3 underground storage tanks and fiberglass piping, spill containment basins, a tank gauge system, automatic shutoff valves, overfill alarm, line leak detectors, monitoring wells and Stage I and II vapor recovery piping.
TC 4162	Ladds Automotive Repair	A CFC facility consisting of a machine which removes and cleans automobile air conditioner coolant, preventing emissions to the atmosphere.
TC 4163	Al's Heating & A/C	A CFC facility consisting of a machine which removes and cleans air conditioner or commercial refrigerant coolant, preventing emissions to the atmosphere.
TC 4164	Oregon Caves Chevron	Three doublewall steel/fiberglass underground storage tanks, enviroflex piping, spill containment basins, a tank gauge system, overfill alarm, sumps, automatic shutoff valves, turbine leak detectors and Stage I and II vapor recovery piping.
TC 4165	Regency Car Wash, Inc.	Installation of epoxy lining into three steel underground storage tanks, spill containment basins and underground preparation of a tank gauge system.
TC 4166	Siberts Auto Body	A CFC facility consisting of a machine which removes and cleans automobile air conditioner coolant, preventing emissions to the atmosphere.

Application Number	Applicant	Description
TC 4169	Pro Automotive	A CFC facility consisting of a machine which removes and cleans automobile air conditioner coolant, preventing emissions to the atmosphere.
TC 4170	Aire-Flo Heating & Air Conditioning, Inc.	A CFC facility consisting of a machine which removes air conditioner or commercial refrigerant coolant, preventing emissions to the atmosphere..
TC 4171	Aire-Flo Heating & Air Conditioning, Inc.	A CFC facility consisting of a machine which removes air conditioner or commercial refrigerant coolant, preventing emissions to the atmosphere.
TC 4172	Jimmy L. Arendell	Four doublewall fiberglass underground storage tanks and piping, spill containment basins, a tank gauge system, automatic shutoff valves, turbine leak detectors, monitoring wells and Stage I and II vapor recovery equipment.
TC 4182	Downtown Texaco	Three STI-P3 tanks and fiberglass piping, spill containment basins, a tank gauge system, automatic shutoff valves, turbine leak detectors and Stage I and II vapor recovery piping.

**Tax Credit Application Review Reports With Facility Costs Over \$250,000:**

Application Number	Applicant	Description
TC 3810	Riedel Environmental Technologies, Inc.	A solid waste pollution control landfill facility consisting of a bottom liner and leachate collection, storm water control, and groundwater monitoring systems together with top liner (and closure) and methane gas control final closure systems.
TC 3916	Evergreen Forest Products, Inc.	A water and hazardous waste treatment facility consisting of a concrete drip pad, steel sumps with a leak detection system, a tank containment area, a chemical unloading area, a roof structure over the drip pad and treated lumber storage area, a dedicated forklift and a paved storage yard.
TC 3922	Lamb Weston, Inc.	An irrigation system installed to prevent groundwater pollution by irrigating wastewater at acceptable agronomic rates consisting of land acquisition, piping, center pivot irrigation systems and associated equipment.
TC 3979	Timber Products Company	An air pollution control facility consisting of an Electrified Filter Bed (EFB) HFC 50 electrostatic precipitator, a Northwest baghouse and support equipment.
TC 3993	Intel Corporation	An air pollution control facility consisting of an exhaust scrubber and related equipment.
TC 4006	Intel Corporation	A hazardous and solid waste segregation and collection facility consisting of tanks, drums, automatic valves, pumps and sumps
TC 4007	Intel Corporation	A water pollution control facility consisting of an industrial wastewater pretreatment system and a chemical storage area with a roof and spill containment capability.

Application Number	Applicant	Description
TC 4017	Rosboro Lumber Company	Two Breslove Fly Ash Collectors with support equipment and structures to control the emission of ash to the atmosphere from hog fuel boilers.
TC 4051	Boise Cascade Corporation	An air pollution control facility to reduce the emissions of total reduced sulfur consisting of piping, pumps, tanks, a heat exchanger and control instruments.
TC 4083	Timber Products Company	An air pollution control facility consisting of an Electrified Filter Bed (EFB) HFC 50 electrostatic precipitator, a Clarke baghouse and support equipment.
TC 4101	Smurfit Newsprint Corporation	An air pollution control facility consisting of a Cottrell electrostatic precipitator and support equipment to control hog fuel boiler emissions.

The Commission considered Tax Credit Applications Nos. 3810 and 3922 separately.

TC-3810, Riedel Environmental Technologies, Inc.: The Department recommended that the Commission certify the facilities claimed in Application TC 3810 with costs as recommended by the Department, but that the certificate be issued by the Department to the applicant only after the applicant has implemented a corrective action plan.

Currently, a fire exists at the Killingsworth Landfill that affects the closure facility, approved by the Department's Waste Management and Cleanup Division (WMC) to ensure the facilities can operate to control pollution under U. S. Environmental Protection Agency (EPA)/DEQ regulations and permit requirements. Riedel is

required to implement the corrective action plan by December 31, 1995, or the tax credit will be deemed revoked as of that date. An adjustment (addition) to the recommended eligible costs as indicated in the Department's report was also proposed by the DEQ and approved by the EQC making the total certifiable cost \$1,438,742. The adjustment corrected an oversight whereby ineligible costs claimed in the application for the bottom liner (costs that were not recommended for approval) were inappropriately deducted from the closure cost recommended for approval by the Department.

A representative of Riedel indicated the company had no objection to the Department recommendation.

It was moved by Commissioner Lorenzen that the Department recommendation with the amended cost be approved. Commissioner Whipple seconded the motion and it was unanimously approved.

TC-3922, Lamb Weston, Inc.: The Commission questioned the claim by Lamb Weston, Tax Credit Application No. 3922, that they were obtaining no cash flow or revenue from providing irrigation and irrigation facilities to Madison Ranch, a nearby farm.

Lamb Weston, whose agreement with Madison Ranch is confidential, indicated that the relationship is quid pro quo. Lamb Weston solves their pollution control problem by providing irrigation services to Madison Ranch thereby preventing groundwater pollution by irrigating wastewater at permissible agronomic rates. The irrigation facilities, owned by Lamb Weston, revert to Madison at the end of the useful life of the facilities, 20 years. Land acquisition costs (\$50,536) were also claimed, and the claim was questioned by Commissioner Whipple. Mr. Bianchi of the Department's Management Services Division indicated that land acquisition costs are specifically claimable under the Oregon rules governing the pollution control tax credit program if the land is part of an eligible pollution control facility. Raj Kapur from the Department's Water Quality Division indicated the land acquisition was made to complete an irrigation circle to allow sufficient area for the required wastewater distribution.

Tom Wamsley, a representative for Lamb Weston, reiterated that the company does not realize an economic benefit from allowing the use of the wastewater at the Madison Ranch.



The Commission agreed that an independent accountant's review of the agreement and certification that Lamb Weston does not realize any economic benefit would be adequate. Lamb Weston indicated that of the three alternatives they evaluated, the other two being purchasing more land in the immediate vicinity and installing a wet water treatment system, this was the most economical and that was their primary reason for constructing the facility.

After hearing the discussion, Commissioner Castle moved to defer the application until additional information is received. Commissioner Lorenzen seconded the motion and it was unanimously approved. The Commission expected to consider the Lamb Weston application during their planned conference call meeting which was later scheduled for December 30, 1993, if the information is received.

TC-3993, 4006, 4007, Intel Corporation: Chair Wessinger advised of a potential conflict of interest relative to these three Intel applications and indicated he would abstain from voting.

Commissioner Castle moved approval of all tax credit applications excluding the Riedel and Lamb Weston applications already acted upon and the three Intel applications; Commissioner Lorenzen seconded the motion. The motion was unanimously approved, with five yes votes.

Commissioner Castle moved approval of the three Intel tax credit applications; Commissioner Lorenzen seconded the motion. The motion was approved with four yes votes and Chair Wessinger abstaining.

**C. Rule adoption: Proposed revisions to Oregon woodstove certification program (Division 34).**

Oregon statute currently requires that new woodstoves sold in Oregon be certified for emissions and rated for efficiency. The Department and EPA maintain separate programs to certify new woodstoves and rate heating efficiency. The proposed rule revision eliminates the duplication of program effort by accepting federal certification as fully meeting Oregon certification requirements. The DEQ will no longer maintain a separate certification program and will eliminate the Oregon requirement for separate efficiency testing and labeling.

The Department recommended adopting the rule revisions to the Oregon woodstove certification program as presented in Attachment A of the staff report.

Commissioner Lorenzen moved approval of the rule revisions; Commissioner McMahan seconded the motion. The motion was unanimously approved.

**D. Rule adoption: uniform application of per ton solid waste disposal fee.**

The proposed rule amendments would apply the existing per-ton solid waste disposal fee and Orphan Site Account fee to Oregon solid waste transported outside Oregon for disposal, effective January 1, 1994.

The Department recommended adoption of the rules regarding uniform application of the solid waste disposal fees as presented in Attachment A of the staff report.

Staff indicated that these rule amendments were in response to what the Legislature directed to be done. Commissioner Lorenzen asked about the status of the lawsuit on the \$2.25 per ton surcharge on disposal in Oregon of solid waste from out of state. Staff responded that the U. S. Supreme Court was slated to hear this on January 18, 1994.

Commissioner Castle moved approval of the uniform application of per ton solid waste disposal fee; Commissioner Whipple seconded the motion. The motion was unanimously approved.

**E. Request by Laurelwood Mission Training Center for waiver of water quality permit compliance fee.**

Laurelwood Mission Training Center, a private boarding school in Washington County, requested the Commission to waive the annual compliance determine fee for their sewage treatment permit for fiscal year 1994. The Department staff report recommended the Commission deny the request for waiver of the annual compliance determination fee.

Tom Bispham, Northwest Region Administrator, advised the Commission that discussions before the meeting with a representative of Laurelwood indicated a possible resolution of the matter. Therefore, Mr. Bispham requested that this item be removed from the agenda, with the understanding that Laurelwood may choose to bring the issue before the Commission at a later meeting if a resolution is not reached.

**Note:** Agenda Item F was considered at 1:30 p.m. and is documented in these minutes after Agenda Item I.

**G. Information item: improved formatting and accounting of information regarding the time and associated costs for performing municipal permit work.**

In June 1992, the Commission directed the Department to evaluate ways to improve reporting and accounting for the time and associated costs for performing domestic wastewater permit work. Additionally, staff was asked to create an advisory committee to assist in the evaluation.

After several meetings, the advisory committee recommended an improved time keeping system which will track hours on seven categories including sludge management, pretreatment, engineering plan review, permit processing, compliance determination and operator certification and other municipal permit activities.

The Department recommended the Commission adopt this report.

Commissioner Castle moved approval of this informational item; Commissioner Whipple seconded the motion. The motion was unanimously approved.

**H. Information item: update on environmental equity project.**

In Oregon, environmental equity has most recently been associated with the consumption of fish from polluted waters such as the Columbia slough. The concern is that water quality standards are often based on analysis of fish species which may not be the species most often consumed by poor and minority populations. Additionally, some minority groups consume fish in substantially greater quantities than what was used as the basis for fish analysis. Many minority populations consume different body parts of the fish, the parts which may disproportionately absorb higher levels of certain toxics are reflective of fish consumption patterns of white anglers but not those of minority subgroups.

At the Department's request, the Governor's Office of Natural Resource and Environment directed the DEQ and the Health Division to determine if the state's environmental programs contribute to discriminatory environmental problems.

Roberta Young of the Department's Management Services Division discussed the emergence of the issue as a national concern and gave an overview of the project's objectives and process. Maria Menor, who is assisting Ms. Young, described the various equity related issues that have been identified through interviews with the DEQ and other agency staff.

Commissioner Castle questioned how staff was planning to address the many different dimensions of economic, social and political issues. Ms. Young stated that there were many factors to consider and that staff plans to use an advisory committee to help determine appropriate state action. Commissioner Castle further commented that whether or not discrimination does take place, agencies must also address the perception disadvantaged groups have that they are being discriminated against. Concern was also expressed that the Department understand the concerns of rural poverty from communities that are predominately non-minority and low income. It was also noted that siting decisions exist within the structure of local government. Ms. Young responded that land use issues demonstrate how equity issues will require interagency coordination strategy as opposed to action from one level of government.

## **PUBLIC FORUM**

Michael Jones spoke to the Commission about the St. John's Landfill. He gave a brief history of the issues surrounding the closure of the landfill and the problems he believes exist with the closure. He indicated that he would be initiating a law suit in regard to inadequate closure plans and activities. He concluded by saying that landfill is also a Comprehensive Environmental Response and Cleanup Liability Act (CERCLA) site as well.

Chair Wessinger asked that staff prepare a report for the next Commission meeting about the closure problems. (Note: Due to staff commitments, this item will be scheduled at the March meeting.)

**I. Information item: implementation of Oregon Administrative Rules (OAR) 340-41-070(1) which prohibits further discharges to the Clackamas River, North Santiam River and McKenzie River (above Hayden Bridge) subbasins in order to preserve existing high quality waters for municipal water supplies and recreation.**

This rule prohibits any new discharges to the three river subbasins. When adopted in 1977, a major purpose of the rule was to preserve existing high quality waters for use as domestic water supplies for the growing Willamette Valley population centers.

The rule prohibits further waste discharges, regardless of the impact on water quality. No exceptions are allowed. This rule may have the effect of precluding activities and land uses in these subbasins that were never intended to be precluded.

The immediate reason to bring this issue to the Commission's attention is a pending discharge permit application for an underground copper mine from Kinross Gold USA, Inc. This is the first significant project for which the Department has evaluated the proposed discharge and has concluded that the site can be managed and operated

to minimize the water quality impacts. Based on the information presented in the permit application, the Department has concluded there would be no measurable impact on the North Santiam River or on the Little North Santiam River. As a result of the high rainfall in the area, it is likely that the mining project would not be able to proceed if the Department is unable to issue a discharge permit.

The Department believes that some flexibility is warranted and that some new discharges can be granted without adversely impacting water quality. Additional flexibility would require a rule change.

The Department recommended that storm water discharges be considered separately from other types of discharges. With respect to storm water issues, it is recommended that the Commission direct the Department to draft a permanent rule excluding storm water from OAR 340-41-470(1) for consideration by the Commission at a later date.

Mike Downs, Water Quality Administrator, presented this item to the Commission. Mr. Downs clarified that this is an information item only and that the Commission would not be taking any action at this meeting. The issue at hand is whether to allow a discharge from the proposed mine in to the North Santiam River basin (prohibited under OAR 340-41-470(1)).

The Commission also heard from water suppliers in the three basins in question (Clackamas, North Santiam, and the McKenzie (above Hayden Bridge) subbasins, environmental groups and Kinross Copper Corporation. Comments were as follows:

- Gary Deadmond, City of Lake Oswego: Opposed to any relaxation without proper safeguards.
- Gordon McGhee, Clackamas Water District: Concerned about the disinfection by products rule and its impact on the water plant; also concerned about heavy metals in the stream.
- Libby Henry, Eugene Water and Electric Board (EWEB): Have not developed a position yet on this issue; would like to participate in an advisory committee to study this rule.
- Joni Low, League of Oregon Cities: Supports recommendations of the staff in the report; have not developed an official position as yet want to be involved in the process.

- Liz Frenkel, Oregon Chapter, Sierra Club: Supported staff position without prejudice, and would like to be involved; concerned about a temporary fix which would not make good public policy.
- Bart Brush, Northwest Environmental Defense Center (NEDC): Indicated there was no basis for changing rule.
- Jeff Golden, Chief of Staff for Senate President Bradbury: Expressed support for Kinross' proposal which would enable the mine to operate. Mr. Golden indicated that he believes that there should be accountability in the regulatory process and that the current problem should be remedied with a narrow amendment.

Allen Gordon and Margaret Kirkpatrick, Kinross Copper Corporation, presented a petition for a narrow amendment to OAR 340-41-470(1). The Commission expressed some concern about the language used in the proposed amendment to the rule. The Department suggested that alternative language be developed.

It was moved by Commissioner Castle that the Commission grant the petition for rulemaking filed by Kinross Copper Corporation and proceed to a rulemaking hearing before the Commission on January 27, 1994. The motion also authorized the Department to develop alternative wording for rule amendments for consideration at the same time. The motion was seconded by Commissioner Whipple and unanimously approved.

The Department stated that the rule would, in effect, prevent the issuance of storm water permits in these basins. The Department indicated that they would also look at this issue and get back to the Commission.

**F. Proposed adoption of state integrated resource and solid waste management plan.**

The 1991 Oregon Recycling Act requires the Commission to adopt an Integrated Solid Waste Management Plan by January 1, 1994. The statute requires that the plan cover a ten-year period and that it address all facets of solid waste management.

The plan envisions a fundamental shift away from the bottom of Oregon's solid waste management hierarchy (disposal) to the top of the hierarchy (waste reduction). Additionally, the plan identifies local government and the private sector as primarily responsible for a functional solid waste system in Oregon, emphasizes market development and the need for recycling to be economically self-sustaining.

The Department recommended adoption of the State Integrated Resource and Solid Waste Management Plan as proposed in Attachment A of the staff report.

Jeanne Roy, representing Recycling Advocates, spoke to the Commission about three issues she believed that needed to be addressed in the plan. Those issues were:

1. Lack of attention to recycling and composting;
2. Disagreement with the idea that goals can be met through education, technical assistance and marketing rather than regulation; and
3. Disagreement with labeling requirements set at the national level.

Paul Cosgrove, representing American Forest and Paper Association, thanked staff for their work on the plan. He said the paper industry was supportive of most of the plan, however, there was concern about some of the strategies.

Gary Conkling representing Blitz-Weinhard Brewing Company read a statement to the Commission expressing concern about the evolving marketing strategy in Oregon which discourages use of refillable beverage containers by crushing all bottles at the point of return. They supported incentives to encourage the use of refillable beverage containers under the bottle bill.

Concern was raised regarding the recommended policy to address labelling issues at the regional and national level. Additionally, it was questioned if the language should not be stronger to encourage Oregon to take the lead in dealing with this issue regionally. Also raised was the issue that composting is not specifically addressed in the plan. Staff indicated that composting of source separated material is included under the definition of recycling and will certainly be considered as part of target materials for market development.

The Commission asked how the plan addressed the question of resources and impacts on local government for their part in plan implementation. Staff responded that the plan does not directly discuss or make recommendations on funding. Many of the strategies and responsibilities outlined in the plan will mean setting new priorities for existing resources, evaluating specific legislative initiatives to find appropriate funding mechanisms, and being creative in how we accomplish these goals.

Commissioner McMahan asked how the plan addresses the issue of plastics recycling. It was indicated that the plan will target specific materials for market development and will look at the effectiveness/efficiencies of recycling specific materials in urban and rural areas. Staff acknowledged that plastics pose a very real challenge for Oregon in the next ten years.

The Commission postponed adoption until the January Commission meeting because this is a far reaching plan which has many complex policy recommendations. They desired more time to educate themselves on the policy directions recommended.

**J. Commission member reports.**

Commissioner McMahan indicated that on December 9 she spoke to the state legislative House committee on endangered species.

Commissioner Whipple said that the next Governor's Water Enhancement Board (GWEB) conference entitled "Catch the Rain" was scheduled for the same day as the Commission's next meetings. She indicated that she would make arrangements to attend both meetings.

**K. Director's report.**

Budget preparation: The Department, along with other state agencies, is facing the reality that ballot measure 5 will leave the state a budget shortfall of approximately \$1.6 billion in the 1995-1997 biennium. The Governor has asked agencies to cut some expenditures this biennium with the goal of carrying over \$50 million to the 1995-1997 biennium. The Governor has asked the Department to produce a plan to identify our share of the savings, not only in general fund, but in other funds as well.

Meantime, the Department has already started working on our budget preparation for the 1995-1997 biennium. Each division will be involving staff in discussions about priorities and looking for ways to do things differently. The Department will discuss the budget with the Commission at the January meeting.

New office space: The Northwest Region office will move into its new space in downtown Portland on December 20. Negotiations are underway for office space in Eugene. If all goes well, the Department may be able to move into Eugene space in January.



Joint meeting of Oregon and Washington legislature: The Department participated in a joint meeting of the Oregon and Washington State Legislative Senate and House Natural Resources Committees in Olympia. The agenda included the Lower Columbia Bi-State program, oil spill response and Oregon's watershed health program.

Livable communities: The Oregon Progress Board has contracted with consultants to conduct livable community workshops around the state starting with Bend and Medford in February. The workshops will include local elected officials, business leaders and civic activists. The goal is to work on growth and livability issues and focus state resources to support local efforts.

Collaborative process on Portland combined sewers: Chair Wessinger and Commissioner Castle have been attending meetings with Portland Commissioners Mike Lindberg and Gretchen Kafoury in a collaborative process to better understand the issues related to combined sewers. The next meeting is December 14, 1993. Chair Wessinger urged other Commission members to attend.

Commissioner Castle noted that Director Hansen had made it clear that the Collaborative committee is not a decision making body. Decision making authority rests with the EQC and the City Council in their respective roles and capacities. If a consensus is reached by the committee, the committee members would carry a recommendation for action back to their respective bodies for consideration.

Hearing authorizations:

- Enforcement Procedures and Civil Penalties

The proposed rules would conform the Department's enforcement rules with recent legislative amendments and allow the Department to use EPA computer models to calculate the economic benefit of delayed or avoided compliance and the inability to pay. The proposed rules would add selected magnitude determinations, amend the five-day notice rule and add Title V (Clean Air Act) violations to the classifications.

- Hazardous Waste Generation Fee

The proposed rule sets the base fee used to calculate annual invoices for large and small quantity generators of hazardous waste. This proposal would establish a base fee of \$60 per metric ton.

Additionally, Director Hansen discussed the small communities project, stage II vapor recovery and orphan site account testimony. In regard to the refillable bottles issues discussed by Mr. Conkling, Director Hansen suggested that the Department could draft a letter stressing reuse for the Commission's signatures. Commissioner Castle responded that action would be appropriate for the Department but proposed that a news release be provided that presented state priorities. The Commission and Director Hansen also discussed the necessity for a special meeting on tax credits. A telephone conference call was scheduled for December 30, 9:00 a.m.

There was no further business, and the meeting was adjourned at 3:35 p.m.

# Environmental Quality Commission

- Rule Adoption Item
- Action Item
- Information Item

Agenda Item B  
January 28, 1994 Meeting

**Title:**

Approval of Tax Credit Applications

**Summary:**

New Applications - 10 tax credit applications with a total facility cost of \$674,620.00 are recommended for approval as follows:

- |  |                |
|--|----------------|
| - 1 Air Quality facility with a total facility cost of:          | \$ 83,576      |
| - 1 Water Quality facility having a total facility cost of:      | \$ 20,291      |
| - 1 Solid Waste Recycling facility having a facility cost of:    | \$ 218,316     |
| - 5 Plastics Recycling facilities with a total facility cost of: | \$ 167,972 and |
| - 2 Underground Storage Tank (UST) facilities costing:           | \$ 184,465     |


One application having a claimed facility cost exceeding \$250,000 has been reviewed by an independent contractor and the review statement is attached to the application review report.

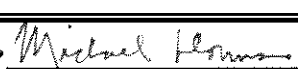
As requested by the Chairman at the December 30, 1993 special meeting of the Commission, the Department analyzed the stratification of tax credit relief for 1993. The analysis indicates that 15 tax credits of a total of 258 credits approved in 1993 accounted for 67% of the certified costs of the Program. These 15 credits included all credits exceeding \$1 million of certified costs. It was also found that 13 firms received 76% of the total dollar value of the credits certified. These firms comprised all applicants that were granted approval of more than \$1 million dollars of certified facility costs.


The average certified cost of tax credits approved for 1993 was \$ 277,893, a figure that is skewed as the result of a relatively small number of high dollar value credits. The median value of certified credits was \$50,658, a figure which more accurately represents the value of the "typical" certified cost of the majority of credits approved. A sensitivity analysis of the potential financial impact of selected ceiling limitations on the Program is provided in a table attached to this Memorandum. The attachment also presents information on certified costs for applicants receiving certification of in excess of \$ 1 million in tax credit costs in 1993.

**Department Recommendation:**

- 1) Approve issuance of tax credit certificates for 10 applications as presented in Attachment A of the staff report.

  
Report Author

  
Division Administrator

  
Director


†Accommodations for disabilities are available upon request by contacting the Public Affairs Office at (503)229-5317(voice)/(503)229-6993(TDD).

GW\WC12\WC12208.5

State of Oregon  
Department of Environmental Quality

Memorandum<sup>†</sup>

Date: January 28, 1994

To: Environmental Quality Commission  
From: Fred Hansen, Director   
Subject: Agenda Item B, January 28, 1994 EQC Meeting

Approval of Tax Credit Applications

**Statement of the Need for Action**

This staff report presents the staff analysis of pollution control facilities tax credit applications and the Department's recommendation for Commission action on these applications. The following is a summary of the applications presented in this report:

**Tax Credit Application Review Reports:**

Application Number	Applicant	Description
TC 3814	Oregon Precision Industries	A reclaimed plastics facility consisting of an eight cavity hot runner mold for the production of plastic carrying handles.
TC 3965	Lane T. Robertson, Lane International Corp.	A reclaimed plastics facility consisting of 2 two cavity Autotech Die plastic injection molds for the production of plastic products.
TC 4020	Jacqueline Vasquez ITA Services	A reclaimed plastics facility consisting of a Plastics Realized injection mold for the production of a plastic product.
TC 4124	Blount, Inc.	A water pollution control facility consisting of a Hyde HMMUF-2 Ultra Filtration System and a Hyde Skimmer (Model BR6100).

<sup>†</sup>A large print copy of this report is available upon request.

Application Number	Applicant	Description
TC 4139	Space Age Fuel, Inc.	An Underground Storage Tank (UST) facility consisting of the epoxy lining and cathodic protection of three steel tanks, fiberglass piping, spill containment basins, an overfill alarm, line leak detectors, monitoring wells, sumps, Stage I vapor recovery equipment and Stage II vapor recovery piping.
TC 4146	Brookman Cast Industries, Inc.	An air pollution control facility consisting of two refurbished mechanical shaker baghouses and support equipment.
TC 4150	Space Age Fuel, Inc.	An Underground Storage Tank (UST) facility consisting of the epoxy lining and cathodic protection of three steel tanks, two fiberglass replacement tanks with fiberglass piping, spill containment basins, a tank guage system, an overfill alarm, line leak detectors, monitoring wells, sumps and Stage I vapor recovery equipment.
TC 4196	Oregon Precision Industries	A reclaimed plastics facility consisting of four cavity molds for the production of plastic carrying handles.
TC 4197	Oregon Precision Industries	A reclaimed plastics facility consisting of a Cincinnati Milacron VT-165-5 molding press and a water chiller for the production of plastic carrying handles.

**Tax Credit Application Review Reports With Facility Costs Over \$250,000  
(Accountant Review Reports Attached):**

Application Number	Applicant	Description
TC 2394	United Disposal Service, Inc.	A solid waste pollution control facility consisting of a building and facilities for recycling solid waste materials.

**Background**

The application for the United Disposal Service, Inc. recycling facility was received by the Department on January 21, 1993, prior to the effective date of the revised rules pertaining to facilities that are integral to the operation of a business. The application is therefore not covered by those rules. In addition, at the April 23, 1993 meeting of the Environmental Quality Commission, the Commission granted a waiver of the two year rule, which was violated by the applicant, because it was deemed that a misunderstanding between the Department and the applicant contributed to a delay in filing of the application.

**Authority to Address the Issue**

ORS 468.150 through 468.190 and OAR 340-16-005 through 340-16-050 (Pollution Control Facilities Tax Credit).

ORS 468.925 through 468.965 and OAR 340-17-010 through 340-17-055 (Reclaimed Plastic Product Tax Credit).

**Alternatives and Evaluation**

None.

**Summary of Any Prior Public Input Opportunity**

The Department does not solicit public comment on individual tax credit applications during the staff application review process. Opportunity for public comment exists during the Commission meeting when the applications are considered for action.

**Conclusions**

- o The recommendations for action on the attached applications are consistent with statutory provisions and administrative rules related to the pollution control facilities and reclaimed plastic product tax credit programs.
  
- o Proposed January 28, 1994 Pollution Control Tax Credit Totals:

<u>Certificates</u>	<u>Certified Costs*</u>	<u>No.</u>
Air Quality	\$ 83,576	1
CFC	0	0
Field Burning	0	0
Hazardous Waste	0	0
Noise	0	0
Plastics	167,972	5
Solid Waste - Recycling	218,316	1
Solid Waste - Landfills	0	0
Water Quality	20,291	1
UST	184,465	2
<b>TOTALS</b>	<hr/> <b>\$ 674,620</b>	<hr/> <b>10</b>

Memo To: Environmental Quality Commission  
 Agenda Item B  
 January 28, 1993 Meeting  
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Calendar Year Totals Through December 30, 1993:

<u>Certificates</u>	<u>Certified Costs*</u>	<u>No.</u>
Air Quality	\$ 17,465,542	42
CFC	138,576	50
Field Burning	2,922,525	35
Hazardous Waste	379,973	1
Noise	0	0
Plastics	32,097	4
Solid Waste - Recycling	1,455,468	13
Solid Waste - Landfills	11,539,481	7
Water Quality	30,447,624	35
UST	7,315,179	71
	<hr/>	<hr/>
TOTALS	\$ 71,696,465	258

\* These amounts represent the total facility costs. To calculate the actual dollars that can be applied as credit, the total facility cost is multiplied by the determined percent allocable of which the net credit is 50 percent of that amount.



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**Recommendation for Commission Action**

It is recommended that the Commission approve certification for the tax credit applications as presented in Attachment A of the Department Staff Report.

**Intended Followup Actions**

Notify applicants of Environmental Quality Commission actions.

**Attachments**

- A. Pollution Control Tax Credit Application Review Reports.

**Reference Documents (available upon request)**

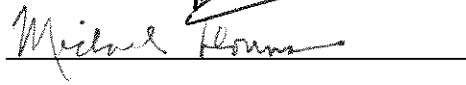
1. ORS 468.150 through 468.190.
2. OAR 340-16-005 through 340-16-050.
3. ORS 468.925 through 468.965.
4. OAR 340-17-010 through 340-17-055.

Approved:

Section:



Division:



Report Prepared By: Charles Bianchi

Phone: 229-6149

Date Prepared: January 11, 1994

Charles Bianchi:crw  
GW\WC12\WC12209.5  
TCJAN.EQC  
Jan 11, 1994

## Attachment A

TABLE 1

Certified Cost By Applicant For 1993

<u>Applicant</u>	<u>Certified Cost</u>	<u>Nr. Approved</u>
James River Corp.	\$ 16,447,394.00	2
Intel Corp.	9,791,032.00	5
Finley Buttes Co.	4,429,243.00	2
Precision Castparts Corp.	4,333,288.00	5
Smurfit Newsprint Corp.	3,668,754.00	1
Boise Cascade Corp.	3,427,367.00	5
Wacker Siltronic Corp.	2,822,407.00	1
Lamb Weston, Inc.	2,277,236.00	1
Chevron, USA, Inc.	1,818,693.00	21
Portland General Electric	1,818,275.00	14
Riedel Environmental Tech.	1,438,742.00	1
Evergreen Forest Products	1,255,201.00	1
Atlantic Richfield Co.	1,088,092.00	22
TOTAL:	\$ 54,615,724.00	81
TOTAL FOR PROGRAM:	\$ 71,696,465.00	258
% of Total:	76.2%	

TABLE 2

Stratification of Certified Costs  
For 1993

<u>\$\$\$</u> <u>Ceiling Level</u>	<u>% of</u> <u>Total Cost</u>	<u>Residual Value of</u> <u>Remaining Credits</u>	<u>Remaining</u> <u>Credits</u>
\$ 1,000,000	67	\$ 23,495,755	243
500,000	75	17,720,176	235
250,000	80	14,169,086	226
200,000	83	12,135,155	217
100,000	93	5,377,613	170

Explanation

The table above presents information on the percentage of certified costs associated with tax credits above certain specified ceilings. For example, the table indicates that individual credits whose certified costs exceeded 1 million dollars comprised approximately 67% of the total certified costs for 1993. The Residual Value of

Remaining Credits column shows the amount of certified costs that would still have been approved had a limitation been effect limiting certified costs to 1 million dollars per facility/application. The Remaining Credits column data indicates the number of applications that would have been approved had the limitation been in effect. Clearly, a limitation on certifiable costs per facility/application, especially if accompanied by a limitation on the total value of credit allowable per applicant per year, would constrain program costs significantly while continuing to allow approval of the majority of credits for small and mid-sized businesses and individuals.

GW\WC12\WC12210.5

Application No. TC-3814

State of Oregon  
Department of Environmental Quality

RECLAIMED PLASTIC TAX CREDIT  
TAX RELIEF APPLICATION REVIEW REPORT

---

1. Applicant

Oregon Precision Industries  
James Borg, President  
2610 W. 5th Avenue  
Eugene, OR 97402

The applicant owns and operates a plastic manufacturing facility at Eugene, Oregon.

Application was made for Reclaimed Plastic Tax Credit.

2. Description of Equipment, Machinery or Personal Property

Claimed Investment Cost: \$35,852.22: consisting of:

One 8 cavity hot runner mold for the production of two unit milk jug carrying handles manufactured from more than 50% reclaimed polypropylene.

An Accountant's Certification was provided.

3. Procedural Requirements

The investment is governed by ORS 468.925 through 468.965, and by OAR Chapter 340, Division 17.

The investment met all statutory deadlines in that:

- a. The request for preliminary certification was filed June 29, 1992. The 30-day prior notice requirement was waived on July 9, 1992.
- b. The request for preliminary certification was approved on January 21, 1993, before the application for final certification was made.
- c. The investment was made on April 2, 1993, prior to June 30, 1995.

- d. The request for final certification was submitted on December 13, 1993 and was filed complete on December 17, 1993.

4. Evaluation of Application

- a. The investment is eligible because the equipment is necessary to manufacture a reclaimed plastic product.
- b. Allocable Cost Findings

In determining the portion of the investment costs properly allocable to manufacture of a reclaimed plastic product, the following factors from ORS 468.960 have been considered and analyzed as indicated:

- 1) The extent to which the claimed collection, transportation, processing or manufacturing process is used to convert reclaimed plastic into a salable or usable commodity.

This factor is applicable. This mold is used to manufacture a reclaimed plastic product during 81% of its production time. For the other 19% the product did not qualify as a reclaimed plastic produce due to a low reclaimed material content.

- 2) The alternative methods, equipment and costs for achieving the same objective.

The applicant indicated that they knew of no alternative method which could be utilized to manufacture this plastic product.

- 3) Any other factors which are relevant in establishing the portion of the actual cost of the investment properly allocable to the collection, transportation or processing of reclaimed plastic or to the manufacture of a reclaimed plastic product.

There are no other factors to consider in establishing the actual cost of the investment properly allocable to reclaiming and recycling plastic material.

The actual cost of the investment properly allocable to processing reclaimed plastic as determined by using these factors is 81% of the claimed \$35,852 or \$29,040.

5. Summation

- a. The investment was made in accordance with all regulatory deadlines.
- b. The investment is eligible for final tax credit certification in that the equipment is necessary to process reclaimed plastic.
- c. The qualifying business complies with DEQ statutes and rules.
- d. The portion of the investment cost that is properly allocable to reclaiming and recycling plastic is 100%.

6. Director's Recommendation

Based upon these findings, it is recommended that a Reclaimed Plastic Tax Credit Certificate bearing the cost of \$29,040 with 100% allocated to reclaiming plastic material, be issued for the investment claimed in Tax Credit Application No. TC-3814.

WRB:b  
wp51\tax\tc3814rr.sta  
(503) 229-5934  
December 19, 1993

Application No. TC-3965

State of Oregon  
Department of Environmental Quality

RECLAIMED PLASTIC TAX CREDIT  
TAX RELIEF APPLICATION REVIEW REPORT

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1. Applicant

Lane T. Robertson  
Lane International Corp.  
P. O. Box 925  
Tualatin, OR 97062

The applicant owns and operates a manufacturing plant for steel and plastic products in Tualatin, Oregon. The applicant manufactures a utility vault terminator and seal out of reclaimed plastic.

Application was made for Reclaimed Plastic Tax Credit.

2. Description of Equipment, Machinery or Personal Property

Claimed Investment Cost: \$19,925 consisting of:

2 two cavity plastic injection molds manufactured by Autotech Die Mold. These molds will be used exclusively to manufacture a reclaimed plastic product from reclaimed polystyrene and polyethylene.

An invoice was provided.

3. Procedural Requirements

The investment is governed by ORS 468.925 through 468.965, and by OAR Chapter 340, Division 17.

The investment met all statutory deadlines in that:

- a. The request for preliminary certification was received on January 26, 1993. The preliminary application was filed complete on January 26, 1993.
- b. The request for preliminary certification was approved on January 26, 1993, before the application for final certification was made.
- c. The investment was made on July 29, 1993, prior to June 30, 1995.

- d. The request for final certification was submitted on October 13, 1993 and was filed complete on October 15, 1993.

4. Evaluation of Application

- a. The investment is eligible because the equipment is necessary to process reclaimed plastic.
- b. Allocable Cost Findings

In determining the portion of the investment costs properly allocable to reclaiming and recycling plastic material, the following factors from ORS 468.960 have been considered and analyzed as indicated:

- 1) The extent to which the claimed collection, transportation, processing or manufacturing process is used to convert reclaimed plastic into a salable or usable commodity.

This factor is applicable because the sole purpose of these molds is to manufacture a reclaimed plastic product. The waste plastic used to manufacture these products is generated by persons other than the applicant.

- 2) The alternative methods, equipment and costs for achieving the same objective.

The applicant investigated other alternatives and determined that no other type of equipment can be used for making these parts on an injection molding machine.

- 3) Any other factors which are relevant in establishing the portion of the actual cost of the investment properly allocable to the collection, transportation or processing of reclaimed plastic or to the manufacture of a reclaimed plastic product.

There are no other factors to consider in establishing the actual cost of the investment properly allocable to reclaiming and recycling plastic material.

The actual cost of the investment properly allocable to processing reclaimed plastic as determined by using these factors is 100%.



5. Summation

- a. The investment was made in accordance with all regulatory deadlines.
- b. The investment is eligible for final tax credit certification in that the equipment is necessary to process reclaimed plastic.
- c. The qualifying business complies with DEQ statutes and rules.
- d. The portion of the investment cost that is properly allocable to reclaiming and recycling plastic is 100%.

6. Director's Recommendation

Based upon these findings, it is recommended that a Reclaimed Plastic Tax Credit Certificate bearing the cost of \$19,925 with 100% allocated to reclaiming plastic material, be issued for the investment claimed in Tax Credit Application No. TC-3965.

WRB:wrb  
wp51\tax\tc3965rr.sta  
(503) 229-5934  
December 23, 1993

Application No. TC-4020

State of Oregon  
Department of Environmental Quality

RECLAIMED PLASTIC TAX CREDIT  
TAX RELIEF APPLICATION REVIEW REPORT

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1. Applicant

Jacqueline Vasquez  
ITA Services  
2312 N. E. 162nd  
Portland, Oregon 97230

The applicant has designed and will distribute a finger stand to be used in manicuring. The applicant has purchased a mold to produce this item and has contracted with a plastic molding company to manufacture the finger stand from reclaimed plastic using the applicant's mold.

Application was made for Reclaimed Plastic Tax Credit.

2. Description of Equipment, Machinery or Personal Property

Claimed Investment Cost: \$5,000 consisting of:

An injection mold manufactured by Plastics Realized. This mold will be used exclusively to manufacture a reclaimed plastic product from plastic regrind supplied by an Oregon reclaimed plastic dealer.

An invoice was provided.

3. Procedural Requirements

The investment is governed by ORS 468.925 through 468.965, and by OAR Chapter 340, Division 17.

The investment met all statutory deadlines in that:

- a. The request for preliminary certification was received on March 30, 1993. The preliminary application was filed complete on March 31, 1993.
- b. The request for preliminary certification was approved on March 31, 1993, before the application for final certification was made.

- c. The investment was made on November 10, 1993, prior to June 30, 1995.
- d. The request for final certification was submitted on December 6, 1993 and was filed complete on December 17, 1993.

4. Evaluation of Application

- a. The investment is eligible because the equipment is necessary to process reclaimed plastic.
- b. Allocable Cost Findings

In determining the portion of the investment costs properly allocable to reclaiming and recycling plastic material, the following factors from ORS 468.960 have been considered and analyzed as indicated:

- 1) The extent to which the claimed collection, transportation, processing or manufacturing process is used to convert reclaimed plastic into a salable or usable commodity.

This factor is applicable because the sole purpose of this mold is to manufacture a reclaimed plastic product. The waste plastic used to manufacture this product is generated persons other than the applicant.

- 2) The alternative methods, equipment and costs for achieving the same objective.

The applicant investigated other alternatives and determined that no other type of equipment can be used for making this item on an injection molding machine.

- 3) Any other factors which are relevant in establishing the portion of the actual cost of the investment properly allocable to the collection, transportation or processing of reclaimed plastic or to the manufacture of a reclaimed plastic product.

There are no other factors to consider in establishing the actual cost of the investment properly allocable to reclaiming and recycling plastic material.

The actual cost of the investment properly allocable to processing reclaimed plastic as determined by using these factors is 100%.

5. Summation

- a. The investment was made in accordance with all regulatory deadlines.
- b. The investment is eligible for final tax credit certification in that the equipment is necessary to process reclaimed plastic.
- c. The qualifying business complies with DEQ statutes and rules.
- d. The portion of the investment cost that is properly allocable to reclaiming and recycling plastic is 100%.

6. Director's Recommendation

Based upon these findings, it is recommended that a Reclaimed Plastic Tax Credit Certificate bearing the cost of \$5,000 with 100% allocated to reclaiming plastic material, be issued for the investment claimed in Tax Credit Application No. TC-4020.

WRB:wrb  
wp51\tax\tc4020rr.sta  
(503) 229-5934  
December 23, 1993

State of Oregon  
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

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1. Applicant

Blount, Inc.  
Oregon Cutting Systems Division  
4909 SE International Way  
Portland, Oregon 97222-4679

The applicant owns and operates a manufacturing facility that produces accessories for chain saws and other fabricated metal products from high quality steel.

An application was made for a tax credit for a water pollution control facility.

2. Description of Facility

The applicant is requesting a tax credit for a water pollution control system designed to treat oily wastewaters. The estimated useful life of the system is 10 years.

Blount discharges process wastewater containing pollutants into the Clackamas County Service District's sanitary sewer system. The discharge of this wastewater is regulated under the Clackamas County Industrial Wastewater Discharge Permit Number 01k-004-M. Due to limitations in the permit regarding the levels of emulsified and free floating oil that can be discharged into the sewer, the applicant had to install a system that pretreats the wastewater for removal of oil and grease prior to discharge.

Blount installed the Hyde HMMUF-2 Ultra Filtration System, along with the Hyde Skimmer Model BR6100, to treat wastewater discharged from their mop wash sump. The wastewater in the sump is produced from mopping the floor around machines that discharge oil, such as punch presses and assembly machines. Wastewater produced from cleaning oily equipment is also placed in this sump for disposal to the sanitary sewer.

The wastewater is skimmed from the surface of the mop wash sump and treated through the Hyde filtration system. This system includes a two compartment tank: an inlet side that removes solids and free oil, and the process side for holding the clarified liquid prior to discharge. The floating skimmer in the inlet side allows surface attraction of free floating tramp oils and any undesirable rag or cream layer. An integral tramp oil separator removes free floating and dispersed oils from the influent mixture. The separated oil is automatically discharged into a waste oil container. The recycled washwater flows from the separator by gravity into the process side. The process supply pump transfers the pretreated liquid into the membrane module where water is separated from the emulsion. This wastewater is then redirected back to the mop wash sump where it commingles with other washwater prior to discharge to the sanitary sewer. The oil is collected in a drum and disposed of as a waste product.

The claimed pollution control facility consists of the following equipment:

(1) the Hyde Ultrafiltration Model HMMUF-2, Serial Number W19382; and

(2) the Hyde Skimmer Model Number BR6100.

Claimed Facility Cost: \$20,291

An Accountant's Certification was provided to support the claimed facility cost.

### 3. Procedural Requirements

The facility is governed by ORS 468.150 through 468.190 and by OAR Chapter 340, Division 16.

The facility met statutory deadlines in that construction of the facility was substantially completed on August 2, 1991, and the application for certification was received by the Department on August 2, 1993, 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 Department to prevent water pollution.

The Clackamas County Department of Utilities is required to administer a pretreatment program to satisfy conditions of its National Pollutant Discharge Elimination System (NPDES) permit, which is issued by the Department. The NPDES program was established to achieve goals outlined in the federal Clean Water Act. The two primary goals outlined in the Act were the elimination of pollutant discharges by 1985 and the achievement of an interim water quality level that would protect fish, shellfish, and wildlife while providing for recreation in and on the water wherever attainable. Towards satisfying these goals, the Department has established a series of water quality standards outlined in Division 41 of Chapter 340 of the OAR. Specifically, OAR 340-41-445 (2)(k) states that "objectionable discoloration, scum, oily sleek or floating solids, or coating of aquatic life with oil films shall not be allowed." The Clackamas County Department of Utilities required through its industrial pretreatment permit that Blount install pollution controls for its wastewater discharge in response to the County's commitments under its Department-issued NPDES permit and, in general, the requirements of the Clean Water Act. The system installed by Blount removes free floating and emulsified oil from their wastewater produced as a result of cleaning activities within the facility. The treatment provided by this system allows Blount staff to discharge the wastewater into the sanitary sewer with their total oil and grease content under the permit limitation of 100 parts per million (ppm).

b. Eligible Cost Findings

In determining the percent of the pollution control facility cost allocable to pollution control, the following factors from ORS 468.190 have been considered and analyzed as indicated:

- 1) The extent to which the facility is used to recover and convert waste products into a salable or usable commodity.

The facility does not recover or convert waste products into a salable or usable commodity. The filtration equipment was installed to allow for pretreatment of the process wastewaters that are discharged from Blount into the County's sanitary sewer. No waste products are recovered or converted for sale or use in this process.

The percent allocable determined by using this factor would be 100%.

- 2) The estimated annual percent return on the investment in the facility.

As noted above, the facility does not recover or convert waste products into a salable or usable commodity, and no income is derived from the operation of the water pollution control system. Therefore, the estimated annual percent return on the investment is zero.

- 3) The alternative methods, equipment and costs for achieving the same pollution control objective.

The applicant indicated that another ultrafiltration system was considered in addition to the Hyde system. A quote was received from Sanborn for the installation of filtration equipment in the amount of \$18,500. However, the quote was received after the applicant's established deadline and did not receive further consideration. The applicant also evaluated the option of storing the mop wash water in 55 gallon drums for transfer to a treatment facility. However, the costs for this disposal option proved prohibitive. After considering all of their alternatives, the applicant decided to install the Hyde ultrafiltration system because this system has been proven to be more effective in treating emulsified oils. In addition, the Hyde unit was chosen based on references from owners of the equipment.

- 4) Any related savings or increase in costs which occur or may occur as a result of the installation of the facility.

There are no savings or increase in costs as a result of the facility installation. The average annual cost for operating the ultrafiltration system has been estimated by Blount staff to be \$2,311. The annual disposal cost for waste oils has been estimated at \$6,600.



- 5) 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.

There are no other factors to consider in establishing the actual cost of the facility properly allocable to prevention, control or reduction of pollution.

The actual cost of the facility properly allocable to pollution control as determined by using these factors is 100%.

5. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible for tax credit certification in that the principal purpose of the facility is to comply with a requirement imposed by the Department to prevent water pollution.
- c. The facility complies with DEQ statutes and rules, and the conditions of the Clackamas County Service District's Industrial Wastewater Discharge Permit, Number 01k-004-M.
- d. The portion of the facility cost that is properly allocable to pollution control is 100%.

6. Director's Recommendation

Based upon these findings, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$20,291 with 100% allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. TC-4124.

Pamela Fink:PLF  
TC-4124  
(503) 229-5263  
December 17, 1993

State of Oregon  
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

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1. Applicant

Space Age Fuel, Inc.  
P. O. Box 607  
Gresham, OR 97030

The applicant owns and operates a retail gas station at 8410 SE Foster, Gresham, OR, Facility No. 649.

Application was made for a tax credit for a water pollution control facility involving underground storage tanks. The application also included related air quality Stage I and Stage II vapor recovery piping.

2. Description of Claimed Facility

The claimed pollution control facilities described in this application are epoxy lining of three steel tanks, cathodic protection on tanks, fiberglass piping, spill containment basins, tank gauge system, overfill alarm, line leak detectors, monitoring wells, sumps, Stage I vapor recovery and Stage II vapor recovery piping.

Claimed facility cost \$74,969  
(Accountant's certification was provided)

3. Procedural Requirements

The facility is governed by ORS 468.150 through 468.190, and by OAR Chapter 340, Division 16.

The facility was substantially completed on May 1, 1993 and placed into operation on May 1, 1993. The application for certification was submitted to the Department on September 16, 1993 was considered to be complete and filed on December 20, 1993, within two years of the completion date of the project.

4. Evaluation of Application

- a. The facility is eligible because the principal purpose of the facility is to comply with underground storage tank requirements imposed by the federal Environmental Protection Agency to prevent pollution of soil, water and air. This is accomplished by preventing releases into soil, water or air. The facility qualifies as a "pollution control facility", defined in OAR 340-16-025(2)(g): "Installation or construction of facilities which will be used to detect, deter or prevent spills or unauthorized releases."

Prior to the installation of pollution control, the facility consisted of three steel tanks and piping with no corrosion protection and no spill and overfill prevention or leak detection equipment.

To respond to Air Quality regulations under OAR 340-22-400 - 403 and Underground Storage Tank requirements under OAR 340-Division 150, the applicant installed:

- 1) For corrosion protection - Epoxy lining and cathodic protection on steel tanks, and fiberglass piping.
- 2) For spill and overfill prevention - Spill containment basins, sumps and overfill alarm.
- 3) For leak detection - Tank gauge system, monitoring wells and line leak detectors.
- 4) For VOC reduction - Stage I vapor recovery and Stage II vapor recovery piping.

Based on information currently available, the applicant is in compliance with all applicable DEQ regulations in that these tanks are permitted and fee payments are current.

The Department concludes that the costs claimed by the applicant (\$74,969) are eligible pursuant to the definition of a pollution control facility in ORS 468.155.

b. Eligible Cost Findings

In determining the percent of the eligible pollution control facility cost allocable to pollution control, the following factors from ORS 468.190 have been considered and analyzed as indicated:

- 1) The extent to which the facility is used to recover and convert waste products into a salable or usable commodity.

The equipment does not recover or convert waste products into a salable or usable commodity.

- 2) The estimated annual percent return on the investment in the facility.

There is no annual percent return on investment as the applicant claims no gross annual income from the facility.

- 3) The alternative methods, equipment and costs for achieving the same pollution control objective.

The applicant considered the method chosen to be the most cost effective. The methods chosen are acceptable for meeting the requirements of federal regulations.

- 4) Any related savings or increase in costs which occur or may occur as a result of the installation of the facility.

The applicant claims no savings or increase in costs as a result of the installation.

- 5) Any other factors which are relevant in establishing the portion of the actual cost of the facility properly allocable to pollution control.

There are no other factors to consider in establishing the actual cost of the facility properly allocable to prevention, control of reduction of pollution.

The actual cost of the facility properly allocable to pollution control is determined by using these factors as displayed in the following table:

	Eligible Facility Cost	Percent Allocable	Amount Allocable
<u>Corrosion Protection:</u>			
Fiberglass piping	\$ 4,333	65% (1)	\$ 2,816
Epoxy tank lining	19,150	100	19,150
Cathodic protection	621	100	621
<u>Spill &amp; Overfill Prevention:</u>			
Spill containment basins	741	100	741
Overfill alarm	231	100	231
Sumps	1,124	100	1,124
<u>Leak Detection:</u>			
Tank gauge system	6,426	90 (2)	5,783
Line leak detectors	897	100	897
Monitoring wells	193	100	193
Stage I vapor recovery	474	100	474
Labor & materials (incl. Stage II piping)	40,779	100	40,779
Total	\$ 74,969	97%	\$ 72,809

- (1) The Department has determined the percent allocable on the cost of a corrosion protected piping system by using a formula based on the difference in cost between the protected piping system and an equivalent bare steel system as a percent of the protected system. Applying this formula to the costs presented by the applicant, where the protected system cost is \$4,333 and the bare steel system is \$1,530, the resulting portion of the eligible piping cost allocable to pollution control is 65%.
- (2) The applicant's cost for a tank gauge system is reduced to 90% of cost based on a determination by the Department that this is the portion properly allocable to pollution control since the device can serve other purposes, for example, inventory control.

5. Summation

- a. The facility was constructed in accordance with all regulatory requirements.
- b. The facility is eligible for tax credit certification in that the principal purpose of the claimed facility is to comply with requirements imposed by the federal Environmental Protection Agency to prevent pollution of soil, water and air. This is accomplished by preventing releases in soil, water or air. The facility qualifies as a "pollution control facility" defined in OAR 340-16-025(2)(g): "Installation or construction of facilities which will be used to detect, deter or prevent spills or unauthorized releases."
- c. The facility complies with DEQ statutes and rules.
- d. The portion of the facility cost that is properly allocable to pollution control is 97%.

6. Director's Recommendation

Based upon these findings, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$74,969 with 97% allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. TC-4139.

Barbara J. Anderson  
(503) 229-5870  
January 5, 1994

State of Oregon  
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

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1. Applicant

Brookman Cast Industries, Inc.  
3530 Brady Court NE  
PO Box 510  
Salem, OR 97308

The applicant owns and operates a steel casting foundry in Salem, Oregon.

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

2. Description of Facility

The facility controls the emissions of particulate from the steel melting area and metal pouring loop. The facility consists of two refurbished mechanical shaker baghouses and support equipment.

Claimed Facility Cost: \$89,975.33

A distinct portion of the claimed facility makes an insignificant contribution to the principal purpose of pollution control. The applicant claimed \$6,399.10 for a service driveway for the baghouses.

Ineligible Costs: \$6399.10

Adjusted facility cost: \$83,576.23

The applicant indicated the useful life of the facility is 20 years.

Accountant's Certification was provided.

3. Procedural Requirements

The facility is governed by ORS 468.150 through 468.190, and by OAR Chapter 340, Division 16.

The facility met all statutory deadlines in that:

Installation of the facility was substantially completed on October 31, 1991 and placed into operation on January 15, 1992. The application for final certification was received by the Department on September 27, 1993. The application was found to be complete within two years of substantial completion of the facility.

4. Evaluation of Application

a. Rationale For Eligibility

The facility is eligible because the principal purpose of the facility is to comply with a requirement imposed by the Department to control air pollution. This is in accordance with OAR Chapter 340, Division 21, sections 015 through 030. The applicant's Air Contaminant Discharge Permit, 24-4980, Condition 3, requires the permittee to control the emission of particulate. The emission reduction is accomplished by the elimination of air contaminants as defined in ORS 468A.005.

The claimed facility controls the emission of particulate generated when the steel is melted, poured, and cooled. On July 8, 1988 the Department asked the applicant to improve the control of emissions to the atmosphere from these areas, and in response the applicant installed the baghouses. Department records indicate that the facility is considered to be in compliance. The claimed facility consists of two refurbished MMF Model baghouses. Installation of the facility required a foundation, structural and electrical materials, and mechanical and electrical labor.

The system draws smoke and fumes from these work areas through metal hoods and duct work into the baghouses. The exhaust air stream is drawn through a series of fabric filters supported on tubular frames. The particulate collects on the outside of the bags. The filtered air then passes through the system fan and is emitted to the atmosphere. The accumulated particulate is removed by periodic mechanical shaking of individual filter bags. The particulate collects in the bottom of the baghouse which is emptied roughly once a month. The particulate is disposed of at an off site municipal solid waste management facility.



b. Eligible Cost Findings

In determining the percent of the pollution control facility cost allocable to controlling pollution, the following factors from ORS 468.190 have been considered and analyzed as indicated:

- 1) The extent to which the facility is used to recover and convert waste products into a salable or usable commodity.

The facility does not recover or convert waste products into a salable or usable commodity. The material collected by the facility is disposed of at an off site municipal solid waste management facility.

- 2) The estimated annual percent return on the investment in the facility.

There is no income or savings from the facility, so there is no return on the investment.

- 3) The alternative methods, equipment and costs for achieving the same pollution control objective.

Baghouses are technically recognized as an appropriate method for controlling the emissions of particulate to the atmosphere. The applicant indicated purchasing and refurbishing the used baghouses were less costly than purchasing new equipment.

- 4) Any related savings or increase in costs which occur or may occur as a result of the installation of the facility.

There are no savings from the facility. The average annual cost of maintaining and operating the facility is \$9,311.80.

- 5) 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 pollution.

The eligible facility costs have been determined to be \$83,576.23 after adjusting for distinct portions of the facility which do not have the principal purpose of pollution control. This is discussed in section 2 of this report.

The actual cost of the facility properly allocable to pollution control as determined by using these factors is 100%.

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 Department to control air pollution.
- c. The facility complies with DEQ statutes, 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 these findings, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$83,576.00 with 100% allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-4146.

Robin Neville, SJO Consulting Engineers

December, 21 1993

State of Oregon  
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

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1. Applicant

Space Age Fuel, Inc.  
P. O. Box 607  
Gresham, OR 97030

The applicant owns and operates a retail gas station at 250 N. 5th St., Madras, OR, Facility No. 8914.

Application was made for a tax credit for a water pollution control facility involving underground storage tanks. The application also included related air quality Stage I vapor recovery.

2. Description of Claimed Facility

The claimed pollution control facilities described in this application are epoxy lining and cathodic protection on three steel tanks, the replacement of two steel tanks with fiberglass tanks, fiberglass piping, spill containment basins, tank gauge system, overfill alarm, line leak detectors, monitoring wells, sumps, and Stage I vapor recovery.

Claimed facility cost \$109,496  
(Accountant's certification was provided)

3. Procedural Requirements

The facility is governed by ORS 468.150 through 468.190, and by OAR Chapter 340, Division 16.

The facility was substantially completed on August 1, 1993 and placed into operation on August 1, 1993. The application for certification was submitted to the Department on October 13, 1993 was considered to be complete and filed on December 20, 1993, within two years of the completion date of the project.

4. Evaluation of Application

- a. The facility is eligible because the principal purpose of the facility is to comply with underground storage tank requirements imposed by the federal Environmental Protection Agency to prevent pollution of soil, water and air. This is accomplished by preventing releases into soil, water or air. The facility qualifies as a "pollution control facility", defined in OAR 340-16-025(2)(g): "Installation or construction of facilities which will be used to detect, deter or prevent spills or unauthorized releases."

Prior to the installation of pollution control, the facility consisted of five steel tanks and piping with no corrosion protection and no spill and overfill prevention or leak detection equipment.

To respond to Air Quality regulations under OAR 340-22-400 - 403 and Underground Storage Tank requirements under OAR 340-Division 150, the applicant installed:

- 1) For corrosion protection - Epoxy lining and cathodic protection on three steel tanks, replacement of two steel tanks with fiberglass tanks and fiberglass piping.
- 2) For spill and overfill prevention - Spill containment basins, sumps and overfill alarm.
- 3) For leak detection - Tank gauge system, monitoring wells and line leak detectors.
- 4) For VOC reduction - Stage I vapor recovery.

Based on information currently available, the applicant is in compliance with all applicable DEQ regulations in that these tanks are permitted and fee payments are current.

The Department concludes that the costs claimed by the applicant (\$100,996) are eligible pursuant to the definition of a pollution control facility in ORS 468.155.

b. Eligible Cost Findings

In determining the percent of the eligible pollution control facility cost allocable to pollution control, the following factors from ORS 468.190 have been considered and analyzed as indicated:

- 1) The extent to which the facility is used to recover and convert waste products into a salable or usable commodity.

The equipment does not recover or convert waste products into a salable or usable commodity.

- 2) The estimated annual percent return on the investment in the facility.

There is no annual percent return on investment as the applicant claims no gross annual income from the facility.

- 3) The alternative methods, equipment and costs for achieving the same pollution control objective.

The applicant considered the method chosen to be the most cost effective. The methods chosen are acceptable for meeting the requirements of federal regulations.

- 4) Any related savings or increase in costs which occur or may occur as a result of the installation of the facility.

The applicant claims no savings or increase in costs as a result of the installation.

- 5) Any other factors which are relevant in establishing the portion of the actual cost of the facility properly allocable to pollution control.

There are no other factors to consider in establishing the actual cost of the facility properly allocable to prevention, control of reduction of pollution.

The actual cost of the facility properly allocable to pollution control is determined by using these factors as displayed in the following table:

	Eligible Facility Cost	Percent Allocable	Amount Allocable
	-----	-----	-----
<u>Corrosion Protection:</u>			
Fiberglass tanks and piping	\$13,945	52% (1)	\$ 7,251
Epoxy tank lining	19,235	100	19,235
Cathodic protection	621	100	621
<u>Spill &amp; Overfill Prevention:</u>			
Spill containment basins	1,235	100	1,235
Overfill alarm	347	100	347
Sumps	2,040	100	2,040
<u>Leak Detection:</u>			
Tank gauge system	8,283	90 (2)	7,455
Line leak detectors	1,495	100	1,495
Monitoring wells	193	100	193
Stage I vapor recovery	790	100	790
Labor & materials	61,312	100	61,312
	-----	-----	-----
Total	\$109,496	93%	\$101,974

- (1) The Department has determined the percent allocable on the cost of a corrosion protected tank and piping system by using a formula based on the difference in cost between the protected tank and piping system and an equivalent bare steel system as a percent of the protected system. Applying this formula to the costs presented by the applicant, where the protected system cost is \$13,945 and the bare steel system is \$6,752, the resulting portion of the eligible tank and piping cost allocable to pollution control is 52%.
- (2) The applicant's cost for a tank gauge system is reduced to 90% of cost based on a determination by the Department that this is the portion properly allocable to pollution control since the device can serve other purposes, for example, inventory control.

5. Summation

- a. The facility was constructed in accordance with all regulatory requirements.
- b. The facility is eligible for tax credit certification in that the principal purpose of the claimed facility is to comply with requirements imposed by the federal Environmental Protection Agency to prevent pollution of soil, water and air. This is accomplished by preventing releases in soil, water or air. The facility qualifies as a "pollution control facility" defined in OAR 340-16-025(2)(g): "Installation or construction of facilities which will be used to detect, deter or prevent spills or unauthorized releases."
- c. The facility complies with DEQ statutes and rules.
- d. The portion of the facility cost that is properly allocable to pollution control is 93%.

6. Director's Recommendation

Based upon these findings, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$109,496 with 93% allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. TC-4150.

Barbara J. Anderson  
(503) 229-5870  
January 5, 1994

Application No. TC-4196

State of Oregon  
Department of Environmental Quality

RECLAIMED PLASTIC TAX CREDIT  
TAX RELIEF APPLICATION REVIEW REPORT

---

1. Applicant

Oregon Precision Industries  
James Borg, President  
2610 W. 5th Avenue  
Eugene, OR 97402

The applicant owns and operates a plastic manufacturing facility in Eugene, Oregon.

Application was made for Reclaimed Plastic Tax Credit.

2. Description of Equipment, Machinery or Personal Property

Claimed Investment Cost: \$56,261: consisting of:

Four 4 cavity molds for the production of two unit milk jug carrying handles manufactured from more than 50% reclaimed polypropylene plastic, Serial #s TP4A, TP4B, TP4C, and TP4D.

An Accountant's Certification was provided.

3. Procedural Requirements

The investment is governed by ORS 468.925 through 468.965, and by OAR Chapter 340, Division 17.

The investment met all statutory deadlines in that:

- a. The request for preliminary certification was filed June 29, 1992. The 30-day prior notice requirement was waived on July 9, 1992.
- b. The request for preliminary certification was approved on January 21, 1993, before the application for final certification was made.
- c. The investment was made on April 2, 1993, prior to June 30, 1995.



- d. The request for final certification was submitted on December 13, 1993 and was filed complete on December 17, 1993.

4. Evaluation of Application

- a. The investment is eligible because the equipment is necessary to process reclaimed plastic.
- b. Allocable Cost Findings

In determining the portion of the investment costs properly allocable to reclaiming and recycling plastic material, the following factors from ORS 468.960 have been considered and analyzed as indicated:

- 1) The extent to which the claimed collection, transportation, processing or manufacturing process is used to convert reclaimed plastic into a salable or usable commodity.

This factor is applicable. These molds are used to manufacture a reclaimed plastic product during 81% of their production time. For the other 19% the product did not qualify as a reclaimed plastic produce due to a low reclaimed material content.

- 2) The alternative methods, equipment and costs for achieving the same objective.

The applicant indicated that they knew of no alternative method which could be utilized to manufacture this plastic product.

- 3) Any other factors which are relevant in establishing the portion of the actual cost of the investment properly allocable to the collection, transportation or processing of reclaimed plastic or to the manufacture of a reclaimed plastic product.

There are no other factors to consider in establishing the actual cost of the investment properly allocable to reclaiming and recycling plastic material.

The actual cost of the investment properly allocable to processing reclaimed plastic as determined by using these factors is 81% of the claimed \$56,261 or \$45,571.

5. Summation

- a. The investment was made in accordance with all regulatory deadlines.
- b. The investment is eligible for final tax credit certification in that the equipment is necessary to process reclaimed plastic.
- c. The qualifying business complies with DEQ statutes and rules.
- d. The portion of the investment cost that is properly allocable to reclaiming and recycling plastic is 100%.

6. Director's Recommendation

Based upon these findings, it is recommended that a Reclaimed Plastic Tax Credit Certificate bearing the cost of \$45,571 with 100% allocated to reclaiming plastic material, be issued for the investment claimed in Tax Credit Application No. TC-4196.

WRB:b  
wp51\tax\tc4196rr.sta  
(503) 229-5934  
December 19, 1993

Application No. TC-4197

State of Oregon  
Department of Environmental Quality

RECLAIMED PLASTIC TAX CREDIT  
TAX RELIEF APPLICATION REVIEW REPORT

---

1. Applicant

Oregon Precision Industries  
James Borg, President  
2610 W. 5th Avenue  
Eugene, OR 97402

The applicant owns and operates a plastic manufacturing facility at Eugene, Oregon.

Application was made for Reclaimed Plastic Tax Credit.

2. Description of Equipment, Machinery or Personal Property

Claimed Investment Cost: \$99,399 : consisting of:

Cincinnati Milacron VT-165-5 molding press serial # 4036A61/92-49 and water chiller serial # AECWC-5-CH for use in production of two unit milk jug carrying handles manufactured from more than 50% reclaimed plastic.

An Accountant's Certification was provided.

3. Procedural Requirements

The investment is governed by ORS 468.925 through 468.965, and by OAR Chapter 340, Division 17.

The investment met all statutory deadlines in that:

- a. The request for preliminary certification was filed June 29, 1992. The 30-day prior notice requirement was waived on July 9, 1992.
- b. The request for preliminary certification was approved on January 21, 1993, before the application for final certification was made.
- c. The investment was made on April 2, 1993, prior to June 30, 1995.
- d. The request for final certification was submitted on December 13, 1993 and was filed complete on December 17, 1993.

4. Evaluation of Application

- a. The investment is eligible because the equipment is necessary to process reclaimed plastic.
- b. Allocable Cost Findings

In determining the portion of the investment costs properly allocable to reclaiming and recycling plastic material, the following factors from ORS 468.960 have been considered and analyzed as indicated:

- 1) The extent to which the claimed collection, transportation, processing or manufacturing process is used to convert reclaimed plastic into a salable or usable commodity.

This factor is applicable. This molding press is used to manufacture a reclaimed plastic product during 81% of its production time. For the other 19% the product did not qualify as a reclaimed plastic produce due to a low reclaimed material content.

- 2) The alternative methods, equipment and costs for achieving the same objective.

The applicant indicated that they knew of no alternative method which could be utilized to manufacture this plastic product.

- 3) Any other factors which are relevant in establishing the portion of the actual cost of the investment properly allocable to the collection, transportation or processing of reclaimed plastic or to the manufacture of a reclaimed plastic product.

The salvage value of equipment replaced by this molding press was \$14,910. This reduces the cost of the claimed equipment to a net claimed value of \$84,489.

The actual cost of the investment properly allocable to processing reclaimed plastic as determined by using these factors is 81% of the net claimed value, \$84,490, or \$68,436.

5. Summation

- a. The investment was made in accordance with all regulatory deadlines.
- b. The investment is eligible for final tax credit certification in that the equipment is necessary to process reclaimed plastic.
- c. The qualifying business complies with DEQ statutes and rules.
- d. The portion of the investment cost that is properly allocable to reclaiming and recycling plastic is 100%.

6. Director's Recommendation

Based upon these findings, it is recommended that a Reclaimed Plastic Tax Credit Certificate bearing the cost of \$68,436 with 100% allocated to reclaiming plastic material, be issued for the investment claimed in Tax Credit Application No. TC-4197.

WRB:b  
wp51\tax\tc4197rr.sta  
(503) 229-5934  
December 23, 1993

STATE OF OREGON  
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

United Disposal Service, Inc.  
2215 N. Front Street  
Woodburn Or 97071

The applicant owns and operates a solid waste collection service and recyclable materials collection and processing depot in Woodburn, Oregon. Application was made for tax credit for a solid waste pollution control facility.

2. Description of Facility

The facility is a recyclable materials collection processing depot including paving, building and facilities for public drop off area, recyclable processing area, paper baler, recycling container repair shop, paper and other recyclable material storage, sorting, and loading area. Some of these facilities were constructed in conjunction with a solid waste collection service facility. Only that portion of the total solid waste and recycling service facility which is dedicated to recycling has been claimed as the recycling pollution control facility.

Cost Category	Total Facility Cost	Cost Allocated to recycling
a. Construction	1,005,560	204,608
b. Permits and fees	133,930	13,651
c. Land, Engineering, & Survey	174,570	26,423
d. Scales	20,025	20,025
e. Fuel tank	31,874	1,625
Total facility cost	\$ 1,365,959	
Claimed facility cost		\$ 266,332
Nonallowable costs		\$ (48,016)
Total allowable costs		\$ 218,316

An applicant's accountant's certification was provided and an independent accountant's review was carried out.

3. Procedural Requirements

The facility is governed by ORS 468.150 through 468.190 and by OAR Chapter 340, Division 16.

The facility has met statutory deadlines in that:

- a. Construction of the facility was begun in December 1, 1987 and substantially completed by January 6, 1989.
- b. The facility was placed into operation on January 9, 1989.

- c. The request for preliminary certification was approved before application for final certification was made.
- d. Construction of the facility was substantially completed on January 6, 1989 and the application for final certification was submitted on January 21, 1993 which was not within 2 years of substantial completion of the facility.
- e. On April 23, 1993 the environmental Quality Commission granted a waiver of the two year application submission requirement.
- f. The application was filed complete on December 17, 1993.

4. Evaluation of Application

- a. The facility is eligible because the sole purpose of the facility is to reduce a substantial quantity of solid waste through recycling. The applicant claimed only those portions of the complete recycling and solid waste collection depot which were used for recycling. Those portions used for solid waste collection were not included as a part of the "facility."

- b. Eligible Cost Findings

In determining the percent of the pollution control facility cost allocable to pollution control, the following factors from ORS 468.190 have been considered and analyzed as indicated:

- 1) The extent to which the facility is used to recover and convert waste products into a salable or usable commodity.

This factor is applicable because the materials processed by the facility, glass, aluminum, steel, cardboard, newspaper, and used oil, are recovered for recycling and are sold as commodities.

The percent allocable by using this factor would be 100%.

- 2) The estimated annual percent return on the investment in the facility.

The recycling facility was constructed as a part of a recycling program required by state and local solid waste management programs. The recycling program is subsidized with income from solid waste collection services. The average annual cash flow for the recycling facility is a negative value because the cost of operation is greater than the sum of the income from the sale of recyclables plus the savings from reduced disposal fees. The percent return on investment is 0%. As a result, the percent allocable is 100%.

- 3) The alternative methods, equipment, and costs for achieving the same pollution control objective.

The applicant has not identified and is not aware of alternative methods for achieving the same objective. It is the Department's determination that the proposed facility is an acceptable method of achieving the pollution control objective.

- 4) Any related savings or decrease in costs which occur or may occur as a result of the installation of the facility.

There are no savings from this facility. The average annual operating cost exceeds the income from this facility and has been included in the ROI calculations.

- 5) 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 top recycle of properly dispose of used oil.

The Environmental Quality Commission has directed that tax credit application at or above \$250,000 go through an additional accounting review to determine if costs were properly allocated. This review was performed under contract by the accounting firm of Coopers and Lybrand. The cost allocation review of this application has identified \$48,016 of nonallowable costs. This amount has been subtracted from the facility cost and results in a Department recommended allowable cost of \$218,316.

The actual cost of the facility properly allocable to pollution control as determined by using these factors is 100%.

5. Summation

- a. The facility was constructed in accordance with all regulatory deadlines.
- b. The facility is eligible for tax credit certification in that the sole purpose of the facility is to reduce a substantial quantity of solid waste through recycling.
- c. The facility complies with DEQ statutes 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, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$218,316 with 100 % allocable to pollution control be issued for the facility claimed in Tax Credit Application No. T-2394.

WRB:wrb  
wp51/tax/tc2394rr.st2  
(503)229-5934  
January 3, 1994



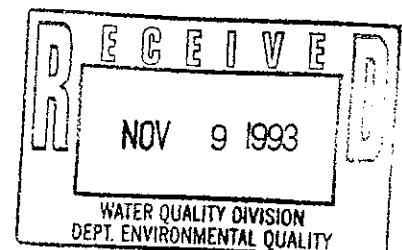
Oregon Department of Environmental Quality  
811 S. W. Sixth Avenue  
Portland Oregon 97204

At your request, we have performed certain agreed upon procedures with respect to United Disposal Service, Incorporated's ( the Company) Pollution Control Tax Credit Application No. 2394, regarding the United Disposal Service Recycling Center in Marion County, Oregon (the Facility). The aggregate claimed Facility costs on the Application were \$266,332. The following agreed upon procedures and related findings are as follows:

1. We read the Application, the Oregon Revised Statutes on Pollution Control Facilities Tax Credits - Sections 469.150 -468.190 (the Statutes) and the Oregon Administrative Rules on Pollution Control Tax Credits - Sections 340-16-005 through 340-16-050 (OAR'S).
2. We discussed the Application and Statues with Charles Bianchi and Bill Bree of the Oregon Department of Environmental Quality (DEQ).
3. We discussed the Application and Statutes with Joan Garren, Office Manager and Pamela Rawie, Accounting Manager, of United Disposal Service's parent company Waste Control Systems (Parent).
4. We inquired as to whether there were any direct or indirect Company costs charged to the Facility costs claimed in the Application. We were informed that no such costs were charged.

Based on our review of supporting documentation discussed in item no. 5 below, there does not appear to be any direct or indirect Company costs claimed in the Application.

5. We reviewed supporting documentation for 91% of the amount claimed on the Application through review of vendor invoices. All costs which we reviewed supporting the Application appeared to be from third party vendors.
6. We discussed with Joan Garren, Office Manager for the Company, and Pamela Rawie, Accounting Manager for the Parent, the extent to which non-allowable costs were excluded from the Application. This was accomplished by reviewing specific contractor invoices (see item no. 5) with Ms. Rawie. We determined that the Company had not properly excluded from the Application \$48,016 of items identified as non-allowable under ORS 468.155. Accordingly, the Facility costs claimed on the Application should have been \$218,316, instead of \$266,332.



Oregon Department of Environmental Quality  
Page Two

Because the above procedures do not constitute an audit conducted in accordance with generally accepted auditing standards, we do not express an opinion on any of the items referred to above. In connection with the procedures referred to above, no matters came to our attention that caused us to believe that the Application should be adjusted, except for the \$48,016 of costs noted in item no. 6 above. Had we performed additional procedures, or had we conducted an audit of the financial statements of the Company in accordance with generally accepted auditing standards, other matters might have come to our attention that would have been reported to you. This report relates only to the items specified above and does not extend to any financial statements of the Company taken as a whole.

This report is solely for the State of Oregon Department of Environmental Quality in the evaluating the Company's Pollution Control Tax Credit Application and should not be used for any other purpose.

*Coopers & Lybrand*

Portland, Oregon  
October 26, 1993

# Environmental Quality Commission

- Rule Adoption Item
- Action Item
- Information Item

Agenda Item E  
28 January, 1994 Meeting

**Title:**


Establishing the Base Hazardous Waste Generation Fee

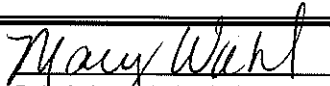
**Summary:**

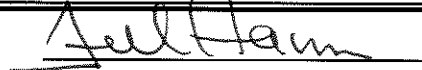
- The fee is paid by hazardous waste generators based on volumes generated and how generators manage their waste. It funds the Department's generator compliance and inspection program.
- The fee consists of a base, which the rule proposes to set at 60 mills per kilograms (\$60 per metric ton), and a set of "fee factors" which are used as multipliers and can give "credit" to generators who use management technologies other than disposal.
- The fee base and factors were developed using an extensive advisory committee process, and only two comments were received, neither of which relate directly to setting the base fee.
- The base fee is calculated to meet the Department's legislatively approved budget. It will be re-evaluated during the next billing cycle and may need to be raised or lowered due to waste volumes and management practices which vary year to year. The Department can lower the fee, but only the Commission can raise it.

**Department Recommendation:**

Adopt the rule establishing the base hazardous waste generation fee, as presented in Attachment A of the staff report.

  
Report Author

  
Division Administrator

  
Director

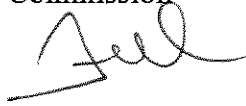
11 January, 1994

†Accommodations for disabilities are available upon request by contacting the Public Affairs Office at (503)229-5317(voice)/(503)229-6993(TDD).

State of Oregon  
Department of Environmental Quality

Memorandum†

Date: January 11, 1994

To: Environmental Quality Commission  
From: Fred Hansen, Director   
Subject: Agenda Item E, January 28, 1994, EQC Meeting

Establishing the Base Hazardous Waste Generation Fee

**Background**

On November 16, 1993, the Director authorized the Waste Management and Cleanup Division to proceed to a rulemaking hearing on proposed rules which would establish the base hazardous waste generation fee at 60 mills per kilogram (\$60 per metric ton), beginning with wastes generated and managed in calendar year 1992. Setting the base fee at this level will enable the Department to adequately fund its current program of hazardous waste generator monitoring, inspection and surveillance, and related administrative costs. This is the final element necessary to implement a two-part fee on hazardous waste generators based on generator status, volumes generated, and how wastes are managed.

Pursuant to the authorization, hearing notice was published in the Secretary of State's Bulletin on December 1, 1993. The Hearing Notice and informational materials were mailed to the mailing list of those persons who have asked to be notified of rulemaking actions, and to a mailing list of more than 1,000 persons known by the Department to be potentially affected by or interested in the proposed rulemaking action on November 29, 1993.

A Public Hearing was held December 20, 1993, at 9:00 a.m., at the Department's Headquarters in Portland, with Gary Calaba serving as Presiding Officer. The Presiding Officer's Report (Attachment C) summarizes the hearing, at which no oral testimony was offered.

Written comments was received through December 31, 1993. A list of written comments received is included as Attachment D. (A copy of the comments is available upon request.)

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†Accommodations for disabilities are available upon request by contacting the Public Affairs Office at (503)229-5317(voice)/(503)229-6993(TDD).

Memo To: Environmental Quality Commission  
Agenda Item E  
January 28, 1994 Meeting  
Page 2

Department staff have evaluated the comments received (Attachment E). Based upon that evaluation, no modifications to the initial rulemaking proposal are being recommended by the Department.

The following sections summarize the issue that this proposed rulemaking action is intended to address, the authority to address the issue, the process for development of the rulemaking proposal including alternatives considered, a summary of the rulemaking proposal presented for public hearing, a summary of the significant public comments and the changes proposed in response to those comments, a summary of how the rule will work and how it is proposed to be implemented, and a recommendation for Commission action.

#### **Issue this Proposed Rulemaking Action is Intended to Address**

Since 1984, regulated generators of hazardous waste have been subject to annual fees based on the volume of wastes they generate each year. In June, 1992, the Commission adopted a new approach to the calculation of annual fees, which includes a base fee and a fee factor related to how each wastestream is managed. (See page A-2 for the list of fee factors.) At that time, the Department did not have sufficient data to propose a base (or unit) fee, which must be set by the Commission before invoices can be sent to generators. This rulemaking is only to set the base fee amount. It is not intended to revisit the fee structure or fee factors. (See Attachment E for the staff report and discussion of issues raised during the initial fee structure adoption.)

#### **Relationship to Federal and Adjacent State Rules**

There is no counterpart in the Federal hazardous waste requirements to the proposed rule: the Federal program does not assess fees on hazardous waste generators. Four other Western states have fees of some sort based on the generation of hazardous waste: Arizona, California, New Mexico, and Washington.

#### **Authority to Address the Issue**

ORS 466.165 provides that an annual fee may be required of every hazardous waste generator, in an amount determined by the Commission to be adequate to carry out the Department's program of hazardous waste generator monitoring, inspection and surveillance.

Memo To: Environmental Quality Commission  
Agenda Item E  
January 28, 1994 Meeting  
Page 3

**Process for Development of the Rulemaking Proposal (including Advisory Committee and alternatives considered)**

In 1988, the Department made a commitment to the Commission to re-evaluate the hazardous waste generator fee structure, to ensure a stable and predictable source of revenue to support the program. The new fee system, of which the base fee is a key part, was developed in 1990 by a Hazardous Waste Advisory Committee comprised of representatives of small and large businesses, industry associations, waste management companies, recyclers, and environmental and public interest groups. Detailed implementation was considered by another advisory group, the Hazardous Waste/Toxics Use Reduction Committee at a series of meeting in 1991 and 1992, prior to the Commission's adoption of the fee system in June 1992. After staff had collected and analyzed waste generation and management data on which to calculate the proposed fee, it was discussed again by this committee on November 1, 1993.

**Summary of Rulemaking Proposal Presented for Public Hearing and Discussion of Significant Issues Involved.**

This proposal sets the base hazardous waste generation fee, allowing invoices to be sent out. The fee amount is calculated to return one-half of the legislatively approved revenue necessary to run the current hazardous waste generator inspection, monitoring and surveillance program during the current biennium, less funds collected through the registration verification fee at 340-102-065(5). The proposed fee was calculated by first aggregating volumes of hazardous waste generated in Oregon in 1992 according to management method, to produce a total "fee-equivalent" tonnage. Attachment D depicts the results of this step for 1991 and 1992. The resulting data set was used to solve for the optimal base fee, taking account of the invoice limitation provision of 340-102-065(4) and the offset against hazardous waste generation fees for wastes disposed hazardous waste landfills in Oregon (ORS 466.165(2)).

Because hazardous waste volumes and management practices vary from year to year, the Department will re-evaluate the billing rate in the next reporting cycle. If a lower billing rate will return the funding needed, the Department will invoice at a lower rate: if an increase is needed, the Commission would have to authorize it. Since this is the first time the fee will be collected, the Department cannot estimate the number of non-payers or incorrect billings, which also may necessitate raising or lowering the billing rate next year.

### **Summary of Significant Public Comment and Changes Proposed in Response**

Two comments were received, which addressed elements of OAR 340-102-065 which are not part of this rulemaking. No changes are proposed.

### **Summary of How the Proposed Rule Will Work and How it Will be Implemented**

If the base fee is adopted by the Commission in January, 1994, the Department would issue invoices in February 1994 for hazardous waste generated and managed in calendar year 1992. Invoices for waste generated and managed in calendar year 1993 would be scheduled for issuance in late 1994.

### **Recommendation for Commission Action**

It is recommended that the Commission adopt the rule amendment establishing the base hazardous waste generation fee at 60 mills per kilogram, beginning with wastes generated and managed in calendar year 1992, as presented in Attachment A of the Department Staff Report.

### **Attachments**

- A. Rule Amendments Proposed for Adoption
- B. Supporting Procedural Documentation:
  - 1. Legal Notice of Hearing
  - 2. Public Notice of Hearing (Chance to Comment)
  - 3. Rulemaking Statements (Statement of Need)
  - 4. Fiscal and Economic Impact Statement
  - 5. Land Use Evaluation Statement
- C. Presiding Officer's Report on Public Hearing
- D. List of Written Comments Received
- E. Department's Evaluation of Public Comment
- F. Chart. Hazardous Waste Generation and Management in Oregon 1991-1992.
- G. Excerpts of June 1, 1992 EQC staff report, with portions relevant to the adoption of the hazardous waste generator fee structure.

Memo To: Environmental Quality Commission  
Agenda Item E  
January 28, 1994 Meeting  
Page 5

**Reference Documents (available upon request)**

Written Comments Received (listed in Attachment D)  
Reports of Advisory Committees, 1990-1992, concerning development of  
hazardous waste generator fee system.

Approved:

Section:

*Ray W. Brown*

Division:

*Mary Wohl*

Report Prepared By: Scott Latham

Phone: 229-5082

Date Prepared: January 11, 1994

RSL  
WMCD-HW 2.50/9402  
1994-01-11



Unless otherwise indicated, material enclosed in brackets [] is proposed to be deleted and material that is underlined is proposed to be adopted. Rule 340-102-065 is proposed to be amended as follows:

### **Hazardous Waste Generator Fees**

#### **340-102-065**

- (1) Each person generating more than 100 kilograms (220 pounds) of hazardous waste, or more than 1 kilogram (2.2 pounds) of acutely hazardous waste, in any calendar month, or accumulating more than 1,000 kilograms (2,200 pounds) of hazardous waste at any time in a calendar year, shall be subject to an annual hazardous waste generation fee. Fees shall be assessed annually for the previous year and shall be paid by the due date shown on the invoice. A late charge equal to ten percent of the fee due shall be paid if the fees are not postmarked by the due date. An additional late charge of ten percent of the invoice amount shall also be paid each 30 days or fraction thereof that the invoice remains unpaid. Invoices 90 days or more overdue may be referred to the Department of Revenue for collection: accounts so referred shall be increased by twenty percent of the total due (original fee plus late charges).
- (2) A base hazardous waste generation fee, expressed in mills per kilogram, shall be fixed by rule by the Commission, based on reports from the Department on the total amount of hazardous waste generated in the state and the methods by which the waste was managed.
  - (a) [Once the base fee is fixed,] T[t]he Department may use the[at] base fee, or any lesser fee, to determine annual generation fee invoices. Any increase in the base fee must be fixed by rule by the Commission.
  - (b) Beginning with hazardous waste generated and managed during 1992, the base fee is fixed at 60 mills per kilogram (\$60 per metric ton).
- (3) Each person's hazardous waste generation fee shall be calculated by multiplying the base fee by the weight of

each hazardous waste stream and by the fee factors listed below for the management method reported in the annual generation report (OAR 340-102-041) as follows:

Management Method	Fee Factor
Metals Recovery (For Reuse)	0.50
Solvents Recovery	0.50
Other Recovery	0.50
Incineration	1.00
Energy Recovery (Reuse as Fuel)	0.75
Fuel Blending	0.75
Aqueous Inorganic Treatment	1.00
Aqueous Organic Treatment	1.00
Aqueous Organic and Inorganic Treatment (Combined)	1.00
Sludge Treatment	1.00
Stabilization	1.00
Other Treatment	1.00
Neutralization (off-site)	0.75
Land Disposal	1.50
Management Method Unknown or Not Reported	2.00
RCRA-Exempt Management	
Neutralization (on-site)	0.00
Permitted Discharge under Clean Water Act Section 402	0.00

In order to determine annual hazardous waste generation fees, the Department may use generator reports required by rule 340-102-041; facility reports required by rule 340-104-075; information derived from manifests required by 40 CFR 262.20; and any other relevant information. For wastes reported in units other than kilograms, the Department will use the following conversion factors: 1.0 metric ton = 1,000 kilograms = 2,200 pounds = 35.25 cubic feet = 264 gallons = 1.10 tons (English) = 4.80 drums (55 gallon).

- (4) A generator subject to the annual hazardous waste generation fee may apply to the Department to limit the amount of the fee invoice to \$15,000. Applications must be submitted by the due date shown on the invoice

and must contain a signed certification of:

- (a) Timely filing of annual generator reports required under rule 340-102-041 covering the previous year,
  - (b) Timely filing of a toxics use reduction and hazardous waste reduction Notice of Plan Completion under rule 340-135-050 (4) or an Annual Progress Report under rule 340-135-070 (3), as applicable, during the previous calendar year, and
  - (c) Timely payment of fees assessed under this rule and under rule 340-105-113 in the previous calendar year.
- (5) In addition to the annual hazardous waste generation fee, effective January 1, 1991, each hazardous waste generator shall be subject to an annual waste activity re-registration verification fee, upon billing by the Department, as follows:
- (a) Large Quantity Generator: \$350
  - (b) Small Quantity Generator: \$200
  - (c) Conditionally Exempt Small Quantity Generator: NO FEE
- (6) All fees shall be made payable to the Department of Environmental Quality.

# NOTICE OF PROPOSED RULEMAKING HEARING

(Rulemaking Statements and Statement of Fiscal Impact must accompany this form.)

Agenda Item E  
Attachment B  
January 28, 1994

Department of Environmental Quality Waste Management and Cleanup Division

OAR Chapter 340

**DATE:**                      **TIME:**                      **LOCATION:**

December 20, 1993                      9:00 A.M.                      Conference Room 3A, 811 S.W. Sixth Avenue, Portland

**HEARINGS OFFICER(s):**                      Gary Calaba

**STATUTORY AUTHORITY:**                      ORS 466.165

**ADOPT:**                      OAR 340-102-065(2)(b)

**AMEND:**                      OAR 340-102-065(2)(a)

This hearing notice is the initial notice given for this rulemaking action. Auxiliary aids for persons with disabilities are available upon advance request.

## SUMMARY:

The Department of Environmental Quality (DEQ) proposes to establish the Base Hazardous Waste Generation Fee of \$60 per metric ton. Setting the base fee at this level will enable the DEQ to adequately fund its current program of hazardous waste generator monitoring, inspection, surveillance, and related administrative costs. This amendment is the final change necessary to establish a two-part fee on hazardous waste generators based on generator status and volume/management of the waste.

**LAST DATE FOR COMMENT:** Deadline for submitting written comments is December 31, 1993, at 5:00 p.m.

**DATE PROPOSED TO BE EFFECTIVE:** Upon adoption by the Environmental Quality Commission and subsequent filing with the Secretary of State.

**AGENCY RULES COORDINATOR:**

Harold Sawyer, (503) 229-5776

**AGENCY CONTACT FOR THIS PROPOSAL:**

Scott Latham

**ADDRESS:**

Waste Management and Cleanup Division

811 S. W. 6th Avenue

Portland, Oregon 97204

**TELEPHONE:**

(503) 229-5082

or Toll Free 1-800-452-4011

Interested persons may comment on the proposed rules orally or in writing at the hearing. Written comments will also be considered if received by the date indicated above.

Gary Calaba  
Signature

11-15-93  
Date

**Proposed Amendments to the Department's Hazardous Waste Generator Fees:  
Establishing the Base Hazardous Waste Generation Fee**

Date Issued:	November 17, 1993
Public Hearings:	December 20, 1993
Comments Due:	December 31, 1993

**WHO IS AFFECTED:** Persons who generate more than 220 pounds (100 kilograms) of hazardous waste per month.

**WHAT IS PROPOSED:** The Department of Environmental Quality (DEQ) proposes to establish the Base Hazardous Waste Generation Fee at 60 mills per kilogram, which equates to \$60 per metric ton (2,200 pounds).

**WHAT ARE THE HIGHLIGHTS:** The base hazardous waste generation fee would be set at 60 mills per kilogram, effective for waste generated and managed in calendar year 1992.

Invoices covering 1992 generation would be issued in February, 1994; invoices for 1993 generation would be scheduled for issuance in late 1994.

**HOW TO COMMENT:** A Public Hearing to provide information and receive public comment is scheduled as follows:

Monday, December 20, 1993 in Conference Room 3A, 811 SW Sixth Avenue, Portland, beginning at 9:00 a.m. and continuing until all testimony is completed.

Written comments must be received by 5:00 p.m. on December 31, 1993 at the following address:

Mr. Gary Calaba  
Department of Environmental Quality  
Waste Management and Cleanup Division  
811 SW 6th Avenue  
Portland, Oregon, 97204-1390

A copy<sup>1</sup> of the Proposed Rule Amendment may be reviewed at the above address. A copy may be obtained from the Department by calling the Waste Management and Cleanup Division at 229-5913 or calling Oregon toll free 1-800-452-4011.

**WHAT IS THE  
NEXT STEP:**

The Department will evaluate comments received and will make a recommendation to the Environmental Quality Commission. Interested parties can request to be notified of the date the Commission will consider the matter by writing to the Department at the above address.

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<sup>1</sup> *Accommodations for disabilities are available upon request by contacting the Public Affairs Office at (503)229-5317 (voice)/(503)229-6993 (TDD).*

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal  
for  
Establishing the Base Hazardous Waste Generation Fee

## Rulemaking Statements

Pursuant to ORS 183.335(7), this statement provides information about the Environmental Quality Commission's intended action to adopt a rule.

1. Legal Authority

ORS 466.165 provides that an annual fee may be required of every hazardous waste generator, in an amount determined by the Commission.

2. Need for the Rule

OAR 340-102-65 as adopted June 1, 1992, provides that the Commission shall fix by rule a base hazardous waste generation fee. Until a base fee is adopted, the Department has no basis on which to calculate and invoice fees associated with hazardous waste generation. Revenues from this billing are needed for continued funding of the Department's program of generator monitoring, inspection and surveillance.

3. Principal Documents Relied Upon in this Rulemaking

Oregon Revised Statutes, Chapter 466  
Oregon Administrative Rules, Chapter 340, Division 102  
"Hazardous Waste Generation and Management in Oregon 1991-1992", DEQ report 1993 (Attachment F)  
"Recommendations of the Oregon DEQ Hazardous Waste 1990 Advisory Committee", 1991  
Request for EQC Action, Agenda Item G, Commission meeting date July 24, 1991  
Request for Rule Adoption, Agenda Item E, Commission meeting date June 1, 1992.

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
Rulemaking Proposal  
for  
Establishing the Base Hazardous Waste Generation Fee  
Fiscal and Economic Impact Statement

**Introduction**

The Department's fee rules potentially apply to 750 to 1,000 large and small quantity generators of hazardous waste. Under previous fee formulas, payments ranged from \$200 to \$14,480 annually. Rules adopted by the Commission in 1992 raised the maximum invoice amount to \$15,350. This proposed rulemaking, which was discussed at the November 1, 1993 Hazardous Waste Advisory Committee meeting, would establish a base hazardous waste generation fee of 60 mills per kilogram, which equates to \$60 per metric ton (2,200 pounds). Under this rule, hazardous waste fees would generally be lowered for most affected parties. The following table shows the fee impacts for groups in the regulated community and is based on actual waste volumes and management methods for wastes generated in calendar year 1992, as well as a "previous fee amount" for which each would have been liable under the fee schedule which was in effect until June, 1992. Of the 564 generators subject to hazardous waste generation fees for 1992, 73 (13%) would face higher average fees under this proposed rule. All facilities subject to the generation fee can reduce their total fees by reducing the quantity of hazardous waste they generate and by managing their wastes through preferred management methods.

Fee Category (Metric tons)	Number in Group	Previous Fee Amount	Average New Fee	Increase (Decrease)	Percent Change
Less than 1	129	\$380	\$225	(\$155)	-40.7%
1 to 3	188	\$740	\$275	(\$465)	-62.8%
3 to 14	145	\$1,275	\$478	(\$797)	-62.5%
14 to 28	29	\$1,950	\$1,378	(\$572)	-29.3%
28 to 142	34	\$3,950	\$4,360	\$410	10.4%
142 to 284	12	\$8,500	\$11,554	\$3,054	35.9%
More than 284	27	\$11,950	\$12,452	\$502	4.2%



### General Public

The general public is exempt from the Department's hazardous waste rules related to fees.

### Small Business

Most small businesses generate small quantities of hazardous waste, and would benefit from the proposed rule by being assessed lower fees. None of the entities facing higher average fees under the proposal is believed to be a small business.

### Large Business

Large businesses constitute about one-third of the regulated community. While all but two of the 73 facilities facing higher average fees are large businesses, most large businesses would see lower fees under the proposed rule than they would have paid under earlier fee structures.

### Local Governments

One local government agency has been identified in the group facing higher average fees under this proposal. Most local governments generate small volumes of hazardous waste, and would see generally lower fees.

### State Agencies

One state agency, involved in the cleanup of a contaminated property, would face higher fees under the proposed rule. Most state agencies which generate hazardous waste do so on a small scale.

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal  
for  
Establishing the Base Hazardous Waste Generation Fee

Land Use Evaluation Statement

1. Explain the purpose of the proposed rules.

Establish a base hazardous waste generation fee to allow for invoicing of hazardous waste generation fees.

2. Do the proposed rules affect existing rules, programs or activities that are considered land use programs in the DEQ State Agency Coordination (SAC) Program?

Yes \_\_\_ No X

a. If yes, identify existing program/rule/activity:

b. If yes, do the existing statewide goal compliance and local plan compatibility procedures adequately cover the proposed rules?

Yes \_\_\_ No \_\_\_ (if no, explain):

c. If no, apply the following criteria to the proposed rules.

Staff should refer to Section III, subsection 2 of the SAC document in completing the evaluation form. Statewide Goal 6 - Air, Water and Land Resources is the primary goal that relates to DEQ authorities. However, other goals may apply such as Goal 5 - Open Spaces, Scenic and Historic Areas, and Natural Resources; Goal 11 - Public Facilities and Services; Goal 16 - Estuarine Resources; and Goal 19 - Ocean Resources. DEQ programs or rules that relate to statewide land use goals are considered land use programs if they are:

1. Specifically referenced in the statewide planning goals; or
2. Reasonably expected to have significant effects on
  - a. resources, objectives or areas identified in the statewide planning goals, or
  - b. present or future land uses identified in acknowledged comprehensive plans.

In applying criterion 2. above, two guidelines should be applied to assess land use significance:

- The land use responsibilities of a program/rule/action that involves more than one agency, are considered the responsibilities of the agency with primary authority.
- A determination of land use significance must consider the Department's mandate to protect public health and safety and the environment.

**In the space below, state if the proposed rules are considered programs affecting land use. State the criteria and reasons for the determination.**

The proposed rules are not considered programs affecting land use. The proposed rules address the mechanism through which generators of hazardous waste will be invoiced for annual fees.

- 3. If the proposed rules have been determined a land use program under 2. above, but are not subject to existing land use compliance and compatibility procedures, explain the new procedures the Department will use to ensure compliance and compatibility.**

Mary Wahl  
Division

Robert Y...  
Intergovernmental Coord.

11/8/93  
Date

State of Oregon  
Department of Environmental Quality

Memorandum

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**To:** Environmental Quality Commission

**From:** Gary Calaba, Hearings Officer

**Subject:** Presiding Officer's Report for Rulemaking Hearing

Hearing Date and Time: December 20, 1993, beginning at 9:00 a.m.

Hearing Location: Department of Environmental Quality, 811  
S.W. 6th Avenue, Room 3A, Portland

Title of Proposal: Establishing the Base Hazardous Waste  
Generation Fee.

The rulemaking hearing on the above titled proposal was convened at 9:00 a.m. Prior to asking for testimony, I briefly explained the specific rulemaking proposal and the reason for the proposal. People were asked to sign witness registration forms if they wished to present testimony. People were also advised that the hearing was being recorded and of the procedures to be followed.

Three people were in attendance, not including staff, and none signed up to give testimony. The hearing was closed at 9:35 a.m.

**List of Written Comments Received**

1. R. Dennis Hayward, Western Wood Preservers Institute, December 28, 1993.
2. Brian D. Bertonneau, Reynolds Metals Company, December 28, 1993.

## **Department's Evaluation of Public Comment**

Comment 1 does not address the subject of establishing the base hazardous waste generation fee. The commenter seeks relief from classification of internally recycled wood treating solutions as hazardous waste, either through a change in definition at the federal level, through a variance, or by the addition of a new fee factor to the table at 340-102-065(3), creating a fee factor of 0.00 for such wastes. Because the fee factors in the current rule are based on management methods, rather than on the kind of hazardous waste managed, the Department feels it would be preferable to explore the first two approaches, rather than create an anomaly in the fee system. The Department continues to work with the wood treating industry in Oregon to address legitimate concerns that current regulation may act as a deterrent to recycling, and to clarify the regulatory status of these wastes.

Comment 2 does not directly address the base hazardous waste generation fee, but requests changes to fee limitation provisions at 340-102-065(4), on the grounds there are no criteria for the acceptance or denial of an application. The commenter argues that the limitation should be fixed and automatic, rather than discretionary. The current rule requires that the application be received by the due date of the invoice and that it contain three specific certifications. The Department believes that the criteria in existing rule are objective, reasonable and clear.

On the basis of comments received, the Department does not recommend any change to the proposed rule.

## HAZARDOUS WASTE GENERATION AND MANAGEMENT IN OREGON 1991-1992

Waste Management Method Category	Fee Factor	Kilos Reported 1991	Fee Equivalent Tons	Kilos Reported 1992	Fee Equivalent Tons
Metals Recovery (for reuse)	0.50	8,905,257	4,453	15,180,471	7,590
Solvents Recovery	0.50	2,414,669	1,207	1,283,534	642
Other Recovery	0.50	610,820	305	346,511	173
Incineration	1.00	1,294,877	1,295	876,779	877
Energy Recovery (Use as fuel)	0.75	654,740	491	836,212	627
Fuel Blending	0.75	493,120	370	2,115,320	1,586
Aqueous Inorganic Treatment	1.00	247,754,828	247,755	598,066,380	598,066
Aqueous Organic Treatment	1.00	31,727,651	31,728	76,081	76
Aqueous Organic & Inorganic Treatment	1.00	75,731	76	117,706	118
Sludge Treatment	1.00	1,912,491	1,912	1,576,612	1,577
Stabilization	1.00	1,936,150	1,936	2,075,887	2,076
Other Treatment	1.00	964,928	965	1,255,541	1,256
Off-site Neutralization	0.75	2,410,801	1,808	408,986	307
Land Disposal	1.50	46,392,239	69,588	38,913,929	58,371
RCRA-Exempt Management Methods	0.00	927,885,521	0	707,529,301	0
Management Method Unknown or Unreported	2.00	0	0	3,385	7
<b>TOTALS</b>		<b>1,275,433,823</b>	<b>363,889</b>	<b>1,370,662,635</b>	<b>673,348</b>

NOTE: Fee equivalent tons are calculated by multiplying reported kilos by the applicable fee factor and dividing the product by 1,000.

**REQUEST FOR RULE ADOPTION**

**Meeting Date:** 6/1/92  
**Agenda Item:** E  
**Division:** HSW  
**Section:** HWP&PD

**SUBJECT:** Amendments to Oregon Administrative Rules (OAR) pertaining to hazardous waste generator fees; regulation of certain chlorofluorocarbons (CFCs) as hazardous wastes; and state requirements for aquatic toxicity testing of pesticide wastes covered under Federal toxic characteristic regulations.

**RULES AFFECTED:** Department of Environmental Quality's hazardous waste regulations, OAR Chapter 340, Divisions 101 and 102.

**STATUTORY AUTHORITY:** Oregon Revised Statutes (ORS) 466.020 and 466.165.

**TIME CONSTRAINTS:** The current hazardous waste generation fees sunset June 30, 1992. In addition, it would be preferable to implement changes to the regulatory status of spent CFCs before the summer cooling season begins.

**ATTACHMENTS:**

Proposed Rule Amendments	Attachment A
Statement of Need for Rulemaking	Attachment B
Statement of Fiscal and Economic Impact	Attachment C
Land Use Evaluation Statement	Attachment D
Hearings Officer's Report	Attachment E
Department's Response to Comments	Attachment F
List of Supplemental Documents Available	Attachment G
List of Advisory Committee Members	Attachment H



**SUMMARY OF ISSUES:**

**1. Hazardous Waste Generator Fees**

This proposal is based on the work of two successive advisory committees and is a follow-up rulemaking to amendments approved at the July 24, 1991 Commission meeting, which reduced generator fees, extended the fee rule one year, and established an annual re-registration verification fee. The proposal would require yearly fees on the generation of hazardous waste on a unit basis, which offers an incentive for waste reduction and minimization, rather than on the current broad tonnage ranges. In addition, a new fee factor is introduced, which parallels Oregon's waste management hierarchy and should encourage more responsible management of hazardous waste. The new schedule will generally lower fees for most small and medium-size generators, and will increase the amount paid by the largest generators in the state. The proposal includes a fee "cap," available to very large quantity generators, including remedial action (cleanup) sites, who comply with basic reporting and fee payment rules. The Commission will be asked to adopt the initial base fee at a future meeting, once the Department has analyzed the generation data on which it is based. Once the base fee is set, the Department may administratively use that rate or a lower one as appropriate to generate program revenues: any increase in the rate would require EQC adoption. The proposed rule will stabilize program funding, support waste reduction and encourage preferred management methods.

**BEFORE THE ENVIRONMENTAL QUALITY COMMISSION  
OF THE STATE OF OREGON**

**STATEMENT OF NEED FOR RULEMAKING**

**STATUTORY AUTHORITY**

1. ORS 466.020 requires the Commission to adopt rules to establish minimum requirements for the generation, treatment, storage, and disposal of hazardous wastes; minimum requirements for operation, maintenance, monitoring, reporting and supervision of generator, treatment, storage and disposal sites; and requirements and procedures for selection of such sites.
2. ORS 466.165 allows the Department to require an annual fee of every hazardous waste generator. The fee amount is determined by the Commission to be adequate to carry on the monitoring, inspection and surveillance program and to cover related administrative costs.

**NEED FOR THE RULES**

1. The Department's current fee rules expire on June 30, 1992. The Commission has instructed the Department to work with the regulated community to develop a new fee system that provides stable and predictable program funding. The current fee schedule does not support Oregon's statutorily and regulatorily mandated hierarchy of preferred hazardous waste management methods; it offers little incentive to waste reduction and minimization; and it is inherently regressive, placing a proportionally greater economic burden on small businesses. The proposed amendments have been developed, with the assistance of two industry/citizen advisory committees, to address these deficiencies.

**BEFORE THE ENVIRONMENTAL QUALITY COMMISSION  
OF THE STATE OF OREGON**

**STATEMENT OF FISCAL AND ECONOMIC IMPACT**

Proposed Changes to the Fee Rules

The Department's current fee rules cover approximately 750 to 1,000 hazardous waste generators, who pay total annual fees ranging from \$200 to \$11,950. Under the proposed amendments, generation fees would generally be lowered for all affected parties except for approximately 23 businesses, none of which is a small business. The following table shows the current and projected average fee burden for groups in the regulated community, based on actual waste volumes generated in 1990, at a hypothetical base fee of 375 mills per kilogram, assuming a management method fee factor of 1.0 for all wastes.

Fee Category (Metric Tons)	Number in Group	Current Fees	Projected Avg. Fees	Increase (Decrease)	Percent Change
Less than 1	248	\$380	\$218	(\$162)	-42.5%
> 1 < 3	255	\$740	\$266	(\$474)	-64.0%
> 3 < 14	142	\$1,275	\$435	(\$840)	-65.9%
> 14 < 28	24	\$1,950	\$1,073	(\$877)	-44.9%
> 28 < 142	45	\$3,950	\$2,607	(\$1,343)	-34.0%
> 142 < 284	13	\$8,500	\$7,763	(\$737)	-8.7%
More than 284	23	\$11,950	\$14,776	\$2,826	23.6%

The generation fee will vary with both the exact volume of waste and the method by which it is managed. While the Department cannot predict exceptional events, such as hazardous waste spills or clean-ups, our analysis has identified no state agency or unit of local government whose normal generation activities would incur higher fees under the proposed system than under the current rule.

The proposal is revenue-neutral, in that it neither increases nor decreases the Department's revenue from these fees. It replaces a regressive fee schedule with a flat unit rate, and offers financial incentives for waste minimization and responsible waste management, in that a generator who generates less will pay less.

State of Oregon  
Department of Environmental Quality

Memorandum

Date: May 11, 1992

**To:** Environmental Quality Commission

**From:** Roy W. Brower, Manager, Hazardous Waste Policy and Program Development

**Subject:** Response to Comments

The Department received oral and written comments from 23 members of the public: American Electronics Association (AEA), Associated Oregon Industries (AOI), Carr Enterprises, City of Gresham, Columbia Helicopters, Emerald People's Utility District (EPUD), Environmental Remediation Division of Chemical Waste Management Inc. (ENRAC), J.H. Baxter & Company, Metro, Northwest Coalition for Alternatives to Pesticides (NCAP), Northwest Industrial Neighborhood Association (NINA), OM Group, Oregon Environmental Council (OEC), Oregon State Public Interest Research Group (OSPIRG), Osmose Wood Preserving, Pacific Sound Resources, Schnitzer Steel Industries, Southern Pacific Transportation Company, Stoel Rives Boley Jones & Grey, Teledyne Wah Chang Albany, U.S. Fish and Wildlife Service, Westak, and Western Wood Preservers Institute (WWPI). In view of the volume of comments received, and the areas of overlap between individual commenters, the Department has chosen to summarize and group the comments, and to respond on an issue-by-issue basis. Copies of all comments received are available upon request. The issues raised, and Department responses, are detailed below.

**FEE ISSUES**

1. The proposed rule allows generators to apply to the Department to limit their annual hazardous waste generation fee invoice to \$15,000, provided that they certify compliance with basic hazardous waste and toxics use reduction reporting and fee-paying requirements. OEC and OSPIRG oppose the fee limitation provision,

arguing that capping the fee violates the principle of "the polluter pays" and nullifies any incentive to waste reduction. OEC suggests that fees be set at levels designed to encourage behavior change, not simply to produce program revenues. OSPIRG feels that, if the limitation is adopted, it should be available only to companies demonstrating full compliance with all environmental regulations, and that any fee limitation must have an expiration date (see #3 below).

Department response: In 1988, the Department made a commitment to the Commission to reevaluate the hazardous waste generator fee structure, to ensure a stable and predictable source of revenue to support the program. A secondary objective of the fee system was to encourage appropriate waste management alternatives, such as waste reduction and recycling. The proposed rules represent the work of a series of advisory committees which considered a broad range of issues and alternatives. Capping the fee at \$15,000 is expected to benefit about 21 companies, most of whom produce large homogeneous wastestreams. The Department believes that the correlation between the volume of waste generated by a particular hazardous waste handler and the extent of the Department's potential concern or involvement with an individual site is not linear: there are between 750 and 1,000 fee-paying sites in Oregon, yet 50% of the state's total waste volume is generated at only 5 facilities. It is unreasonable to expect these sites to pay half the cost of the Department's program of hazardous waste monitoring, inspection and surveillance. A practical advantage to the fee limitation is that no one invoice will be so large that its payment becomes critical to the program's continued operation. Capping the fee also has the effect of increasing the base rate for the entire regulated community, which should generally strengthen incentives for waste reduction and use of preferred management methods.

2. The original proposed rule afforded the fee limitation only to cleanups done on-site, leaving fees for off-site cleanups open-ended. The advisory committee considered exempting cleanups from fees altogether, but finally voted to recommend that they be treated as other sites, and be eligible for the fee limitation. OSPIRG opposes any fee limitation on cleanup wastes, or would at least limit its duration, to encourage faster cleanups. AEA, AOI, Columbia Helicopters, ENRAC, NINA, Schnitzer Steel, Stoel Rives, and Teledyne generally oppose charging fees on cleanup wastes, on the grounds that so doing will discourage cleanups, or unfairly penalize companies who undertake them. They find no environmental motive for making a distinction in a fee system between on-site and off-site remediation. They point out that the unpredictability of cleanups counteracts the Department's goal of establishing a stable and predictable funding source. They assert that charging fees on cleanups amounts to double taxation, since the Department may

recover its costs under the Voluntary Cleanup Program and in RCRA cleanups. If cleanup wastes are subject to fees, all cleanups should be eligible for the fee limitation, whether done on-site or off.

Department response: Historically, the Department has charged generator fees for cleanup wastes only when they were managed off-site, because invoicing was based on shipping manifests, rather than actual waste generation. Off-site cleanups utilize valuable hazardous waste landfill capacity and run the risks associated with over-the-road transportation. However, the preference for on-site cleanups is properly a technical determination made on a case-by-case basis, and should not be unduly influenced by fee differentials. Furthermore, since cleanups are sporadic and unpredictable, the Department cannot prudently base a large portion of program revenues on such special situations, which often have financial, as well as environmental, difficulties. The rule has been amended to make all cleanup wastes eligible for the fee limitation.

3. OSPIRG believes the fee limitation provision should expire in two years, requiring an affirmative act of the Commission to continue it. Schnitzer views the original proposed language, requiring reconsideration by the Commission, as tantamount to sunseting and opposes it, arguing that the fee limitation should not be considered separately from the rest of the fee system.

Department response: The Department thinks it will be useful for the Commission to examine whether, and how, the new fee system, including the fee limitation provision, is working, but believes the pressures associated with a specific date can impede thoughtful consideration. The reconsideration provision has been deleted from the final proposed rule. The Department has worked diligently with various advisory committees for 4 years to establish a stable and predictable funding source for this program and believes that the proposed rule does so. We believe that it is not an efficient or effective use of the Department's resources to continually bring the matter before the Commission.

4. The 1990 Hazardous Waste Advisory Committee recommended "bringing conditionally exempt small quantity generators (CEGs) into the system," by levying a \$50 annual fee, and considered the possibility of charging tonnage fees over a de minimis annual waste volume. Columbia Helicopters and Schnitzer Steel believe that CEGs should be charged fees under this rule. They cite the amount of resources devoted to CEGs by the Department, their presumed lack of knowledge, and environmental risk. Columbia proposes a higher fee, which would shift some

of the financial burden from small and large quantity generators.

Department response: As the designation suggests, CEGs are conditionally exempt from the program of regulatory oversight funded by this fee. Since the first advisory committee presented its recommendations, the 1991 Legislature passed Senate Bill 241, which directs the Department to offer a program of technical assistance to businesses that are, or are likely to be, CEGs, funded through an increase in the hazardous waste disposal fee at Arlington. This effectively brings CEGs into the system, and provides them with technical resources for safe and responsible management of their hazardous wastestreams. The Department believes that no reasonable level of fee for CEGs would materially shift the burden of the generator fee system, due to the added costs of identifying, enrolling, processing, billing, and collecting from such a large group. The Department recommends that no fees be required of conditionally exempt small quantity generators under this rule at this time.

5. Schnitzer and Westak question whether the 0.50 management method fee factor assigned to "Metals Recovery" is appropriate. Westak proposes to lower it to 0.00, on the grounds that such recovery both eliminates pollution and reduces the need to mine virgin ore. Schnitzer also expresses concern that new, alternative technologies that do not fit into a preferential fee category might be penalized, to the detriment of the environment.

Department response: Metals recovery is a form of recycling, and as such, is a **waste management** method, and receives the same factor as other recycling methods: the highest preference should be given to **not generating** the waste at all. The Department believe the categories are sufficiently flexible to accommodate emerging technologies.

6. City of Gresham objects to the management method fee factor of 0.00 associated with "Permitted Discharge under Clean Water Act Section 402," on the grounds that it is incompatible with their publicly owned treatment works' (POTW) goals, contrary to federal pretreatment policy, and does not reduce hazardous waste. They propose that such discharge be minimized or that the fee factor be set at 2.00.

Department response: Under EPA Biennial Report regulations and the Department's annual generator reporting requirements (OAR 340-102-041), hazardous waste generators are required to report on all hazardous wastestreams, including those managed by **permitted** direct discharge to a

sewer or POTW or to surface water under NPDES, despite the fact that such waste management activities are exempt from regulation under RCRA and the Department's hazardous waste rules. The proposed generator fee system, which funds the Department's hazardous waste monitoring, inspection and surveillance program, is based on this reporting, and the Department has proposed the 0.00 fee factor only as a means of reflecting the regulatory status of this management method, not as an encouragement to such discharges. The Department, through its Water Quality and other programs, works closely with POTWs and supports their efforts to prevent pollutants from entering the state's sewerage systems and public waters. The proposed rule has been modified by placing both this management method and "Neutralization (on-site)" under a new heading, "RCRA-Exempt Management."

7. Schnitzer argues that, rather than basing the fee on volume generated, the Department should use as a basis the relative toxicity of the wastestream. The proposed rule penalizes businesses producing high-volume/low-toxicity wastes, and does not focus on the most environmentally damaging substances.

Department response: The Department believes this could be a valid approach, but would require revisiting the basic underpinnings of the entire RCRA program. Doing so is beyond the scope of the Department's resources and expertise at this time.

8. Schnitzer opposes the changes to the billing cycle/due date. The extant rule requires payment within 30 days of invoice date, but calls for late-payment charges to be imposed if payment is not made by the due date on the invoice; the proposal requires payment by the due date shown on the invoice, and imposes late-payment charges as of the same date. Schnitzer feels this is a dangerous precedent, and that the number of days should be fixed by rule, not by administrative practice.

Department response: The change is an attempt to resolve an anomaly in the rule language, not a change in policy. The Department thinks this is properly an administrative issue.

9. Schnitzer opposes the provision allowing the Department to bill at the base rate set by the Commission or a lower one, unless an increase is needed, as an arrogation of the Commission's duties to exercise budgetary control. Schnitzer suggests that the fee be re-approved annually, particularly as future progress toward waste reduction and responsible management may permit reductions in



program size.

Department response: Formal procedures are in place ensuring Commission oversight of the Department's budgets and staffing. Statute requires that the Commission set fees, but maintaining or lowering the base rate in response to waste volume fluctuations in individual reporting and billing years is properly an administrative function. The rule proposes that the Commission approve any **increase** in the base rate. (Also see response to #3 above.)

10. Schnitzer believes that lowering fees for small and medium generators, and not charging fees to CEGs (see #4 above), sends the wrong message, that they need not take the rules seriously and will not be subjected to scrutiny by the Department. Schnitzer further states that these generators are more likely to have problems such as spills and accidental releases than the largest generators, who have sophisticated environmental programs in place.

Department response: Implementation of the proposed rule, by eliminating regressivity and shifting to a unit basis, brings about a one-time change in fee levels for almost all fee-paying generators. Thereafter, the new system will closely reflect each generator's annual waste volumes and the management methods employed, and thus will provide incentives for increased attention by each generator to opportunities for waste reduction and better management. Compliance and enforcement priorities are not determined by fee levels, and are not the only means to encourage environmentally responsible actions on the part of the regulated community.

11. Schnitzer believes that imposing hazardous waste generator fees on certain industries conflicts with solid waste recycling priorities. Schnitzer reclaims scrap metals, thereby diverting them from disposal in solid waste landfills and reducing the need to mine virgin ores. In the process, it generates "bag-house dust" containing hazardous contaminants from the scrap, which it sends to another facility for further reclamation. Schnitzer asserts that charging generator fees for these and similar activities conflicts with other Departmental priorities, such as encouraging solid waste recycling, and acts as a disincentive, if not a commercial disadvantage.

Department response: The Department regulates many substances as hazardous wastes, without regard to the form of the raw materials used as inputs to the industrial processes which bring the wastes into being. Under RCRA, the Department regulates the commenter's primary wastestream

(K061 - Emission control dust/sludge from the primary production of steel in electric furnaces) as a listed hazardous waste. Exempting this wastestream from fees would affect all generators engaged in the primary production of steel in electric furnaces, regardless of whether they start with scrap metal or virgin iron ore. The RCRA program has procedures for delisting of a specific generator's wastestream, which the commenter may care to pursue, that would in effect eliminate hazardous waste fees on this waste. The Department has not previously exempted an individual company's waste from fees.

## Environmental Quality Commission

- Rule Adoption Item  
 Action Item  
 Information Item

Agenda Item F  
January 28, 1994 Meeting

**Title:**

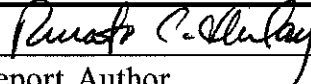
Confined Animal Feeding Operation Memorandum of Agreement

**Summary:**

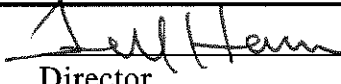
Chapter 567, Oregon Laws 1993 (Senate Bill 1008) passed by the 1993 Legislature requires the Environmental Quality Commission (Commission) and the Oregon Department of Agriculture (ODA) to enter into a memorandum of agreement authorizing ODA to operate a program to prevent and control water pollution from confined animal feeding operations (CAFO). The law requires the transfer of enforcement responsibilities to ODA. ODA made a commitment to adopt enforcement rules similar to Department rules. An existing MOA between ODA and the Department established the roles of each agency in the implementation of the CAFO waste management program. The existing MOA is rewritten to include the transfer of enforcement responsibilities to ODA.

**Department Recommendation:**

The Department recommends that the Commission enter into a Memorandum of Agreement with the Oregon Department of Agriculture to operate a program to prevent and control water pollution from confined animal feeding operations and to assume enforcement responsibilities as presented in Attachment A of the Department staff report.

  
Report Author

  
Division Administrator

  
Director

January 12, 1994

\*Accommodations for disabilities are available upon request by contacting the Public Affairs Office at (503)229-5317(voice)/(503)229-6993(TDD).

MW\WC12\WC12238.5

State of Oregon  
Department of Environmental Quality

Memorandum<sup>†</sup>

Date: January 11, 1994

**To:** Environmental Quality Commission  
**From:** Fred Hansen, Director  
**Subject:** Agenda Item F, January 28, 1994 EQC Meeting  
Confined Animal Feeding Operation Memorandum of Agreement

**Statement of the Issue**

Chapter 567, Oregon Laws 1993 (Senate Bill 1008) passed by the 1993 Legislature requires the Environmental Quality Commission (EQC) and the Oregon Department of Agriculture (ODA) to enter into a memorandum of agreement authorizing ODA to operate a program to prevent and control water pollution from confined animal feeding operations (CAFO).

**Background**

On October 17, 1988, the Department entered into a Memorandum of Agreement (MOA) with ODA for managing and implementing a statewide CAFO waste management program. The CAFO waste management program includes permit issuance for wastewater disposal facilities, plan review for pollution control facilities, tax credit certification, and compliance assurance. CAFO is defined as the confined feeding or holding of animals or poultry, or which have wastewater treatment works. The MOA established the responsibilities of each agency for each program component.

Under the current MOA, ODA is responsible for providing technical assistance, advice of financial assistance available and other related information to CAFO facilities through cooperative efforts with state and federal agencies. It acts as the Department's agent in the registration of CAFOs and distribution of the General Permit 800. Review for approval or rejection of waste treatment facility plans is conducted by ODA and is certified to the Department.

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<sup>†</sup>Accommodations for disabilities are available upon request by contacting the Public Affairs Office at (503)229-5317(voice)/(503)229-6993(TDD).

Memo To: Environmental Quality Commission  
Agenda Item F  
January 28, 1994 Meeting  
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ODA responds to and resolves all complaints or problems associated with CAFOs and other livestock operations. If a CAFO facility is not in compliance with the conditions of the general permit because of inadequate pollution control facilities, management, or waste disposal area, the Department issues an EQC stipulated and final order (Consent Order). The terms and conditions of the Consent Order are negotiated by ODA with the respondent, and the Director issues the order for the EQC. The EQC Consent order is issued to the CAFO facility in addition to the General Permit and it does not replace the permit. Other formal enforcement actions include notice of permit violation and imposition of civil penalties. All formal enforcement actions are referred by ODA to the Department. CAFO facilities with individual WPCF permits remain under the oversight of the Department. For these sources, compliance assurance and enforcement responsibilities stay with the Department.

The Department provides advice, assistance, and program guidance relative to water quality problems associated with animal waste. The Department is responsible for the issuance and modification of the General Permit 800. A CAFO source not covered by the General Permit 800 is issued a WPCF permit and remains under the oversight of the Department.

The Department is responsible for the review of all tax credit applications for water pollution control facilities. Waste treatment facilities for CAFOs are eligible for tax credit certification. When a CAFO facility plans and specifications for water pollution control facilities are submitted to ODA for review and approval, ODA should inform CAFOs of the opportunity for tax credit. The tax credit application is submitted to the Department upon completion of the water pollution control facilities. The Department reviews the application and make recommendations to the EQC for tax credit certification of the facility.

On request of the Oregon Dairy Farmers Association, Senate Bill 1008 was proposed and enacted by the 1993 Legislature. The law, Chapter 567 Oregon Laws 1993, requires the EQC and ODA to enter into a memorandum of agreement authorizing ODA to operate a program to prevent and control water pollution from CAFO facilities, including enforcement responsibilities. It also provides for the transfer of resources for enforcement services from the Department to ODA. The General Fund appropriation for this resource is equivalent to 0.5 FTE.

### **Memorandum of Agreement**

The new MOA is between the EQC and ODA as opposed to the current one which is between DEQ and ODA. Responsibilities for each agency for permit issuance and distribution, wastewater treatment facility plan review and tax credit certification will be the same except for enforcement.

The major changes to the current MOA include the requirement for ODA to adopt new enforcement rules similar to the Department's and a civil penalties schedule in conformance with the provisions of the new law. The Director of ODA or designee issues the Consent Orders as opposed to being issued by the Director of the Department for the EQC. ODA takes all enforcement and civil penalty imposition responsibilities for CAFOs in violation of the conditions of the General Permit 800 and/or water quality rules and statutes. By July 1, 1994, ODA will adopt enforcement rules which are equivalent to the Department's rules and a schedule of civil penalties in conformance with the provisions of Chapter 567, Oregon Laws 1993.

Until ODA has adopted its enforcement rules the Department provides enforcement services to CAFO sources for ODA. DEQ retains enforcement responsibilities for facilities that have WPCF permits.

### **Authority to Address the Issue**

The new law, Chapter 567 Oregon Laws 1993, authorizes ODA to assume enforcement responsibilities for CAFO permitted sources by a memorandum of agreement with the EQC.

### **Alternatives and Evaluation**

1. Do nothing. This alternative was rejected because the 1993 Legislature enacted new legislation requiring a new MOA between EQC and ODA by January 1, 1994 at the latest.
2. The current Memorandum of Agreement between DEQ and ODA for regulating CAFO facilities is rewritten to reflect the requirements of the new law. Major changes include a provision for ODA to adopt enforcement rules similar to DEQ by July 1, 1994. Consent Orders will be issued by the Director of ODA. Upon adoption of enforcement rules, ODA will assume full enforcement responsibilities for CAFO facilities covered by the General Permit No. 800. However, if ODA fails to take enforcement action against a CAFO facility for any documented

violation, the Department can initiate its own enforcement action. The roles and responsibilities of DEQ and ODA for the other components of the CAFO waste management program will remain the same. The new MOA shown as Attachment A will be between the EQC and ODA.

### **Summary of Any Prior Public Input Opportunity**

The proposed Memorandum of Agreement was prepared in accordance with the provisions of the new law enacted by the Legislature. The terms and conditions of the Memorandum of Agreement were negotiated by ODA and DEQ pursuant to ORS 468.035. The proposed MOA was reviewed by the ODA CAFO advisory committee.

### **Conclusions**

- \* The recommendation for action on the Memorandum of Agreement is consistent with the provisions of the new law, Chapter 567 Oregon Laws 1993.
- \* By July 1, 1994, ODA shall adopt enforcement rules similar to the Department's rules to implement the requirements of the new law.
- \* Upon adoption of new enforcement rules, ODA shall assume full enforcement responsibilities on CAFO facilities covered by the General Permit No. 800. Until ODA has adopted its enforcement rules the Department shall continue to provide enforcement services for CAFO facilities.

### **Recommendation for Commission Action**

It is recommended that the Commission enter into a Memorandum of Agreement with the Oregon Department of Agriculture to operate a program to prevent and control water pollution from confined animal feeding operations and to assume enforcement responsibilities as presented in Attachment A of the Department staff report. The Memorandum of Agreement will be signed by the Director for the Commission.

### **Intended Followup Actions**

Following the adoption of the amended Memorandum of Agreement, CAFO rules as contained in OAR Chapter 340 Divisions 51 and 52 should be amended to reflect the CAFO waste management program components transferred to ODA. Amendment of Department rules should occur after July 1, 1994 when the ODA rules are in place.

Memo To: Environmental Quality Commission  
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**Attachments**

- A. Proposed Memorandum of Agreement Between The Environmental Quality Commission and Oregon Department of Agriculture for Permitting and Regulating CAFO Facilities
- B. Chapter 567 Oregon Laws 1993
- C. Senate Bill 1008
- D. 1988 Memorandum of Agreement Between The Department of Environmental Quality and Oregon Department of Agriculture for Permitting and Regulating CAFO Facilities

**Reference Documents (available upon request)**

- 1. Oregon Revised Statutes 190.110
- 2. Oregon Revised Statutes 468.015
- 3. Oregon Revised Statutes 468.035
- 4. Oregon Revised Statutes 468B.200

Approved:

Section: *Thomas J. Lucas*

Division: *Michael Hovns*

Report Prepared By: Renato C. Dulay

Phone: 229-5374

Date Prepared: November 22, 1993

RCD:crw  
MW\WC12\WC12162.5  
13 Jan 94



MEMORANDUM OF AGREEMENT BETWEEN  
THE ENVIRONMENTAL QUALITY COMMISSION (EQC)  
AND  
OREGON DEPARTMENT OF AGRICULTURE (ODA)  
FOR  
PERMITTING AND REGULATING CAFO FACILITIES

I. PURPOSE

In accordance with ORS 190.110 and ORS 468.015, this Memorandum of Agreement sets forth the roles and responsibilities of the Department of Environmental Quality (DEQ) as directed by the Environmental Quality Commission (EQC) and the Oregon Department of Agriculture (ODA), in managing and implementing a statewide Confined Animal Feeding Operation (CAFO) waste management program.

II. ROLES AND AUTHORITIES

- A. WHEREAS the ODA has an existing framework for working directly with the agricultural community to identify and implement conservation practices, and
- B. WHEREAS the ODA has extensive knowledge and experience in delivering information to the agricultural community, and
- C. WHEREAS, through Oregon Revised Statutes Chapter 468, the DEQ has been designated the state agency responsible for preventing water pollution in the state from all sources, including CAFO facilities, and
- D. WHEREAS the statutory framework for the water pollution control program includes, in part, reviewing plans for waste disposal systems, issuing permits for waste disposal systems, and evaluating tax credit applications for water pollution control facilities, and
- E. WHEREAS ORS 468.035 authorizes DEQ to advise, consult, and cooperate with other agencies of the state with respect to all matters pertaining to control of water pollution, and
- F. WHEREAS Chapter 567 Oregon Laws 1993 authorizes ODA to perform any function of the EQC or the DEQ relating to the control and prevention of water pollution from a confined animal feeding operations,

THEREFORE, through mutual agreement, DEQ by policy direction from EQC and ODA have established the following responsibilities in order to implement the CAFO program through a coordinated and

mutually acceptable agreement.

III. ODA DESIGNATED RESPONSIBILITIES:

The ODA has these CAFO responsibilities:

- A. Conduct an education program in cooperation with the OSU Cooperative Extension Service (for CAFO operators) to describe Best Management Practices (BMPs) for animal waste disposal facilities.
- B. Advise CAFO owner/operators of available state, federal, and private sources of technical assistance for planning, designing, and implementation of appropriate BMPs which comprise an animal waste management system.
- C. Advise CAFO owner/operators of sources of financial assistance available from state and federal agencies to provide incentives for such CAFO operators in implementing approved BMPs for animal waste disposal systems.
- D. Act as DEQ's agent in receiving registration forms for coverage under the CAFO general permit and distribute copies of the general permit to those CAFO facilities which apply, in accordance with detailed procedures described in Section V. A., which follows.
- E. Act as DEQ's agent in receiving and reviewing permit application forms and plans for new proposed CAFO facilities and distribute a general permit to the proposed facility, in accordance with procedures in Section V. B. of this document.
- F. Negotiate with a CAFO permittee the terms and conditions to be included in a Consent Order for those facilities which are not in compliance with the conditions of the DEQ general permit. The Consent Order would be in addition to the general permit and not in lieu of it. The Consent Order shall be issued by the Director of DEQ. After ODA enforcement rules are adopted pursuant to Section III. J., the Director of ODA or the Director's designee will sign and issue the Consent Order.
- G. Review for approval or rejection plans and specifications for CAFO waste collection and disposal systems to verify that they have been prepared in accordance with the Oregon Animal Waste Installation Guidebook design criteria and certify such to DEQ in

accordance with Section V. E. of this document.

- H. Respond to and resolve, where possible, all complaints, or problems where no complaint has been received, associated with CAFOs and other livestock operations suspected violations of permits, orders, rules, or water quality standards. DEQ will respond to and resolve complaints on CAFO facilities which operate under an individual WPCF permit.
- I. Take prompt enforcement action against CAFO facilities violating permit conditions, water quality statutes, rules or orders in accordance with ODA enforcement procedures.
- J. By July 1, 1994, adopt enforcement rules and civil penalties schedules in conformance with the provisions of Chapter 567 Oregon Laws 1993.
- K. Impose civil penalties on the owner or operator of a CAFO facility for failure to comply with the provisions of ORS Chapter 468 or 468B or any rule adopted under, or a permit issued under ORS Chapter 468B, relating to the control and prevention of water pollution from a CAFO facility.
- L. Provide DEQ with a quarterly update on the status of CAFO permits, orders, complaint investigations, notices of noncompliance and civil penalties imposed.
- M. At least one inspection per year will be conducted by ODA on those CAFO facilities which have a Consent Order in addition to their permit, unless, by agreement, oversight has been retained by DEQ.

#### IV. DEQ RESPONSIBILITIES

The DEQ, through its regional offices and Water Quality Division, will provide the following support to the CAFO program:

- A. Provide advice, assistance, and program guidance relative to instream water quality problems associated with animal waste.
- B. Review and approve plans and specifications for construction, modification, and expansion of those CAFO facilities not reviewed by ODA under III. G. above.
- C. Recommend to EQC the issuance of tax credit certificates in accordance with procedures described in Section V. G.

- D. Issue Water Pollution Control Facilities Permits to CAFO facilities which are uniquely different, require special monitoring, or for some other reason should not be covered by a general permit.
- E. Refer all water pollution complaints received on CAFOs and information regarding other suspected violations of permits, rules, or water quality standards by CAFOs to ODA for investigation and follow-up, except for those facilities for which oversight has been retained by DEQ.
- F. Until ODA's enforcement rules are adopted pursuant to Section III. J., DEQ will take prompt enforcement action against CAFO facilities violating permit conditions or water quality statutes or rules or orders. DEQ will retain enforcement responsibilities for facilities which have remained under DEQ individual WPCF permit or other livestock operations where verified violations or water quality problems have been referred to DEQ by ODA for enforcement action because the process of soliciting voluntary compliance has failed.
- G. At least one inspection per year will be conducted by DEQ on those CAFO facilities issued with individual WPCF permits.

V. DETAILED PROGRAM PROCEDURES

A. General Permit Distribution to Existing Facilities.

The ODA will distribute registration/applications to CAFO facilities which need to be covered by the general permit, unless it is determined by DEQ and ODA that an individual WPCF permit for the particular CAFO facility is necessary. After the applications have been received, the ODA will screen them to determine which CAFO facilities already have adequate pollution control facilities or which ones should be issued a Consent Order along with the general permit. The ODA will distribute a copy of the general permit and issue a Consent Order, where appropriate.

Prior to distributing a copy of the general permit, the ODA will forward a copy of the application to DEQ for assignment of a facility identification number and logging the facility into the DEQ data system. The ODA will put a label on each copy of the general permit being distributed which contains the name of the applicant, the DEQ generated identification number and the address of the facility. A copy of the completed first page of each permit will be sent to DEQ for their files. A printout of all CAFO facilities to which permits have been issued will be prepared by DEQ and sent to ODA quarterly.

B. Permits for New CAFO Facilities.

New CAFO facilities may be eligible for coverage by the general permit. However, the application will include a Land use Compatibility Statement, facility and waste management plans. The fees for a new facility application will include a permit processing fee. The application and fees will be collected by the ODA. A copy of the application and Land Use Compatibility Statement will be sent to DEQ. Once the application, including construction plans and waste management program have been approved by ODA and any necessary public participation procedures have been completed, the ODA may distribute a general permit to the applicant. A Copy of the completed first page will be sent to DEQ.

C. Individual Water Pollution Control Facilities (WPCF) Permit Issuance.

Those few CAFO facilities which are uniquely different, need groundwater monitoring, or for some other reason should not be covered by the general permit, will be issued an individual permit by the DEQ. Permit application forms will be distributed by DEQ and the permitting process will follow standard DEQ procedures. These facilities will continue to be carried under DEQ oversight for inspection and enforcement.

D. Issuance of Consent Orders.

Where a CAFO facility is not in compliance with the general permit because of inadequate pollution control facilities, management, or waste disposal area, the DEQ will propose a Consent Order which will specify the corrections to be made and the time schedule to make them. The Consent Order will be in addition to the general permit and will not replace it. The ODA will negotiate with the permittee and make recommendations to the DEQ on the issues and time schedules to be addressed in the proposed Consent Order. After ODA has arranged for the permittee to sign the Consent Order, it will be sent to the DEQ Director for signature. It will then be delivered to the permittee by ODA. After ODA enforcement rules are adopted pursuant to Section III. J, the Director of ODA or the Director's designee will sign and issue the Consent Order.

E. Plan Review for CAFO Pollution Control Facilities.

Oregon Revised Statutes (ORS) 468B.055 requires plans and specifications for water pollution control facilities to be reviewed by DEQ prior to construction, unless exempted from

DEQ review by Commission rule, pursuant to OAR 340-52-045(5), the DEQ may exempt submittal of plans where it has been determined that adequate review is conducted by another state agency. Pursuant to that rule, DEQ waives the requirement for plan submittal on CAFO waste water collection and disposal facilities where facilities have been designed in accordance with the Oregon Animal Waste Installation Guidebook design criteria and so certified by ODA. ODA will inform DEQ and certify whether or not the plans and specifications adhere to the Oregon Animal Waste Installation Guidebook design criteria, or equivalent.

F. Tax Credit Certification.

The DEQ is responsible for the review of all tax credit applications for water pollution control facilities. The ODA should inform CAFOs of the opportunity for tax credits and the requirement to have plans approved prior to construction. If ODA reviews plans and specifications pursuant to E. above, and provides documentation of such to DEQ, the DEQ will accept that plan review as meeting the plan review requirements associated with tax credit certification without making an independent plan review.

G. Tax Credit Certificates.

When DEQ receives a request for a tax credit certificate, ODA will be requested to verify that the claimed facilities are in place and are working properly. The ODA will provide that verification within 60 days of the request. Once that verification has been received, the DEQ will review the application and prepare a recommendation for the Environmental Quality Commission.

H. Collection and Distribution of Permit Fees.

A filing fee is required of all facilities requesting a permit. The ODA will collect and retain all filing fees from those existing CAFO facilities which register for coverage by the general permit.

In addition to the filing fee, an application processing fee is required of all applicants for new proposed facilities. The ODA will collect and retain the application processing fee for those facilities which will be covered by the general permit. If ODA and DEQ determine that the proposed facility is unique or for some other reason does not fit the requirements of the general permit, the application and all fees will be transferred to DEQ for the issuance of an individual permit.

Those facilities with individual WPCF permits must also pay an annual compliance determination fee. The DEQ will collect the fees through their existing annual invoicing procedures.

- VI. This Memorandum of Agreement is in effect upon all signatures and will remain in effect until terminated by either agency, upon 180 days notice, or until modified by mutual agreement.

STATE OF OREGON  
DEPARTMENT OF AGRICULTURE

\_\_\_\_\_  
Director

\_\_\_\_\_  
Date

STATE OF OREGON  
ENVIRONMENTAL QUALITY  
COMMISSION

APPROVED BY THE ENVIRONMENTAL  
QUALITY COMMISSION

\_\_\_\_\_  
Date

\_\_\_\_\_  
Fred Hansen, Director  
Department of Environmental  
Quality

ments of 1990, 42 U.S.C. 7545(m), any retail dealer of gasoline who sells or dispenses a petroleum product that contains at least one percent, by volume, ethanol, methanol or other oxygenate, shall be required to post only such label or notice as may be required pursuant to 42 U.S.C. 7545(m)(4) or any amendments thereto or successor provision thereof.

Approved by the Governor August 2, 1993  
Filed in the office of Secretary of State August 2, 1993  
Effective date - Regular effective date

## CHAPTER 567

AN ACT

SB 1008

Relating to confined animal feeding operations; and appropriating money.

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

**SECTION 1.** Sections 2 and 3 of this Act are added to and made a part of ORS 468B.200 to 468B.220.

**SECTION 2.** (1) On or before January 1, 1994, the Environmental Quality Commission and the State Department of Agriculture shall enter into a memorandum of understanding providing for the State Department of Agriculture to operate a program for the prevention and control of water pollution from a confined animal feeding operation.

(2) Subject to the terms of the memorandum of understanding required by subsection (1) of this section, the State Department of Agriculture:

(a) May perform any function of the Environmental Quality Commission or the Department of Environmental Quality relating to the control and prevention of water pollution from a confined animal feeding operation.

(b) May enter onto and inspect, at any reasonable time, a confined animal feeding operation or appurtenant land for the purpose of investigating a source of water pollution or to ascertain compliance with a statute, rule, standard or permit condition relating to the control or prevention of water pollution from the operation. The State Department of Agriculture shall have access to a pertinent record of a confined animal feeding operation including but not limited to a blueprint, design drawing and specification, maintenance record or log, or an operating rule, procedure or plan.

**SECTION 3.** (1) In addition to any liability or penalty provided by law, the State Department of Agriculture may impose a civil penalty on the owner or operator of a confined animal feeding operation for failure to comply with a provision of ORS chapter 468 or 468B or any rule

adopted under, or a permit issued under ORS chapter 468 or 468B, relating to the control and prevention of water pollution from a confined animal feeding operation. For the purposes of this section, each day a violation continues after the period of time established for compliance shall be considered a separate violation unless the State Department of Agriculture finds that a different period of time is more appropriate to describe a specific violation event.

(2) The State Department of Agriculture may not impose a civil penalty under subsection (1) of this section for a first violation by an owner or operator of a confined animal feeding operation:

(a) That is more than \$2,500; and

(b) Unless the State Department of Agriculture notifies the violator that the violation must be eliminated no later than 30 business days from the date the violator receives the notice. If the violation requires more than 30 days to correct, the State Department of Agriculture may allow such time as is necessary to correct the violation. In all cases, the legal owner of the property shall also be notified, prior to the assessment of any civil penalty.

(3) The State Department of Agriculture may not impose a civil penalty under subsection (1) of this section that exceeds \$10,000 for a subsequent violation.

(4) In imposing a civil penalty under this section, the State Department of Agriculture may consider:

(a) The past history of the owner or operator in taking all feasible steps or procedures necessary and appropriate to correct a violation.

(b) A past violation of a rule or statute relating to a water quality plan.

(c) The gravity and magnitude of the violation.

(d) Whether the violation was a sole event, repeated or continuous.

(e) Whether the cause of the violation was as a result of an unavoidable accident, negligence or an intentional act.

(f) Whether the owner or operator cooperated in an effort to correct the violation.

(g) The extent to which the violation threatens the public health and safety.

(5) No notice of violation or period for compliance shall be required under subsection (2) of this section if:

(a) The violation is intentional; or

(b) The owner or operator has received a previous notice of the same or similar violation.

(6) A civil penalty collected by the State Department of Agriculture under this section shall be deposited into a special subaccount in the Department of Agriculture Service Fund. Monies in the subaccount are continuously appropriated to the department to be used for educational programs on animal waste manage-



ment and to carry out animal waste management demonstration or research projects.

(7) Any civil penalty imposed under this section shall be reduced by the amount of any civil penalty imposed by the Environmental Quality Commission, the Department of Environmental Quality or the United States Environmental Protection Agency, if the latter penalties are imposed on the same person and are based on the same violation.

**SECTION 4.** In addition to and not in lieu of other appropriations, for the biennium beginning July 1, 1993, there is appropriated to the State Department of Agriculture, out of the General Fund, the sum of \$54,826 for Agricultural Services. However, except as provided in ORS 291.254, the Executive Department shall not reduce the appropriations made by this Act by means of the allotment system if such action materially reduces the program or service levels below legislatively established levels for which funds were appropriated.

**SECTION 5.** Notwithstanding any other law appropriating money or otherwise adjusting appropriations, the General Fund appropriation for the Department of Environmental Quality authorized in section 1, chapter \_\_\_\_\_, Oregon Laws 1993 (Enrolled House Bill 5022), is reduced by \$54,826 for the biennium beginning July 1, 1993.

Approved by the Governor August 2, 1993  
 Filed in the office of Secretary of State August 2, 1993  
 Effective date - Regular effective date

**CHAPTER 568**

AN ACT SB 1009

Relating to determination of compliance with record keeping requirements; creating new provisions; and amending ORS 459A.650, 459A.655 and 459A.660.

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

**SECTION 1.** ORS 459A.650 is amended to read: 459A.650. As used in ORS 459A.650 to 459A.665:

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

[(2) "Manufacturer" means the producer or generator of a packaged product which is sold or offered for sale in Oregon in a rigid plastic container.]

[(3)] (2) "Package" means any container used to protect, store, contain, transport, display or sell products.

(3) "Package manufacturer" means the producer or generator of a rigid plastic container for a packaged product that is sold or offered for sale in Oregon.

(4) "Product-associated package" means a brand-specific rigid plastic container line, which may have one or more sizes, shapes or designs and which is used in conjunction with a particular, generic product line.

(5) "Product manufacturer" means the producer or generator of a packaged product that is sold or offered for sale in Oregon in a rigid plastic container.

[(5)] (6) "Recycled content" means the portion of a package's weight that is composed of recycled material, as determined by a material balance approach that calculates total recycled material input as a percentage of total material input in the manufacture of the package.

[(6)] (7) "Recycled material" means a material that would otherwise be destined for solid waste disposal, having completed its intended end use or product life cycle. Recycled material does not include materials and by-products generated from, and commonly reused within, an original manufacturing and fabrication process.

[(7)] (8) "Reusable package" means a package that is used five or more times for the same or substantially similar use.

[(8)] (9) "Rigid plastic container" means any package composed predominantly of plastic resin which has a relatively inflexible finite shape or form with a minimum capacity of eight ounces and a maximum capacity of five gallons, and that is capable of maintaining its shape while holding other products.

**SECTION 2.** ORS 459A.655 is amended to read:

459A.655. (1) Except as provided in ORS 459A.660 [(3)] (5), [every manufacturer of] any rigid plastic [containers] container sold, offered for sale or used in association with the sale or offer for sale of products in Oregon shall [insure that the container meets one of the following criteria]:

(a) [Contains] Contain 25 percent recycled content by January 1, 1995;

(b) [Is] Be made of plastic that is being recycled in Oregon at a rate of 25 percent by January 1, 1995; or

(c) [Is] Be a reusable package.

(2) A [manufacturer's] rigid plastic container shall meet the requirements in subsection (1)(b) of this section if the container meets one of the following criteria:

(a) It is a rigid plastic container and rigid plastic containers, in the aggregate, are being recycled in the state at a rate of 25 percent by January 1, 1995;

(b) It is a specified type of rigid plastic container and that type of rigid plastic container, in the aggregate, is being recycled in the state at a rate of 25 percent by January 1, 1995; or

(c) It is a particular product-associated package and that type of package, in the aggregate, is being recycled in the state at a rate of 25 percent by January 1, 1995.

**SECTION 3.** ORS 459A.660 is amended to read:

67th OREGON LEGISLATIVE ASSEMBLY--1993 Regular Session

## B-Engrossed Senate Bill 1008

Ordered by the House July 16  
Including Senate Amendments dated June 22 and House Amendments  
dated July 16

Sponsored by COMMITTEE ON AGRICULTURE AND NATURAL RESOURCES (at the request of Oregon Dairy  
Farmers Association)

### SUMMARY

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

Requires Environmental Quality Commission and State Department of Agriculture to enter into memorandum of understanding authorizing State Department of Agriculture to operate program to prevent and control water pollution from confined animal feeding operation. Authorizes State Department of Agriculture to enforce certain environmental regulations.

Imposes maximum civil penalty of \$2,500 for first violation. Requires notice to violator and property owner prior to assessing first civil penalty unless violation was intentional.

Imposes maximum civil penalty of \$10,000 for subsequent violation.

Directs penalties to be deposited in subaccount in Department of Agriculture Service Fund to be used for certain education programs on animal waste management.

Appropriates moneys from General Fund to State Department of Agriculture for Agricultural Services. Subjects appropriation to Executive Department allotment process but forbids reduction in appropriation by allotment process if reduction would decrease legislatively approved program or service.

Reduces certain General Fund appropriation for Department of Environmental Quality.

### A BILL FOR AN ACT

1

2 Relating to confined animal feeding operations; and appropriating money.

3 **Be It Enacted by the People of the State of Oregon:**4 **SECTION 1.** Sections 2 and 3 of this Act are added to and made a part of ORS 468B.200  
5 to 468B.220.6 **SECTION 2.** (1) On or before January 1, 1994, the Environmental Quality Commission and  
7 the State Department of Agriculture shall enter into a memorandum of understanding pro-  
8 viding for the State Department of Agriculture to operate a program for the prevention and  
9 control of water pollution from a confined animal feeding operation.10 (2) Subject to the terms of the memorandum of understanding required by subsection (1)  
11 of this section, the State Department of Agriculture:12 (a) May perform any function of the Environmental Quality Commission or the Depart-  
13 ment of Environmental Quality relating to the control and prevention of water pollution  
14 from a confined animal feeding operation.15 (b) May enter onto and inspect, at any reasonable time, a confined animal feeding oper-  
16 ation or appurtenant land for the purpose of investigating a source of water pollution or to  
17 ascertain compliance with a statute, rule, standard or permit condition relating to the con-  
18 trol or prevention of water pollution from the operation. The State Department of Agricul-  
19 ture shall have access to a pertinent record of a confined animal feeding operation including  
20 but not limited to a blueprint, design drawing and specification, maintenance record or log,  
21 or an operating rule, procedure or plan.

NOTE: Matter in boldfaced type in an amended section is new; matter *[italic and bracketed]* is existing law to be omitted.  
New sections are in boldfaced type.

1        **SECTION 3.** (1) In addition to any liability or penalty provided by law, the State Depart-  
2        ment of Agriculture may impose a civil penalty on the owner or operator of a confined ani-  
3        mal feeding operation for failure to comply with a provision of ORS chapter 468 or 468B or  
4        any rule adopted under, or a permit issued under ORS chapter 468 or 468B, relating to the  
5        control and prevention of water pollution from a confined animal feeding operation. For the  
6        purposes of this section, each day a violation continues after the period of time established  
7        for compliance shall be considered a separate violation unless the State Department of Ag-  
8        riculture finds that a different period of time is more appropriate to describe a specific vio-  
9        lation event.

10       (2) The State Department of Agriculture may not impose a civil penalty under subsection  
11       (1) of this section for a first violation by an owner or operator of a confined animal feeding  
12       operation:

13       (a) That is more than \$2,500; and

14       (b) Unless the State Department of Agriculture notifies the violator that the violation  
15       must be eliminated no later than 30 business days from the date the violator receives the  
16       notice. If the violation requires more than 30 days to correct, the State Department of Ag-  
17       riculture may allow such time as is necessary to correct the violation. In all cases, the legal  
18       owner of the property shall also be notified, prior to the assessment of any civil penalty.

19       (3) The State Department of Agriculture may not impose a civil penalty under subsection  
20       (1) of this section that exceeds \$10,000 for a subsequent violation.

21       (4) In imposing a civil penalty under this section, the State Department of Agriculture  
22       may consider:

23       (a) The past history of the owner or operator in taking all feasible steps or procedures  
24       necessary and appropriate to correct a violation.

25       (b) A past violation of a rule or statute relating to a water quality plan.

26       (c) The gravity and magnitude of the violation.

27       (d) Whether the violation was a sole event, repeated or continuous.

28       (e) Whether the cause of the violation was as a result of an unavoidable accident,  
29       negligence or an intentional act.

30       (f) Whether the owner or operator cooperated in an effort to correct the violation.

31       (g) The extent to which the violation threatens the public health and safety.

32       (5) No notice of violation or period for compliance shall be required under subsection (2)  
33       of this section if:

34       (a) The violation is intentional; or

35       (b) The owner or operator has received a previous notice of the same or similar violation.

36       (6) A civil penalty collected by the State Department of Agriculture under this section  
37       shall be deposited into a special subaccount in the Department of Agriculture Service Fund.  
38       Moneys in the subaccount are continuously appropriated to the department to be used for  
39       educational programs on animal waste management and to carry out animal waste manage-  
40       ment demonstration or research projects.

41       (7) Any civil penalty imposed under this section shall be reduced by the amount of any  
42       civil penalty imposed by the Environmental Quality Commission, the Department of Envi-  
43       ronmental Quality or the United States Environmental Protection Agency, if the latter pen-  
44       alties are imposed on the same person and are based on the same violation.

45       **SECTION 4.** In addition to and not in lieu of other appropriations, for the biennium be-

1 ginning July 1, 1993, there is appropriated to the State Department of Agriculture, out of the  
2 General Fund, the sum of \$54,826 for Agricultural Services. However, except as provided in  
3 ORS 291.254, the Executive Department shall not reduce the appropriations made by this Act  
4 by means of the allotment system if such action materially reduces the program or service  
5 levels below legislatively established levels for which funds were appropriated.

6 SECTION 5. Notwithstanding any other law appropriating money or otherwise adjusting  
7 appropriations, the General Fund appropriation for the Department of Environmental Quality  
8 authorized in section 1, chapter \_\_\_\_\_, Oregon Laws 1993 (Enrolled House Bill 5022), is re-  
9 duced by \$54,826 for the biennium beginning July 1, 1993.  
10 \_\_\_\_\_

MEMORANDUM OF AGREEMENT BETWEEN  
THE DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ)  
AND  
THE OREGON DEPARTMENT OF AGRICULTURE (ODA)  
FOR  
PERMITTING AND REGULATING CAFO FACILITIES

I. PURPOSE

In accordance with ORS 190.110, this Memorandum of Agreement sets forth the roles and responsibilities of the Department of Environmental Quality (DEQ) and the Oregon Department of Agriculture (ODA), in managing and implementing a statewide Confined Animal Feeding Operation (CAFO) waste management program.

II. ROLES AND AUTHORITIES

- A. WHEREAS the ODA has an existing framework for working directly with the agricultural community to identify and implement conservation practices, and
- B. WHEREAS the ODA has extensive knowledge of the existing administrative structure for delivering information to the agricultural community, and
- C. WHEREAS the publication Oregon's CAFO Waste Management Program, describes the origin and the general intent of the CAFO program, and
- D. WHEREAS, through Oregon Revised Statutes Chapter 468, the DEQ has been designated the state agency responsible for preventing water pollution in the state from all sources, including CAFO facilities, and
- E. WHEREAS the statutory framework for the water pollution control program includes, in part, reviewing plans for waste disposal systems, issuing permits for waste disposal systems, and evaluating tax credit applications for water pollution control facilities, and
- F. WHEREAS ORS 468.035 authorizes DEQ to advise, consult, and cooperate with other agencies of the state with respect to all matters pertaining to control of water pollution,

THEREFORE, through mutual agreement, DEQ and ODA have established the following responsibilities in order to implement the CAFO program through a coordinated and mutually acceptable approach.

### III. ODA DESIGNATED RESPONSIBILITIES

The ODA has these CAFO responsibilities:

- A. Conduct an education program in cooperation with the OSU-Cooperative Extension Service (for CAFO operators) to describe Best Management Practices (BMPs) for animal waste disposal facilities.
- B. Advise CAFO owner/operators of available state, federal, and private sources of technical assistance for planning, designing, and implementation of appropriate BMPs which comprise a resource management system.
- C. Advise CAFO owner/operators of sources of financial assistance available from state and federal agencies to provide incentives for such CAFO operators in implementing approved BMPs for animal waste disposal systems.
- D. Act as DEQ's agent in receiving registration forms for coverage under the CAFO general permit and distribute copies of the general permit to those CAFO facilities which apply, in accordance with detailed procedures described in Section V. A., which follows.
- E. Act as DEQ's agent in receiving and reviewing permit application forms and plans for new proposed CAFO facilities, provide public participation, where appropriate, and distribute a general permit to the proposed facility, in accordance with procedures in Section V. B. of this document.
- F. After negotiating with a CAFO permittee, recommend to DEQ the conditions to be included in a DEQ Consent Order prepared for those facilities which are not in compliance with the conditions of the general permit. The Consent Order would be in addition to the general permit and not in lieu of it.
- G. Review for approval or rejection plans and specifications for CAFO waste collection and disposal systems to verify they have been prepared in accordance with SCS revised design criteria and certify such to DEQ in accordance with Section V. E. of this document.
- H. Respond to and resolve, where possible, all complaints associated with CAFOs and other suspected violations of permits, orders, rules, or water quality standards where no complaint has been received, with the exception of those few facilities which remain under the oversight of DEQ or for which DEQ is in the process of enforcement. The details of the complaint procedure are found in "Revised Management Procedures", attached.

- I. Provide DEQ with a quarterly update on the status of CAFO permits, orders, and complaint investigations.
- J. Refer to DEQ, CAFO operators found in violation of their permit or DEQ Consent Order when voluntary compliance has failed or, in the opinion of the director, a violation of enough significance has occurred to merit immediate enforcement action.
- K. At least one inspection per year will be conducted by ODA on those CAFO facilities which have a Consent Order in addition to their permit, unless, by agreement, oversight has been retained by DEQ.

#### IV. DEQ RESPONSIBILITIES

The DEQ, through its regional offices and Water Quality Division, will provide the following support to the CAFO program:

- A. Provide advice, assistance, and program guidance relative to in-stream water quality problems associated with animal waste.
- B. Review and approve plans and specifications for construction, modification, and expansion of those CAFO facilities not reviewed by ODA under III. G., above.
- C. Issue (tax credit preliminary certification) and tax credit certificates in accordance with procedures described in Sections V. F. and G. which follow. The plan review associated with preliminary certification will be handled pursuant to V. C.
- D. Issue Water Pollution Control Facilities Permits to CAFO facilities which are uniquely different, require special monitoring, or for some other reason should not be covered by a general permit.
- E. Refer all water pollution complaints received on CAFOs and information regarding other suspected violations of permits, rules, or water quality standards by CAFOs to ODA for investigation and follow-up, except for those facilities for which oversight has been retained by DEQ or enforcement action is in progress.
- F. Take prompt enforcement action against CAFO facilities violating permit conditions or water quality statutes or rules when such facilities have remained under DEQ oversight or where verified violations or water quality problems have been referred to DEQ by ODA for enforcement action because the process of soliciting voluntary compliance has failed. Written notification of any enforcement action or planned enforcement action will be provided to ODA within 30 days of referral.

- G. After the enforcement process has been completed, ODA will again resume its voluntary role and responsibility associated with the CAFO program.
- H. At least one inspection per year will be conducted by DEQ on those permitted CAFO facilities which have, by agreement, remained under DEQ oversight.

V. DETAILED PROGRAM PROCEDURES

A. General Permit Distribution to Existing Facilities.

The ODA will distribute registration applications to CAFO facilities which need to be covered by the general permit, unless it is determined by DEQ and ODA that an individual WPCF permit for the particular CAFO facility is necessary. After the applications have been received, the ODA will screen them to determine which CAFO facilities already have adequate pollution control facilities or which ones should be issued a Consent Order along with the general permit. The ODA will distribute a copy of the general permit and DEQ Consent Order, where appropriate, to those who apply.

Prior to distributing a copy of the general permit, the ODA will forward a copy of the application to DEQ for assignment of a facility identification number and logging the facility into the DEQ data system. The ODA will put a label on each copy of the general permit being distributed which contains the name of the applicant, the DEQ generated identification number and the address of the facility. A copy of the completed first page of each permit will be sent to DEQ for their files. A printout of all CAFO facilities to which permits have been issued will be prepared by DEQ and sent to ODA quarterly.

B. Permits for New CAFO Facilities.

Most new CAFO facilities will also be eligible for coverage by the general permit. However, a different application form will be used which will include a Land use Compatibility Statement, facility plans, and a waste management program. The fees for a new facility application will include a permit processing fee. The application and fees will be collected by the ODA. A copy of the application and Land Use Compatibility Statement will be sent to DEQ. If it is anticipated that there may be local objections to the new facility, a public notice of the proposal will be distributed to interested parties. Once the application, including construction plans and waste management program have been approved by ODA and any necessary public participation procedures have been completed, the ODA may distribute a general



permit to the applicant. A copy of the completed first page will be sent to DEQ.

C. Individual Water Pollution Control Facilities (WPCF) Permit Issuance.

Those few CAFO facilities which are uniquely different, need groundwater monitoring, or for some other reason should not be covered by the general permit, will be issued an individual permit by the DEQ. Permit application forms will be distributed by DEQ and the permitting process will follow standard DEQ procedures. These facilities will continue to be carried under DEQ oversight for inspection and enforcement.

D. Issuance of DEQ Consent Orders.

Where a CAFO facility is not in compliance with the general permit because of inadequate pollution control facilities, management, or waste disposal area, the DEQ will issue an Consent Order which will specify the corrections to be made and the time schedule to make them. The Consent Order will be in addition to the general permit and will not replace it. The ODA will negotiate with the permittee and make recommendations to the DEQ on the issues and time schedules to be addressed in the Consent Order. After the ODA has arranged for the permittee to sign the Consent Order, it will be sent to the DEQ Director for signature. It will then be delivered to the permittee by ODA.

E. Plan Review for CAFO Pollution Control Facilities.

Oregon Revised Statutes(ORS) 468.742 requires plans and specifications for water pollution control facilities to be reviewed by DEQ prior to construction, unless exempted from DEQ review by Commission rule. Pursuant to OAR 340-52-045(3), the DEQ may exempt submittal of plans where it has been determined that adequate review is conducted by another state agency. Pursuant to that rule, DEQ waives the requirement for plan submittal on CAFO waste water collection and disposal facilities where facilities have been designed in accordance with SCS revised design criteria and so certified by ODA. Plans which have not been designed in accordance with SCS design criteria, or equivalent; will be reviewed by DEQ for approval or rejection unless DEQ waives that review on a case by case basis. In that event, the review will be conducted by ODA. Where ODA conducts the plan review, they will inform DEQ and certify whether or not the plans and specifications adhere to the revised design criteria of SCS, or equivalent.

F. Tax Credit Preliminary Certification.

The DEQ is responsible for the review of all tax credit applications for water pollution control facilities. Normally, a request for preliminary certification should be accompanied by plans and specifications. The ODA should inform CAFOs of the opportunity for tax credits and the requirement to have plans approved and a preliminary certification issued prior to construction. If ODA reviews plans and specifications pursuant to D. above, and provides documentation of such to DEQ, the DEQ will accept that plan review as meeting the plan review requirements associated with tax credit preliminary certification without making an independent plan review. Any Request for Preliminary Certification which ODA receives with plans for construction of CAFO water pollution control facilities will be sent to DEQ along with documentation that the adequate plans have been submitted. This will be done in a timely manner so that DEQ can act on the request for preliminary certification within the statutory deadlines found in ORS 468.175.

G. Tax Credit Certificates.

When DEQ receives a request for a tax credit certificate, they will request that the ODA verify that the claimed facilities are in place and are working properly. The ODA will provide that verification within 60 days of the request. Once that verification has been received, the DEQ will review the application and prepare a recommendation for the Environmental Quality Commission.

H. Collection and Distribution of Permit Fees.

A filing fee is required of all facilities requesting a permit. The ODA will collect and retain all filing fees from those existing CAFO facilities which register for coverage by the general permit.

In addition to the filing fee, an application processing fee is required of all applicants for new proposed facilities. The ODA will collect and retain the application processing fee for those facilities which will be covered by the general permit. If ODA and DEQ determine that the proposed facility is unique or for some other reason does not fit the requirements of the general permit, the application and all fees will be transferred to DEQ for the issuance of an individual permit.

Those facilities with individual WPCF permits must also pay an annual compliance determination fee. The DEQ will collect the fees through their existing annual invoicing procedures.

VI. This Memorandum of Agreement is in effect upon all signatures and will remain in effect until terminated by either agency, upon 180 days notice, or until modified by mutual agreement.

STATE OF OREGON  
DEPARTMENT OF AGRICULTURE

Robert Buchanan  
Director

10-19-88  
Date

STATE OF OREGON  
DEPARTMENT OF ENVIRONMENTAL QUALITY

Jul Hansen  
Director

10/17/88  
Date

# Environmental Quality Commission

- Rule Adoption Item
- Action Item
- Information Item

Agenda Item G  
January 28, 1994 Meeting

**Title:**

Pulp Mill Contested Case: Proposed Order Dismissing Case

**Summary:**

By order dated August 10, 1992, the EQC granted the petitions from the pulp mills for reconsideration of the AOX conditions of the April 16, 1992 contested case order. A subsequent hearing was to be held by the Commission between July 1, 1993 and November 30, 1993 for the purpose of further clarifying the scope of the issues to be reconsidered and determining whether to reopen the evidentiary record. The delay was to allow the mills time to complete the installation of chlorine dioxide substitution equipment and to develop and present operating data to demonstrate the capability of such equipment. At the October 29, 1993 meeting of the Commission, the Commission entered an order extending the November 30, 1993 deadline for proceeding with the reconsideration until January 31, 1994.

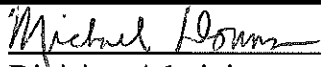
On December 23, 1993, the Department issued NPDES Permit No. 101173 to the City of St Helens, and NPDES Permit No. 101172 to James River Paper Company.

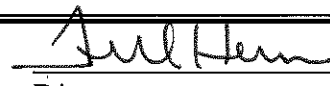
On January 11, 1994, a joint motion was filed by the City of St Helens, James River Paper Company, Inc., and Boise Cascade Corporation to dismiss the Pulp Mill Contested Case as moot. The permittees state in their motion for dismissal that these permits are acceptable to them and that the contested case filed in 1990 is now moot. The Motion was mailed by the petitioners to all of the parties in the contested case.

**Department Recommendation:**

The Department recommends that the Commission enter an order dismissing the contested case and authorize the Director to sign the order on behalf of the Commission. A proposed order is included as attachment A to the staff report.

  
Report Author

  
Division Administrator

  
Director

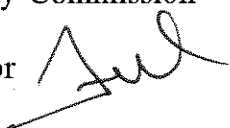
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\*Accommodations for disabilities are available upon request by contacting the Public Affairs Office at (503)229-5317(voice)/(503)229-6993(TDD).

State of Oregon  
Department of Environmental Quality

Memorandum<sup>†</sup>

Date: January 12, 1994

To: Environmental Quality Commission  
From: Fred Hansen, Director   
Subject: Agenda Item G, January 29, 1994, EQC Meeting  
Pulp Mill Contested Case: Proposed Order Dismissing Case

**Statement of the Issue**

A joint motion has been filed by the City of St Helens, James River Paper Company, Inc., and Boise Cascade Corporation to dismiss the Pulp Mill Contested Case as moot.

**Background**

On November 14, 1990, the Department of Environmental Quality issued National Pollutant Discharge Elimination System (NPDES) Permit No. 100715 to the City of St. Helens and NPDES Permit No. 100716 to James River II, Inc. The permits were appealed, and a contested case proceeding was commenced before Hearings Officer Arno Denecke.

The EQC determination on the contested case was made at the March 12, 1992 EQC Meeting in Hillsboro. The written order setting forth the decision was signed and mailed to the parties on April 16, 1992.

Petitions for Reconsideration or Rehearing of the Commission's Decision in the Contested Cases were received from James River II on 6/11/92 and Boise Cascade Corporation on 6/12/92.

The Environmental Quality Commission considered the petitions on July 23, 1992, and by order dated August 10, 1992, granted the petitions for reconsideration of portions of the Findings of Fact and Conclusions of Law and Final Order relating to the mills' NPDES permit conditions regulating the discharge of organochlorines other than dioxin. The order further specified that a hearing will be held by the Commission on the matter

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<sup>†</sup>Accommodations for disabilities are available upon request by contacting the Public Affairs Office at (503)229-5317(voice)/(503)229-6993(TDD).

Memo To: Environmental Quality Commission  
Agenda Item G  
January 29, 1994 Meeting  
Page 2

at a date to be scheduled by the Department subject to approval by the Commission Chair during the period between July 1, 1993 and November 30, 1993.

At the October 29, 1993 meeting of the Commission, the Commission entered an order extending the November 30, 1993 deadline for proceeding with the reconsideration until January 31, 1994.

On December 23, 1993, the Department issued NPDES Permit No. 101173 to the City of St Helens, and NPDES Permit No. 101172 to James River Paper Company. The permittees state in their motion for dismissal that these permits are acceptable to them and that the contested case filed in 1990 is now moot.

On January 11, 1994, a joint motion was filed by the City of St Helens, James River Paper Company, Inc., and Boise Cascade Corporation to dismiss the Pulp Mill Contested Case as moot. The Motion was mailed by the petitioners to all of the parties in the contested case. The Motion is included as Attachment B of this report

#### Recommendation for Commission Action

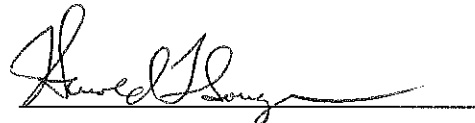
It is recommended that the Commission enter an order dismissing the contested case and authorize the Director to sign the order on behalf of the Commission. A draft order is presented in Attachment A of this report.

#### Attachments

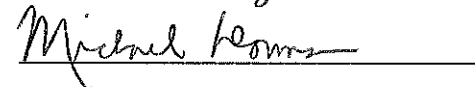
- A. Proposed Order
- B. Joint Motion to Dismiss the Contested Case

Approved:

Section:



Division:



Report Prepared By: Harold Sawyer

Phone: 229-5776

Date Prepared: January 12, 1994

HLS:1

Before the Environmental Quality Commission  
of the State of Oregon

In the Matter of National Pollutant )  
 Discharge Elimination System Waste )  
 Discharge Permit No. 100715 issued )  
 to the City of St. Helens on )  
 November 14, 1990, )  
 )  
 and )  
 )  
 In the Matter of National Pollutant )  
 Discharge Elimination System Waste )  
 Discharge Permit No. 100716, issued )  
 to James River II, Inc. on )  
 November 14, 1990. )  
 )  
 \_\_\_\_\_ )

ORDER DISMISSING  
CONTESTED CASE

On January 11, 1994, the City of St. Helens, James River Paper Company, Inc., formerly known as James River II, Inc. ("James River"), and Boise Cascade Corporation ("Boise Cascade") filed a joint motion for a final order dismissing the contested case in its entirety as moot.

FINDINGS

1. On November 14, 1990, the Department of Environmental Quality issued National Pollutant Discharge Elimination System (NPDES) Permit No. 100715 to the City of St. Helens and NPDES Permit No. 100716 to James River II, Inc. The permits were appealed, and a contested case proceeding was commenced before Hearings Officer Arno Denecke.
2. The EQC determination on the contested case was made at the March 12, 1992 EQC Meeting in Hillsboro. The written order setting forth the decision was signed and mailed to the parties on April 16, 1992.
3. Petitions for Reconsideration or Rehearing of the Commission's Decision in the Contested Cases were received from James River II on 6/11/92 and Boise Cascade Corporation on 6/12/92.
4. The Environmental Quality Commission considered the petitions on July 23, 1992, and by order dated August 10, 1992, granted the petitions for reconsideration of portions of the Findings of Fact and Conclusions of Law and Final Order relating to the mills' NPDES permit conditions regulating the discharge of organochlorines

other than dioxin. The order further specified that a hearing will be held by the Commission on the matter at a date to be scheduled by the Department subject to approval by the Commission Chair during the period between July 1, 1993 and November 30, 1993.

5. At the October 29, 1993 meeting of the Commission, the Commission entered an order extending the November 30, 1993 deadline for proceeding with the reconsideration until January 31, 1994.
6. On December 23, 1993, the Department issued NPDES Permit No. 101173 to the City of St Helens, and NPDES Permit No. 101172 to James River Paper Company. The permittees state in their motion for dismissal that these permits are acceptable to them and that the contested case filed in 1990 is now moot.
7. The Motion for dismissal was mailed by the petitioners to all of the parties in the contested case.

#### ORDER

The joint motion for an order dismissing the contested case in its entirety is hereby granted.

Dated this \_\_\_ day of January, 1994.

On behalf of the Commission

---

Fred Hansen, Director  
Department of Environmental Quality



STOEL RIVES BOLEY  
JONES & GREY

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(503) 294-9676

January 11, 1994

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED  
JAN 11 1994

BY MESSENGER

Mr. Fred Hansen  
Director  
Department of Environmental Quality  
811 S.W. Sixth Avenue  
Portland, Oregon 97204

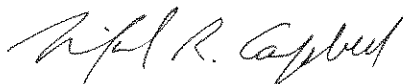
OFFICE OF THE DIRECTOR

Re: Pulp Mill Contested Case

Dear Mr. Hansen:

I enclose for filing in the matter described above the joint motion of the City of St. Helens, James River Paper Company, Inc., and Boise Cascade Corporation to dismiss the contested case as moot.

Very truly yours,



Michael R. Campbell  
Of Attorneys for  
Boise Cascade Corporation

MRC:bak  
Enclosure

cc (w/encl.): Service List  
Mr. Charles K. Ashbaker  
Mr. Richard H. Williams  
Mr. Peter M. Linden  
Mr. Michael D. McIntyre

PDX1-93929.1 15760 0133

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION  
OF THE STATE OF OREGON

In the matter of National )  
Pollutant Discharge Elimination )  
System Waste Discharge Permit ) JOINT MOTION TO DISMISS THE  
No. 100715, issued to the City ) CONTESTED CASE AS MOOT  
of St. Helens on November 14, )  
1990, )  
and )  
In the matter of National )  
Pollutant Discharge Elimination )  
System Waste Discharge Permit )  
No. 100716, issued to James )  
River II, Inc., on November 14, )  
1990. )

The City of St. Helens, James River Paper Company, Inc., formerly known as James River II, Inc. ("James River"), and Boise Cascade Corporation ("Boise Cascade") jointly move the Commission for a final order dismissing the contested case in its entirety as moot.

On December 23, 1993, the Department issued National Pollutant Discharge Elimination System ("NPDES") Permit No. 101173 to the City of St. Helens.

On December 23, 1993, the Department issued NPDES Permit No. 101172 to James River.

NPDES Permit No. 101173 is acceptable to the City and Boise Cascade, and NPDES Permit No. 101172 is acceptable to James River. Therefore, the contested case, which challenges the terms of the NPDES permits issued to the City and James

River in 1990, is now moot. Accordingly, the City, James River, and Boise Cascade jointly move for a final order dismissing the contested case in its entirety as moot.

DATED: January 11, 1994.

CITY OF ST. HELENS

Peter M. Linden by MRC

Peter M. Linden  
Attorney for the  
City of St. Helens

LANE POWELL SPEARS LUBERSKY

Richard H. Williams

Richard H. Williams  
Attorneys for  
James River Paper Company, Inc.

STOEL RIVES BOLEY JONES & GREY

Michael R. Campbell

Michael R. Campbell  
Attorneys for  
Boise Cascade Corporation

CERTIFICATE OF FILING AND SERVICE

I hereby certify that I filed the original of the foregoing JOINT MOTION TO DISMISS THE CONTESTED CASE AS MOOT by causing it to be hand-delivered to the Office of the Director of the Department of Environmental Quality, 811 S.W. Sixth Avenue, Portland, Oregon 97204, on January 11, 1994.

I further hereby certify that I served a true and correct copy of the motion on

William W. Wessinger, Chair  
Environmental Quality Commission  
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Portland, Oregon 97204

Emery N. Castle, Vice Chair  
Environmental Quality Commission  
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307 Ballard Hall  
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by first-class mail, at the listed addresses, on January 11,  
1994.

DATED: January 11, 1994.

STOEL RIVES BOLEY JONES & GREY

  
\_\_\_\_\_  
Michael R. Campbell  
Attorneys for  
Boise Cascade Corporation

# Environmental Quality Commission

- Rule Adoption Item
- Action Item
- Information Item

Agenda Item H  
January 28, 1994 EQC Meeting


<b>Title:</b> Review of City of Portland Proposal for Interim Control Measures for combined Sewer Overflows			
<b>Summary:</b> The Environmental Quality commission is required by the terms of a Stipulated Final Order to review and approve interim control measures for the City of Portland's combined sewer overflows. The control measures considered were ones in use in other cities or that appeared to be technically reasonable and promising. Each of the control measures was evaluated against a set of criteria, and whether the control construction was likely to be part of the final control of overflows.			
<b>Department Recommendation:</b> The Department held a public information meeting, followed by a public hearing, about the proposed interim control measures, and recommends the following interim control measures: 1) disconnection of roof drains, 2) reduction/regulation of batch discharges, and 3) increased diversion of flows to treatment plant.			
<table style="width: 100%; border: none;"><tr><td style="width: 33%; text-align: center;"><u>Michael Down for Bahr</u> Report Author     <i>Bahr</i></td><td style="width: 33%; text-align: center;"><u><i>[Signature]</i></u> Division Administrator</td><td style="width: 33%; text-align: center;"><u><i>[Signature]</i></u> Director</td></tr></table>	<u>Michael Down for Bahr</u> Report Author <i>Bahr</i>	<u><i>[Signature]</i></u> Division Administrator	<u><i>[Signature]</i></u> Director
<u>Michael Down for Bahr</u> Report Author <i>Bahr</i>	<u><i>[Signature]</i></u> Division Administrator	<u><i>[Signature]</i></u> Director	

1/14/84     †Accommodations for disabilities are available upon request by contacting the Public Affairs Office at (503)229-5317(voice)/(503)229-6993(TDD).

State of Oregon  
Department of Environmental Quality

Memorandum<sup>†</sup>

Date: December 29, 1993

To: Environmental Quality Commission  
From: Fred Hansen, Director   
Subject: Agenda Item H, January 28, 1994, EQC Meeting

Review of City of Portland Proposal for Interim Control Measures for  
Combined Sewer Overflows

**Statement of the Issue**

Under the terms of a Stipulation and Final Order (SFO) signed by the City of Portland and the Environmental Quality Commission, the City is required to submit a study of possible interim control measures for the City's combined sewer overflows. The Commission is required under the conditions of the Order to review and approve interim control measures.

**Background**

The City is on schedule to eliminate almost all of the untreated combined sewer overflows into the Willamette River and Columbia Slough by the year 2011. In addition, through the SFO, the Commission required that the City look at interim control measures which might reduce pollution while the long range plan is being implemented.

The term "interim control measure" is not clearly defined in the Order. An interim control measure could be any structure or practice that has the effect of reducing either the volume or amount of pollutants discharged during combined sewer overflow events. Such measures would be employed with the recognition that, in themselves, they will not meet the full objective of the SFO of virtually no discharges that do not achieve water quality standards. Examples of interim control measures include: better management of "batch discharges" from industries discharging to the City's sewers (to avoid adding flows/pollutants during rainstorms when overflows are already occurring); and periodic sewer flushing between rain storms to remove solids that have settled out in the sewers. Both of these measures would reduce the combined sewer overflows volume or pollutant loading, but would not solve the problem entirely.

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<sup>†</sup>Accommodations for disabilities are available upon request by contacting the Public Affairs Office at (503)229-5317(voice)/(503)229-6993(TDD).

Additional examples of possible interim control measures might include: residential roof drain disconnects (to minimize the stormwater portion of the combined sewer overflows); increased street sweeping (to reduce the solids being washed into the combined sewers during rains); and removing creek flows such as Tanner Creek from the combined sewers.

### **Authority to Address the Issue**

Approval of the interim control measures is required under the Stipulation and Final Order approved by the Commission.

### **Alternatives and Evaluation**

**What interim control measures have been evaluated?** The interim control measures considered were those either in use in other cities, or those that seemed technically reasonable and promising. The City was required to evaluate the following: screens and other technologies for removing large solids and floatables; maximization of in-line storage including passive and automatic regulators; removal of new and/or existing roof drain connections from the sewer system; increased line flushing including an evaluation of timing and location of flushing activities; increased street sweeping; the review and modification of the pretreatment program; and increased cleaning of catch basins.

Under the terms of SFO, the City also conducted three pilot studies, which evaluated the efficiency/practicality of sewer cleaning, increased street sweeping, and innovative low technology screens. A study evaluating the source and possible control of syringes was also completed.

### **What criteria did the Department use in evaluating each interim control measure?**

The City currently discharges an average of six billion gallons per year of untreated combined sewer overflows from 55 combined sewer overflow points. Overflow events occur an average of 70 times per year. Human pathogens from the sanitary wastes are the primary pollution concern, although not the only one. Also of concern are other pollutants such as metals associated with some industrial discharges and street runoff. Each interim control measure was evaluated using the following criteria:

- Does the measure reduce the number of overflow events, and at what overflow points?



- Is the pollutant load reduced resulting in fewer/shorter periods of water quality standards violations? Is there an reduced impact on beneficial uses?
- Is the control measure a likely part of the final control measure, or will there be a substantial capital investment that will be "wasted" in the long run?
- How "implementable" is the control measure - are there institutional/legal/other barriers that would prevent the control measure from happening?
- Is the control measure considered proven technology in use elsewhere, or is it experimental? Does it have a good chance of being successful?
- How expensive is it relative to the water quality benefits, both in terms of capital cost and annual operating expenses?

**What are final control measures likely to be?** As part of the evaluation of possible interim control measures, it is helpful to determine whether the interim control measure construction will be "throwaway" structures or not, in terms of the final control measures. Although not yet approved by the Commission, the final control of the overflows will probably include the following elements:

- Stormwater reduction - Roof drains will be disconnected from the sewer system, and stormwater in some areas will be diverted to new stormwater sumps. In addition, some creeks that currently discharge into the combined sewer system will be diverted to the Willamette River.
- Increased flows to secondary treatment - Many of the diversion structures will be modified so that more flows will be diverted to the existing secondary treatment plant. Some pump stations will be expanded and some relief sewers will be built. An additional secondary treatment plant is scheduled for construction to treat wastes from the newly sewerred mid-Multnomah County.
- New storage and primary treatment facilities - One or more new primary treatment facilities may be built to treat the combined sewer flows during storm events. In addition, the primary treatment capacity at the existing Columbia Boulevard secondary treatment plant will be expanded.

### **Evaluation of Interim Control Measures**

The Department's evaluation of the interim control measures is included as Attachment 5. A summary chart of the evaluation is included at the end of this report.

### **Summary of Any Prior Public Input Opportunity**

The Department's draft recommendations were put out on public comment, and a public information meeting followed by a public hearing were held. The summary of the testimony (both written comments and at the public hearing) is attached, as well as the Department's response to comments received. The City submitted testimony approving the Department's recommendations.

### **Conclusions**

The Commission's initial intent was for the City to explore possible interim control measures to quickly and reasonably reduce the impact of the combined sewer overflows. The Department believes that the following measures meet the intent of the Commission, and recommends them for approval by the Commission.

1. Maximization of in-line storage - Increased in-line storage for larger interceptors should be included as part of the overall control plan, but due to very high cost is not suitable as an interim control measure and should not be singled out for early implementation. Upper basin in-line storage is not recommended because of the likelihood of increased basement flooding.
2. Disconnection of residential roof drains - This measure has the potential to reduce the overflows by up to 40%, but has a very high capital cost (up to \$104 million). It should be implemented as soon as possible, consistent with maintaining a constant capital expenditure to minimize ratepayer impact.
3. Reduction/regulation of batch discharges - Continue with prohibition on one-time batch discharges during rain, careful oversight of Fire and Water Bureau activities that result in large batch discharges.
4. Increased diversion of flows to treatment plant - Recommend City proceed with efforts to modify 104 diversion structures to increase flows to treatment plant as soon as practicable, but by no later than March 31, 1995.

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**Recommendation for Commission Action**

The Department recommends that the Commission approve the interim control measures as described above.

**Attachments**

- Attachment 1 - Summary of Interim Control Measures
- Attachment 2 - Hearings Officer Report
- Attachment 3 - Department Response to Comments
- Attachment 4 - Copy of Stipulation and Final Order
- Attachment 5 - Department Evaluation of Interim Control Measures

**Reference Documents (available upon request)**

"Combined Sewer Overflow SFO Compliance - Interim Control Measures Study", May, 1993.

Approved:

Section: Barbara A. Burton

Division: Michael Horns

Report Prepared By: Barbara Burton

Phone: 378-8240

Date Prepared: December 29, 1993

BAB:crw  
MW\WC12222.5  
(12/29/93)

**ATTACHMENT 1**

**SUMMARY OF INTERIM CONTROL MEASURES**

INTERIM CONTROL MEASURE	WQ EFFECTS		PART OF LONG-RANGE PLAN	PROVEN TECHNOLOGY	COST			DEPARTMENT RECOMMENDATION
	% REDUCTION FECAL COLIFORM	% REDUCTION, HOURS OF WQS VIOLATIONS			CAPITAL (\$)	ANNUALIZED (\$)	\$/HOUR WQ STANDARD VIOLATIONS REDUCED	
Screens	5	2.6	No	Yes	100M	11.6M	390,000/Hour	<b>Reject</b> — Minimal WQ benefit — too expensive.
Maximize In-Line Storage — Upper Basin	6	3.1	No	Maybe — Not commonly used; has experienced problems.	2.6M	676,000	19,500/Hour	<b>Reject</b> — Not feasible because of lack of excess storage; danger of basement/street flooding.
Maximize In-Line Storage — Interceptors	—	—	Yes	Yes	—	—	—	<b>Reject</b> — Major construction; integral part of overall control plan. Not suitable for early implementation.
Roof Drain Disconnect	6.6 — 31	3.3 — 20	Yes	Yes	34M — 104M	2.1M — 6.5M	56,000/Hour — 38,000/Hour	<b>Approve</b> — Should proceed as fast as consistent with even capital expenditure in project.

## SUMMARY OF INTERIM CONTROL MEASURES

INTERIM CONTROL MEASURE	WQ EFFECTS		PART OF LONG-RANGE PLAN	PROVEN TECHNOLOGY	COST			DEPARTMENT RECOMMENDATION
	% REDUCTION FECAL COLIFORM	% REDUCTION, HOURS OF WQS VIOLATIONS			CAPITAL (\$)	ANNUALIZED (\$)	\$/HOUR WQ STANDARD VIOLATIONS REDUCED	
Sewer Flushing	1.2	0.6	No	No Results	—	6.8M	990,000/Hour	Reject — Minimal WQ benefit; too expensive.
Intensified Street Sweeping	Minimal	Negligible	No	Yes	—	850,000	?	Reject — Minimal WQ benefit.
Catch Basin Construction/Cleaning	Minimal	Negligible	No	Yes	97M	6.3M	?	Reject — Minimal WQ benefit; high cost.
Reduction/Elimination of Batch Discharges	?	Several Days of Discharges Eliminated	Yes	Yes	—	—	—	Approve — Recommend to continue program.
Increase Flow to Treatment Plant Diversion Structure Modifications	7	3.5	Yes	Yes	392,000	20,000	500/Hour	Approve — Recommend early implementation.

## ATTACHMENT 2

State of Oregon  
Department of Environmental Quality

Memorandum

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Date: December 28, 1993

**To:** Environmental Quality Commission  
**From:** Barbara Burton, Hearings Officer  
**Subject:** Comments Received, Proposed City of Portland Interim Control Measures for Combined Sewer Overflows

The Department prepared a draft list of proposed interim control measures to be recommended to the Commission, and on November 12, 1993 placed those recommendations out for public comment. A public hearing was held on December 15, 1993, and written comments could be submitted up to December 22, 1993. The following summarizes the comments received during the public comment period.

### December 15, 1993 Public Hearing

The public hearing was held starting at 7:00 PM, at the Northwest Service Center in Portland. The public hearing followed a two hour informational meeting, where the specifics of the Department's recommendations were discussed.

Lester Lee, representing the City of Portland, read into the record a letter of support of the Department's recommendations. A copy of that letter is attached. No one else testified.

### Written Comments

Four sets of written comments were received by the Department, in addition to the comments submitted by the City of Portland. These are attached. The following summarizes the major points raised in each.

**Kent Taylor, City Manager of McMinnville** offered testimony regarding the Department's statement that minimizing ratepayer impact was a consideration in recommending interim control measures. He said that no such consideration was given to the City of McMinnville, and questioned how the Department would make the determination as to "acceptable" ratepayer impact.

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**James Barrett, President of the Foster-Powell Neighborhood Association** made several suggestions regarding wording changes. In addition, he recommended that the City be required to improve their street sweeping program by adopting ordinances prohibiting car parking on days of sweeping. This would be a low cost or no cost way to improve the efficiency of street sweeping, since parked cars currently get in the way of the street sweepers in many neighborhoods.

**Nina Bell, Executive Director, Northwest Environmental Advocates** expressed concern in a number of areas. Ms. Bell stated that this is the only public comment period allowed by the Department for the entire CSO project, and comments regarding matters other than the interim control measures were included. Ms. Bell stated that the City will likely be allowed to discharge more frequently than is now allowed in the Stipulation and Final Order, and that this should have been taken into account. Also, the change in time frame that may occur before the CSO's reach full compliance was not taken into account. The use by the Department of water quality standards violations as a criteria was rejected, and instead the use of [unadopted] sediment and fish tissue levels of toxics should have been used. Ms. Bell believes that not enough sampling of CSO discharges has occurred, and that it is therefore not known if there are water quality standards violations of metals. Further information regarding street runoff solids, and how much of them are metals, should have been included in the Department's evaluation. The Department should have included an evaluation of EPA's draft minimum control technologies in the discussion of interim control measures. The use of screens as part of the final control strategy should have been included in the discussion of interim control measures. Further measurement of dry weather overflows should be considered by the Department. Further discussion of the City's industrial pretreatment program should have been included as part of the interim control measures study. In addition, pollution prevention by households and industries should be considered as an interim control measure. Adequate public notification for CSO events should have been discussed by the Department. A monitoring program and time frames for implementing the interim control measures should be included and made available to the public. The Department should state the level of treatment that increased flows to the secondary treatment plant will receive.

**Annette Liebe, Air/Water Program Director for the Oregon Environmental Council** commended the Department for having an open process and involving the public, but expressed concerns about the substance of the Department's recommendations and the evaluation process followed. Ms. Liebe stated that the Department placed too much emphasis on the entire elimination of overflows, and not enough on measures that reduced

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the flows, particularly the stormwater portion of the overflows. She also expressed the view that the City will likely be allowed to discharge more frequently than is now in the Stipulation and Final Order, and that this will change the appropriate interim control measures. Regarding catch basins, it was recommended that the Department look at specific toxic "hotspots" and require catch basins be installed there, rather than look at catch basins over the entire combined sewer area as the Department did. Ms. Liebe also urged the Department to require that measures that will reduce the overflow volumes (such as increasing in-line storage) that are part of the overall control effort be implemented as soon as possible.

#### Attachments



## Attachment 3

State of Oregon  
Department of Environmental Quality

Memorandum

**Date:** December 29, 1993

**To:** Environmental Quality Commission

**From:** Barbara Burton

**Subject:** Response to Comments, Portland Interim Control Measures for Combined Sewer Overflows

**Comment:** Why was ratepayer impact included for Portland but not other cities projects, and what are the criteria to be used in determining an acceptable ratepayer impact?

**Response:** The Department considered ratepayer impact for this project because the overall control effort will be so expensive, and it did not seem reasonable to require additional significant expense for interim control measures. The Department rarely requires interim control measures, but rather believes that public dollars are better spent on the ultimate control effort. For example, the Department has not required any interim control measures for the City of McMinnville.

**Comment:** The City could adopt ordinances prohibiting on-street parking during street sweeping, and thereby much reduce the solids discharged into the combined sewers.

**Response:** Street sweeping is done now for aesthetic purposes, although there is a small reduction in the pollutant load associated with storm runoff. As the commenter noted, in congested areas, it is difficult for the street sweepers get to the curb and effectively sweep the curb line.

Historically, the City paid to have staff reach under and around parked vehicles to remove debris, but this practice was dropped because of cost. More recently, Portland has approached the problem of sweeping in congested areas in three ways: "door hangers" are place at each residence once per year, giving the dates of sweeping; "clean sweeps" have been conducted in eight congested neighborhoods, where streets were blockaded and an intensive effort was made to notify residents to park elsewhere during sweeping; and leaf pickups are made in seventeen neighborhoods. The "clean sweeps" were relatively effective

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December 29, 1993

in terms of the amount of debris picked up, but an estimated 90% of the debris was from years of accumulations and was too heavy to have washed off into the combined sewers. That is, the clean sweeps were effective from an aesthetic standpoint but were relatively ineffective at removing the smaller solids likely to wash off. The City estimates that "clean sweeps" approximately quadruple the cost of street sweeping. Based on this high cost, more intensive efforts to restrict parking during street sweeping is not recommended by the Department.

**Comment:** If the ultimate level of control is changed, this will change whether or not specific interim control measures are worth pursuing. An example was given where with a less protective level of control, the outfalls might be combined and screens might be required and that these screens could be considered interim control measures.

**Response:** The Commission will be considering requests from the City of Portland for a reduced discharge frequency standard, but any change is unlikely to be a large enough to result in a change in the basic control measures (storage and treatment). The Department disagrees that the most likely change in allowable overflows will result in a change in the feasibility of interim control measures. All interim control measures will still have the same cost/benefit. The only change in recommended interim control measures that might occur would be for those measures rejected only because they are not part of the long range program, but with a less stringent standard they would be part of the long range plan. The Department reviewed the interim control measures and could find none that would be affected by any change in discharge frequency.

In the example given, screens may be appropriate as part of the final control effort but not as an interim control measure. Installing screens now would not be feasible, since the consolidation sewers linking the outfalls have not been constructed, and the flows are vastly higher than they will be after completion of the overall control effort.

**Comment:** Interim control measures should have been evaluated as to the impact on reducing the toxics associated with stormwater runoff, not just bacteria and not just the impact on water quality standard violations.

**Response:** The Department did include as a criterion how much volume and how much solids would be reduced for each interim control measure evaluated. Both of these parameters are directly linked to stormwater runoff and the associated metals. For example, under the Department discussion of catch basins, the following statement was made under the

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December 29, 1993

section labeled WQ benefits: "...If all direct inlets were converted to catch basins, then there would be an estimated 80% reduction in solids associated with stormwater. No impact on WQ standards violations, but would impact sediment levels of heavy metals around CSO outfalls." Under the section of the Department's report entitled "What criteria did the Department use in evaluating each control measure?" the following statement was made: "...Human pathogens from the sanitary wastes are the primary pollution concern, although not the only one..."

The Department agrees that the reduction in solids including metals associated with stormwater runoff is desirable, even if water quality standards are not currently being violated. All recommended interim control measures will reduce the stormwater as well as the sanitary component of the combined sewer overflows. The construction of catch basins was rejected because of the very high cost (\$97 million) and because it would not be part of the overall control plan, and not because it would not produce water quality benefits.

It should be noted that the metals of most concern (specifically zinc, copper and lead) in the stormwater are no greater than that in the sanitary portion of the overflows (very slightly higher for lead and zinc, slightly lower for copper). Metals in stormwater are mostly from automobile related sources, whereas metals in sanitary wastes come mostly from industrial/commercial wastes, and from drinking water which picks up these metals in plumbing fixtures in homes and businesses.

**Comment:** The catch basin analysis should be re-done, looking at localized toxic "hotspots" as opposed to the entire system.

**Response:** Likely sources of elevated levels of toxics in stormwater are or will be regulated under the stormwater permit program. Included in the stormwater permits issued are monitoring requirements as well as control requirements to prevent the contamination of stormwater runoff. If hotspots are found, catch basins could be required. However, the Department expects the stormwater management measures to minimize hotspots.

Urban stormwater is recognized nationally as a significant source of some pollutants, and is receiving increased attention including the development and implementation of best management practices. Oregon is not yet ready to require catch basins in selected areas in any City, although as our knowledge of stormwater systems increases catch basins and other control measures may be required.

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December 29, 1993

**Comment:** Measures such as increasing in-line storage which will reduce overflows but are part of the long-range program should be implemented as soon as possible.

**Response:** The Department agrees. However, it needs to be recognized that many of the flow reducing measures are also very expensive (\$300 million plus total for the "cornerstone projects"). Timing of these control measures should be done as soon as possible, consistent with equalizing capital expenditures over time and thereby minimizing ratepayer impact.

**Comment:** The interim control measures should also include a much increased monitoring program. The Department did not have sufficient monitoring data upon which to evaluate the interim control measures.

**Response:** The Department disagrees with both points. The interim control measures are strictly to minimize the volume or characteristics of the overflows. Monitoring requirements are included in the NPDES permit issued to the City. Secondly, the Department believes that there were sufficient data available. The City has completed a CSO "characterization" study that has been accepted by the Department as adequately measuring and describing the overflows. Finally, the City is required to frequently and comprehensively monitor the influent to the Columbia Boulevard treatment facility. During rain storms, the influent will be representative of the discharges occurring at the combined sewer overflows. Some monitoring of representative CSO's is continuing.

**Comment:** EPA has a draft document requiring that three additional "minimum controls" be met for combined sewer systems. These additional draft EPA requirements should have been included as part of the interim controls evaluated, and the Department should start over on evaluating interim control measures.

**Response:** The Department disagrees. First, the EPA requirements are draft only and could change. Secondly, if these additional requirements are finalized, the Department would need to modify the permit and include those new requirements. This process will include an opportunity for public comment. That is the appropriate time to consider additional controls, if any are ultimately required.

**Comment:** A discussion of the relation of solids in street sweepings and the levels of heavy metals should have been included in the Department's discussion.

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**Response:** The discussion of solids and the metals content could have been longer, although mention was made in the Department's report. There was a more detailed discussion included in the City's full interim control measures study, that was available to members of the public during this public comment period. The Department did take into consideration the metals portion of the solids associated with street runoff during the evaluation of alternatives.

**Comment:** A number of issues related to the overall CSO control program but not interim control measures were raised, including increased monitoring and public notification. These were brought up "because this is the only significant public commenting process during which the public has been invited to comment on the entire CSO program..."

**Response:** This public comment period was strictly regarding interim control measures, and this is not the appropriate time to open up all aspects of the CSO program for review and alteration. There was an extensive public comment period regarding the overall CSO program when the Stipulation and Final Order was signed two years ago. Public comment regarding other aspects of the CSO program can be made at the joint DEQ-City of Portland public meetings now underway, or when the final facilities plan for the entire CSO program is received (expected next summer). The Department intends to open up the facilities plan and the Department's recommendations to the Commission regarding the CSO program for public comment.

**Comment:** Pollution prevention programs for residential, commercial and industrial sewer users should have been evaluated.

**Response:** The City has an extensive industrial pretreatment program, as required by the federal Clean Water Act, which includes extensive monitoring, permits issued to industries, and regular sampling and inspections. The Department oversees the City's program, and is satisfied that discharges of toxics into the City's sewers have been reasonably minimized. Those facilities known to have a significant potential to discharge toxic pollutants are carefully regulated under the pretreatment program.

ATTACHMENT 4

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION  
OF THE STATE OF OREGON

3	DEPARTMENT OF ENVIRONMENTAL QUALITY, )	STIPULATION AND FINAL ORDER
4	OF THE STATE OF OREGON, )	No. WQ-NWR-91-75
5	Department, )	MULTNOMAH COUNTY
6	v. )	
7	CITY OF PORTLAND, )	
8	Respondent. )	

WHEREAS:

1. On August 5, 1991, the Department of Environmental Quality (Department or DEQ) issued National Pollutant Discharge Elimination System (NPDES) Waste Discharge Permit Number 100807 (Permit) to the City of Portland (Respondent), pursuant to Oregon Revised Statutes (ORS) 468.740 and the Federal Water Pollution Control Act Amendments of 1972, P.L. 92-500, as amended. The Permit authorizes the Respondent to construct, install, modify or operate waste water treatment control and disposal facilities (facilities) and discharge adequately treated waste waters into the Columbia River and Willamette River, waters of the state, in conformance with the requirements, limitations and conditions set forth in the Permit. The Permit expires on March 31, 1996.

2. Respondent's sewage collection system is comprised in part of combined sewers designed to collect both sanitary sewage and storm runoff water. The combined sewer system is designed and intended to collect and transport all sanitary sewage to Respondent's sewage treatment plant during periods of dry weather;

1 Respondent's sewage treatment plant during periods of dry weather;  
2 however, during some periods of wet weather, the combined sanitary  
3 sewage and storm runoff entering the system exceeds the system's  
4 capacity to collect and transport sewage to the sewage treatment  
5 plant. At such times, the excess combined sanitary sewage and storm  
6 runoff are discharged through Combined Sewer Overflows directly to  
7 the Willamette River and Columbia Slough, waters of the state,  
8 without treatment. Respondent's system includes 54 Combined Sewer  
9 Overflows. In addition, Respondent owns and operates sewage pump  
10 stations, one of which, the Ankeny Pump Station, may not be capable  
11 of pumping all incoming combined sanitary sewage and storm runoff  
12 during periods of wet weather. At such times, combined sanitary  
13 sewage and storm runoff are discharged from the Ankeny Pump Station  
14 directly to the Willamette River without treatment. The discharges  
15 of combined sanitary sewage and storm runoff from the Combined Sewer  
16 Overflows and the Ankeny Pump Station (Discharges) may cause  
17 violations of Oregon's water quality standards for Fecal Coliform  
18 bacteria and possibly other parameters in the Columbia Slough and  
19 the Willamette River.

20 3. Respondent's prior NPDES permit, issued on September 18,  
21 1984, did not expressly identify the combined sewer overflow  
22 discharge points that are part of the sewer system. Prior to the  
23 development of the Department's final draft 'Oregon Strategy for  
24 Regulating Combined Sewer Overflows (CSOs)' on February 28, 1991, as  
25 a matter of policy the Department did not always list CSO discharge  
26 points in an NPDES permit but, in many instances, issued permits for

1 an entire sewer system. EPA's Region 10 office approved the  
2 issuance of such permits. Respondent's 1984 NPDES permit is a  
3 permit for the sewer system, which includes CSO outfalls, but did  
4 not contain specific effluent limitations for CSOs.

5 4. Since the adoption of water quality standards for the  
6 Willamette Basin (included in Oregon Administrative Rules 340-41-  
7 445) by the Environmental Quality Commission in 1976, Respondent  
8 has discharged combined sanitary sewage and storm runoff and may  
9 have caused violations of water quality standards. These water  
10 quality standards include limitations on visible solids and  
11 floatable material.

12 5. DEQ and the Respondent recognize that until new or  
13 modified facilities are constructed and put into full operation,  
14 Respondent may cause violations of the water quality standards at  
15 times.

16 6. Respondent presently is conducting or preparing to  
17 conduct studies and facilities planning in order to determine the  
18 quantity and quality of combined sanitary sewage and storm runoff  
19 discharged from its sewage system, and to determine appropriate  
20 methods and time schedules to eliminate violations of water quality  
21 standards.

22 7. The Department and Respondent recognize that the  
23 Environmental Quality Commission (Commission) has the power to  
24 impose a civil penalty and to issue an abatement order for  
25 violations of water quality standards. Therefore, pursuant to ORS  
26 183.415(5), the Department and Respondent wish to settle those



1 possible past violations referred to in Paragraph 4 and to limit  
2 and resolve the future violations referred to in Paragraph 5 in  
3 advance by this Stipulation and Final Order.. In light of the  
4 recent development of EPA and Departmental strategy and policy  
5 governing permitting and evaluation of CSO impacts on water  
6 quality, imposition of a civil penalty at this time is not deemed  
7 appropriate by the Department.

8 8. This Stipulation and Final Order is not intended to  
9 limit, in any way, the Department's right to proceed against  
10 Respondent in any forum for any past or future violations not  
11 expressly settled herein.  
12

13 NOW THEREFORE, it is stipulated and agreed that:

14 9. The Commission hereby issues a final order:

15 a. Requiring the Respondent to eliminate all  
16 Discharges that violate applicable water quality standards from  
17 November 1 through April 30 except during storms greater than or  
18 equal to a storm with a five year return frequency and to eliminate  
19 all Discharges that violate applicable water quality standards from  
20 May 1 through October 31 except during storms greater than or equal  
21 to a storm with a ten year return frequency, as soon as reasonably  
22 practicable, but no later than the following schedule:

23 (1) By no later than September 1, 1991, the  
24 Respondent shall submit to the Department a draft scope of study  
25 for the facilities plan. The scope of study shall include an  
26 outline of the final facilities plan content, and sufficient detail

1 on how the necessary information is to be obtained to complete the  
2 facilities plan. The facilities plan shall, at a minimum, include a  
3 characterization of the Discharges including volume, times of  
4 discharge, and bacterial and chemical content; alternatives for  
5 eliminating water quality violations attributable to CSO's; the  
6 environmental and other impacts of the alternatives evaluated; the  
7 estimated cost of the alternatives; an evaluation of the impact of  
8 the CSO control alternatives on the Columbia Blvd. wastewater  
9 treatment plant; if the CSO alternatives will cause permit  
10 violations at the treatment plant, an evaluation of alternatives to  
11 expand or upgrade the treatment plant so as to maintain compliance  
12 with existing discharge standards; recommended control alternatives  
13 including any required plant upgrades that will result in compliance  
14 with water quality standards for the CSO discharges and compliance  
15 with the existing treatment plant discharge standards; a detailed  
16 implementation schedule for completing the recommended actions; a  
17 detailed demonstration that the recommended actions are the least  
18 cost/environmentally sound alternatives that will achieve the  
19 discharge limitations specified in this order; and a mechanism for  
20 financing the recommended improvements. The facilities plan shall  
21 include detailed implementation plans and financing plans for  
22 attaining compliance with applicable water quality standards at all  
23 CSO's alternatively: (1) for attaining compliance at all CSO's by  
24 December 1, 2006; and (2) for attaining compliance at all CSO's by  
25 December 1, 2011;  
26

1 (2) By no later than October 1, 1991, the  
2 Respondent shall submit to the Department a draft scope of study for  
3 an interim control measures study. The interim control measures  
4 study shall include a brief narrative description of each control  
5 measure; which CSO's would be affected by each control measure; the  
6 estimated impact of each control measure on quantity, quality, and  
7 timing of discharge; the estimated impact of each control measure on  
8 beneficial uses; the estimated capital cost and annual operation and  
9 maintenance cost for each control measure; and the estimated time  
10 needed to install or initiate each control measure. The interim  
11 control measures to be evaluated and included in the interim control  
12 measures study shall include but are not limited to the following:  
13 screens and other technologies for removing large solids and  
14 floatables; maximization of in-line storage including passive and  
15 automatic regulators; removal of new and/or existing roof drain  
16 connections from the sewer system; increased line flushing including  
17 an evaluation of timing and location of flushing activities;  
18 increased street sweeping; the review and modification of  
19 pretreatment program; and increased cleaning of catch basins;

20 (3) Within thirty (30) days of receiving written  
21 comments from the Department, the Respondent shall submit to the  
22 Department final approvable scopes of study for interim control  
23 measures study and the facilities plan;

24 (4) By no later than December 31, 1992, the  
25 Respondent shall submit the portion of the facilities plan that  
26 characterizes Combined Sewer Overflows;

1 (5) By no later than December 31, 1992, the  
Respondent shall submit the draft interim control measures study to  
3 be used by the Department and the Commission to determine  
4 appropriate and reasonably practicable interim control measures to  
5 reduce water quality impacts until such time as final compliance is  
6 attained.

7 (6) Within thirty (30) days of receiving written  
8 comments from the Department, the Respondent shall submit to the  
9 Department and the Commission the final interim control measures  
10 study that is approvable by the Department as to content and  
11 completeness;

12 (7) Upon submission of the final interim control  
13 measures study, the Commission, upon recommendation of the  
14 Department, shall establish the required interim control measures  
15 and the schedule for their implementation;

16 (8) By no later than July 1, 1993, the Respondent  
17 shall submit a draft facilities plan to the Department;

18 (9) Within six months of receiving written  
19 comments from the Department, the Respondent shall submit to the  
20 Department a final facilities plan that is approvable by the  
21 Department as to content and completeness. The Department will  
22 review the facilities plan and prepare recommendations to the  
23 Commission for CSO control strategies and schedules for implementing  
24 them. Final approval of the control strategies and schedules to  
25 eliminate applicable water quality standards violations attributable  
26 to CSO's will be by the Commission;

1 (10) By no later than October 1, 1996, the  
Respondent shall remove all large solids and floatables from  
3 discharges to the Columbia Slough;

4 (11) By no later than December 1, 1997, the  
5 Respondent shall submit final engineering plans and specifications  
6 for construction work required to comply with Section 9(a)(13);

7 (12) By no later than May 1, 1998, the Respondent  
8 shall begin construction required to comply with Section 9(a)(13);

9 (13) By no later than December 1, 2001, the  
10 Respondent shall eliminate discharges that violate applicable water  
11 quality standards, subject to the storm return frequencies specified  
12 in Paragraph 9(a) of this Order, at 20 of the CSO discharge points,  
13 including all discharges to Columbia Slough, consistent with the  
14 facilities plan approved by the Commission;

15 (14) By no later than December 1, 2001 the  
16 Respondent shall submit final engineering plans and specifications  
17 for construction work required to comply with Section 9(a)(16);

18 (15) By no later than May 1, 2003 the Respondent  
19 shall begin construction required to comply with Section 9(a)(16);

20 (16) By no later than December 1, 2006 the  
21 respondent shall eliminate discharges that violate applicable water  
22 quality standards, subject to the storm return frequencies specified  
23 in Paragraph 9(a) of this Order, at 16 of the remaining CSO  
24 discharge points, consistent with the facilities plan approved by  
25 the Commission;  
26

1 (17) By no later than December 1, 2006 the  
2 Respondent shall submit engineering plans and specifications for  
3 construction work required to comply with Section 9(a)(19);

4 (18) By no later than May 1, 2008, the Respondent  
5 shall begin construction required to comply with Section 9(a)(19);

6 (19) By no later than December 1, 2011, the  
7 Respondent shall eliminate discharges that violate applicable water  
8 quality standards, subject to the storm return frequencies specified  
9 in Paragraph 9(a) of this Order, at all remaining CSO discharge  
10 points, consistent with the facilities plan approved by the  
11 Commission;

12 (20) By no later than September 1 of each year that  
13 this Order is in effect, the Respondent shall submit to the  
14 Department and to the Commission for review an annual progress  
15 report on efforts to minimize and eliminate discharges that violate  
16 water quality standards. These annual reports shall include at a  
17 minimum work completed in the previous fiscal year and work  
18 scheduled to be completed in the current fiscal year.

19 b. Requiring Respondent to implement the interim  
20 control measures as specified in Attachment 1 to this Order;

21 c. Requiring Respondent to comply with all the terms,  
22 schedules and conditions of the Permit, except those modified by  
23 Paragraph 9(a) above, or of any other NPDES waste discharge permit  
24 or modified permit issued to Respondent while this Order is in  
25 effect.

1           d.       Requiring Respondent to demonstrate that each  
2 discharge is in compliance with applicable water quality standards,  
3 by a means approved by the Department, within twelve months of the  
4 scheduled date when compliance is required in this Order. (Nothing  
5 in this paragraph shall prevent the Department from enforcing this  
6 Order during the twelve month demonstration period.)

7           e.       Requiring Respondent to identify each discharge  
8 that is converted to a storm sewer discharge only.

9           f.       Requiring Respondent, in the event that Respondent  
10 chooses to retain a Discharge with any connected sanitary wastes, to  
11 apply for a modification of Respondent's permit requesting a waste  
12 load increase and appropriately sized mixing zone. (Nothing in this  
13 paragraph shall affect the Department's or the Commission's  
14 discretion over granting such a request.)

15           g.       Requiring Respondent, upon receipt of a written  
16 notice from the Department for any violations of the Stipulation and  
17 Final Order, to pay the following civil penalties:

18                   (i) \$1,000 for each day of each violation of each  
19 provision of the compliance schedules set forth in  
20 Paragraph 9(a) and Attachment 1.

21                   (ii) \$2,500 per outfall per day for each CSO  
22 outfall for which Respondent fails to demonstrate  
23 compliance with applicable water quality standards  
24 as specified in 9(d). Discharges that are listed  
25 and regulated in Respondent's Permit as may be  
26

1                    allowed in 9(f) shall not be subject to stipulated  
2                    civil penalties under the terms of this Order.

3                    10. Respondent agrees that the dates specified in Paragraph 9  
4                    above are firm commitments for the maximum time required for the  
5                    completion of each task subject only to extraordinary events beyond  
6                    Respondent's reasonable control which causes or may cause a delay or  
7                    deviation in performance of the requirements of this Stipulation and  
8                    Final Order. In the event of such an extraordinary event,  
9                    Respondent shall immediately notify the Department verbally of the  
10                    cause of delay or deviation and its anticipated duration, the  
11                    measures that have been or will be taken to prevent or minimize the  
12                    delay or deviation, and the timetable by which Respondent proposes  
13                    to carry out such measures. Respondent shall confirm in writing  
14                    this information within five (5) working days of the onset of the  
15                    event. It is Respondent's responsibility in the written  
16                    notification to demonstrate to the Department's satisfaction that  
17                    the delay or deviation has been or will be caused by circumstances  
18                    beyond the control and despite due diligence of Respondent. If  
19                    Respondent so demonstrates, the Department shall extend times of  
20                    performance of related activities under the Stipulation and Final  
21                    Order as appropriate. Circumstances or events beyond Respondent's  
22                    control include, but are not limited to, acts of nature, unforeseen  
23                    strikes, work stoppages, fires, explosion, riot, sabotage, or war.  
24                    Increased cost of performance or consultant's failure to provide  
25                    timely reports shall not be considered circumstances beyond  
26                    Respondent's control.



1 11. Regarding the violations set forth in Paragraph 4 and 5  
2 above, which are expressly settled herein without penalty,  
3 Respondent and the Department hereby waive any and all of their  
4 rights to any and all notices, hearing, judicial review, and to  
5 service of a copy of the final order herein. The Department  
6 reserves the right to enforce this order through appropriate  
7 administrative and judicial proceedings.

8 12. Regarding the schedule set forth in Paragraph 9(a) above,  
9 Respondent acknowledges that Respondent is responsible for  
10 complying with that schedule regardless of the availability of any  
11 federal or state grant monies.

12 13. The terms of this Stipulation and Final Order may be  
13 amended by the mutual agreement of the Commission and Respondent,  
14 after notice and opportunity for public comment; or with respect to  
15 the compliance schedules or limitations herein, by the Commission if  
16 it finds, after review and evaluation of the facilities plan  
17 including alternative discharge limitations and the alternative  
18 schedules required under Paragraph 9(a)1, that modification of this  
19 Order is reasonable.

20 14. Respondent acknowledges that it has actual notice of the  
21 contents and requirements of the Stipulation and Final Order and  
22 that failure to fulfill any of the requirements hereof would  
23 constitute a violation of this Stipulation and Final Order and  
24 subject Respondent to payment of civil penalties pursuant to  
25 Paragraph 9(e) above.  
26

1           15. This Stipulation and Final Order shall terminate 60 days  
2 after Respondent demonstrates full compliance with the requirements  
3 of the schedule set forth in Paragraph 9(a) above.

4           16. If it becomes necessary to allocate wasteloads as a result  
5 of either the Willamette River or the Columbia River being  
6 designated as Water Quality Limited, the parties agree that  
7 Respondent's reductions in discharges pursuant to this agreement  
8 will be considered as contributing to Respondent's share of the  
9 obligation to achieve water quality standards.  
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RESPONDENT

8/1/91  
Date

Mike Lundberg for  
(Name) J. E. Bud Clark  
(Title) Mayor

Barbara Clark by Craig Proser  
Barbara Clark, Auditor

DEPARTMENT OF ENVIRONMENTAL QUALITY

AUG 05 1991  
Date

Fred Hansen  
Fred Hansen, Director

FINAL ORDER

IT IS SO ORDERED:

COMMISSION

ENVIRONMENTAL QUALITY

AUG 05 1991  
Date

William P. Hutchison, Jr.  
William P. Hutchison, Jr., Chairman  
Environmental Quality Commission

ATTACHMENT 1

1. Respondent shall clean and/or flush sewers in three sub-basins, from the diversion structures to one-half mile up the sewer lines, during August, 1991 and during August, 1992. The three sub-basins shall be: (a) a sub-basin representative of sub-basins having the heaviest settleable solids accumulation; and (b) two sub-basins expected to have average settleable solids accumulation. The respondent shall estimate the volume of settleable solids captured in each sub-basin during the annual flushing and cleaning, and shall analyze a representative sample of the settleable solids captured in each sub-basin for biochemical oxygen demand, total suspended solids, fecal coliform bacteria, silver, arsenic, cadmium, chromium, copper, mercury, nickel, lead, zinc, and cyanide. Respondent shall include all test results in the interim control measures study specified elsewhere in this Order.
2. Respondent shall intensify street cleaning in three sub-basins and study the effects of the intensified street cleaning on reducing pollutants entering the combined sewer system. Street cleaning shall be completed once per month, ending when the interim control measures study is approved by the Department. Respondent shall submit to the Department by

1 no later than September 1, 1991 a draft sampling program for  
2 measuring the impact of the intensified street cleaning.  
3 Within 30 days of receiving written comments from the  
4 Department, the Respondent shall submit a final approvable  
5 sampling plan and implement the intensified street cleaning  
6 and monitoring program. Respondent shall include all test  
7 results in the interim control measures study specified  
8 elsewhere in this Order.  
9

10 3. Respondent shall inspect all diversion structures on a weekly  
11 basis and clean the structures as necessary to maintain  
12 hydraulic performance. Respondent shall report all blockages  
13 at diversion structures that result in dry weather discharges  
14 on Respondent's Daily Monitoring Report submitted to the  
15 Department on a monthly basis. Respondent shall record  
16 whether or not a discharge is occurring from each diversion  
17 structure to an outfall, as observed at each diversion  
18 structure during the weekly inspections, and shall make this  
19 report available to the Department upon request by the  
20 Department.  
21

22 4. Respondent shall modify diversion structures #SW55, WC58,  
23 SJ31, E5, E7, and EC7 to assure proper hydraulic performance  
24 by October 31, 1991.  
25  
26

- 1 5. Respondent shall design and install two innovative, "low  
- technology" screening methods proposed by the Respondent by  
3 December 1, 1991. Respondent shall evaluate the effectiveness  
4 of each screening device and include the results in the interim  
5 control measures study specified elsewhere in this Order.  
6
- 7 6. By no later than August 1, 1992, Respondent shall evaluate the  
8 feasibility of converting each Significant Industrial User with  
9 batch discharges to dry weather only discharges. Upon permit  
10 renewal and where reasonable, Respondent shall modify such  
11 industrial discharge permits to prohibit batch discharges  
12 during rain events.  
13
- 14 7. Respondent shall prohibit all dischargers who request  
15 Respondent's approval prior to a non-permit, periodic, or one-  
16 time batch discharge from discharging during rain events.  
17 Exceptions shall be made only if extenuating circumstances can  
18 be demonstrated to show that it is unreasonable to apply this  
19 restriction.  
20
- 21 8. By September 1, 1991, Respondent shall post signs at each CSO  
22 discharge location indicating the presence of the CSO  
23 structure and the inadvisability of water contact activities  
24 in these locations during and subsequent to rain storms.  
25  
26

1 9. As soon as practicable, but by no later than October 31, 1992,  
2 Respondent shall install seventeen additional level flow  
3 monitoring stations at diversion structures approved by the  
4 Department. Respondent shall include in each flow monitoring  
5 installation a telemetry device that will indicate an alarm at  
6 Respondent's control terminal whenever a discharge during dry  
7 weather occurs. Respondent shall attempt to eliminate the  
8 immediate cause of any dry weather discharge within one hour of  
9 an alarm. Respondent shall report all dry weather discharges  
10 on the Daily Monitoring Report submitted to the Department  
11 monthly. The Department may require flow monitoring stations  
12 at additional diversion structures if dry weather discharges  
13 are observed.

14  
15 10. Respondent shall conduct and submit to the Department a study  
16 that evaluates each CSO discharge for the presence of  
17 syringes. Respondent shall submit to the Department a draft  
18 study plan for evaluating the presence of syringes in CSO  
19 discharges by no later than October 1, 1991. Within six  
20 months of receiving written comments from the Department,  
21 Respondent shall submit the study to the Department.  
22  
23  
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## ATTACHMENT 5

### Department Evaluation of Interim Control Measures

**Screens and other technologies for removing large solids and floatables** - Screens could filter out larger material found in combined sewer overflows, such as leaves, rags, and other unsightly debris while allowing smaller solids and all the liquids to pass through. Screens would be effective in removing aesthetically objectionable material, but would not remove large amounts of bacteria.

Two types of low technology screens were designed and tested by the City. One required manual cleaning, and the other was designed to be "self cleaning" (some solids would be retained in the diversion structure during overflows, and would then slide into the diversion interceptor and be treated at the Columbia Boulevard treatment plant). Neither worked, and neither is used elsewhere. They either collected no solids, or they collected solids too quickly (plugged within two hours of overflow) and were too difficult to access and clean safely.

Mechanically cleaned screens are commonly used in wastewater treatment plants and are effective in screening out debris greater than 1/4 inch diameter. Odor control and ease of access to regularly remove the collected debris are important considerations in siting such facilities. They are relatively expensive. Screens will not be part of the long range control plan.

**WQ benefits** - Reduce fecal coliform discharges by 5%, reduce hours of WQ standards violations by 2.6%. Would eliminate aesthetically objectionable material in discharge. All overflows would be affected.

**Part of long range control?** - No.

**Cost** - Capital cost \$100 million, annual cost (includes capital cost annualized plus operation and maintenance costs) - \$11.6 million, or \$390,000/hour of WQ standard violation eliminated.

**Department recommendation** - Screens should be dropped from further consideration as interim control measures.

**Maximization of in-line storage** - This measure would involve using the larger sewer lines as interim storage during storms, that is deliberately backing up the sewage and stormwater in the sewer lines using some kind of valve or dam. Great care has to be taken, however, to insure that flows and the sewer system elevations are accurately known and that the flows do



not back up into basements or overflow from manholes. Two different types of in-line storage were considered, that using the large interceptor sewers along the Willamette River and Columbia Slough, and "upper basin" in-line storage for the rest of the sewer system that is "upstream" from the main interceptors.

Using large interceptors for in-line storage is commonly, safely, and easily done. For this portion of the sewer system, pump stations located along the interceptor can be used to back up the sewage, and any overflows would simply flow through the existing combined sewer overflow outfalls located up gradient from the pump station. Portland has within the past five years raised the restricting dam at the two main pump stations on the Willamette to maximize the in-line storage now possible. This added enough storage to eliminate approximately 70 million gallons of combined sewer overflows per year. Additional gains are proposed as part of the long range control program, as follows: disconnection of some low-lying overflows, allowing more in-line storage; increasing pumping capacity and interceptor capacity; use of a slide gate in the southeast relieving interceptor; and installation of a computerized flow control system. These control measures involve major construction and are beyond what the Department considers interim control measures.

Using "upper basin" areas for in-line storage was evaluated separately. These sewer lines present greater risks, and are not easily or commonly used by other cities to increase in-line storage. Since this portion of the sewer system is up gradient from the combined sewer overflows, overflows from the backed-up sewage and stormwater, if they occurred, would be to basements or to streets via manholes. These types of uncontrolled overflows are highly undesirable and a public health concern. The portions of the upper basin that are most promising in terms of total storage are the flatter sewer sections, but unfortunately for Portland this also corresponds with those areas that now have basement flooding problems. Basement flooding is an indication that the sewer lines are now over capacity and have no excess capacity for storage. The City is continuing to add sewer conveyance capacity in areas of basement flooding, which could make this a more feasible option in the future.

Unlike the relatively easy pump station modifications possible for interceptor in-line storage, upper basin in-line storage involves installed automatic gates and computer sensors. When water levels in the sewers reached a pre-set critical point (i.e., about to overflow into someone's basement), the gate would open allowing all of the previously stored combined flows to continue down the sewers. Failure of the device to promptly open would result in an uncontrolled overflow to a basement or from a manhole. These devices would not be part of the long range control plan.

Increased in-line storage in the major interceptors are dropped from further evaluation as an interim control measure, but will be included as part of the overall control plan. The use of increased in-line storage in upper basin areas is evaluated in the following:

**WQ benefits** - 6% reduction in total discharges, reduce hours of standards violations by 3.1%. Would eliminate some overflows during very small rain storms, would have no impact for larger storms. Eight overflow points would be affected if only the more cost effective in-line storage areas were controlled.

**Part of long range control?** - Yes for interceptor in-line storage, no for upper basin controls.

**Cost** - Capital cost of \$2.6 million, annual cost of \$676,000, or \$19,500/hour of WQ standards violation eliminated.

**Department recommendation** - Increased upper basin in-line storage should not be required, because of the increase in basement flooding that would occur.

**Disconnection of roof drains** - Residential roofs constitute almost half of the impervious surface in residential areas of Portland, and therefore generate a significant amount of stormwater. Most roof drains are connected to the combined sewer system, either on the property where the roof drains are connected to the residential sanitary sewer lateral, or through a separate connection to the combined sewer. The following describes the three alternatives for disposing of roof drainage, in descending order of preference in terms of safe disposal of the drainage:

Run a separate line(s) from the roof downspouts out to the street - This only benefits water quality if the street runoff is then diverted out of the combined sewer system into storm water sumps or a separate storm sewer.

The City is proposing to construct storm water sumps in approximately 35% of the combined sewer area, and so this alternative would only be effective in the area with sumps.

Construct a dry well on site - These typically are five feet in depth, three feet in diameter and will only work in those areas without high groundwater (groundwater does not come any closer than about seven feet from the ground surface). A modification of on site disposal would be a disposal or seepage trench.

Construct splash blocks, and divert the drainage to the ground surface - This is currently against the Portland building code, because of runoff problems this can cause for neighbors that are downslope and because of potential impacts on house foundations and basements if the drainage is not directed away from the house. Splash blocks could be used in some yards without causing nuisance conditions, but the City would have to modify the building code.

The City has conducted some preliminary evaluations, and has prepared very conservative estimates as to the number and cost of disconnecting residential roof drains. That is, the City's estimates are "worst case" estimates and probably underestimate the volume of roof drainage that can be eliminated from the sewer system, and may overestimate the cost. The Department has estimated the cost and number of roof drains that may be disconnected that may be more realistic, and is providing both the City's and the Department's estimates in this document to provide a range of values. The City is continuing to gather more detailed information, and will have better data available before the overall facilities plan is completed and any roof disconnection program is initiated. A key issue will be whether City Building Codes can be modified to safely allow splash blocks, which are very inexpensive (\$100 per house or less if the homeowner does the work).

The Department estimates that virtually all residences in the area where storm water sumps are constructed could construct either a line out to the street or on-site dry wells, and that possibly half of the residences located in other portions of the city could construct dry wells. This is equivalent to about 65% of the households in the entire combined sewer area. The City's estimates are much lower, at only 14% of all residences. The City is proposing to carry out a pilot project, which will further explore and evaluate the number of residences with roof drains that can be diverted from the sewer system.

Disconnection of roof drains could be financed by the City as part of the overall project. Some homeowners may object to the construction in their yards. However, disconnection of roof drains is very cost effective and is included in the City's proposal for overall control. The City estimates average costs at \$1500 per house. The Department's brief survey of other municipalities and consultants indicates that \$1000 or less may be more realistic.

**WQ benefits** - The Department estimates that about 31% by volume of the overflows could be eliminated by disconnecting all possible roof drains. The City estimates only 6.6% reduction in overflow volumes, based on a smaller number of roof drains disconnected. All overflow points would be affected. The affect of a 31% reduction in overflows has not been determined, but should be substantial.

**Part of long range control?** - Yes.

**Cost** - City estimates capital cost of about \$34 million, annual cost (including capital cost) of \$2.1 million, or \$56,000/hour of WQ standard violation eliminated. Department estimates capital cost of about \$104 million, annual cost of \$6.5 million, or approximately \$38,000/hour of WQ standard violation eliminated.

**Department recommendation** - Residential roof drain dis-connections should proceed as fast as is consistent with maintaining even capital expenditures for the entire project.

**Sewer cleaning or flushing** - Sewer cleaning is now done on a routine basis in Portland, and is designed to remove the heavy deposits of silt, sand and gravel that accumulate over the years in sewer lines. Sewer cleaning crews use rods or scrapers to remove the accumulations, which are then collected at downstream manholes. This is a relatively slow, labor-intensive activity. The two reasons that sewers are cleaned are to remove these accumulations so as to restore conveyance capacity to the sewer lines, and to allow internal inspection of the sewer lines by a TV camera. Lines that are prone to blockages are cleaned more frequently. While some organic type solids and other light solids are removed during cleaning, most of the material removed is very heavy and would not be flushed out during heavy rains.

Sewer flushing is a different activity, and is not done routinely in Portland. Sewer flushing involves sending jets of water down a sewer line, which re-suspends lighter material that settles out in the sewer lines between rain storms. Another technique for sewer flushing involves installing removable dams in the sewer lines, temporarily building up a volume of sewage behind the dam, and then releasing the stored sewage to allow the sewage to surge through the lines and re-suspend the lighter solids. Weekly flushing of sewer lines was assumed for the City's evaluation.

Neither sewer flushing nor sewer cleaning will be part of the long term combined sewer overflow strategy. However, neither of these activities require a substantial capital investment - rather, the cost is in the labor involved. Since sewer cleaning is much more expensive than sewer flushing for the same water quality gain, only sewer flushing is evaluated below:

**WQ benefits** - A reduction of 1.2% of solids per year, would reduce the hours of WQ standards violations by 0.6%. Would not eliminate any overflows. All overflow points would be affected.

**Part of long range control?** - No, but does not include a large capital investment.

**Cost** - Annual cost of \$6,828,000, \$83.27/pound of solids removed, or \$990,000/hour of WQ standards violation eliminated.

**Department recommendation** - Sewer flushing should be dropped from further consideration, because of the minimal WQ benefits and high cost.

**Intensified street sweeping** - Street sweeping is now done in Portland, both for aesthetic purposes and to minimize plugging of street water drains. The current practice is to mechanically sweep the street, and then follow with a light water flushing to wet the dust and to erase the "sweeper trail". Previous studies by the City estimate that current street sweeping reduces the stormwater pollutant load by approximately 7%. Mechanical sweeping removes larger particles and debris only.

As part of the interim control measures study, Portland evaluated two intensified street sweeping methods. The first method involved replacing the light water flushing with a much heavier flush, where lighter particles would be washed into the sewers and (presumably) conveyed to the treatment plant when it is not raining. The second method was to follow the mechanical sweeper with a vacuum-assisted sweeper truck.

Street sweeping to reduce storm water pollutants has been relatively well studied in the United States. Computer models have been developed nationally to predict the affect of various intensities and frequencies of street sweeping. Portland has conducted a number of studies in recent years on the pollution reduction impact of street sweeping. The City used nationally available models, slightly modified to more accurately reflect data collected by Portland.

Based on the data gathered and used in the computer models, the most cost effective method/frequency of cleaning was:

- Residential streets - five times per year, using a vacuum assisted sweeper following the mechanical sweeper.
- Arterial streets - fifteen times per year, using a heavy flushing following the mechanical sweeper.

**WQ benefits** - Approximately 850,000 pounds or 10% of the solids associated with street runoff would be reduced. The impact on fecal coliform levels and water quality violations would be negligible, however.

**Part of long range control?** - No, but minimal capital investment.

**Cost** - \$850,000/year, \$1.00/pound of suspended solids removed.

**Department recommendation** - Existing street sweeping activities should be continued but not intensified.

**Catch basin cleaning** - Catch basins are structures located between a surface storm water grate and the sewer, and are designed to capture solids and debris. Direct inlets do not have a basin to accumulate solids, but rather allow all the storm water runoff to enter the storm or combined sewer directly. Portland currently has an estimated 45,000 to 54,000 storm water direct inlets and catch basins, of which only 1 to 5% are estimated to be catch basins.

Catch basins, if cleaned at least twice per year, can reduce suspended solids discharged into combined sewers by 60 to 97%. Cost of cleaning catch basins is estimated at \$14.77 per catch basin, or \$.38/pound of suspended solids removed.

**WQ benefits** - If only existing catch basins are considered, twice per year cleaning would result in an overall 2.4% reduction of suspended solids associated with stormwater runoff, negligible impact on fecal coliform levels. If all direct inlets were converted to catch basins, then there would be an estimated 80% reduction in solids associated with stormwater. No impact on WQ standards violations, but would impact sediment levels of heavy metals around CSO outfalls.

**Part of long range control?** - No.

**Cost** - Capital cost to convert approximately 48,500 direct inlets to catch basins - \$97 million. Annual cleaning cost - \$1,477,000. Annual costs of \$3.20/pound of suspended solids removed, no reduction of WQ standards violations.

**Department recommendation** - Construction of additional catch basins should be dropped from further consideration because of high cost and lack of impact on WQ standards violations.

**Reduction/elimination of large batch discharges during storm events** - Like most cities, Portland has a few entities or establishments that discharge large volumes of water to the sewer system on an intermittent or infrequent basis. When it is not raining, these discharges are transported and treated. When it is raining, however, these large discharges add to the volume discharged from the combined sewer overflows. The potential for eliminating batch discharges during rain storms was investigated, as it seemed likely that these discharges would not be related to on-going production activities and therefore could be re-scheduled without undue burden to the discharger.

The City regulates all dischargers into their sewer system, including residential, commercial, and industrial sources. The City reviewed it's procedures for batch or intermittent discharges from the Significant Industrial Users (greater than 25,000 gallons/day, or known discharger of toxic materials), and determined that none of them have intermittent discharges. That is, the discharges are relatively constant over time and are directly related to the production activities of the facilities. Smaller dischargers were not reviewed for batch discharges because of the expected minor impact.

Some requests are received for one-time discharges, for example emptying a swimming pool. The City has now instituted a policy of including as a condition to discharge that the discharge only occur if it is not raining.

The City also found that some activities by other governmental entities could cause very large batch discharges. These activities include flushing of fire hydrants (for flushing of water lines, particularly near the "ends" of the water distribution system), and the draining of water reservoirs. The City Council recently adopted a resolution requiring both the Fire and Water Bureaus to obtain the permission of the Bureau of Environmental Services prior to

non-emergency batch discharges. Unlike other control measures evaluated, the primary purpose of these limitations is to make sure that there are no dry weather discharges, since the volumes are so large that they were causing overflows during dry weather, just as if it were raining. The current practice of restricting these activities to dry weather (requiring careful monitoring and temporary blockage of key overflows during reservoir draining and hydrant flushing) also has the effect of reducing wet weather overflows. Dry weather overflows are prohibited.

**WQ benefits** - These are hard to quantify, but certainly some dry weather overflows each year will be prevented, and the amount of discharges during rain will be reduced by probably a small amount. This means that there will be several more days each year when no discharge occurs, and therefore when there are no violations of fecal coliform levels.

**Part of long range control?** - Yes for the prevention of dry weather overflows, no for control of other batch discharges.

**Cost** - Minimal - some additional staff time to oversee Fire and Water Bureau discharges, some small additional staff time to explain prohibitions on dry weather batch discharges.

**Department recommendation** - Recommend that the City proceed as indicated above.

**Increase flows to treatment plant by diversion structure modification** - Diversion structures are built into 191 manholes in Portland, and are designed to "divert" combined sewer flows from the combined sewer system into the major interceptors that carry flows to the sewage treatment facility. Parts of the diversion structure includes a short dam, and an overflow pipe to the nearest waterway (either the Willamette River or the Columbia Slough for Portland's sewers). When it rains, flows increase in the combined sewers and some of the flows raise above the dams located in the diversion structure. These flows are then discharged to either the Willamette or the Columbia Slough without treatment.

When originally constructed, each of the 191 diversion structures were designed to divert 3 times the average dry weather flow to the treatment plant, and flows above that were expected to overflow and be discharged via a combined sewer overflow outfall. The City has reviewed the capacity remaining in the interceptors to the treatment plant, and the intervening pump stations, and the treatment capacity at the Columbia Boulevard treatment plant, and has determined that more flows can be safely diverted. The City is proposing to modify 104 of the 191 diversion structures, and projects that by doing so approximately 450

million gallons of combined sewer overflows can be diverted and treated. This is approximately 7% of the total volume currently discharged. This project will have the additional benefit of reducing the chances of dry weather overflows at these overflows outfalls.

**WQ benefits** - 7% by volume of the overflows will be treated, including that portion of the early part of the discharge known as the "first flush". This early overflow includes many solids that settle out in sewers during low flows, and are re-suspended when it rains. In addition, some dry weather overflow events may be prevented.

**Part of long range control?** - Yes.

**Cost** - \$392,000 capital cost.

**Department recommendation** - Proceed as soon as possible, but no later than March 31, 1995.

### **Summary of Recommended Interim Control Measures**

**Screens** - Reject from further consideration, based on minimal WQ benefits, large cost, not part of final control plan.

**Maximization of in-line storage** - Increased in-line storage for larger interceptors should be included as part of the overall control plan, but due to very high cost should not be singled out for early implementation. Increased in-line storage for upper basin interceptors should be dropped because of lack of capacity and the potential to worsen basement flooding.

**Disconnection of residential roof drains** - This measure has the potential to reduce the overflows by up to 40%, but has a very high capital cost (up to \$104 million). It should be included as part of the overall control strategy.

**Sewer cleaning or flushing** - Reject because of minor impact on WQ, large cost, not part of final control plan.

**Intensified street sweeping** - Reject because of negligible effect on WQ standard violations, but continue with existing street sweeping efforts.

**Catch basin cleaning** - Reject because of minimal WQ benefits, high capital cost, not part of final control plan.




Reduction/regulation of batch discharges - Continue with prohibition on one-time batch discharges during rain, careful oversight of Fire and Water Bureau activities that result in large batch discharges.

Increased diversion of flows to treatment plant - Recommend City proceed with efforts to modify 104 diversion structures to increase flows to treatment plant.

State of Oregon  
Department of Environmental Quality

Memorandum<sup>†</sup>

Date: January 11, 1994

To: Environmental Quality Commission  
From: Fred Hansen, Director   
Subject: Agenda Item I, January 28, 1994, EQC Meeting

Proposed Adoption of State Integrated Resource and Solid Waste  
Management Plan

**Background**

The proposed adoption of the State of Oregon Integrated Resource and Solid Waste Management Plan is carried over from the December 10, 1993 EQC meeting. The members of the Commission felt that more time was needed for them to review and consider the impacts of the many and far-reaching policies contained in the proposed plan. Commission members have individually reviewed the proposed plan and discussed their concerns with the Department. As a result of this review, a few changes are recommended in the plan being proposed for adoption at the January 28, 1993 EQC meeting. These concerns and recommended changes are outlined below.

**Statement of the Issue**

Specific concerns raised by individual Commission members which should be considered during the implementation of the plan are as follows:

- Although it is important to recognize that labeling standards should be established at the national level, it is also important for Oregon to take a leadership role and be proactive in addressing labeling issues.
- In general, the usefulness of tax credits as an incentive for pollution prevention has diminished over the years; however it is recognized that a single tax credit program aimed specifically at developing markets for recyclable materials is needed in the near term to address the supply and demand problem associated with recycling.

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<sup>†</sup>Accommodations for disabilities are available upon request by contacting the Public Affairs Office at (503)229-5317(voice)/(503)229-6993(TDD).

- It is agreed that it is important to measure success of overall waste reduction, without penalizing efforts in either recycling or waste prevention. The plan recommends doing this by looking at trends in amount of waste disposed per capita. In measuring these trends it is important to consider volume as well as weight because of the make up of various material types found in the waste stream. In addition, a method for looking at the "value" of the waste found in the waste stream would be useful since the vision of the plan is to look at waste as a secondary resource for manufacturing.
- It is important to emphasize waste prevention in solid waste; however, in doing so, the state should not lose sight of the continuing need for public educational efforts on recycling.

In response to the concerns raised by the Commission and to public testimony received on December 10, 1993, the following changes are proposed to the plan (Attachment A).

- Page 8 - Government will take a more active role in developing national labelling standards by seeking federal legislation rather than simply supporting federal legislation on labeling.
- Page 10 - Although the vision remains one of limited government intervention in solid waste management, language has been added that government will have a role to insure protection of human health and the environment.
- Page 21 - Strategy G outlines the approach for measuring a successful waste prevention program. While recognizing the significance of looking at per capita disposal trends by weight and volume, the plan proposes to leave the language in the strategy nonspecific. As the Department begins to collect, evaluate and learn more about disposal information, it is important to retain the flexibility to select and utilize the measurement types that will provide the best overall trend analysis.
- Page 23 - Strategy B outlines the priorities for government procurement efforts to promote waste prevention. Reduction in the product itself has been added as a priority waste prevention strategy in addition to working to reduce product packaging.
- Page 24 - Strategy B adds product formulation as an additional area to focus on in supporting federal legislation that addresses waste prevention.

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- Page 31 - Strategy C has been revised to indicate a more proactive role for the state in considering labeling program initiatives with other western states.
- Page 36 - Clarifying language has been added to Strategy E to include the concept of "resource value" as important information to collect and analyze when evaluating the solid waste management system.
- Page 37 - Rather than recommending the elimination of required wasteshed recovery rates after 1995, Strategy H was revised to recommend that measurement techniques and goals should be reevaluated after 1995. This allows time to evaluate the success and shortcomings of such an approach.

The staff report from December 10, 1993 EQC meeting (Attachment B) describes the overall plan as well as findings and other issue analysis.

A cover letter, to be signed by the Commission, is provided in Attachment C. This letter formalizes the adoption of the plan and outlines the specific concerns of the individual Commission members.

### **Recommendation for Commission Action**

It is recommended that the Commission adopt the Oregon Integrated Resource and Solid Waste Management Plan, 1995-2005, dated January 1994, as presented in Attachment A of the Department Staff Report and sign the attached cover letter.

### **Attachments**

- A. Oregon Integrated Resource and Solid Waste Management Plan, 1995-2005.
- B. December 10, 1993 Department Staff Report.
- C. Commission cover letter.

### **Reference Documents (available upon request)**

- 1. Statutory Authority, ORS 459A.020
- 2. Applicable Rules, OAR Chapter 340, Divisions 90, 91, 93, 94, 95, 96, 97
- 3. Oregon Integrated Resource and Solid Waste Management Plan, 1995-2005, Background Document

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4. Mandatory Solid Waste Collection Analysis
5. Summary of Public Comment and Response to Comment

Approved:

Section:

E. Patricia Vann

Division:

Mary Wahl

Report Prepared By: Jan Whitworth

Phone: 503 229-6434

Date Prepared: January 7, 1994

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January 7, 1994

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**OREGON  
S T A T E  
Integrated  
Resource &  
Solid Waste  
Management  
P l a n**

**1995-2005**

**January 1994**

**T h e P l a n**



# Oregon State Integrated Resource & Solid Waste Management Plan 1995-2005

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## ACKNOWLEDGEMENTS

The Oregon State Department of Environmental quality (DEQ) extends its sincere appreciation to the **State Solid Waste Advisory Committee (SWAC)** and over 200 **Local Work Groups (LWG)** members throughout the state who were instrumental in the formulation of the solid waste vision and strategies. Special recognition goes to **Gail Achterman** for her outstanding leadership as chair of the SWAC. These volunteers met with and advised the Department in over fifteen meetings during the past two years. The meetings and untold hours of preparation time by the committee and work group members have resulted in a State Integrated Resource and Solid Waste Management Plan that will guide Oregon into the twenty first century. The insightfulness and forward thinking of these advisors has resulted in solid waste strategies for Oregon that will place a priority on generating less waste in the future and utilizing the waste that is generated as an economic resource. The individuals that participated as members of the SWAC and LWG's are listed in Appendices B and C of the Background Document.

The Department would also like to acknowledge the help and input that was provided by the other state agencies in developing this plan. Special thanks to **Art Ayre** of the Economic Development Department, **Doug White** with the Department of Land Conservation and Development, and **Claudia Howells** of the Public Utilities Commission for the extra time they took to research and respond to issues related to recycling markets, local comprehensive land use plans, and solid waste transportation issues. All of the state agencies who participated in the planning process are listed in Appendix D of the Background Document.

Thanks to **Gerry Uba**, METRO, who on special assignment to the Department did an outstanding job on the 1992 Disposal Capacity Report. (See Background Document.)

The State Plan's project team wishes to thank **Joe Hertzburg**, of Decisions Decisions, who did such an excellent job of facilitating the workshop that resulted in the outstanding vision for the future of solid waste management in Oregon. The team would also like to recognize **Pat Vernon**, Manager of the Department's Solid Waste Policy and Programs Section, for her support and commitment throughout the planning process. A big "thank you" to all the **staff from the Department's Solid Waste Program** for their contributions to the plan. A special thanks to:

**Chuck Donaldson**, Solid Waste Permits and Compliance  
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**Bonnie Nasshahn**, Hazardous and Solid Waste  
**Lauren Dye**, Hazardous and Solid Waste  
**Nora Tramontana**, Solid Waste Policy and Programs

### The Project Team

**Jan Whitworth**, Project Leader  
**Marti Roberts-Pillon**, Technical Staff  
**Dave Kunz**, Technical Staff



# OREGON STATE INTEGRATED RESOURCE & SOLID WASTE MANAGEMENT PLAN

Oregon adopted a Solid Waste Management Plan in 1979, required under the federal Resource Conservation and Recovery Act (RCRA). The plan set clear priorities for managing both municipal solid waste and hazardous waste. During the next ten years, the state's municipal solid waste efforts concentrated on closing dumps, bringing landfills into compliance, and increasing residential recycling participation. With these programs underway, it was clear in the 1991 legislative session that a state plan was needed for integrating the facets of waste generation, recycling and disposal in the next decade.

The 1991 Oregon Recycling Act requires the Environmental Quality Commission, DEQ's governing board, to adopt an Integrated Solid Waste Management Plan by January 1, 1994. The statute also requires that the plan cover a ten-year period and that it address all facets of solid waste management. A review of solid waste planning issues is mandated by law every two years and the plan is required to be updated as needed.

Development of the plan was a two-year process. To solicit a range of public input, DEQ staff organized 13 local work groups comprised of both public and private solid waste and recycling professionals and interested local citizens. At the outset of the planning process, staff met with these groups to assess critical solid waste issues that needed to be addressed in the plan. The local work groups were instrumental in keeping urban and rural issues identified separately and ensuring that the plan included measures to address them. The local work groups met three times and received all DEQ mailings related to the plan.

The Department's Solid Waste Advisory Committee provided invaluable input and review into the overall policy direction for the plan and its goals, objectives and strategies.

Early on it became clear that there were critical issues to include in a planning document. Because statute requires biennial review of the plan, staff and advisors agreed that the first edition of the plan would focus on municipal solid waste issues related to education, waste prevention, recycling, and residual waste policies. Analysis of industrial solid waste and special wastes will be performed in the first review period after adoption. The plan will be updated to include objectives and strategies on industrial solid waste.

The plan is specifically designed for use as a guidance document for state and local government, the private sector, and citizens in making solid waste management decisions and for future legislation. The plan also provides a resource for state and local government, and defines roles for state and local government as well as the private sector. Where "Responsible Party" is indicated under each strategy, the party identified is the one who appears to be the most appropriate to take the lead. Every attempt was made to clarify roles and to ensure that there is an appropriate balance of responsibility and authority among various entities.

Just as state solid waste management decisions cannot be made in isolation, today local issues extend far beyond the borders of cities and counties. Local jurisdictions can explore program options and consolidation of resources through countywide or regional comprehensive planning. This process is key to Oregon's ability to provide an economical and environmentally sound, integrated management system.

What follows is the most comprehensive view of Oregon's solid waste management system, practices and traditions to date. It is the first integrated solid waste management plan prepared by the state and provides a new direction for waste management in Oregon as we enter the 21st century. The plan endorses a fundamental shift away from managing waste and recyclables recovered from waste. The preferred view in the plan is that natural resources, recycled materials and even the "left over" waste represent valuable resources and should be managed as such.

When accomplished, the proposed efforts will reduce unnecessary waste at the source. Recoverable materials are not viewed or handled as waste but are reused, repaired, recycled, composted, and provide energy recovery when technologically and economically feasible. Difficult to manage wastes are isolated for special handling, treatment and disposal. Residual waste from the reduction and recycling efforts are landfilled in "state of the art" facilities for safe, economical disposal. These efforts move solid waste management from disposal-based into the realm of natural resource use and product manufacturing. This document sets out a framework for such an Integrated Resource and Solid Waste Management System.

## Vision 2005

Oregon has a history and reputation for creativity in solving environmental problems and protecting the environment. The State Integrated Resource and Solid Waste Management Plan seeks to continue that leadership by providing Oregon citizens with a vision to the year 2005 and by identifying the tools needed to realize this vision.

The value of resource conservation as a priority to protect the well-being of the public and our environment is promoted in this plan. It endorses a fundamental shift away from managing "garbage" (waste materials without value) to managing valuable natural resources, secondary resources and residuals. It changes traditional terminology from "solid waste management" to *integrated resource and solid waste management* in order to accurately reflect the shift.

The Plan has been developed by DEQ, a Solid Waste Advisory Committee, a state agency work group, 13 local work groups, and through statewide public meetings. Participants included citizens, industry, local governments, haulers, recyclers, environmental groups, and appropriate state agencies.

Implementation of the plan is intended to occur over a ten-year time frame. Each strategy indicates a time frame for implementation of first third, second third, and third third. These time frames relate to the sequence of implementation over the ten-year period of the plan.

Throughout the development of the plan, it has been recognized that certain strategies will require new revenue sources to implement while others can be implemented by redirecting existing resources. In addition to the traditional funding and incentive approaches such as solid waste disposal and collection fees and tax credits, funding approaches including federal research and technology transfer grants, advance disposal fees, foundation grants, fees on recycling, energy taxes, and taxes on virgin material use may be considered. It will be important for those responsible for implementing the strategies contained in this plan to be innovative and creative in using and finding resources to accomplish the objectives.

## MISSION

**Citizens of Oregon work together to protect the public health and our environment by:**

- ◆ Conscientiously reducing waste;
- ◆ Diminishing per capita waste generation;
- ◆ Managing resources and residuals cost-effectively and in an environmentally sound manner; and
- ◆ Financially supporting a convenient and environmentalyy sound waste and resource management system.

## VISION

YEAR 2005

The citizens of Oregon have made a value shift from a "throw-away" society to a conservation society.

### GETTING THERE

**Citizens Will:**

- ◆ Buy products that are durable, reusable, repairable, recycled or recyclable;
- ◆ Tell manufacturers citizens prefer products that are durable, reusable, repairable, recycled and recyclable; and
- ◆ Act as a "watchdog" to ensure government and business promote conservation.

**Business Will:**

- ◆ Conserve natural resources, reduce consumption and use secondary resources;
- ◆ Make and market products that are durable, reusable, repairable, recycled or recyclable; and
- ◆ Ensure consumers convenient opportunities to have products repaired.

**Government Will:**

- ◆ Place an emphasis on waste prevention, market demand and policy initiatives; and
- ◆ Lead through example by purchasing products that are durable, reusable, repairable, recycled or recyclable.

## VISION

YEAR 2005

The citizens of Oregon are stewards of the environment. They actively **SOURCE REDUCE, REUSE, AND RECYCLE** materials before they dispose of them.

### GETTING THERE

#### Citizens Will:

- ◆ Perform self-assessments to identify areas for waste prevention, reuse, recycling, and composting;
- ◆ Source reduce, reuse, recycle, and compost;
- ◆ Buy goods and services from businesses that practice waste prevention and recycling; and
- ◆ Participate in local programs for recycling and composting.

#### Business Will:

- ◆ Perform self-assessments to identify areas for waste prevention, reuse and recycling;
- ◆ Source reduce, reuse and recycle;
- ◆ Utilize secondary resources in manufacturing processes;
- ◆ Buy goods and services from suppliers who practice waste prevention and recycling; and
- ◆ Participate in local programs for recycling and composting.

#### Government Will:

- ◆ Perform self-assessments to identify areas for waste prevention, reuse and recycling;
- ◆ Source reduce, reuse and recycle;
- ◆ Buy goods and services from businesses that practice waste prevention and recycling;
- ◆ Seek federal legislation aimed at national standards for achieving waste prevention;

- ◆ Participate in development of national policies regarding definitions, purchasing, labelling, and content standards;
- ◆ Establish Recycling Enterprise Zones; and
- ◆ Participate in local programs for recycling and composting.

## VISION

### YEAR 2005

**Education, not regulation, is the primary means of affecting citizens' environmental stewardship and promoting conservation of our resources.**

## GETTING THERE

### **Citizens Will:**

- ◆ Educate by good example; and
- ◆ Participate in educational opportunities at home, work and in the community.

### **Business Will:**

- ◆ Educate by good example;
- ◆ Educate consumers on the production and use of their products;
- ◆ Educate employees about waste prevention and recycling in the workplace;
- ◆ Foster company values for conservation of natural resources;
- ◆ Support and cooperate in programs that promote resource conservation and environmental stewardship to consumers; and
- ◆ Accurately label, promote, and sell recyclables and recycled content products.

**Government Will:**

- ◆ Educate by good example;
- ◆ Help consumers communicate to manufacturers the need for products that are recyclable, durable, repairable, and have reduced toxicity;
- ◆ Provide curricula and training materials for kindergarten through college students;
- ◆ Institute research and development activities at colleges and universities;
- ◆ Develop information and materials to foster resource conservation by businesses and citizens; and
- ◆ Educate citizens on the need for integrated resource and solid waste management.

**VISION**

**YEAR 2005**

**Secondary resource and residual waste management are self-sustaining operations with limited need for direct government intervention. Government will focus on the environmental protection and human health aspects of waste management.**

**GETTING THERE**

**Citizens Will:**

- ◆ Pay for consumption by financially supporting safe management of resource and residual materials.

**Business Will:**

- ◆ Adopt the vision of resource conservation in business practices and thereby minimize the need for government intervention; and
- ◆ Financially support safe management of resource and residual materials.



**Government Will:**

- ◆ Provide citizens the opportunity to recycle and dispose of waste;
- ◆ Develop local plans which give citizens services that are safe, affordable and convenient;
- ◆ Assure that Oregon has sufficient, safe and convenient disposal capacity; and
- ◆ Implement funding alternatives for secondary resource and residual collection and disposal which will spread the cost of solid waste management broadly throughout the system.

**VISION**

**YEAR 2005**

**Public and private decisions about how products are manufactured and used and how residual waste is disposed are made in the best interests of public and environmental health.**

**GETTING THERE**

**Government,  
Business and  
Citizens Will:**

- ◆ Take responsibility for individual behavior and be aware of how daily actions affect the quality of Oregon's air, water and land.

## OBJECTIVES & STRATEGIES

This part of the plan outlines the objectives and strategies for achieving the vision. It is organized into five primary areas - Education, Waste Prevention, Material Recovery, Residual Disposal, and System Management. For each strategy a lead responsible party is identified. Other entities who will play a key role in seeing that the strategy is accomplished are identified as resources. The timeline for achieving the strategy is described as "first third", "second third" or "third third". This is intended to define a general time and sequence for implementation during the ten year period of the plan, between 1995 and 2005. Where local government is referenced in the plan it means cities, counties and metropolitan service districts as appropriate for the identified strategy and in accordance with existing authorities and responsibilities. It is important to recognize that successful plan implementation can only occur if all parties identified in the plan take responsibility for their role and actively participate in implementation of the strategies.

# EDUCATION

## Problem Summary

The cost of generating waste is ultimately borne by everyone. In order to make sound purchasing and business decisions, people must be made aware of the social, environmental and economic impacts of our "throw-away" society. These include such things as the short- and long-term costs of disposal, effects on natural resource availability and conservation, as well as national and international business competition. In addition, business and industry will require a workforce with the knowledge and technical skills to implement effective waste reduction measures.

### Objective 1

Develop education programs and materials that promote an understanding of the environmental impact of the manufacture and use of products and packaging and the true cost of disposal.

### Strategies:

- A. Enable consumers to communicate to manufacturers and businesses their product and packaging preferences.
  - ◆ **Responsible Party:** Department of Environmental Quality
  - ◆ **Resource:** Local Governments
  - ◆ **Timeline:** First Third
  
- B. Develop consumer guides for "environmentally sound" purchasing choices.
  - ◆ **Responsible Party:** Department of Environmental Quality
  - ◆ **Resources:** Manufacturers, Retailers, Scientific Community
  - ◆ **Timeline:** First Third
  
- C. Develop "material-specific" public education campaigns to target specific materials and/or markets and other activities that promote waste prevention and recycling.
  - ◆ **Responsible Party:** Department of Environmental Quality, Local Governments
  - ◆ **Resources:** Business, Manufacturers, Retailers
  - ◆ **Timeline:** First Third

- D. Participate with other states in labeling program initiatives to ensure consistency in labeling policy and requirements for national consistency.
- ◆ **Responsible Party:** Department of Environmental Quality
  - ◆ **Resources:** Manufacturers, Environmental Groups, Scientific Community
  - ◆ **Timeline:** As appropriate
- E. Provide technical assistance to local governments to incorporate waste prevention and reuse education into their recycling programs.
- ◆ **Responsible Party:** Department of Environmental Quality
  - ◆ **Resource:** Local Government
  - ◆ **Timeline:** First Third
- F. Provide information on waste prevention, recycling and residual disposal to businesses located in or relocating to Oregon.
- ◆ **Responsible Party:** Local governments
  - ◆ **Resource:** Department of Environmental Quality, Economic Development Department
  - ◆ **Timeline:** First Third
- G. Establish a local recognition and award program for businesses, manufacturers, institutions and government agencies which incorporate waste prevention into their operation practices.
- ◆ **Responsible Party:** Department of Environmental Quality
  - ◆ **Resources:** Chamber of Commerce, City and County Government
  - ◆ **Timeline:** First Third

## Objective 2

Expand curricula in primary and secondary levels of education that include waste prevention and reuse.

### Strategies:

- A. Develop and make available a comprehensive solid waste curricula for primary and secondary schools that provide a

balanced approach among waste prevention, reuse, recycling and disposal as methods for solid waste management in Oregon.

- ◆ **Responsible Party:** Department of Environmental Quality
- ◆ **Resources:** Department of Education, Business, Industry
- ◆ **Timeline:** Second Third

B. Provide assemblies, tours and other activities for primary and secondary schools to promote an understanding of prevention, reuse and recycling.

- ◆ **Responsible Party:** Industry and Business
- ◆ **Resource:** Local School Districts
- ◆ **Timeline:** Second Third

C. Promote the solid waste curricula among primary and secondary educators and school districts. Local school districts will be educated about its benefits and educational significance.

- ◆ **Responsible Party:** Department of Education
- ◆ **Timeline:** Second Third

### Objective 3

Make it a priority to develop a strong environmental post-secondary education program with an emphasis on solid waste resource management in publicly funded institutions. Oregon will be recognized nationally and internationally as having one of the best college and university level environmental education programs available.

#### Strategies:

A. Develop curricula for managing sustainable and secondary resources and residual wastes in four year colleges and universities.

- ◆ **Responsible Party:** Department of Higher Education
- ◆ **Resources:** Business, Industry, Federal Government, Economic Development  
Department, Department of Environmental Quality
- ◆ **Timeline:** Second Third

- B. Provide undergraduate and graduate students in engineering and business programs with enhanced exposure to the interdisciplinary field of materials recycling and waste prevention.

- ◆ **Responsible Party:** Department of Higher Education
- ◆ **Resource:** Business, Industry, Federal Government, Economic Development Department, Department of Environmental Quality
- ◆ **Timeline:** Second Third

- C. Develop industry outreach programs in which material engineering concepts related to new and existing recycling technology and waste prevention technology are incorporated.

- ◆ **Responsible Party:** Department of Higher Education
- ◆ **Resource:** Industry
- ◆ **Timeline:** Second Third

- D. Establish solid waste management educational programs serving personnel from the industrial and public sectors through workshops and continuing education.

- ◆ **Responsible Party:** Department of Higher Education
- ◆ **Resource:** Business and Industry
- ◆ **Timeline:** Third Third

- E. Establish a shared funding approach that will support a recycling and waste prevention technology educational program through Oregon's institutions of higher education.

- ◆ **Responsible Party:** Business, Industry
- ◆ **Resource:** Department of Higher Education
- ◆ **Timeline:** Second Third

# WASTE PREVENTION

## Problem Summary

Oregon has a policy that source reduction or prevention of solid waste should be considered the first solid waste management option above recycling, composting, energy recovery, and disposal. The policy has been in place since 1983, but Oregon has not expended much effort in developing the framework necessary to realize the benefits of waste prevention. Today as we see disposal costs rising and the world becoming more concerned about depletion of natural resources, other environmental impacts, and the ability to be competitive in difficult economic times, it is critical that we look at our manufacturing and consumption habits.

### Objective 1

Research and develop a waste prevention program for Oregon which addresses industrial and municipal solid waste.

### Strategies:

- A. Survey businesses, industry and institutions to determine the current level of waste prevention awareness and practices and to identify participants interested in waste prevention programs.
  - ◆ **Responsible Party:** Department of Environmental Quality
  - ◆ **Resources:** Business, Industry, Institutions
  - ◆ **Timeline:** First Third
  
- B. Conduct workshops, promote pilot projects, identify industry needs and develop technical assistance programs.
  - ◆ **Responsible Party:** Department of Environmental Quality
  - ◆ **Resources:** Business, Industry, Trade Association
  - ◆ **Timeline:** First Third
  
- C. Coordinate and provide technical assistance to volunteer participants to conduct waste audits and material assessments, and to develop, implement and assess waste prevention and reuse programs. The participants will report to DEQ on activities that best achieve waste prevention goals while having economic benefits and demonstrated cost savings.
  - ◆ **Responsibility:** Department of Environmental Quality
  - ◆ **Resources:** Business, Industry, Institutions, Local Governments, State Agencies.
  - ◆ **Timeline:** First Third

- D. Develop waste prevention training manuals, waste assessment handbooks, and other informational materials for public use.
- ◆ **Responsible Party:** Department of Environmental Quality
  - ◆ **Resources:** Business, Industry, Local Governments
  - ◆ **Timeline:** First Third
- E. Establish a clearinghouse to distribute materials and publicize programs to the general public, private sector and government.
- ◆ **Responsible Party:** Department of Environmental Quality
  - ◆ **Resources:** Business, Industry, Local Governments
  - ◆ **Timeline:** Second Third
- F. Develop and promote the use of a waste exchange program for the private and public sectors.
- ◆ **Responsible Party:** Business and Industry
  - ◆ **Resources:** Department of Administrative Services, Local Governments
  - ◆ **Timeline:** First Third
- G. Oregon's progress in the waste prevention program will be measured overall by determining the waste disposed, per capita, on an annual basis with a baseline established in 1995. The amount of waste disposed per capita should show a steady decline.
- ◆ **Responsible Party:** Department of Environmental Quality
  - ◆ **Resources:** State Agencies, Local Governments, Business, Industry, Institutions
  - ◆ **Timeline:** First Third, Second Third, Third Third



**Objective 2**

**Implement a statewide waste prevention program by 1998 which addresses industrial and municipal solid waste.**

**Strategies:**

- A.** Train employees to conduct waste audits and material assessments with the goal of implementing waste prevention programs.
- ◆ **Responsible Party:** Trade and Professional Organizations
  - ◆ **Resources:** Department of Environmental Quality, Local Governments, Business and Industry, Department of Higher Education
- B.** Business, manufacturers, institutions, and public agencies will conduct waste evaluations, develop reduction programs and implement them.
- ◆ **Responsible Party:** Business, Industry, Institutions, State and Local Governments
  - ◆ **Resources:** Department of Environmental Quality, Department of Higher Education, Local Governments
  - ◆ **Timeline:** Second Third
- C.** Business, manufacturers and institutions will be surveyed in order to determine the amount of waste reduced, and to identify successful waste prevention strategies.
- ◆ **Responsible Party:** Department of Environmental Quality
  - ◆ **Resources:** Business, Manufacturers, Institutions, Local Governments
  - ◆ **Timeline:** First Third, Second Third, Third Third
- D.** Through legislation establish a low interest/no interest revolving loan fund. This fund will be made available for manufacturers to finance the capital expenditures necessary to implement process changes that result in maximum waste prevention for a specific material or process; or that extend the reparability and durability of products by a five year minimum. A loan program would be sought in 1999 if a declining trend in the amount of waste disposed has not been achieved.
- ◆ **Responsible Party:** Economic Development Department
  - ◆ **Resources:** Department of Energy, Business, Industry, Local Governments
  - ◆ **Timeline:** Second Third

- E. Provide research and development for source reduction strategies. These strategies will include, but not be limited to, reduction in packaging, use of bulk items, use of two-way packaging, increased use of refillable containers, and reduction of toxins.

- ◆ **Responsible Party:** Business, Industry
- ◆ **Resources:** Department of Higher Education
- ◆ **Timeline:** Second Third

- F. If waste disposal is not reduced by the year 2000, seek legislation to require some or all solid waste generators to plan and implement waste prevention programs.

- ◆ **Responsible Party:** Department of Environmental Quality
- ◆ **Resources:** Local governments, Business, Industry
- ◆ **Time Line:** Third Third

### Objective 3

Government agencies will conduct waste prevention self-assessments; prepare and implement prevention plans.

#### Strategies:

- A. Provide technical assistance, procurement guidance and employee training to facilitate the implementation of waste prevention programs

- ◆ **Responsible Party:** Department of Administrative Services
- ◆ **Resources:** Department of Environmental Quality, Local Governments
- ◆ **Timeline:** Second Third

- B. State and local government procurement policy will target reduction in product, packaging, reuse of shipping materials, and a reduction in the amount of toxins.

- ◆ **Responsible Party:** Department of Administrative Services
- ◆ **Resources:** State Agencies, Local Governments
- ◆ **Timeline:** Second Third

- C. Provide guidance for state agencies and local governments on procurement practices that consider product and equipment longevity, reduce waste, conserve energy, and reduce toxins.
- ◆ **Responsible Party:** Department of Administrative Services
  - ◆ **Resources:** Department of Environmental Quality, Business, Industry
  - ◆ **Timeline:** First Third
- D. Integrate waste prevention programs in a cross-media format. These programs will include recycling, pollution prevention, energy conservation, air quality, and water quality.
- ◆ **Responsible Party:** Department of Environmental Quality
  - ◆ **Resources:** Business, Industry, State Agencies, Local Governments, Department of Energy
  - ◆ **Timeline:** First Third
- E. A "Leave it on the Lawn" and site composting program will be established and demonstrated at state offices in Salem. Implement the model program throughout state government.
- ◆ **Responsible Party:** Department of Parks and Recreation
  - ◆ **Resources:** All State Agencies
  - ◆ **Timeline:** First Third

#### Objective 4

Actively seek and support state and federal legislation where regional, national and international requirements and/or standards are necessary to achieve waste prevention.

- Strategies:
- A. Evaluate the applicability of an advance disposal fee on products as a mechanism to encourage waste prevention and fund waste prevention efforts.
- ◆ **Responsible Party:** Department of Environmental Quality
  - ◆ **Resources:** Industry, Business, State and Local Governments
  - ◆ **Timeline:** Second Third
- B. Coordinate with neighboring states and support federal legislation that addresses prevention of solid waste through national policies on packaging, product formulation, product durability and repairability.

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- ◆ **Responsible Party:** Department of Environmental Quality
- ◆ **Resources:** Business, Industry, U.S. Environmental Protection Agency, Consumers, ASTSWMO, NGA
- ◆ **Timeline:** Second Third, Third Third

C. Seek and support federal legislation that mandates companies which produce, use, and sell packaging and produce products to study and implement ways the companies can proactively participate in the management of their packaging and product waste.

- ◆ **Responsible Party:** Department of Environmental Quality
- ◆ **Resources:** Other States, ASTSWMO, NGA, Business, Industry, Local Governments
- ◆ **Timeline:** Second Third, Third Third

# MATERIAL RECOVERY

## Problem Summary

In order to have effective material recovery and recycling programs, it is essential to achieve a balance in supply and demand for recyclable materials. Currently there is no system that assures that each material collected has a marketplace. Transportation costs and low material volume are problems for recycling programs in rural areas of the state. Commercial recycling programs and procurement policies which create a demand for goods made from recycled material have not been maximized.

### Objective 1

**Maximize the efficiencies and effectiveness of recyclable material collection programs and market development. Specific materials should be targeted for material recovery opportunities.**

### Strategies:

- A. Establish a list of target materials for the purposes of focusing market development strategies and materials collection, education and promotion programs. Analysis to develop the list of targeted materials will include a biennial waste composition study; annual recycling surveys; source reduction projections; analysis of the status of western region recycling markets; economic analysis of recovery costs and benefits; environmental health impacts of production and disposal of specific materials; and information related to conservation of natural resources.

◆ **Responsible Party:** Department of Environmental Quality

◆ **Resources:** Local Governments, Department of Economic Development, Business, Industry

◆ **Timeline:** First Third

- B. Recycling collection, processing, markets, and resource utilization efforts will place priority on the targeted materials.

◆ **Responsible Party:** Business, Industry

◆ **Resources:** Local Governments, Department of Environmental Quality, Economic Development Department, Department of Administrative Services, Consumers

◆ **Timeline:** First Third

**Objective 2**

Encourage development of sustainable local, state, and regional markets for secondary material through research and development, financial incentives, technical assistance, and identifying and removing regulatory barriers.

**Strategies:**

- A. Establish appropriate legislative authority and resources to broaden programs which address secondary resource market development.
- ◆ **Responsible Party:** Economic Development Department
  - ◆ **Resources:** Business and Industry, Local Governments, Consumers
  - ◆ **Timeline:** First Third
- B. Develop a uniform building code for including recycling areas in all new commercial, industrial and residential construction.
- ◆ **Responsible Party:** Building Codes Agency
  - ◆ **Resources:** Local Governments, Department of Environmental Quality
  - ◆ **Timeline:** First Third
- C. Analyze barriers to using building products made from recyclable material. Establish standards and codes for using such materials.
- ◆ **Responsible Party:** Building Codes Agency
  - ◆ **Resources:** Business, Industry, Local Governments, Department of Environmental Quality
  - ◆ **Timeline:** First Third
- D. Encourage innovative material recovery solutions. Seek legislation that establishes and funds a research and development program in the Oregon higher education system. The program will focus on developing technologies to use specific recyclable materials. The program will include industry and business testing and pilot programs as well as direct communication and educational components.
- ◆ **Responsible Party:** Industry
  - ◆ **Resources:** Department of Higher Education, Local Governments
  - ◆ **Timeline:** First Third

- E. Provide information to business and industry on the supply of recyclable materials available as a resource. This outreach and promotion program will target specific materials.
- ◆ **Responsible Party:** Economic Development Department
  - ◆ **Resources:** Markets Development Council, Department of Environmental Quality
  - ◆ **Timeline:** First Third
- F. Consider establishing enterprise zones to encourage the establishment of local markets for targeted recyclable materials.
- ◆ **Responsible Party:** Local governments
  - ◆ **Resources:** Economic Development Department, Business, Industry
  - ◆ **Timeline:** First Third
- G. Support a recycling market investment tax credit program initially administered by the Oregon Department of Energy. This would be the sole tax credit program for recycling and recycling market development. Seek legislation to shift the responsibility for administering the market development tax credit program to the Economic Development Department.
- ◆ **Responsible Party:** Department of Energy and Economic Development  
Department
  - ◆ **Resources:** Department of Environmental Quality, Recycling Markets  
Development Council, Business, Industry
  - ◆ **Timeline:** First Third, Second Third

**Objective 3**

**Maximize the recovery of recyclable material from commercial generators throughout Oregon.**

**Strategies:**

- A. Place a strong emphasis on education and promotion for commercial collection programs within local jurisdictions. The focus will be on specific businesses and waste streams for developing collection and marketing programs.
- ◆ **Responsible Party:** Local Governments
  - ◆ **Resources:** Department of Environmental Quality
  - ◆ **Timeline:** First Third

- B.** Develop strategies and provide training and technical assistance to government, business and industry for increased commercial collection programs for specific target materials.

- ◆ **Responsible Party:** Department of Environmental Quality
- ◆ **Resources:** Local Governments and Business, Industry, Economic Development Department, Department of Administrative Services
- ◆ **Timeline:** First Third

- C.** Government, business and industry will conduct a review and analysis of their own waste generation to determine what material recovery opportunities exist within their operations. Using this information, they will develop and implement effective material recovery programs.

- ◆ **Responsible Party:** State and Local governments, Business, Industry
- ◆ **Resources:** Department of Environmental Quality, Trade Associations
- ◆ **Timeline:** First Third

#### **Objective 4**

**Promote recycling by increasing state and local government recycling programs and procurement of products made from recycled materials and recyclable materials.**

#### **Strategies:**

- A.** Seek legislation to enhance current public agency procurement practices, including the establishment of technically and economically feasible appropriate product standards.

- ◆ **Responsible Party:** Department of Administrative Services
- ◆ **Resources:** Department of Environmental Quality, Industry
- ◆ **Timeline:** First Third

- B.** Conduct procurement program self-assessments to determine potential recycled material purchases.

- ◆ **Responsible Party:** State and Local Governments
- ◆ **Timeline:** First Third



- C. Continue to monitor all state agency purchasing and report findings to the legislature.
  - ◆ **Responsible Party:** Department of Administrative Services
  - ◆ **Resources:** State Agencies
  - ◆ **Timeline:** First Third, Second Third, Third Third
  
- D. Modify "Opportunity to Recycle" legislation to include procurement of products made from recycled materials and recyclable materials.
  - ◆ **Responsible Party:** Department of Environmental Quality
  - ◆ **Resources:** Local Governments, Economic Development Department
  - ◆ **Timeline:** First Third
  
- E. Require public agency suppliers to submit waste reduction plans as part of proposals and bids.
  - ◆ **Responsible Party:** Department of Administrative Services
  - ◆ **Resources:** Business, Industry, Department of Environmental Quality
  - ◆ **Timeline:** Third Third

**Objective 5**

**Develop and adopt common policies with other western states for packaging, labeling, procurement and content standards in order to influence the development of national policy.**

- Strategies:**
- A. Develop common policies for minimum content standards. Consider standards that are compatible, at a minimum, with the larger market states in the west.
    - ◆ **Responsible Party:** Department of Environmental Quality
    - ◆ **Resources:** Industry, Other States
    - ◆ **Timeline:** Second Third
  
  - B. Assure compatible procurement policies. Where efficiencies in purchasing can be gained by consolidating Oregon state efforts with other states. This will be a priority.
    - ◆ **Responsible Party:** Department of Administrative Services
    - ◆ **Resources:** Other States
    - ◆ **Timeline:** First Third, Second Third, Third Third

C. Demonstrate leadership with other western states in labelling program initiatives.

◆ **Responsible Party:** Department of Environmental Quality

◆ **Resources:** Other States, Business, Industry

◆ **Timeline:** First Third, Second Third, Third Third

D. Work with the state's legislative and congressional delegation and such organizations as the National Governors' Association and the Association of State and Territorial Solid Waste Management officials to seek national resource use policies which make it more cost effective for manufacturing industries to demand and use targeted recovered materials.

◆ **Responsible Party:** Department of Environmental Quality

◆ **Resources:** Industries, Economic Development Department

◆ **Timeline:** First Third, Second Third, Third Third

# RESIDUAL WASTE DISPOSAL

## Problem Summary

With the implementation of more stringent landfill standards under RCRA, Oregon is seeing many small local landfills close and the cost of solid waste disposal increase. Although Oregon has adequate landfill capacity, accessible and convenient disposal capacity may be lacking. With an increase in material recovery, reuse and waste reduction efforts, the amount of waste requiring disposal will decrease over time. But there will always be a need for available disposal options to take care of waste which cannot be recovered.

### Objective 1

Sufficient, safe and accessible disposal capacity will be assured to manage municipal wastes.

### Strategies:

- A. Gather data, perform analysis and develop appropriate policy on statewide disposal capacity needs. A critical component of needs assessment will be generators' accessibility to remaining disposal capacity.
  - ◆ **Responsible Party:** Department of Environmental Quality
  - ◆ **Resources:** Local Governments, Industry
  - ◆ **Timeline:** First Third, Second Third, Third Third
  
- B. Develop local strategies to address insufficient disposal capacity.
  - ◆ **Responsible Party:** Local Governments
  - ◆ **Resources:** Department of Environmental Quality, Industry
  - ◆ **Timeline:** First Third, Second Third, Third Third
  
- C. Continue to assure safe and accessible disposal for all Oregonians. Local governments should work together to meet solid waste management needs when necessary.
  - ◆ **Responsible Party:** Local Governments
  - ◆ **Resources:** Department of Environmental Quality
  - ◆ **Timeline:** First Third, Second Third, Third Third

- D. Oregon will assess a surcharge on the disposal of imported solid waste based on the costs to the state of disposing of the waste.
- ◆ **Responsible Party:** Department of Environmental Quality
  - ◆ **Timeline:** First Third, Second Third, Third Third
- E. Recognize that solid waste management is a regional concern and cooperate with states within the region on policy decisions related to solid waste management.
- ◆ **Responsible Party:** Department of Environmental Quality
  - ◆ **Resources:** Local Governments, Other States, Industry
  - ◆ **Timeline:** First Third, Second Third, Third Third
- F. Out-of-state solid waste generators are required to reduce and recycle waste at least as well as Oregonians.
- ◆ **Responsible Party:** Waste Generators
  - ◆ **Timeline:** First Third, Second Third, Third Third

## Objective 2

Assure that adequate operating standards, sensitive to geographic differences, are established and enforced for all municipal solid waste disposal sites.

### Strategies:

- A. Conform, at a minimum, to RCRA Subtitle D requirements.
- ◆ **Responsible Party:** Landfill Owners/Operators
  - ◆ **Timeline:** First Third, Second Third, Third Third
- B. Assure adequate environmental protection at municipal solid waste landfills, considering (among other factors) the hydrogeological conditions of a site; the climatological conditions; the amount of waste managed at a landfill; and the practicable waste management alternatives available.
- ◆ **Responsible Party:** Department of Environmental Quality
  - ◆ **Timeline:** First Third, Second Third, Third Third

**Objective 3**

Assure adequate funding to conduct and maintain safe disposal site closures to protect Oregon's land, air and water.

**Strategies:**

**A.** Implement and enforce RCRA Subtitle D.

- ◆ **Responsible Party:** Landfill Owners/Operators
- ◆ **Resources:** Department of Environmental Quality, Citizens
- ◆ **Timeline:** First Third, Second Third, Third Third

**B.** Assure that any necessary facility closure costs are fully funded.

- ◆ **Responsible Party:** Landfill Owners/Operators
- ◆ **Timeline:** First Third, Second Third, Third Third

**Objective 4**

For disposal sites identified as having no responsible parties, assure that resources are available for remedial actions necessary to protect the environment.

**Strategies:**

**A.** Continue to use the Orphan Site Account process for assisting in disposal facility remediation.

- ◆ **Responsible Party:** Department of Environmental Quality
- ◆ **Timeline:** First Third, Second Third, Third Third

# SYSTEM MANAGEMENT

## Problem Summary

The solid waste system, from reduction and recycling to disposal, historically has operated in a fragmented way. Technology is becoming more sophisticated and complex and costs associated with solid waste management are continuing to rise. In order to achieve an efficient and effective system and maintain public accountability, comprehensive standards, policies, and a framework for resolving issues needs to be developed and implemented.

### Objective 1

**Encourage and enable sustainable and viable management systems based on local decision making by facilitating the development and implementation of local and regional solid waste management strategies which recognize geographic differences.**

### Strategies:

- A. Through guidelines and technical assistance encourage counties to prepare and adopt integrated solid waste management plans by 1998. The plans should be consistent with the state plan vision and objectives. They will be updated every five years or more often if local circumstances change significantly. Cities will be encouraged to participate in and adopt their county's/ metropolitan service district plan or provide a comparable alternative. In lieu of a county plan, a multi-jurisdictional plan may be developed.

- ◆ **Responsible Party:** Local Governments
- ◆ **Resources:** Department of Environmental Quality, Citizens, Business, Industry
- ◆ **Timeline:** First Third

- B. Develop and adopt regulations defining the elements to be included in local solid waste management plans.

- ◆ **Responsible Party:** Department of Environmental Quality
- ◆ **Resources:** Local Governments, Business, Industry, Citizens
- ◆ **Timeline:** First Third

- C. Continue to provide funds and technical assistance for local solid waste planning efforts to prepare integrated solid waste management plans.
- ◆ **Responsible Party:** Department of Environmental Quality, Local Governments
  - ◆ **Resources:** Business, Industry, Citizens
  - ◆ **Timeline:** First Third
- D. Seek legislation to broaden the use of grant funds for local solid waste plan implementation. These funds will be available to rural areas to assure a viable management system.
- ◆ **Responsible Party:** Local Governments, Department of Environmental Quality
  - ◆ **Resources:** Business, Industry, Citizens
  - ◆ **Timeline:** First Third, Second Third
- E. Data gathering and information analysis and dissemination on such things as waste composition, materials recovered, and resource value will continue to be an important element of the integrated solid waste management system.
- ◆ **Responsible Party:** Department of Environmental Quality
  - ◆ **Resources:** Local Governments, Business, Industry
  - ◆ **Timeline:** First Third, Second Third, Third Third
- F. Provide information on variable rates, fixed rates, service fees and other funding mechanisms to local governments.
- ◆ **Responsible Party:** Department of Environmental Quality
  - ◆ **Resources:** Local Governments, Other States, Business and Industry
  - ◆ **Timeline:** First Third, Second Third, Third Third
- G. Solid waste permit actions will be in conformance with the local solid waste management plan which has been adopted and approved.
- ◆ **Responsible Party:** Permittee
  - ◆ **Timeline:** Second Third, Third Third

- H. Develop recommendations for the legislature on reliable solid waste management measurement techniques and appropriate goals for the system beyond 1995.

- ◆ **Responsible Party:** Department of Environmental Quality
- ◆ **Resources:** Local Governments, Business, Industry
- ◆ **Timeline:** First Third

### Objective 2

Encourage efficient transportation networks for recoverable materials and residual waste.

- Strategies: A. Evaluate barriers and opportunities for solid waste transportation information and options.

- ◆ **Responsible Party:** Public Utility Commission, Department of Environmental Quality
- ◆ **Resources:** Trucking Industry, Railroads, Business, Industry, Local Governments
- ◆ **Timeline:** Second Third

### Objective 3

Assure that collection and/or convenient drop-off services for recoverable materials and residual wastes are available while considering local, regional, geographic, and economic differences.

- Strategies: A. Continue to provide the opportunity to recycle and provide adequate disposal services to all citizens of the state.

- ◆ **Responsible Party:** Local Governments
- ◆ **Resources:** Department of Environmental Quality, Industry
- ◆ **Timeline:** First Third, Second Third, Third Third

- B. Provide information to local governments which evaluates the benefits and drawbacks to mandatory collection and assists local government in their solid waste management decisions.

- ◆ **Responsible Party:** Department of Environmental Quality
- ◆ **Timeline:** First Third



- C. Coordinate with neighboring states to promote and develop waste exchange, education and promotion programs, and procurement guidelines.

- ◆ **Responsible Party:** Business, Industry
- ◆ **Resources:** Other States, Department of Environmental Quality, Department of Administrative Services, Local Governments,
- ◆ **Timeline:** First Third

**Objective 4**

Identify and develop a system to manage special and problem wastes that minimizes the impact on human health and the environment.

**Strategies:**

- A. Gather data, perform analysis and develop a management plan component for special and industrial wastes in the first plan update.

- ◆ **Responsible Party:** Department of Environmental Quality
- ◆ **Resources:** Business, Industry, Local Governments
- ◆ **Timeline:** First Third

## Environmental Quality Commission

- Rule Adoption Item  
 Action Item  
 Information Item

Agenda Item F  
 December 10, 1993 Meeting

**Title:**

Proposed Adoption of State Integrated Resource and Solid Waste Management Plan

**Summary:**

The 1991 Oregon Recycling Act requires the Environmental Quality Commission (EQC) to adopt an Integrated Solid Waste Management Plan by January 1, 1994. The statute requires that the plan cover a ten year period and that address all facets of solid waste management.

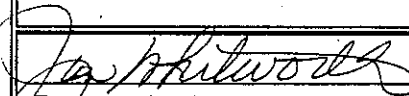
The proposed plan was developed over a two year period and incorporates the input of 13 local work groups, the Department's Solid Waste Advisory Committee, a state agency work group, and an industry and business work group.

The plan envisions a fundamental shift away from the bottom of Oregon's solid waste management hierarchy (disposal) to the top of the hierarchy (waste reduction). The hierarchy, which the plan is designed to follow, is: reduce, reuse, recycle, compost, energy recover, and dispose.

In addition to recommending a major emphasis on waste prevention, the plan also identifies local government and the private sector as primarily responsible for a functional solid waste system in Oregon, emphasizes market development and the need for recycling to be economically self-sustaining. The measurement of overall success will be a declining trend in per capita solid waste disposal.

**Department Recommendation:**

Adopt the State Integrated Resource and Solid Waste Management Plan as proposed in Attachment A of the staff report.

  
Report Author

  
Division Administrator

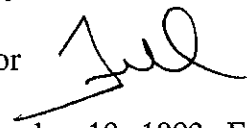
  
Director

November 23, 1993 †Accommodations for disabilities are available upon request by contacting the Public Affairs Office at (503)229-5317(voice)/(503)229-6993(TDD).

State of Oregon  
 Department of Environmental Quality

Memorandum†

Date: November 23, 1993

To: Environmental Quality Commission  
 From: Fred Hansen, Director   
 Subject: Agenda Item F, December 10, 1993, EQC Meeting

Adoption of State of Oregon Integrated Resource and Solid Waste Management Plan, 1995 - 2005.

Statement of the Issue

In 1991 the Oregon Legislature determined that in order to make sound solid waste management policy decisions there is a need for Oregon to prepare and regularly update a statewide integrated solid waste plan. Waste generation continues to increase in Oregon and the nation. The United States generates twice the amount of waste per capita of any other industrialized nation. The impact is a decrease in natural resources and an increase in air, water and land pollution.

The plan takes an integrated view of solid waste management by evaluating and providing policy direction in five major areas - Education, Waste Prevention, Material Recovery, Residual Disposal, and System Management.

Solid Waste Management directions proposed are:

- \* A major waste prevention initiative in Oregon. Begin a voluntary program for a government and private sector partnership on waste prevention, i.e., not generating waste in the first place.
- \* A fundamental shift away from managing discarded and recovered materials as "waste", to managing discarded and recoverable material as valuable resources
- \* Self-sustaining recycling markets for the utilization of specific target materials that have been recovered from the waste stream.

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- \* An environmentally sound functional solid waste management system that provides accessible safe disposal of waste, optimum collection and utilization of recoverable materials, options for handling difficult to manage wastes, and informed and effective waste prevention.

### **Background**

The Integrated Resource and Solid Waste Management Plan for 1995 - 2005 proposes a fundamental shift in the way Oregon will approach solid waste management issues in the future. Solid waste will be viewed and treated as a resource with economic potential, rather than as a waste. The focus will be on waste prevention and preservation of natural resources -- the top of the solid waste management hierarchy -- rather than on management of the waste after it is produced. Waste generation occurs in the production, use and disposal of products. The environmental impacts -- depletion of natural resources, air, water, and land pollution, and waste generation -- occur at each stage.

This means it is imperative to change the way producers, consumers and governments view "waste". The Plan's VISIONS in the Year 2005 draw a picture of producers and consumers conserving valuable natural resources, and protecting the environment. This VISION is:

- \* Society shifts values from "throw away" to conservation.
- \* Producers and consumers move from generating waste to preventing waste.
- \* Government policies shift from regulation to education.
- \* Recycling and waste management industries become self-sustaining enterprises.

The Plan sets out an ambitious program for waste prevention that relies on a partnership among producers, consumers and government.

This plan attempts to address the "cause and effect" of waste generation and its impact on Oregon's natural resources and environment. The Plan makes a strong commitment to follow the solid waste management hierarchy -- reduce, reuse, recycle and dispose -- with decreasing priority placed on each step. To reflect the more comprehensive approach needed to address both waste generation and disposal the plan has been titled the "Oregon Integrated Resource and Solid Waste Management Plan".

The plan is designed to provide guidance to state and local government, the private sector, and citizens in making solid waste management decisions. It attempts to clarify roles and to ensure that there is an appropriate balance of responsibility and authority among various entities.

Significant Strategies Proposed in the Plan:

- Place a significant emphasis on waste prevention programs involving business, industry and government.
- Focus on national standards, rather than local standards, for labeling, minimum content, packaging and resource use policies.
- Improve local solid waste planning through technical assistance and guidance from the state. Cities and counties must work together on solid waste management.
- Seek funding to support local plan implementation.
- Manufacturers and retailers will participate in the management of the resulting waste from products made and sold.
- Evaluate the advance disposal fee (ADF) as an option to encourage waste prevention and provide a revenue source to support private and public waste prevention programs.
- Consider the applicability of mandatory collection of garbage and recyclables in local government jurisdictions. Encourage collection and funding systems that promote participation, education, broader rate base to support the system, concept that "generator pays", reduce air pollution and reduce energy consumption.
- Support the continuance of a single state tax credit program for recycling market development.
- Develop a strong environmental post-secondary education program in Oregon, with an emphasis on solid waste and resource management.

Key Roles in Solid Waste Management as Described in the Plan are:

\* **State Government:**

- Provide technical assistance and guidance to local government and business/industry.
- Ensure public education on all aspects of waste management and waste as a resource.
- Regulate and monitor disposal and material recovery.
- Buy recycled products.

- Lead by example for waste prevention, material recovery, procurement policies and activities.

\* **Local Government:**

- Assure a functional solid waste management system.
- Offer education and technical assistance to citizens and business/industry.
- Regulate solid waste collection and material recovery.
- Buy recycled products.
- Lead by example for waste prevention, material recovery, procurement.

\* **Business/Industry:**

- Plan and implement waste prevention programs.
- Participate in management of waste resulting from products made and sold.
- Use secondary resources in manufacturing.
- Buy recycled products.
- Educate employees and consumers.

\* **Citizens:**

- Be stewards of the environment.
- Demand and buy durable, repairable, and recycled products.
- Communicate environmental concerns to manufacturers.
- Be informed and make environmentally responsible choices.

THE PROPOSED PLAN IS CONTAINED IN ATTACHMENT A.

**Authority to Adopt a State Solid Waste Management Plan**

ORS 459A.020 requires the Commission to adopt a statewide integrated solid waste management plan by January 1, 1994.

This plan, as recommended, meets the conditions of this statutory requirement.

**Issues and Evaluation**

The following is a summary of the major areas of concern that were addressed throughout

the planning process. In most cases these are not issues of dissention, but areas where all concerned were in agreement that the plan needed to establish this direction for Oregon over the next ten years. These areas of statewide concern are outlined here because they are the most significant ones that came up during the development of the plan.

### **Emphasis on Waste Prevention**

The plan proposes a shift in solid waste management priorities from recycling and disposal to an increased emphasis on waste prevention. This emphasis was strongly supported by all of those involved in the planning process. Historically solid waste management has focused on disposal of waste. Disposal issues have been dealt with through a command and control approach to environmental management. Many solid waste management decisions in the past have been focused on the need for disposal capacity. From a statewide perspective, disposal capacity in Oregon is not presently an issue, nor will it likely be a problem for many years into the future. The bigger issue facing society today and in the future is that of resource conservation. One of the key approaches for improving our resource conservation efforts is to look at our production and consumption habits and find economically beneficial ways to produce, use and throw away "less stuff".

The waste prevention program, as proposed in the plan has the following key components:

- Voluntary participation by business, industry and government to plan and implement waste prevention measures.
- Education for the consumer on purchasing and product use.
- Pilot waste prevention projects from specific business and industry types and from state and local governments.
- Waste generators conduct waste audits, set goals, implement changes and measure waste reduced and economic benefits.
- State lead in providing technical assistance and information clearinghouse services.

It is time to implement a program that can realize resource and cost savings through waste prevention efforts. The plan supports and recommends this shift in focus for solid waste management.

### **Changing the Measure of Success**

State law contains a goal of 50% recovery from the general solid waste stream by the year 2000 and has established specific recovery rates for each county for the year

1995. The purpose of this goal and rates is to provide an incentive for local governments to improve local recycling programs and get valuable resources out of the waste stream for use as a resource in manufacturing processes.

The Plan recommends measuring statewide per capita disposal as a more accurate measure of overall success in material recovery/recycling and waste prevention efforts. This change in measurement is consistent with the broadening of emphasis to waste prevention efforts because just measuring recovery rates tends to encourage counties to focus only on recycling and disposal programs since reuse and reduction efforts do not "count" under the current measurement system.

Even though the plan recommends dropping the use of county specific legislatively mandated recovery rates as a compliance tool after 1995, the plan recognizes that recovery rates, disposal and generation trends are all important tools to evaluate the solid waste management system and make sound policy decisions. Therefore, required reporting and collection of data and information about materials recycled and recovered as well as disposed should continue. This information is essential to be able to analyze how programs can be improved and how we can have successful solid waste management over time. This information allows us to target problem areas and identify resources in the waste stream.

Using the more precise and consistent measurement of per capita disposal to measure success in solid waste management programs, while still maintaining the ability to utilize the county and statewide recovery data was supported by most people.

### **Local Solid Waste Planning**

Local solid waste planning is key to the ability of local governments to assure a functional solid waste system for its citizens. The plan encourages local government to utilize existing authority, seek the assistance and guidance of the state, and regularly review and anticipate solid waste issues and adopt solutions for local solid waste programs through an ongoing solid waste planning effort. It is essential that counties and cities within the counties work together. In some cases counties should consider planning for solid waste management together. The complexity and costs of solid waste management have grown immensely over last ten years and efficiencies can often realized through multi-jurisdictional cooperation.

The plan recommends a "carrot" approach over the "stick" approach to dealing with local solid waste management problems. Rather than recommend new legislation that would require local governments to do solid waste planning, the plan continues to



support existing legislation which says local governments are responsible for solid waste planning. The plan recommends that the state provide technical assistance, develop regulations, and seek legislative authority to use existing available grant dollars for plan implementation as a carrot to encourage integrated solid waste planning at the local level.

### **Mandatory Collection of Solid Waste and Recyclables**

The plan supports existing state policy which gives local governments the authority to determine if mandatory collection of solid waste and recyclables is appropriate for their jurisdiction. Throughout the development of this plan, the concept of mandatory collection in communities over a certain size was reviewed and discussed as a mechanism to address the following:

- Health and environmental issues related to illegal dumping.
- Place the cost of managing the waste on the individual who generates it.
- Spread the cost of a solid waste system more equitably across a broader base of generators.
- Help balance the funding of solid waste management systems by reducing the reliance on disposal tipping fees.
- Encourage more awareness of consumption and waste generation habits.

Information from other states indicates that communities with mandatory collection to have higher recovery rates for recycling. In Oregon only four communities have instituted mandatory collection, with mixed results. Because Oregon seems to have many communities which have allowed citizens to pay very low to no disposal costs while having convenient disposal, the proportion of people who self-haul their solid waste and recyclables is quite high. Because of the number of self-haulers and the low disposal costs it has been politically difficult for communities to pass ordinances requiring participation in collection services. During plan development comments and recommendations were split between seeking legislation that would mandate communities of a pre-determined size to have mandatory collection, and continuing to allow that decision to be made at the local level.

Because the character of the solid waste system is changing significantly, with disposal costs increasing, recycling increasing, landfills closing, and local governments reviewing their current systems, it was felt that the decision to institute mandatory collection should remain a local one. There are many variables in each

community and this decision needs to be evaluated in light of each community circumstance. The plan recommends leaving this decision to local governments and encourages the state to provide information and technical assistance to local governments so they can make the best decision for their jurisdiction. ATTACHMENT B provides background and analysis on this issue.

### **Funding the Plan**

During the public review process many concerns were raised regarding the funding for the initiatives and new responsibilities identified in the plan. The plan does not specifically identify resources or funding mechanisms for each strategy in the plan. The intent, in these difficult economic times, is to take a three pronged approach to funding the strategies laid out in the plan. 1) Set priorities and shift a portion of resources currently dedicated to recycling and disposal to waste prevention efforts; 2) Seek outside fund sources such as grants and foundation awards for technology and education initiatives; 3) Examine new funding approaches that have a direct relationship to the cost of services, cost of consumption, and/or the economic gains realized by waste prevention. This approach will involve creativity, risks, and decisions on the part of all participants responsible for implementing the strategies in this plan.

### **Summary of Any Prior Public Input Opportunity**

The development of the Integrated Resource and Solid Waste Management Plan has occurred during the last two years, January, 1992 to December, 1993. During this period, the State Solid Waste Advisory Committee (SWAC), thirteen Local Work groups (LWGs) representing all regions of the state, a State Agency Work group (SWG), and an Industry and Business Work group (IBWG) participated in the development of the plan being proposed for adoption. In addition to committee and work group meetings throughout the process, five public meetings were held in August, 1993 to discuss the proposed plan and receive public comment on the plan. ATTACHMENT C contains the announcement for the public meetings and summarizes the public comments and response to comments received. The Background Document for the plan includes appendices which lists the people involved in the committee and work groups that developed the plan.

The most frequent and major comments received from the public related to the following matters:

- Strong support for waste prevention efforts.
- Concern about costs of implementing the plan.
- Strong support for the education components.

- Opposition to legislatively required statewide mandatory collection.
- In rural areas of the state, concern about the rising cost of disposal.
- Need for viable markets for recyclable materials, especially in rural areas.

In addition to the public meetings, the Department also met with state agency representatives from Economic Development Department, Dept. of Higher Education, Dept. of Education, Parks and Recreation Department, Public Utility Commission, Department of Administrative Services and Department of Transportation. The strategies which specifically relate to these agencies were reviewed with them and modified according to input received from them.

### Conclusions

- \* The most effective approach to solid waste management is an integrated approach with major emphasis on waste prevention.
- \* Local government should remain the primary authority over local solid waste management planning and decision-making.
- \* State government's role should primarily be technical assistance, education, and regulation of disposal.
- \* Policies related to labeling, minimum content, and packaging are most effectively made and implemented at the national level.
- \* Material recovery and recycling should function as a self-sustaining economic enterprise to be successful. Business/industry and the generators of waste are primarily responsible for successful recycling programs and conservation of natural resources.

### Recommendation for Commission Action

It is recommended that the Commission adopt the Oregon Integrated Resource and Solid Waste Management Plan, 1995 - 2005, dated December, 1993 as presented in ATTACHMENT A of the Department Staff Report.

### Next Steps

1. Phased implementation of the plan over the next ten years.
2. Research and preparation of the 1996 plan update, which will focus on industrial solid waste information and issues.

3. Two year progress review by the Commission in December, 1995.

**Attachments**

- A. Proposed Integrated Resource and Solid Waste Management Plan, 1995 - 2000.
- B. Mandatory Solid Waste Collection Analysis
- C. Summary of Public Comment and Response to Comment

**Reference Documents (available upon request)**

1. Statutory Authority, ORS 459A.020
2. Applicable Rules, OAR Chapter 340 Divisions 90,91, 93, 94, 95, 96, 97
3. Supporting Technical References, Oregon Integrated Resource and Solid Waste Management Plan 1995 - 2005, Background Document.

Approved:

Section:

B. Patricia Venn

Division:

Mary Wahl

Report Prepared By: Jan Whitworth

Phone: 503 229-6434

Date Prepared: November 10, 1993

ATTACHMENT C

January 28, 1994

Dear Interested Persons:

As members of the Environmental Quality Commission, we are pleased to adopt the Oregon Integrated Resource and Solid Waste Management Plan. This plan provides overall guidance and direction for the development of solid waste policy in Oregon for the next ten years. Adoption of this plan signifies strong support for a waste prevention program initiative in Oregon. The plan also emphasizes the need for good educational programs in Oregon on solid waste management in general, including waste prevention, recycling, and disposal and the public-private partnership necessary to develop a solid waste system that is economically self-sustaining and places value on waste as a resource.

The Commission would like to take this opportunity to reiterate several specific concerns which we believe should be considered during

January 3, 1994

Page 2

implementation of this plan.

- Although it is important to recognize that labeling standards should be established at the national level, it is also important for Oregon to be a leader and be proactive in addressing labeling issues.
  
- In general, the usefulness of tax credits as an incentive for pollution prevention has diminished over the years; however it is recognized that a single tax credit program aimed specifically at developing markets for recyclable materials is needed in the near term to address the supply and demand problem associated with recycling.
  
- It is important to be specific in measuring success through trends in reduction of the amount of waste disposed. Measurement of weight and volume are important indicators, as well as developing a method of looking at the value of waste.
  
- It is important to emphasize waste prevention in solid waste. However, in doing so, the state should not lose sight of the continuing need for public educational efforts on recycling.

It will be a challenge to all Oregonians to implement this plan over the next ten years, and

January 3, 1994  
Page 3

the Department of Environmental Quality is committed to carrying out its part.

We recognize that this plan was developed through an extensive and interactive process involving the public, the Solid Waste Advisory Committee, other state agency representatives, local government, business and industry. We would like to personally thank everyone for his or her time commitment and invaluable advice and consultation in the development of this plan.

Sincerely,

William W. Wessinger

Commission Chair

Emery N. Castle  
Commission Vice Chair

Henry Lorenzen  
Commissioner

Carol A. Whipple  
Commissioner

Linda McMahan  
Commissioner

EQC:jw

## Environmental Quality Commission

- Rule Adoption Item
- Action Item
- Information Item

Agenda Item J  
January 27/28, 1994 Meeting

**Title:**

Fifth Annual Environmental Cleanup Report

**Summary:**

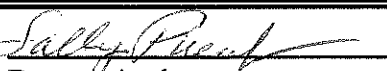
The Environmental Cleanup Report is submitted every year to the Environmental Quality Commission, the Governor, and the Legislature. The purpose of the report is to highlight accomplishments of Oregon's cleanup program in discovering and assessing contamination of sites from hazardous substances and cleaning up those sites, either with funds from the State Hazardous Substance and Remedial Action Fund (HSRAF) or through voluntary cleanups by responsible parties.

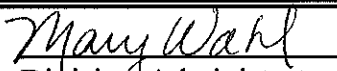
The program also includes cleanup of leaks from underground storage tanks, drug labs, and spill response.


This report covers the fiscal year from July 1992 through June 1993. Current information from July 1993 through December 1993 and projections through June 1994 are also addressed.

**Department Recommendation:**

Accept report--information only.

  
Report Author

  
Division Administrator

  
Director


†Accommodations for disabilities are available upon request by contacting the Public Affairs Office at (503)229-5317(voice)/(503)229-6993(TDD).



State of Oregon  
Department of Environmental Quality

Memorandum<sup>†</sup>

Date: January 11, 1994

To: Environmental Quality Commission  
From: Fred Hansen, Director   
Subject: Agenda Item J, Fifth Annual Environmental Cleanup Report, EQC Meeting  
1-27/28-94.

**Statement of Purpose**

This is the fifth annual environmental cleanup program report.

**Background**

ORS 465.234 requires that the Department of Environmental Quality submit a report to the Legislature, the Governor, and the Environmental Quality Commission outlining the environmental cleanup program's accomplishments during the previous fiscal year and its goals for the current fiscal year.

**Authority of the Commission with Respect to the Issue**

For information only.

**Alternatives and Evaluation**

not applicable

**Summary of Public Input Opportunity**

not applicable

**Conclusions**

not applicable

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<sup>†</sup>Accommodations for disabilities are available upon request by contacting the Public Affairs Office at (503)229-5317(voice)/(503)229-6993(TDD).

Memo To: Environmental Quality Commission  
Agenda Item J  
January 27/28, 1994 Meeting  
Page 2

**Intended Future Actions**

not applicable

**Department Recommendation**

It is recommended that the Commission accept this report.

**Attachments**

none

**Reference Documents (available upon request)**

none

Approved:

Section: Policy and Program Development  
Section

Division: Waste Management and Cleanup  
Division

Report Prepared By: Sally Puent

Phone: (503) 229-6431

Date Prepared: 1/11/93

SP/sp  
rep94.eqc  
1/11/94

**FIFTH ANNUAL**

**ENVIRONMENTAL CLEANUP REPORT**

**January 1994**

**submitted to:**

**Governor Barbara Roberts**

**Oregon Legislative Assembly**

**Environmental Quality Commission**

**by:**

**Fred Hansen, Director  
Department of Environmental Quality**

**Mary Wahl, Administrator  
Waste Management and Cleanup Division**

**printed on recycled paper**

## FORWARD

In 1993, the Department of Environmental Quality (DEQ) initiated a reorganization that places increased emphasis on regional activities such as technical assistance, pollution prevention and cross-program approaches to environmental concerns. We are in the process of moving portions of the Environmental Cleanup Program and our other programs from the headquarters office in Portland to regional offices throughout the state as part of reorganization. These changes will place staff closer to regulated industries and municipalities and help DEQ to be more responsive to the needs, questions and concerns of local communities.

This report summarizes this and other accomplishments of DEQ's Environmental Cleanup Program and outlines the challenges we face in 1994.

DEQ has achieved the following goals for 1993:

- The Voluntary Cleanup Program continues to meet an increasing demand.
- More interim cleanup actions are taking place to speed up the cleanup process.
- The Voluntary Cleanup and Site Response Sections are overseeing the investigation and cleanup of more than 140 sites - a record number.

We will continue to explore options for a replacement fee for the petroleum load fee to fund the orphan site account to pay for cleanups at sites where responsible parties are unknown, unwilling or unable to pay for cleanup.

Increased spill response technical assistance for local governments is another high priority goal. DEQ will provide on-scene technical assistance and inter-agency coordination for emergency spills of hazardous substances.

The Environmental Cleanup Program will continue to be a key service of DEQ. I am confident that we will meet 1994's challenges and will continue to become more effective at cleaning up Oregon sites contaminated by hazardous substances.

Respectfully,



Fred Hansen  
Director  
Department of Environmental Quality

# Accomplishments

## Introduction

Oregon's Environmental Cleanup program was established in 1988 by the Department of Environmental Quality (DEQ) and given the responsibility of implementing Oregon's environmental cleanup law (ORS 465.200-900). This report presents cleanup program accomplishments during the past fiscal year (July 1992-June 1993). It also summarizes cleanup activities that are in progress, those that have been completed during the current fiscal year, and those projected for completion through June 1994.

### Reorganization

In November 1993, the Environmental Cleanup Division joined with DEQ's Hazardous and Solid Waste Division to form a new DEQ headquarters division-- WASTE MANAGEMENT AND CLEANUP. Staff from both programs have been and will continue to be assigned to regional offices. This change supports DEQ's commitment to implement programs regionally, to be closer to the problems and issues, and to be more accessible to citizens, industry, local governments, and others who are affected by DEQ programs. For the environmental cleanup program, reorganization means more staff are moving to the field and cleanups are being conducted by staff who are familiar with specific local concerns and problems.

### Key Issues

Last year's report targeted three key areas of concern: 1) Streamlining the cleanup process, 2) Financing environmental cleanups and 3) Providing local government assistance.

**Streamlining:** Making the cleanup process more effective and efficient is an ongoing process. For example, the Voluntary Cleanup Program responds to the needs of property owners dealing with contaminated land. The program is designed so resources can be added as needed to meet the demand and therefore more cleanups may be completed. A new, simpler voluntary cleanup agreement has been developed to reduce negotiation time and enable cleanups to start sooner.

The increased use of interim cleanup actions to achieve a degree of cleanup earlier in the process and prevent the spread of contamination is another means of shortening the cleanup process. The implementation of soil cleanup standards and groundwater cleanup standards for petroleum contamination have helped to provide greater certainty during the cleanup process.

**Financing:** DEQ has identified two areas as central to the continued financing of environmental cleanups:

- *cost recovery and*
- *orphan site account (OSA) funding.*

Uniform cost recovery procedures have been implemented in headquarters and throughout the regional offices.

The 1993 legislature approved five million dollars for orphan site work for the 93-95 biennium. (Orphan sites are those where the responsible parties are unknown, unwilling or unable to pay for cleanup.) However, long term OSA funding will require a replacement fee for the petroleum loading fee. (More about orphan sites and orphan site funding in the *Issues* section of this report.)

**Local Government Assistance:** The voluntary cleanup program currently provides assistance to six local government agency projects. Representatives of 43 Oregon city and county governments attended the Environmental Cleanup Conference for local governments held in January 1993. In addition, environmental cleanup staff regularly consult with local government representatives about the cleanup program.

## Cleanup Activities

Tables A through D show cleanup activities conducted since the environmental cleanup program was created, as well as cleanup work that is projected through the end of the current fiscal year (June 1994).

For comparison, Appendix A is a condensed version of the 1991 Four-Year Plan. Appendix B, the Environmental Cleanup Glossary, provides definitions of general environmental cleanup terminology. The glossary also provides descriptions of general cleanup phases. Appendices C and D list the status of all

current projects.

## Site Assessment/ECSI

The site assessment process includes discovery of a potentially contaminated site, initial screening and assigning priority, performing preliminary assessments (PA) when appropriate, and determining if further investigation and/or cleanup is necessary.

The Environmental Cleanup Site Information System (ECSI) is an electronic filing system or database of sites contaminated or potentially contaminated by hazardous substances. During the fiscal year June 1992 through July 1993, 179 new sites were added to ECSI with 178 more expected to be added by June 1994. Currently there are 1291 sites in ECSI.

The Confirmed Release List (CRL), a subset of ECSI, is a list of sites where contamination has been verified. Twenty-eight new sites were added to the CRL during the 1992-93 fiscal year. Thirty-four more are estimated to be included by June 1994. The CRL currently has 101 sites.

The "inventory," also a subset of ECSI, is a list of sites where contamination has been confirmed through a preliminary assessment (PA) and the need for further action has been determined. The Inventory increased by sixteen new sites during fiscal year 1992-1993 with approximately another 21 to be added by June 1994. There are currently 62 sites on the inventory.

DEQ is currently emphasizing conducting

more site screenings. Site screening categorizes sites by high, medium, and low priority. Preliminary assessments (PAs) are then done only on the high priority sites, allowing high priority cleanups to start earlier. During the fiscal year July 1992 to June 1993, 90 site screenings were completed. By June 1994, 110 more are expected to be completed.

Between July 1992 and June 1993, preliminary assessments were completed at 54 sites. Ninety-four PAs were completed during the 1991-93 biennium. (This total is very close to the 1991 Four Year Plan projection of 100 PAs completed.) Forty-eight additional PAs are expected to be completed by June 1994.

## **Voluntary Cleanup**

The Voluntary Cleanup Section (VCS) is currently overseeing 74 active projects. New projects are initially placed in the pre-remedial development (PD) phase. Activities such as negotiations, file review, and work plan approvals occur in the PD phase. VCS had 28 projects which completed the PD phase during the fiscal year 1992-1993 and expects to have an additional 36 completed during the fiscal year 1993-1994. Early investigation work done during the PD phase may determine that some projects do not need further cleanup work. In these cases, sites which complete the PD phase are classified as completed projects.

For the fiscal year ending June 1993, four removals were completed. Three remedial investigations and two feasibility studies were also completed. For the fiscal year ending June 1994, seven removals, 28

remedial investigations and 11 feasibility studies are expected to be finished. Thirteen remedial actions also are expected to be completed. There are currently 24 projects on the VCS "waiting list." About three new projects are signed up each month. VCS completes about nine projects each year.

Evidenced by the number of projects in progress and the length of the waiting list, the voluntary cleanup program continues to be in demand. The program is funded by responsible parties who request DEQ oversight, allowing staff resources to be provided in relation to the demand for cleanup oversight. The Legislative Emergency Board recently approved additional limited duration positions to accommodate increasing requests for oversight.

Guidance to help people use the soil cleanup standards process has been completed and will be available in December 1993. The Voluntary Cleanup Program will begin operating from DEQ regional offices as of December 1993. This move is in keeping with the agency-wide commitment to be more accessible locally and will allow more sites to be cleaned up more quickly and efficiently.

## **Site Response**

The Site Response Section (SRS) is currently overseeing cleanup work at 70 sites. For the fiscal year ending June 1993, 15 remedial investigations and four feasibility studies were completed. By the end of June 1994, another 12 remedial investigations and one feasibility study are expected to be completed.

During the fiscal year 1992-1993, five removals were finished. Another 10 removals are expected to be completed by June 1994. More removals are expected to be completed than originally projected in the 1991 Four Year Plan, reflecting the move toward using interim cleanup actions where possible. In many cases, a removal will serve as the final cleanup for a site so that further remedial action is not necessary. No remedial actions were completed during fiscal year July 1992 through June 1993. However, three remedial actions are expected to be completed by July 1994.

The decrease in the number of feasibility studies and remedial actions from previous projections represents the degree of complexity of current Site Response projects. Remedial investigations/feasibility studies (RI/FS) for large, complex projects may take anywhere from three to five years to complete. Currently, 12 SRS projects are undergoing feasibility studies.

Follow up monitoring or operation and maintenance (O&M) activities have been initiated at one site during the previous fiscal year. By June 1994, O&M activities will be started at three additional sites.

As mentioned, SRS is conducting more interim cleanup actions such as soil removals, stabilization, site security, and groundwater treatment systems during the investigation phase at complex sites. When it is apparent an interim cleanup action will prevent the spread of contamination or achieve a significant degree of cleanup early in the process, it is performed. Interim cleanup actions allow final cleanups to occur more quickly which

may also help to reduce costs.

In addition to the removals stated above, 13 interim cleanup actions were conducted during fiscal year 1992-93 with four more expected to be underway by July 1994.

Several interim cleanup actions have been implemented at McCormick & Baxter Creosoting Company in North Portland. In Spring 1993, a comprehensive cleanup plan was recommended for this high priority orphan site.

Besides McCormick & Baxter, work continues at other orphan sites:

Nu-Way Oil Company--Portland  
Milwaukie Water Supply--Milwaukie  
East Multnomah County Groundwater--  
Portland/Gresham  
Lakewood Estates Groundwater--Aurora

One new site has been added to the list of official orphans--the Lebanon Area Groundwater project.

Work has also begun at several sites that are potential orphans:

D & D Radiator--White City  
Industrial Battery--Portland  
Vadis Pole Yard--North Plains  
Rogue Valley Circuits--Medford  
Fashion Cleaners--Klamath Falls  
Chambers Oil--North Bend

## **Underground Storage Tank (UST) Cleanups**

During the fiscal year ending June 1993, 942 releases of petroleum from underground storage tanks were reported



totaling 2004 for the 1991-93 biennium. This is significantly higher than the 1991 Four-Year Plan projection of 1400. An additional 780 releases are expected to be reported by June 1994. 348 investigations were conducted and 277 cleanups completed during fiscal year July 1992 through June 1993. 158 more cleanups were completed than anticipated in the Four-Year Plan. For the July 1993 through June 1994 fiscal year, 400 investigations and 250 cleanups are expected to be completed.

The UST Cleanup Program currently is exploring ways to simplify its cleanup process. Meetings with consultants, service providers, and industry representatives have been held to identify problem areas and recommend improvements. Additional guidance and technical information documents as well as proposed rule amendments are in the works and are planned for implementation in the Fall of 1994.

In addition, permit requirements are now in place to ensure proper handling of contaminated soil piles.

### **Spill Response and Drug Lab Cleanups**

DEQ cleans up a small portion of the hundreds of emergency spills of hazardous materials reported annually by arranging cleanups when no responsible party is available. Additionally, DEQ's spill response program oversees cleanup and disposal activities performed by responsible parties.

For the fiscal year ending June 1993, DEQ

cleaned up 42 emergency spills, totalling \$190,483 in cleanup expenses.

The 1993 legislature changed illegal drug lab cleanup funding for the 1993-95 biennium, enacting a law which allows drug lab cleanups to be funded from drug related asset forfeiture proceeds. (State general funds for this purpose were discontinued.) This means that DEQ assistance on illegal drug lab cleanups will not be available until sufficient forfeiture funds are received. However, in the interim, DEQ has provided law enforcement agencies with an option for signing agreements with DEQ for technical assistance on a pay-as-you-go basis. Agreements with approximately 20 local government agencies are currently in effect.

During the fiscal year ending June 1993, 80 drug labs were cleaned up at a cost of \$260,781.

### **Summary**

All goals outlined in the 1993 Legislative Report were achieved. The increased use of interim cleanup actions, continued response to the needs of property owners through the voluntary cleanup program, and the ongoing efficiency efforts in the UST Cleanup program have made the cleanup process more effective.

Ways to ensure continued financing of environmental cleanups and to provide more technical assistance to local governments have been evaluated and implemented. These issues and more will continue to be addressed during the current fiscal year.

# Table A: Projects Completed

## Site Assessment

	1/88-6/90	7/90-6/91	7/91-6/92	7/92-6/93	7/93-6/94*	TOTAL
Suspected Releases Added	883	74	100	179	178	1414
Confirmed Release List Additions	0	33	37	28	34	132
Facilities added to Inventory	0	24	22	16	21	83
Preliminary Assessments	51	48	54	54	48	255
Site Screenings	16	72	74	90	110	362

## Site Response

Removals	6	5	4	5	10	30
Remedial Investigations	4	3	6	15	12	40
Feasibility Studies	3	3	4	4	1	15
Remedial Design & Remedial Action	3	3	6	0	3	15

## Voluntary Cleanup

Pre-Remedial Development	**	1	20	28	36	85
Removals	**	0	3	4	7	14
Remedial Investigations	**	1	4	3	28	36
Feasibility Studies	**	0	0	2	11	13
Remedial Actions	**	0	1	0	13	14

## Underground Storage Tank Cleanup

Releases Reported	1499	988	1062	942	780	5271
Investigations	1165	488	374	348	400	2775
Cleanups	403	343	331	277	250	1604

## Drug Lab/Spill Response

Drug Lab Cleanups	216	89	80	80	40	505
Spill Cleanups	109	30	32	42	43	256

\* Projected

\*\* Prior to initiation of program

Totals include projected amounts

## Table B: Projects Initiated

### Site Assessment

	1/88-6/90	7/90-6/91	7/91-6/92	7/92-6/93	7/93-6/94*	TOTAL
Preliminary Assessments	73	45	40	53	54	265
Site Screenings	16	75	76	94	111	372

### Site Response

Removals	11	3	2	16	12	44
Remedial Investigations	29	14	9	10	22	84
Feasibility Studies	13	5	3	3	2	26
Remedial Design & Remedial Action	11	4	6	5	4	30

### Voluntary Cleanup

Pre-Remedial Development	**	13	17	35	46	111
Removals	**	1	3	5	6	15
Remedial Investigations	**	2	7	21	27	57
Feasibility Studies	**	0	0	2	22	24
Remedial Actions	**	0	3	2	11	16

### Underground Storage Tank Cleanup

Cleanups	627	545	754	455	380	2761
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\* Projected

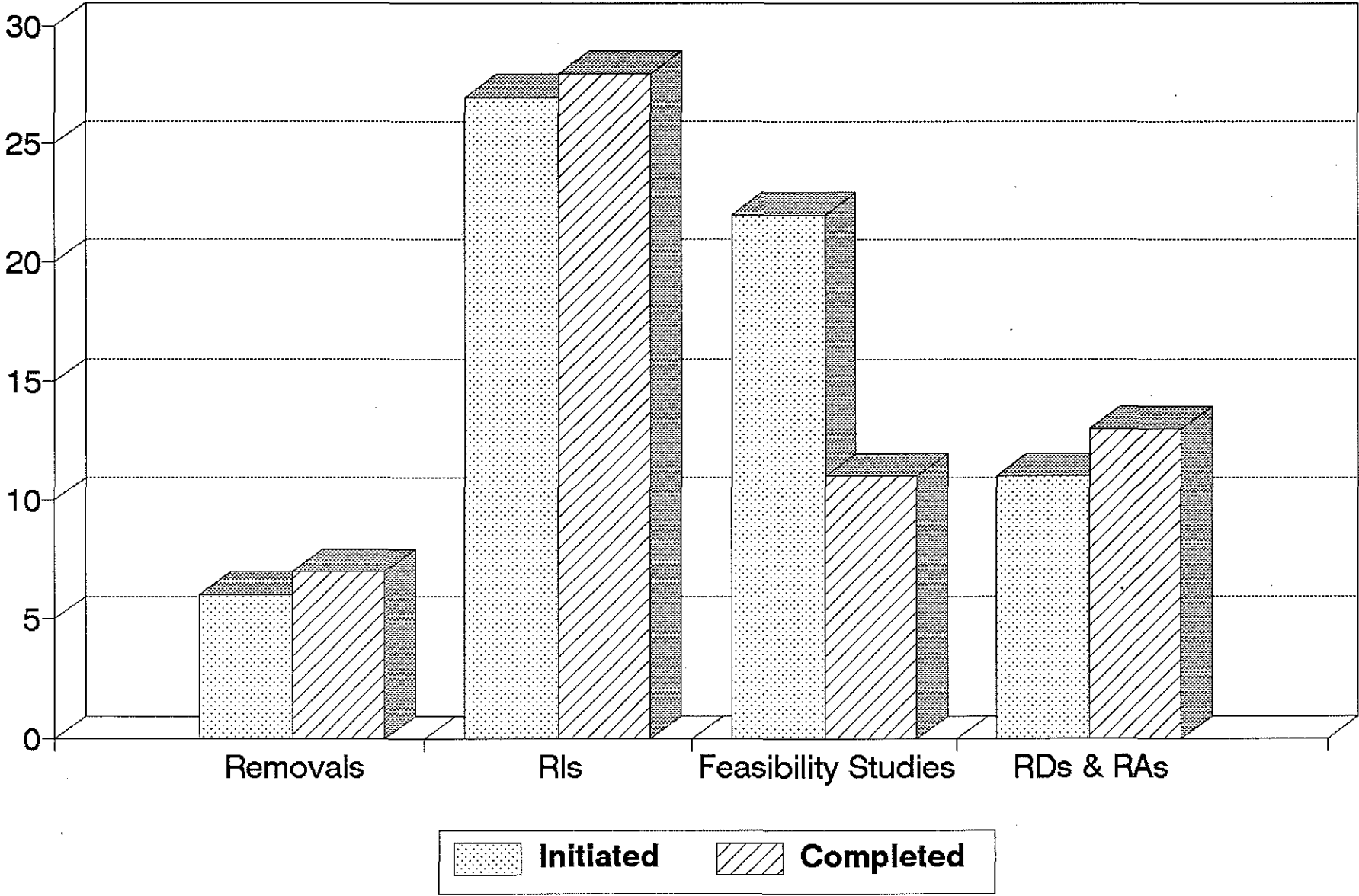
\*\* Prior to initiation of program

Totals include projected amounts

# Table C: Voluntary Cleanup

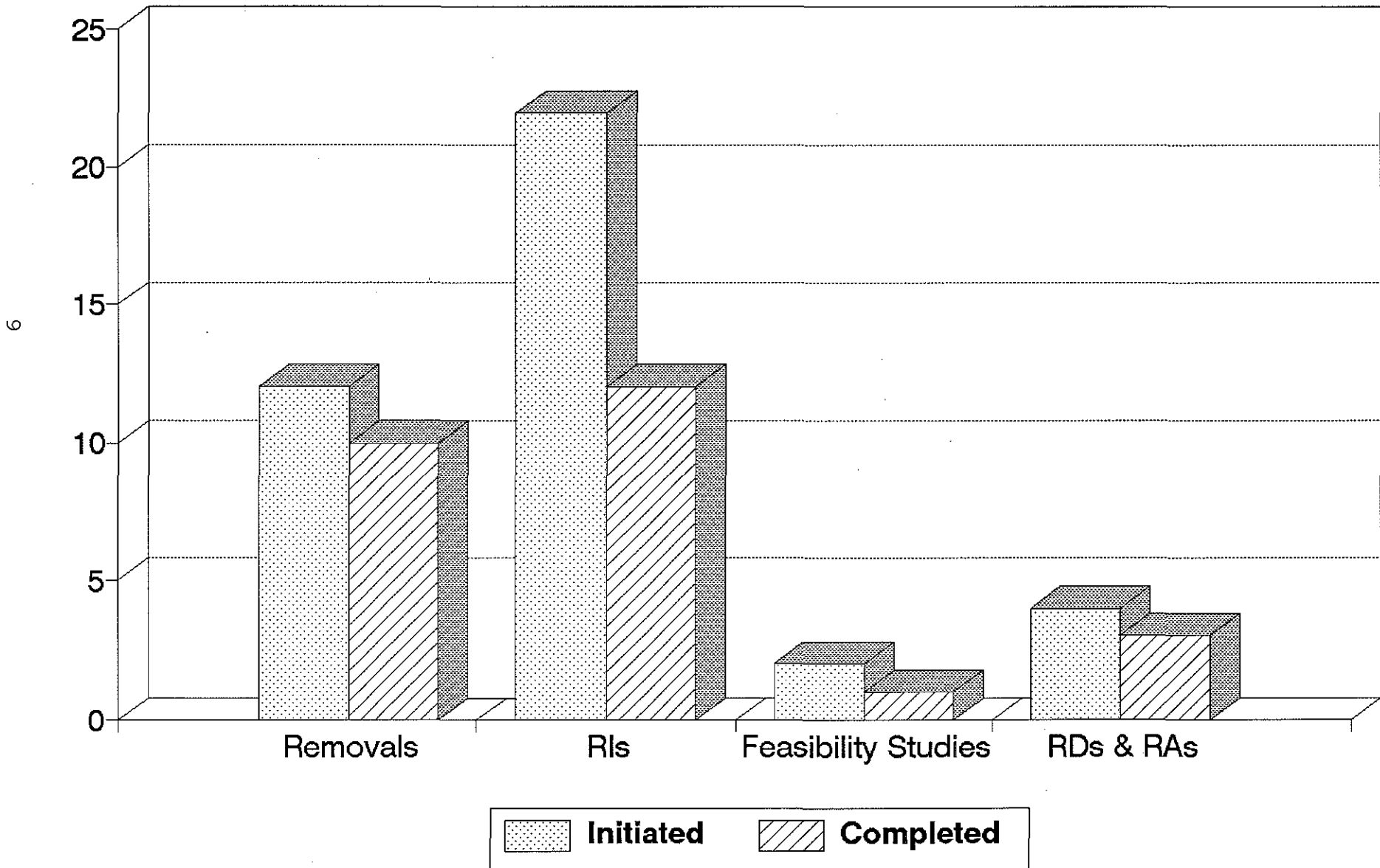
July 1993 through June 1994

8



# Table D: Site Response

July 1993 through June 1994



# Issues

## Introduction

This section discusses the major issues to be addressed by the Waste Management and Cleanup Division (WMCD) in implementing the cleanup program in the coming year. Issues highlighted include: Decentralization, petroleum load fee replacement, orphan sites, and spill response technical assistance.

### Decentralization

As noted in the *Accomplishments* section of this report, DEQ is in the process of changing its organizational structure by expanding its regional field operations. Several more field offices will open during the next year. Many staff will move from headquarters to regional field offices to accomplish the shift in focus from program development to implementation.

This change is happening to bring staff closer to the citizens affected by DEQ programs. Most environmental cleanup oversight will take place from regional offices by the beginning of 1994.

### Petroleum Load Fee Replacement

Since enactment by the Legislature in 1989, petroleum load fees have been used to help pay the petroleum industry share for environmental programs including the Oregon Emergency Response System, local hazardous materials response teams, DEQ expenditures for the cleanup of hazardous substance spills, and the Orphan Site Account. However, collection and use of petroleum load fees was discontinued in 1993 following an Oregon Supreme Court ruling on the constitutionality of other similar petroleum-derived fees.

DEQ and the Oregon Department of Revenue sought legislative review and action for replacement of the petroleum fee. In turn, the 1993 Legislature developed a one biennium "fix" to the problem of lost petroleum load fee revenue. The solution provides:

- 1) that the Department of Revenue collect a petroleum load fee of up to \$10 to be used only for "highway-related" activities; e.g., highway-related hazardous substance emergency response events that fall within the Constitutional limitation for use of revenue from petroleum products;
- 2) a one biennium loan from carryover in the Hazardous Substance Remedial Action Fund (covering what would have been the petroleum industry share) to service debt on bonds that have already been sold for the Orphan Site Account; and
- 3) authorization of the sale of \$5.0 million in bonds to enable DEQ to continue orphan site work. The Legislature also provided a \$250,000 General Fund

appropriation to service one year of the bond debt during the second year of the biennium. This General Fund appropriation will cover what would have been paid by the petroleum load fee.

In addition, the legislature stated that it recognizes the need to develop a stable, permanent, long-term funding source for hazardous materials emergency response and orphan site cleanup programs financed from the petroleum load fee. An interim legislative task force has been established by legislative leaders for the purpose of developing recommendations for a permanent funding solution.

## **Orphan Sites**

The Orphan Site Account is used to clean up some of the most seriously contaminated sites in Oregon, in instances where the responsible parties are unknown, unwilling or unable to pay for cleanup. Sites now being investigated and cleaned up using the Orphan Site Account include East Multnomah County Groundwater, McCormick and Baxter Creosoting Company, Nu-Way Oil Company, Milwaukie Water Supply, Lakewood Estates Groundwater and the new Lebanon Area Groundwater project. Among other potential candidates, proposed additions for Orphan Site Account funding include Vadis Pole Site in Washington County and Fashion Cleaners in Klamath Falls.

The first Orphan Site Account expenditure limitation of \$7.3 million was approved by the Legislative Emergency Board in September 1991. These funds were raised by the sale of 20-year pollution control

bonds, with debt service provided by hazardous substance possession and petroleum load fees (see previous section). In addition, a solid waste fee was initiated with proceeds reserved for future solid waste orphan site cleanup activities.

The 1993 legislature authorized a \$5.0 million bond sale for the current biennium, representing a scaled-back Orphan Site Account program. Financing of cleanups at sites where there is no responsible party is a major challenge for the state's environmental cleanup program. DEQ will continue to work with the Legislature and affected parties to help develop more stable orphan site funding solutions.

## **Spill Response Technical Assistance**

During the past legislative session, concern that serious gaps exist in the local hazardous materials emergency response system prompted DEQ and the State Fire Marshal's Office to request funding for emergency or spill response technical assistance for this biennium. Specifically, on-site response needs are often greater than the scope of services provided by local hazardous materials response teams.

The legislature approved funding to assist local emergency response teams, the State Fire Marshal's Office and local communities to adequately address emergency hazardous materials incidents. The funding will provide for DEQ on-scene technical assistance available 24 hours a day at the request of local emergency response teams. Services provided include: coordination of State emergency response resources, sample collection and analysis, community

relations, site stabilization, and providing standards for environmental cleanup and restoration.

Another important aspect of DEQ's increased involvement is coordination and education services to local emergency responders and other affected local and state agencies. The spill response technical assistance program is currently being developed and should be fully implemented by next fiscal year.

## **Summary**

These issues will be among the primary challenges for the environmental cleanup program. In addition, a major planning effort for the environmental cleanup program will soon be underway--the next Four Year Plan for July 1994 through June 1998. The plan outlines proposed environmental cleanup activities as well as projections for necessary funding and staffing levels to implement the plan. The 1995 Environmental Cleanup Report will address the 1995 Four Year Plan projections.

###



## APPENDIX A

### Four-Year Plan

In January of 1991, a four-year plan of action for the state's environmental cleanup report was submitted to the Governor, the Legislature and the Environmental Quality Commission as required by ORS 465.235. The following information provides a condensed version of the plan. Except as noted, the January 1991 Legislative Report's Four-Year Plan has not been amended.

#### Four-Year Plan Activities

Two major trends in the future of environmental cleanup activities can be anticipated. First, the total number of activities will increase because the infrastructure and rules for implementing the environmental cleanup program have been established. Second, a shift in the types of activities completed is expected as sites move from investigative to cleanup stages. Figures 1-5 depict the number of DEQ projects which will be initiated and completed. Figure 1, for example, shows that the number of completed preliminary assessments is expected to climb from 77 in the 1989-91 biennium to approximately 100 in 1991-93 and 200 in 1993-95.

In contrast to the anticipated steady growth in completion of preliminary assessments, a different trend is anticipated for remedial investigations and feasibility studies. As shown in Figure 2, DEQ projected that 10 remedial investigations would be completed in the 1989-91 biennium, followed by 15 in 1991-93 and 8 in 1993-95.

Likewise, 6 feasibility studies were scheduled for completion in 1989-91, followed by 13 in 1991-93 and 5 in 1993-95 as shown in Figure 3. This anticipated short-term surge in completion of remedial investigations and feasibility studies reflects movement of sites currently under investigation to cleanup stages.

Figure 4 demonstrates the combined effect of increasing environmental cleanup activity and the movement of individual sites from investigation to cleanup phases. As shown, DEQ estimates the number of completed remedial actions will increase from 2 in the 1989-91 biennium to 11 in 1991-93 with an additional 12 completed in 1993-95.

Hundreds of sites contaminated by petroleum products already have been identified and cleaned up, primarily sites where petroleum product contamination has been limited to soils. Figure 5 summarizes the number of UST cleanups completed per biennium and projections for the program's future.

Figure 1

## PRELIMINARY ASSESSMENTS

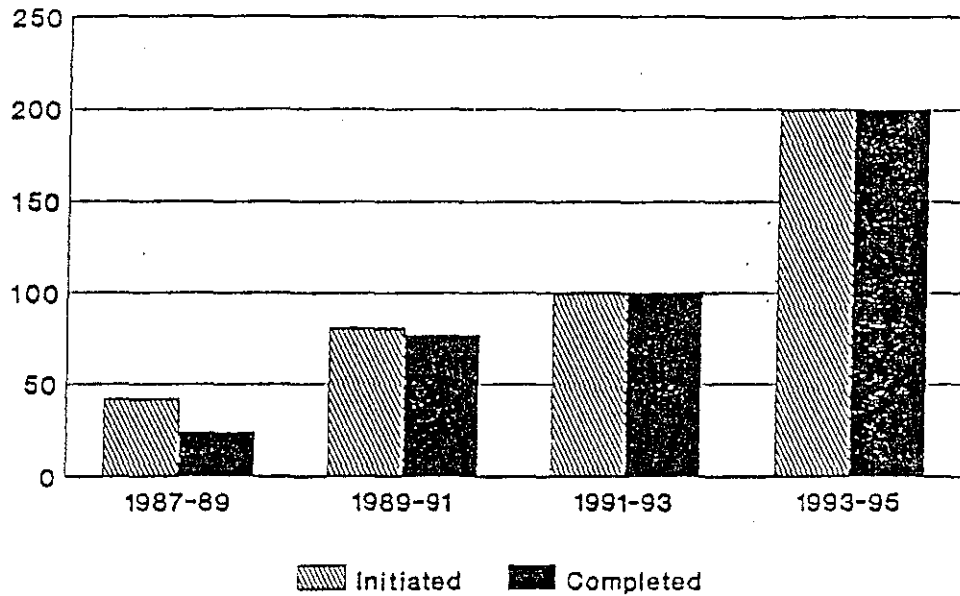


Figure 2

## REMEDIAL INVESTIGATIONS

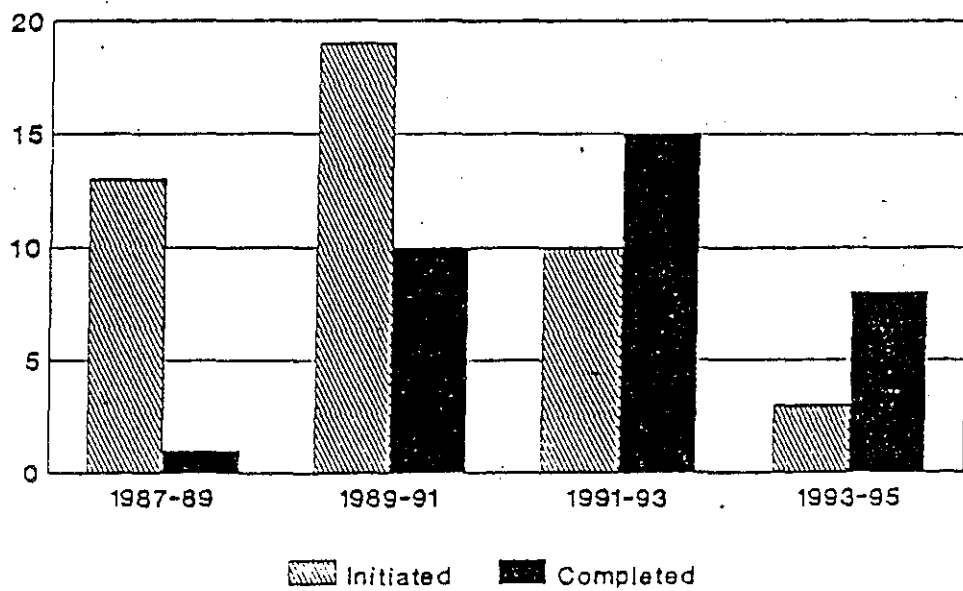


Figure 3  
FEASIBILITY STUDIES

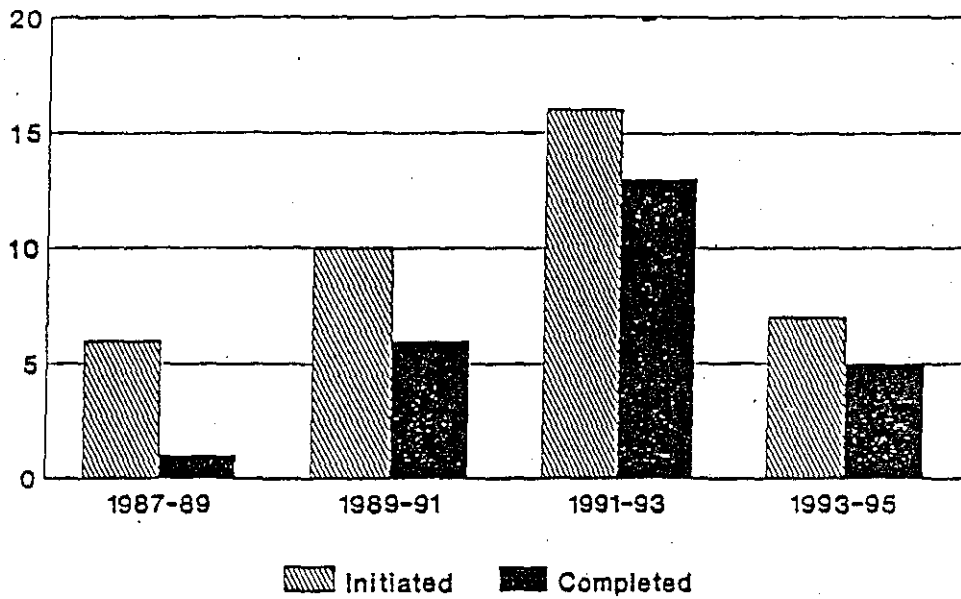


Figure 4  
REMEDIAL ACTIONS

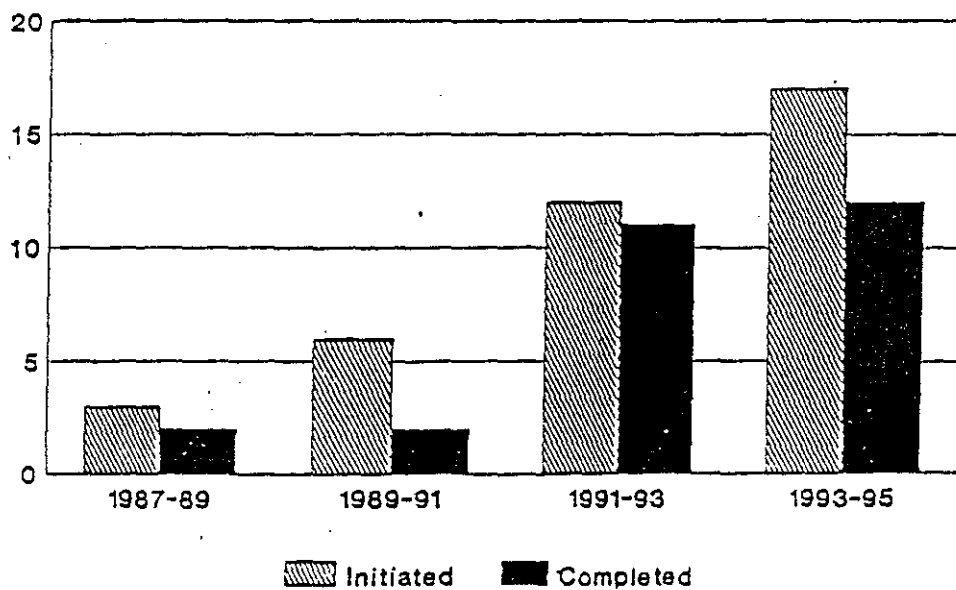
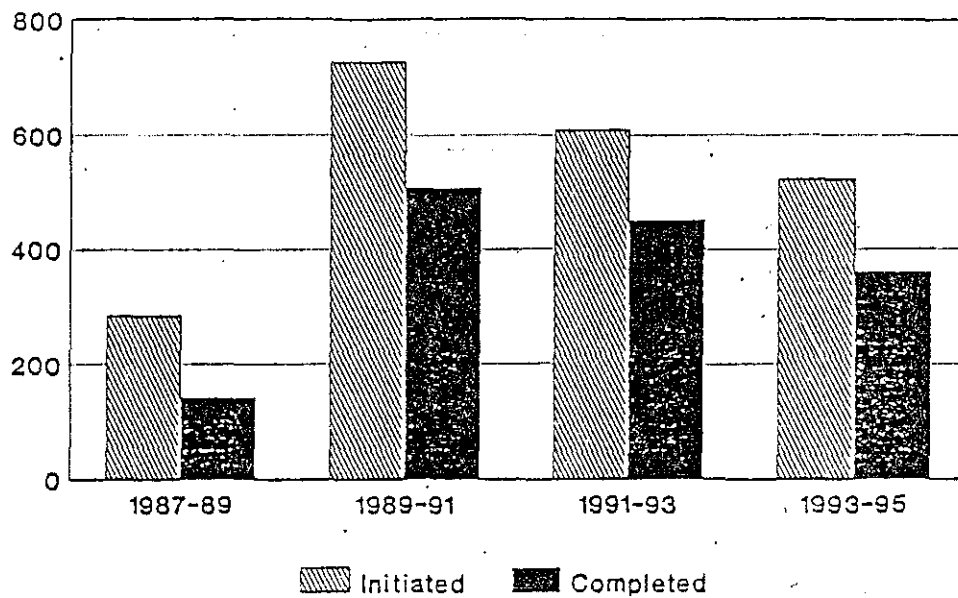


Figure 5  
UST CLEANUPS



## Appendix B

# Environmental Cleanup GLOSSARY

**aquifer:** an underground bed or layer of earth, gravel or porous stone that contains water.

**background:** the level of hazardous substance occurring naturally in the environment prior to a spill or release.

**confirmed release list:** a list of properties where it has been verified that a hazardous substance has been released into the environment. Sites on the confirmed release list do not necessarily require any cleanup action.

**consent order:** A legal document that specifies a responsible party's obligations when entering into a cleanup settlement with the state.

**corrective action plan:** a work plan specifying exactly how a site contaminated with petroleum products will be cleaned up.

**CERCLA:** Comprehensive Environmental Response, Compensation, and Liability Act--commonly known as Superfund; the federal law passed in December 1980 authorizing identification and cleanup of abandoned hazardous waste sites.

**DEQ:** Department of Environmental Quality; the Oregon state agency established to restore, enhance, and maintain the quality of Oregon's air, water and land.

**EPA:** United States Environmental Protection Agency; the agency responsible for enforcing federal laws protecting the environment.

**EQC:** Environmental Quality Commission; the five-member citizen panel appointed by the Governor to set the environmental policies and regulations for Oregon.

**feasibility study (FS):** a study conducted to determine different options for cleaning up a site; it is based on information gathered during the "remedial investigation." The FS examines different levels of cleanup, cost effectiveness, permanence and level of protection, as well as available technology.

**groundwater:** the mass of water in the ground that fills saturated zones of material such as sand, gravel or porous rock.

**inventory:** the list of sites where release of a hazardous substance has been confirmed and further investigation is necessary.

**LUST:** leaking underground storage tank.

**NPL:** National Priorities List; the EPA's official list of hazardous waste sites nationwide to be addressed under the Superfund law.

**numeric cleanup standards:** a matrix used in simple soil cleanups that defines "how clean is clean" by setting a pre-approved cleanup level.

**orphan site:** a site contaminated with hazardous substances where the owner/operator is unknown, unwilling or unable to pay for cleanup.

**plume:** the extent or boundaries of the spread of contamination in groundwater.

**preliminary assessment (PA):** the initial determination to confirm whether a hazardous substance has been released into the environment, and whether further action is necessary.

**RCRA:** Resource Conservation and Recovery Act (1980); regulates management and disposal of hazardous materials and wastes currently being generated, treated, stored, disposed or distributed.

**release:** a hazardous substance that has spilled, leaked or otherwise been discharged into the environment.

**remedial action (RA):** work done at a contaminated site to permanently clean up, control or contain the hazardous substances.

**remedial investigation (RI):** an environmental investigation that includes information on the types and concentrations of hazardous substances, the geology and hydrology of the area, and an evaluation of potential risks to human health and the environment.

**removal:** work done at a contaminated site to clean up or remove a release of hazardous substances, including but not limited to security fencing or other means of limiting access and instigating measures to prevent contamination spread.

**risk assessment:** a comprehensive evaluation that examines potential risk to human health and the environment in terms of routes of exposure, populations at risk, and degree of harmful effects.

**SARA:** Superfund Amendments and Reauthorization Act (1986); federal law reauthorizing and expanding the jurisdiction of CERCLA.

**site investigation:** an environmental investigation that includes information to determine whether a site should proceed to the next stage of investigation or whether it should be placed in a No Further Action status. A site investigation may be performed when a full RI/FS is not required.

**Superfund:** see CERCLA

**ust:** underground storage tank

**work plan:** a detailed report including a schedule for completing an investigation, a description of sampling methods, quality control measures, and safety procedures.

**APPENDIX C  
Current Projects Status  
Site Response Section**

**LEAD STAFF:**

<b>PROJECT NAME / LOCATION</b>	<b>LEAD/ FUND SOURCE</b>	<b>CURR PHASE</b>	<b>% COMPL</b>	<b>SUBSTANCES OF CONCERN</b>	<b>MEDIA CONTAMINATED</b>	<b>PROJECT ACTIVITY STATUS</b>
Abe's Dry Cleaner Milwaukie #1258	STATE PRP	SI PD	INIT C50	PCE, TCE,	soil, groundwater	Monitoring wells installed & sampled in June.
Abe's Dry Cleaners II Milwaukie #1258	STATE PRP	PD	INIT	PCE, TCE,	soil, groundwater	Continued cleanup of Abe's Dry cleaners with multiple PRPs. Negotiations on Consent Order ongoing.
Alkali Lake Alkali Lake, Lake Co. #291	STATE STATE	RI	INIT	2,4,-D, Chlorinated phenols, MCPA, dioxins, furans,	groundwater soil surfacewater	Long term groundwater & ecological monitoring program is being implemented. Schedule & objectives for 1993 have been established.
Allied Plating Portland #6	FED FED	CO	INIT	Heavy metals,	groundwater soil	RI field work done. Limited removal done 10/92. ROD for no further action signed 6/93. Project delisting underway.
Associated Chemists, Inc. Portland #94	STATE STATE	PA	C50	PCP, solvents,	unknown	EPA approved sampling plan for site investigation. Field work completed 6/93.
Astoria Plywood II Astoria #1370	STATE STATE	PM	C25	PCBs, PAHs, acids,	soil, sediment	Removal of drums containing waste oils, sodium hydroxide and acids. Removed capacitors containing PCBs. Waiting for demolition to be completed.
Ballweber Aurora #1086	STATE PRP	PD RI	C75 C25	1,1,1-TCA, 1,1-DCE,	groundwater	Project related to Lakewood Estates. DEQ conducted limited site investigation in Sept & Oct 92 & Oct 93. Further investigation planned pending investigation at Elixir Industries.
Bergsoe Metal Corporation St. Helens #12	STATE PRP	PM FS	C75 C25	Cd, Cr, Liquid waste, Pb,	groundwater soil	Draft FS report received 10/93 and is under DEQ review.
Broadway Cab Portland #383	STATE PRP	RI	C75	PNA, benzene, toluene, xylene,	groundwater soil	Draft Risk Assessment reviewed & discussed at meeting of DEQ, City of Portland & consultants. Awaiting final version.

PROJECT NAME / LOCATION	LEAD/ FUND SOURCE	CURR PHASE	% COMPL	SUBSTANCES OF CONCERN	MEDIA CONTAMINATED	PROJECT ACTIVITY STATUS
Carlton Company Milwaukie #1035	STATE PRP	RI FS	C75 INIT	1,1-DCE, PCE, TCE, VC,	groundwater soil	Risk assessment report received 7/26/93. DEQ returned comments 8/24/93 & rec'd pump test results 8/31/93. Revised risk assessment rec'd 9/27/93. Pilot test hydraulic containment conceptual plan due 12/1/93.
Cascade Corporation Troutdale #635	STATE PRP	RI FS	C75 INIT	DCE, PCE, TCE, TPH,	groundwater soil surfacewater	Negotiating scope of FS. Pump test scheduled for 12/7/93.
Chambers Oil Corporation North Bend	STATE STATE	PD	INIT	Petroleum Hydrocarbons,	Groundwater Soil	Review site file to determine PRP & investigative needs. Plans for site visit with limited media sampling. Potential for product on groundwater or bay sediments.
Columbia Slough Portland	STATE PRP	RI	INIT		Surface water	Study of slough contamination, sources unknown
Columbia Steel/Joslyn Sludge Pond Portland #104	STATE PRP	FS	INIT	Creosote, PCP, THP,	groundwater soil	Revised FS report rec'd 5/11/93. Comments returned 6/30/93. Revised FS received 8/4/93. Cost effectiveness comparison rec'd 9/17/93. DEQ comments returned 11/15/93. FS report rejected. Meeting scheduled for 12/93.
D&D Radiator White City #1166	STATE STATE	PM	C25	AS,CU,CR,PB,	SOIL	DEQ issued Consent Order for cleanup of local contaminants. DEQ to meet on 11/18 to negotiate & finalize order.
Dant and Russell - Mill Site North Plains #108	STATE PRP	RI FS	C75 C75	As, Cr, Cu, PAHs, PCP,	groundwater soil surfacewater	Final RI/FS Report approved 11/24/93.
Dant and Russell Soils Unit North Plains	STATE PRP	RD RA	C75 C25	AS, CR, PCP, PAHs, Dioxins,	soil	excavation & removal initiated 9/27/93. Final design plans for soil treatment rec'd 11/1/93. Offsite disposal of surface soil completed about 10/31/93.
Dow Corning Corp. - Springfield Plant Springfield #694	STATE PRP	OM		1,1,1-TCA, 1,1-DCA, 1,1-DCE, PCE, TCE,	groundwater soil	ROD for additional groundwater monitoring signed 9/13/93. Groundwater monitoring ongoing.



PROJECT NAME / LOCATION	LEAD/ FUND SOURCE	CURR PHASE	% COMPL	SUBSTANCES OF CONCERN	MEDIA CONTAMINATED	PROJECT ACTIVITY STATUS
EMC TSA Removal Action Gresham/Fairview	STATE PRP	PM	INIT	PCE, TCE, TCA, DCE,	groundwater	Report summarizing 1993 activities received 12/1/93 & under review. Work plan amendment for additional extraction wells received 12/1/93.
East Multnomah Co. Area Troutdale #13	STATE STATE	RI	C50	DCE, PCE, TCA, TCE,	groundwater soil surfacewater	Negotiations with EPA underway for lead agency for NPL site. Awaiting final NPL listing decision.
East Multnomah Co. Monitoring East Mult. Co	STATE PRP	PM	INIT	TCE, PCE, DCE,	groundwater	Quarterly monitoring scheduled for week of 12/19/93.
Elixir Industries Aurora #1087	STATE PRP	PD RI	C75 C75	1,1,1-trichloroethane, 1,1-dichloroethylene, soil, toluene,	soil, groundwater	Sampling results in Oct 93. Soil and soil gas investigation for Lakewood Estates suggest need for further investigation at Elixir site. Meeting to discuss investigation set for 12/15/93.
Erickson Aircrane II Central Point	STATE PRP	SI RI	INIT INIT	PLE, TCE, MEK,	Soil, groundwater	PRP indicated willingness to conduct investigation of site. DEQ awaiting work plan. DEQ in process of selecting bidder for installation of treatment systems on 2 contaminated domestic wells.
Fashion Cleaners Klamath Falls #1004	STATE STATE	PA PD	INIT C50	PCE, TCE, trans-1,2 dichloroethylene,	groundwater soil	PRP search underway. Field sampling conducted 8/93. Groundwater survey planned for 12/93.
Foothills Blvd. Dump Grants Pass #578	STATE STATE	SI PM	C50 INIT	PCB, Metals, Pesticides,	Soil	In process of writing data summary report. Results indicate site is not threat to public health.
Forrest Paint Co. Eugene #201	STATE PRP	OM	INIT	MEK, Toluene, ethyl benzene, xylene,	groundwater soil	Groundwater extraction & treatment system installed 5/91 & continues to operate. Dewatering trench installed in warehouse continues to remove contaminated water trapped beneath building.
Frontier Leather Sherwood #116	STATE MIXED	SI	C75	chromium, lead, unknown waste,	soils	Previously excavated lab chemicals removed and soil back-filled. Deed restrictions being prepared.

PROJECT NAME / LOCATION	LEAD/ FUND SOURCE	CURR PHASE	% COMPL	SUBSTANCES OF CONCERN	MEDIA CONTAMINATED	PROJECT ACTIVITY STATUS
Gould, Inc./N.L. Portland #49	FED PRP	RA	INIT	Cd, Pb, Zn,	groundwater soil surfacewater	Design completed/RA begun. Air monitoring follow-up is underway. Full scale treatment has progressed, 24-hrs/day, 5-days/week.
Green Brothers Logging ParkDale #1198	STATE STATE	PD PM	INIT INIT	hydrocarbons, solvents,	soil, groundwater	DEQ reviewing Statement of Financial Condition from PRP. DEQ and ODOT conducted sampling at site 11/93. DEQ lab conducting analyses.
Illinois Tool Works, Inc. Milwaukie #1016	STATE PRP	RI FS	C25 INIT	Trichloroethene,	groundwater soil	FS comments returned 11/4/93. Comment review meeting held 11/29/93. Revised FS due 12/17/93.
Industrial Battery Building Portland #935	STATE STATE	PM	INIT	Lead,	Soil	County indicated willingness to fund building demolition & final cap if DEQ investigates & removes hazardous wastes. DEQ conducted additional samples on 11/93 to assess extent of lead contamination. Awaiting analytical results from lab.
J. H. Baxter Co. - Eugene Eugene #55	STATE PRP	PM RI	INIT C50	As, Cr, Cu, PCP, creosote,	groundwater soil	Treatment system start-up activities begun. Pilot testing started 6/93. Temporary discharge to POTW authorized. Treatment levels approaching discharge limits but carbon polishing step to be added 12/93.
Joseph Forest Products Joseph #61	FED MIXED	RD RA	C75 C75	As, Cr, Cu,	groundwater soil	Remedial activities conducted 4/93-5/93: excavation & off-site disposal of contaminated soil, UST removal, asbestos & building demolition. Groundwater monitoring conducted 8/93 & semi-annually thru 12/94.
L. D. McFarland Eugene #63	STATE PRP	RI	C75	PAH, PCP,	groundwater soil	IRAM operational 9/15. Final sampling planned for week of 12/6. Dec. 7 meeting planned to discuss EA comments and preliminary FS report.

PROJECT NAME / LOCATION	LEAD/ FUND SOURCE	CURR PHASE	% COMPL	SUBSTANCES OF CONCERN	MEDIA CONTAMINATED	PROJECT ACTIVITY STATUS
Lakewood Estates Aurora #1038	STATE STATE	RI OM	C50 INIT	Organics,	groundwater	Air stripping tower complete; Lakewood Homeowners to maintain. 2 monitoring wells installed near main well 4/93. New wells resampled 8/93. Soil gas survey completed 10/93. Discussions with Elixir Industries were initiated (See Elixir).
Lebanon Area Groundwater Contamination Lebanon #1089	STATE STATE	PD RI	C50 INIT	PCE,	groundwater	Residential well sampling results received. 11 of 28 wells sampled showed contamination. Site discovery completed 9/93. Geoprobe groundwater investigation task order issued. Work scheduled for week of 12/6/93.
Marathon - Guilds Lake Portland #404	STATE PRP	RD	INIT	Pb,	soil	Cleanup remedy consists of an asphalt-concrete cap and institutional controls. City is scheduled to implement in 1994.
Martin Marietta Reduction Facility 236 Dalles #72	FED PRP	RA	C75	Cyanide, F, PAHs, sulfates,	groundwater soil	Site work required under ROD is nearly complete. Modification to CERCLA landfill are being conducted to address infiltration problems.
McCormick & Baxter Creosoting Portland #74	STATE STATE	RI FS	100% 100%	Metals, PCP, creosote, dioxins,	groundwater sediment soil surfacewater	Interim remedial actions under way. EPA NPL listing anticipated. Additional creosote removal efforts underway.
Milwaukie Area Groundwater Contamination Milwaukie #706	STATE STATE	PD RI	C25 C25	TCE, chlorinated solvents,	groundwater	Emphasis on site discovery to determine source of contamination.
NorWest Publishing Portland #962	STATE STATE	PA	C75	TCA,	soil, groundwater	Report received & being reviewed. 2nd round of sampling completed 12/93/ Results of sample received and under review.
Northwest Pipe and Casing - Clackamas Clackamas #139	FED FED	PD RI	C75 INIT	PCB, PNAs, VOCs,	groundwater soil surfacewater	Site is now NPL. EPA completed site investigation. Removal program fenced site and demolished site structures in 10/93. DEQ to assist and coordinate as needed.

PROJECT NAME / LOCATION	LEAD/ FUND SOURCE	CURR PHASE	% COMPL	SUBSTANCES OF CONCERN	MEDIA CONTAMINATED	PROJECT ACTIVITY STATUS
Nu Way Oil Co. Portland #88	STATE STATE	PM RI FS	INIT C75 C50	PCB, VOCs, heavy metals, pesticides, petroleum hydrocarbons,	Groundwater sediments soil	Task Order to implement removal measures initiated 9/22/93. Final draft project budget rec'd 10/93. Task Order & Notice to Proceed issued 11/16/93.
Nurnberg Scientific Co. Portland #87	STATE STATE	PD	INIT	Unknown,	Unknown	Currently conducting potentially responsible party search.
OREMET - Alkali Lake Investigation Lake Co. #1253	STATE PRP	PM	INIT	lead, chromium, radium 226,228	soil	Phase 1 of waste removal completed 9/22. Removal to be completed in summer, 94.
Opti-Craft Portland #1186	STATE STATE	PA	C75	TCA	soil, groundwater	PA report reviewed. Second round of sampling requested.
Oregon Fir Supply, Co. II Portland	STATE STATE	PD	INIT	1,2-BCE, 1,1,2-TCA, Lead, Arsenic, TCE, PCE, PCP,	Soil, Groundwater	Information on site use history requested of PRP.
Pacific Detroit Diesel Allison Springfield #1031	STATE PRP	PM RI	INIT C75	TCA, TPH., chlorobenzene,	groundwater soil	Site investigation nearly complete. Removal action conducted 8/93. Removal Report expected 12/93.
Pendleton Grain Growers- Pendleton Pendleton #639	STATE STATE	PM	C75	pesticides,	groundwater soil	DEQ received & approved addendum for cap design 9/93. PRP in process of grading & constructing cap & propose to complete cap by 11/93. DEQ to inspect final cap following completion.
Portable Equipment Salvage Co. Clackamas #149	STATE PRP	RD RA	INIT INIT	Cu, PCB, Pb, dioxin,	soil	Consent order for RD/RA signed 6/30/93. Remedial activities initiated 8/93 & expected to be completed in 12/93.
Portland General Electric - Stn. L - Op. Unit 3 Portland #151	STATE PRP	RI	C75	BETX, PAH, PCB, metals,	groundwater soil	Final phase III report submitted by PGE. Certificate of Completion expected in 11/93. Cap repair completed 10/93.
Precision Castparts - Pltd. Titanium Facility Portland #274	STATE STATE	PA	C25	solvents, PCB's, metals,	unknown	EPA performed RCRA facility assessment and visual site investigation in July 1992. EPA RCRA preliminary assessment submitted to DEQ for review. Review pending.

PROJECT NAME / LOCATION	LEAD/ FUND SOURCE	CURR PHASE	% COMPL	SUBSTANCES OF CONCERN	MEDIA CONTAMINATED	PROJECT ACTIVITY STATUS
Production Parts Milwaukie #1117	STATE STATE	PA	C50	TCE, PCE,	groundwater	DEQ review of voluntary XPA completed. Strategy recommendation approved. Site is high priority for further action.
Rhone-Poulenc - Doane Lake Facility Portland #155	STATE PRP	RI FS	C50 C25	Pesticides, VOCs, chlorinated benzenes, chlorinated phenolics, dioxins/furans, metals,	groundwater sediments soil surfacewater	Work Plan for completing RI/FS under agency review. Draft revision to consent order under DEQ/RO review. NL/Gould Superfund site soil remedial action (excavation of lead-contaminated soil/battery casings) begun on Rhone-Poulenc "Lake Area."
Rogue Valley Circuits Medford #538	STATE STATE	PM	INIT	Lead, nickel, copper, acids, waste oil,	Possibly soil	Equipment not containing hazardous substances auctioned 10/93. DEQ will perform site visit 11/93 to access site after auction. Add'l Rps have been identified & will be notified. Lien was placed on property 11/93.
Schnitzer Investment Corp-Moody Portland #875	STATE PRP	FS	C50	Cd, PCB, Pb, VOCs, pesticides,	soil	Additional soil samples (0-4 ft) collected in Unit A in 10/93. Results pending.
Silver Butte Mine Riddle	STATE PRP	PM	INIT		Sediments	Mine reclamation and cleanup of Middle Creek planned.
Southern Pacific - Milwaukie Milwaukie #1190	STATE PRP	PD RI	C75 INIT	TCE, PCE,	groundwater, soil surfacewater	Implementation of RI/FS work plan commenced 4/93. Phase II field activities commenced in 10/93.
Swift Adhesives Portland #884	STATE PRP	FS	C75	1,1,1TCA, 1,1DCA, 1,1DCE, TCE,	groundwater soil	Preparing proposed remedial action plan for public comment.
Tacoma Street Overpass Milwaukie #1159	STATE STATE	RI	INIT	PCE, TC, VC, 1,2-DCE,	groundwater soil	IRAM operational 9/15/93. Phase IV supplemental RI well installation completed. Final ODOT/DEQ Agreement forwarded to ODOT for signature.
Teledyne Wah Chang Albany #315	FED PRP	FS	C75	PCBs, metals, radionuclides, solvents,	groundwater soil surfacewater	Proposed Cleanup Plan released to public 8/93. Public meeting on Proposed Plan held 9/14/93. Public comment period ended 10/27/93. Record of Decision scheduled for completion by 3/94.

PROJECT NAME / LOCATION	LEAD/ FUND SOURCE	CURR PHASE	% COMPL	SUBSTANCES OF CONCERN	MEDIA CONTAMINATED	PROJECT ACTIVITY STATUS
UPRR - The Dalles - Columbia OP. Unit The Dalles	STATE PRP	RI FS	INIT C50	PAHs, PCP, AS,	Sediment Surface water	Columbia River Sediment sampling completed 10/5/93.
Umatilla Army Depot Activity Hermiston #514	FED PRP	FS RD RA	C75 C50 INIT	Explosives, metals, pesticides,	groundwater soil	DEQ & Army signed RODs for active landfill & inactive landfills 1/93. EPA signed 8/10/93. FS reports for 4 other units under review. Lagoon soils & furnace soils units in remedial action. EPA threatening stipulated penalties for Army delay.
Union Pacific Railroad - The Dalles The Dalles #54	STATE PRP	RI FS	COMP C75	Metals, PCP, VOCs, creosote,	groundwater soil	Bioventing tests underway. FS report revision in progress. DNAPL recovery test on hold due to problems with water treatment system.
Vadis Pole Yard North Plains #109	STATE STATE	PD	INIT		soil, groundwater	PRP search initiated.
Warn Industries Milwaukie #1118	STATE STATE	SI PD RI	INIT INIT INIT	solvents, hydrocarbons,	unknown	Site investigation underway. New monitoring wells & borings installed 9/93. DEQ expecting SI report in 11/93.
White King Mine Lakeview #601	STATE STATE	FS RD	INIT INIT			Site proposed to NPL. Department of Energy is commenting on Environmental Impact State- ment. DEQ prepared to negotiate with EPA and Forest Service considering enforcement.
Willamette Oaks Building Portland #883	STATE PRP	RI	C75	BTEX, PCE, TCE, long-chain hydrocarbons,	groundwater soil	Investigation complete. Report received. SOW requires revision if project is to proceed.
Willbridge Bulk Fuel Area Portland #177	STATE PRP	PD RI	INIT INIT			DEQ initiated review of Consent Order for Shell, Chevron & Unocal. Negotiating with all three in Nov & Dec 93.
Wolf Creek Removal Wolf Creek	STATE PRP	PM	INIT	TCE, PCE,	Groundwater Soil	Private well testing conducted week of 11/7/93. Results pending. Consent Order to be issued on 11/19/93. Work plan due 12/3/93.

**APPENDIX D  
Current Projects  
Voluntary Cleanup Section**

PROJECT NAME / LOCATION	LEAD/ FUND SOURCE	CURR PHASE	% COMPL	SUBSTANCES OF CONCERN	MEDIA CONTAMINATED	PROJECT ACTIVITY STATUS
A-Dec Manufacturing Newberg	STATE PRP	RI	INIT	chlorinated solvents,	groundwater, soil	File review summary memo completed. RI/FS recommended. RI/FS Agreement in preparation.
Astoria Plywood Astoria	STATE PRP	PD PM	C75 INIT			Initial review of existing soil and groundwater data in progress.
Balteau Standard Medford	STATE PRP	PD	INIT	PCBs,	soil	Letter Agreement signed 9/21/93. File Review in progress. Site visit and meeting with Balteau completed 9/22/93. File review resource projection provided 9/28/93.
Bear Country Petroleum Bend	STATE PRP	PD	INIT			New project
Beaverton Honda Beaverton #1185	STATE PRP	RI	C75	gasoline,	soil, groundwater	A phase I RI workplan is being implemented.
Bend Millwork Systems Bend #323	STATE PRP	SI	INIT	Chloropyriphos, Pentachlorophenol, Stoddard solvent,	Soil	Field work to complete characterization conducted 9/93.
Bend Research Inc. Bend #1158	STATE PRP	SI	INIT	cr, radionuclides,	soil	XPA report under review.
Benton County Auto Wreckers Corvallis	STATE PRP	RI	INIT	petroleum,	soil	Asbestos removal and building demolition pending. Site tasks have been prioritized.
Catellus Development Corp.- Milwaukie Milwaukie #887	STATE PRP	RI	INIT	Creosote,	Soil, Groundwater	Field work completed 5/93. Draft RI submitted 11/93.
Caterpillar Dallas	STATE PRP	PD	INIT	petroleum hydrocarbons, tetrachloroethylene,	groundwater soil	Removal of Building D petroleum-contaminated soils taking place in 12/93.
Coos - Curry Electric Cooperative Coquille #1107	STATE PRP	RI	C75	petroleum,	soil, groundwater	Soil has been removed from the waste pit and heating oil tank areas. Report pending.

PROJECT NAME / LOCATION	LEAD/ FUND SOURCE	CURR PHASE	% COMPL	SUBSTANCES OF CONCERN	MEDIA CONTAMINATED	PROJECT ACTIVITY STATUS
Crooked River National Grassland	STATE PRP	PM	C50	pentachlorophenol,	soil	Interim Remedial Action completed.
Department of Corrections - Administration Salem	STATE PRP					Reviewing priority of environmental issues discovered in PAs. Negotiating multi-year management plan to address all environmental compliance and cleanup issues.
Durametal Corporation Tualatin #258	STATE PRP	RI	C75	Petroleum hydrocarbons, Phenol, PCB's, Metals,	Groundwater Soil	Sediment removal in East Outfall area performed 11/3/93; report received 11/29/93. Work plan for additional soil and groundwater investigation received 11/12/93.
Eastern Oregon Correctional Institute Pendleton #1173	STATE PRP	PD	INIT	unknown,	unknown	Letter agreement signed 3/92 for oversight of PA. Final PA submitted 12/92. Further action required; may be completed in context of multi-year environmental management plan.
Eastside Machine Co. Creswell #1217	STATE PRP	XPA	C75	acetone, paint products,	soil	Sediment sampling completed. UST decommissioned. Draft XPA received. Workplan for installation of monitoring well network approved. Monitoring wells installed and sampled.
Farmcraft Tigard #1223	STATE PRP	PA	INIT	pesticides,	soil	XPA report under review.
GNB - Beaverton Beaverton #142	STATE PRP	RI	INIT	Lead (Pb),	Soil	Final RI/FS Work Plan approved 3/93. Field work: 4/93 to 5/93. RI Report received 8/93. Proposal to remove and stabilize contaminated soils received 9/93.
GNB - Salem Salem #358	STATE PRP	PA XPA	INIT INIT	Lead Oxide, Petroleum,	Soil	Soil sampling performed 1/93. Catch basins and storm lines cleaned out 3/93. Data report and proposal for groundwater character- ization - 3/93. Revised groundwater proposal submitted 11/93.
Georgia Pacific Mill Coquille #1255	STATE PRP	WL	INIT			New project.
Giustina Bros. Mill Eugene	STATE PRP	SI	INIT	TCE, Vinyl Chloride,	soil, groundwater	Finalizing Work Plan for site sampling and further site groundwater investigation.



PROJECT NAME / LOCATION	LEAD/ FUND SOURCE	CURR PHASE	% COMPL	SUBSTANCES OF CONCERN	MEDIA CONTAMINATED	PROJECT ACTIVITY STATUS
Grant & Roth Plastics Hillsboro	STATE PRP	PD	INIT	chlorinated solvents,	groundwater	DEQ conducting file review.
Gunderson, Inc. Portland #1155	STATE PRP	PD	INIT	unknown,	unknown	VCS to take lead in UST decommissioning approval; final review of UST work is in progress. Agreement to be finalized after UST review completed.
Hillstrom Shipyard Coos Bay	STATE PRP	PD	INIT	Chromium, Copper, Lead,, Mercury, Zinc, Tri-butyl Tin, Arsenic,,	sandblast grits, sediments	Tank removal completed. Additional sandblast grit samples collected to determine disposal options.
Houston's Inc. Portland #1052	STATE PRP	RI	INIT	TCE, DCE, PCE, petroleum, diesel,	soil, groundwater	Water level monitoring continuing. Evaluation of low-water sampling data received 8/93. Interim report on sampling results received 11/22/93.
Howard Cooper/Triad Coburg	STATE PRP	RI FS	C75 INIT	chlorinated solvents, petroleum hydrocarbons,	soil, gw	Feasibility study being prepared. Site Characterization Report under review.
ICN Pharmaceutical II Portland	STATE PRP	RI	INIT	Petroleum Products, TCE, Vinyl Chloride, Hg, cyanide,	soil, groundwater	Asbestos removal complete. Phase I workplan under revision.
Infiniti Beaverton Beaverton #1106	STATE PRP	RI	C75	chlorinated solvents, gasoline, oil,	groundwater soil	An interim remedial action is being planned to remove contamination source areas. A third area, an old gas station, has a confirmed release.
Infiniti/Arco Beaverton	STATE PRP	RI	INIT			Scope of work being developed.
Intel Corp. Aloha Campus Aloha	STATE PRP	RI	INIT			File review completed. RI/FS Agreement completed. Conceptual Work Plan received November 30, 1993.
J. O. Olsen Manufacturing Co. Eugene	STATE PRP	SI	C25	Petroleum Hydrocarbons, pentachlorophenol,	soil, groundwater	File review summary memo completed. Focused RI/FS recommended. Workplan received 2/24/93. Investigative boring installed and monitoring wells sampled 9/16/93.
Jessup Company White City #1222	STATE PRP	XPA	COMP	Chlorinated Solvents,	groundwater	Final XPA received. Soil sampling completed. Results indicate on-site source. Additional monitoring wells and soil borings installed. Groundwater sampling indicates elevated levels of solvents.

PROJECT NAME / LOCATION	LEAD/ FUND SOURCE	CURR PHASE	% COMPL	SUBSTANCES OF CONCERN	MEDIA CONTAMINATED	PROJECT ACTIVITY STATUS
K.B.T.C. Eugene	STATE STATE	SI	C25	VOCs, PAHs,	soil, groundwater	Site Investigation Workplan was received and approved by DEQ on November 10, 1993. DEQ currently awaiting results from SI field work. SI results expected to be submitted to DEQ in early December 1993.
Linnton Oil Fire Training Grounds Portland #1189	STATE PRP	RI	C50	chlorinated solvents, petroleum hydrocarbons,	soil, groundwater	Agreement and SOW signed by DEQ and the City of Portland. Final workplan received 5/28/93. Phase I Remedial Investigation completed. RI Report in preparation. Phase II of RI in progress.
Lyman Mining Co. II Corvallis	STATE PRP	RI	C75	elemental, mercury,	concrete soil	Draft Site Characterization Report is under review.
Mid-State Petroleum Inc. Albany Albany #1207	STATE PRP	PM RI	C50 INIT	hydrocarbons, petroleum,	groundwater soil	Responsible party engaging environmental consultant.
Mill Creek Correctional Facility Salem #1175	STATE PRP	PD	INIT	unknown,	unknown	Letter agreement signed 3/92 for oversight of PA. Final PA received 12/92. Further action required; may be completed in context of multi-year environmental management plan.
National Guard Armory Salem #1172	STATE PRP	PD	C75	TPH, halogenated compounds, metals,	groundwater soil	PCE detected in new monitoring well. Re-sampling performed 10/21/93; results received 11/19/93. DEQ review in progress.
North Marine Drive Portland #1170	STATE PRP	PD	C75	TPH, PCB, pesticides,	groundwater soil	DEQ and City of Portland evaluating pre-road construction removal alternatives for pesticide-contaminated soils. City is preparing a Work Plan for a soil removal at Morrison Oil.
Northwest Aviation Independence #374	STATE PRP	RI	C75	unknown,	unknown	Determining data requirements for clean closure.
Northwest Web Eugene #85	STATE PRP	WL	INIT			New project
ORE-IDA Foods Ontario	STATE PRP	PD	INIT			New project

PROJECT NAME / LOCATION	LEAD/ FUND SOURCE	CURR PHASE	% COMPL	SUBSTANCES OF CONCERN	MEDIA CONTAMINATED	PROJECT ACTIVITY STATUS
OSMOSE Wood Preserving Tangent	STATE PRP	PD	INIT	Chromium,	groundwater soil	Letter Agreement being signed.
Oregon Metallurgical II Albany	STATE PRP	PM RI	INIT INIT	Chlorinated Solvents, Inorganics, PCBs,	soil, groundwater surface water	PCB RA Workplan approved w/comments; Removal completed 10/24/93. Outline for RA report received 11/17/93.
Oregon State Correctional Institute Salem #1176	STATE PRP	PD	INIT	unknown,	unknown	Final PA submitted 2/93. Further action required; may be completed in context of multi-year environmental management plan.
Oregon State Penitentiary Salem #621	STATE PRP	RI	INIT	DCE, TCE, PCE,	groundwater	Workplan addendum approved 7/21/93. Additional deep wells and a shallow well installed. Private well survey status report received 10/22/93; comments 10/25/93. Proposal for sampling received 11/24/93. Permit for drill water granted 11/4/93.
Oregon Waste Transfer - Stockyards N Marine Dr. Portland #1091	STATE PRP	WL	INIT			New project
Oregon Women's Correctional Center Salem #1177	STATE PRP	PD	INIT	unknown,	unknown	Final PA submitted 12/92. Further action required; may be completed in context of multi-year environ- mental management plan.
Pacific Telecom Salem	STATE PRP	PD	COMP			Letter Agreement signed. File Review Summary Memo completed. Further investigation recommended. Work Plan received 12/1/93.
Pelican Bay Klamath Falls	STATE PRP	PD	INIT			Voluntary project awaiting signature of PRP. Part of Jen-Weld project.
RFD Publications, Inc. Tigard	STATE PRP	RI	INIT	Halogenated Solvents,	groundwater	Consent Agreement in preparation. Quarterly groundwater monitoring occurring. Well survey being reviewed.
Rhone-Poulenc/North Marine Drive Portland	STATE PRP	SSA PD	INIT INIT	VOC's, metals, pesticides, herbicides,	soil, groundwater	See North Marine Drive.
Riverfront Research Park Eugene #1018	STATE PRP	RI	C25	laboratory wastes, petroleum,	soil	Summary report under revision.
Salem Radar Site Salem	STATE PRP	PD	C25	Methylene Chloride, TPH, PCBs, PCE,	potential gw soils	File summary in progress.

PROJECT NAME / LOCATION	LEAD/ FUND SOURCE	CURR PHASE	% COMPL	SUBSTANCES OF CONCERN	MEDIA CONTAMINATED	PROJECT ACTIVITY STATUS
Salem Riverfront Park Project Salem	STATE PRP	RI	C50	PAHs, petroleum products,	soil	Phase 2 data being compiled.
Santiam Correctional Institute Salem #1178	STATE PRP	PD	INIT	unknown,	unknown	Final PA submitted 12/92. Further action required; may be completed in context of multi-year environmental management plan.
Schoen Electric Albany #1195	STATE PRP	SI	C50	chlorinated solvents, petroleum hydrocarbons,	groundwater soil	Site investigation report received 4/93. Supplemental PA information received 7/93. Third round of groundwater sampling completed 8/93. Upgradient monitoring wells installed and sampled.
Selmet, Inc. Albany #342	STATE PRP	RI	C25	chlorinated solvents, inorganics,	groundwater soil	DER reviewing Draft Work Plan.
Sheridan Mill Sheridan #1182	STATE PRP	PD	INIT	herbicides, insecticides,	soil	Enforcement referral in preparation.
Shiny Rock Mining Corp. Lyons #1251	STATE PRP	RA	INIT	lead, cadmium, petroleum, diesel,	soil, tailings	Block disposal completed. Landfarming re-initiated 4/93; sampling plan received 8/24/93. Bioremediation treatment pile evaluation report received 10/21/93; comments 11/1/93.
Simplot Soil Builders - Vale Vale #1216	STATE PRP	SI PD RI RA	INIT INIT INIT INIT	1,2 - DCP, petroleum, diesel, pesticides,	groundwater, soil	RI Reports rec'd 9/16/93. Revised petroleum closeout report outline and test proposal received 11/19/93. Impact of pumping at City Well begun. Private well sampling results supplied to owners 11/4/93.
South Fork Forest Camp Tillamook #1179	STATE PRP	PD	INIT	unknown,	unknown	Final PA submitted 8/92. Further action required; may be conducted in context of a multi-year environmental management plan.
South Waterfront Admin. Portland	STATE STATE	RA	INIT			Continued operation and maintenance of controls in Areas A and B of the Waterfront Redevelopment area.
South Waterfront Redevelopment - I Portland #602	STATE PRP	RI	C50	petroleum hydrocarbons,	groundwater soil	Final RI/FS Work Plan submitted 8/93. Field work completed 10/93.
South Waterfront Redevelopment - II Portland #602	STATE PRP	RA	C75	Metals, PCB, volatile organics,	groundwater soil	Stockpiled soils remain in Area C; development project proposed 8/93.

PROJECT NAME / LOCATION	LEAD/ FUND SOURCE	CURR PHASE	% COMPL	SUBSTANCES OF CONCERN	MEDIA CONTAMINATED	PROJECT ACTIVITY STATUS
Southern Pacific Transportation Company - Ashland Ashland #1146	STATE PRP	RI	C25	petroleum products,	soil, groundwater surface water	Meeting to discuss RI/FS held 6/93; Work Plan received 10/6/93. Work Plan comments submitted 11/22/93.
TRF Pacific Inc. Medford	STATE PRP	PD	INIT			File review underway.
Texaco Bulk Fuel Storage Terminal Portland	STATE PRP	PD	INIT	petroleum hydrocarbons,	soil, groundwater	Letter agreement signed 8/27/93. Independent remedial investigation proceeding. Results pending.
Three-M Medical Imaging Systems White City #1045	STATE PRP	RI	INIT	VOC,	Groundwater Soil	3M proposed construction of building in heart of source area 3/93. Building constructed 7/93. Final RI/FS Work Plan submitted 8/93, approved 9/93. Field work began 10/93.
Tri-Met Light Rail Portland - Washington Co.	STATE PRP	XPA SI PD RI RA	INIT INIT INIT INIT INIT	asbestos, petroleum,	soil	DEQ comments on contract specs sent 10/6/93. RA proposals submitted 10/25/93. DEQ summary of issues provided 11/2/93. Additional metals data received 11/8 and 11/22/93.
Tri-Met Merlo Garage Beaverton	STATE PRP	PD PM RI RA	INIT INIT INIT INIT	petroleum,	soil, gw	Meeting w/Tri-Met 9/15/93. Verbal discussion on UST removal 10/6/93. Revised work plan pro- vided 11/15/93; comments 11/23/93. UST removal initiated 11/29/93.
Unocal Bulk Plant #0333 Klamath Falls	STATE PRP	PD	INIT	petroleum hydrocarbons,	soil, groundwater	Letter Agreement sent for approval on 7/29/93.
Unocal Milwaukie Milwaukie	STATE PRP	PD	INIT			Awaiting deposit.
Warrenton Marine Terminal Warrenton	STATE PRP	PM RI	INIT INIT	constituents, petroleum,	groundwater soil	Soil excavation & DEQ site visit 7/93. File summary & comments on Draft Site Remediation Work Plan 8/93. Letter Report rec'd 9/93. Overburden sampling results submitted 10/8/93. Excavation backfill and further soil removal proposed.
Western Smelting & Metals Dallas	STATE PRP	PA	C75	Magnesium Chloride,	Soil	PA reviewed. Approval of cleanup recommended. Public Notice period completed 12/1/93.

PPD\SM5513

**ACRONYMS**

1,2DCP	Dichloropropane	AC	Active	ACZA	Ammoniacal Copper Zinc Arsenate	APT	Aquifer Performance Test
ARAR'S	Applicable Revelant Appropriate Requirements	AS	Arsenic	BA	Barium	BLA	Blue Lake Aquifier
BTEX	Benzene, Toluene, Ethyl Benzene, Xylene	C	Closed	C25	25% Complete	C50	50% Complete
C75	75% Complete	CD	Cadmium	CO	Closeout	COMPL	Complete
CR	Chromium	CR(VI)	Chromium-6	CU	Copper	DCA	Dichloroethane
DCE	Dichloroethylene	DEC	Consent Decree	DEQ	Dept.of Environmental Quality	DOGAMI	Dept. of Geology & Mineral Industries
DOJ	Department of Justice	DRUGL	Drug Lab	EA	Endangerment Assessment	EPA	Environmental Protection Agency
F	Fluorine	FED	Federal	FS	Feasibility Study	GW TR	Groundwater Treatment
HRS	Hazard Ranking System	I	Inactive	IAG	Interagency Agreement	INIT	Initiated
IRAM	Interim Remedial Action Measures	IW	Industrial well	LSI	Listing Site Inspection	LTR	Letter Agreement
LUST	Leaking Underground Storage Tank Section	MEK	Methyl Ethyl Ketone	MG	Magnesium	MIXED	PRP and Agency
NFA	No Futher Action	NPL	National Priorities List	OM	Operations and Maintenance	ORD	Consent Order
PAH	Polyaromatic Hydrocarbons	PASI	Preliminary Assessment/Site Investigation	PB	Lead	PCB	Polychlorinated Biphenyls
PCE	Perchloroethylene	PCP	Pentachlorophenol	PD	Pre-remedial Development	PM	Pre-remedial Measures
PNA	Polynuclear Aromatics	PRP	Potentially Responsible Party	QA	Quality Assurance	RA	Remedial Action
RAP	Remedial Action Plan	RCRA	Resource Conservation and Recovery Act of 1976	RD	Remedial Design	REMOV	Removal
RI	Remedial Investigation	RIFS	Remedial Investigation/Feasibility Study	ROD	Record of Decision	SAS	Site Assessment Section
SGA	Sand & Gravel Aquifer	SI	Site Investigation	SITE	Superfund Innovative Technology Evaluation	SOW	Scope of Work
SRS	Site Response Section	STA	State Technical Assistance Project	SUPER	Superfund	T	Terminated
TBT	Tri-Butyl-Tin	TCA	Trichloroethane	TCE	Trichloroethylene	TGA	Troutdale Gravel Aquifer
TPH	Total Petroleum Hydrocarbons	TRC	Technical Review Committee	TSA	Troutdale Sandstone Aquifer	UAO	Unilateral Administrative Order
VC	Vinyl Chloride	VCS	Voluntary Cleanup Section	VOC	Volatile Organic Compounds	VPA	Voluntary Preliminary Assessment
XPA	Extended Preliminary Assessment	ZN	Zinc				

**ENVIRONMENTAL CLEANUP MISSION:**

*"...to discover, assess, investigate and clean up sites contaminated by hazardous substances."*

**Environmental Quality Commission**

X Rule Adoption Item

X Action Item

Information Item

**Agenda Item K**

**January 27, 1994, EQC Meeting**

**Title:**

Commission Deliberation and Possible Action on (1) Proposed Modification to the Special Policy Rule Which Prohibits Further Waste Discharges to the Clackamas River Sub-basin, North Santiam River Sub-basin, and McKenzie River Sub-basin above Hayden Bridge (OAR 340-41-470(1)), and (2) Potential Findings to Allow a Discharge into Cedar Creek or the Unnamed Tributary of Cedar Creek in the North Santiam River Sub-basin.

**Summary:**

In response to a petition submitted by Kinross Copper Corporation at the December 10, 1993, Commission meeting, the Commission directed the Department to proceed to rule-making and bring a proposed rule for possible action by the Commission at their January meeting.

The Department prepared a public notice, informational materials and three alternatives, mailed then to interested persons, and scheduled a hearing before the Commission on January 27, 1994. After discussions with environmental groups, water suppliers and other interested parties the Department prepared an additional three alternatives for consideration by the Commission. The six alternatives for consideration by the Commissions are noted as follows:

Alternatives 1, 2, and 4 deal specifically with the proposed Kinross Copper Corporation mine. Alternative 3 is a broad proposal that would exempt discharges other than sanitary waste water and industrial process waste water, and would enable the Commission to permit discharges of industrial process waste water and sanitary waste if the Antidegradation Policy is met. Alternative 5 is a proposal which allows storm water and other non-industrial process waste water discharges to the three basins provided they do not significantly impair existing water quality. Alternative 6 makes no immediate changes in the existing rules and allows the Commission to either end the rule-making process or direct the Department to go through its normal rule development process with the expectation that the Department would return to the Commission in approximately one year with any proposed rule changes.

The staff report also includes a discussion of the Antidegradation Policy. If the Commission decides on a rule change to permit consideration of the Kinross Copper mine, then the Commission needs to make a determination that the mine operation will not violate the antidegradation policy. The Department has attached draft findings that the Commission may consider if they choose to proceed to this step in the process.

**Department Recommendation:**

It is recommended that the Commission adopt the rule amendments regarding the proposed modification to OAR 340-41-470(1) as presented in Attachment A - Alternative 5 of the Department Staff Report. In relation to the Kinross facility, the Department along with the Commission wants to hear public hearing comments before making a recommendation as to which alternative we support.

  
Report Author

  
Division Administrator

  
Director

January 23, 1994


†Accommodations for disabilities are available upon request by contacting the Public Affairs Office at (503)229-5317(voice)/(503)229-6993(TDD).



State of Oregon  
Department of Environmental Quality

Memorandum<sup>†</sup>

Date: January 21, 1994

To: Environmental Quality Commission  
From: Fred Hansen, Director   
Subject: Agenda Item K, January 27, 1994, EQC Meeting

Commission Deliberation and Possible Action on (1) Proposed Modification to the Special Policy Rule Which Prohibits Further Waste Discharges to the Clackamas River Sub-basin, North Santiam River Sub-basin, and McKenzie River Sub-basin above Hayden Bridge (OAR 340-41-470(1)), and (2) Potential Findings to Allow a Discharge into Cedar Creek or the Unnamed Tributary of Cedar Creek in the North Santiam River Sub-basin.

**BACKGROUND**

In response to a petition submitted by Kinross Copper Corporation at the December 10, 1993, Commission meeting, the Commission directed the Department to proceed to rule-making and bring a proposed rule for action by the Commission at their January meeting. The Director authorized the Water Quality Division to develop five rule-making proposals for consideration by the Commission. All five alternatives are presented in the report. Alternatives 1, 2, and 4 deal specifically with the proposed Kinross copper mine and would allow discharge into Cedar Creek and the unnamed tributary to Cedar Creek (designated Bornite Brook). Alternatives 3 and 5 would clarify what types of discharges OAR 340-41-470(1) applies to and exempt other discharges, such as storm water, from the rule. In addition, the Department has included an alternative 6, which affirmatively makes no change to the existing rules and allows the Commission to either end the rule-making process or direct the Department to go through its normal rule development process with the expectation that the Department would return to the Commission in approximately one year with any proposed rule changes.

Pursuant to the authorization, a hearing notice was published in the Secretary of State's Bulletin on January 1, 1994. The Hearing Notice and informational materials were mailed on

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<sup>†</sup>Accommodations for disabilities are available upon request by contacting the Public Affairs Office at (503)229-5317 (voice)/(503)229-6993 (TDD).

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December 22, 1993, to the mailing list of those persons who have asked to be notified of rule-making actions, and to a mailing list of persons known by the Department to be potentially affected by or interested in the proposed rule-making action.

Due to time constraints, a Public Hearing was not held prior to the Commission meeting. The Commission will receive testimony at their January 27, 1994, meeting. Written comments received during the public notice period, which expires on January 24, 1994, will be forwarded to the Commission for consideration.

The following sections summarize the issue that this proposed rule-making action is intended to address, the authority to address the issue, the process for development of the rule-making proposal including alternatives considered, a discussion of the information that was distributed to the public, a summary of how the rule will work and how it is proposed to be implemented, and a recommendation for Commission action.

**ISSUE THIS PROPOSED RULE-MAKING ACTION IS INTENDED TO ADDRESS**

OAR 340-41-470(1) prohibits the discharge of any further waste into the Clackamas River, North Santiam River, and McKenzie River (above Hayden Bridge) sub basins. Kinross Copper Corporation has proposed an underground copper mine in the North Santiam River Basin. The proposed facility would discharge to Cedar Creek or the unnamed tributary of Cedar Creek (designated as Bornite Brook).

To proceed with the project Kinross Copper Corporation needs to secure a National Pollutant Discharge Elimination System (NPDES) waste discharge permit from the Department of Environmental Quality. The Department is unable to issue this permit because of the restrictions in OAR 340-41-470(1). The Commission may consider amending this rule to allow the discharge of waste water to Cedar Creek or the unnamed tributary.

Since OAR 340-41-470(1) prohibits the discharge of any further waste into these sub basins, the Commission will also consider the broader issue of whether to allow discharges of storm water and other non-process waste waters. The specific discharges to be allowed are discussed with the proposed alternatives. For example, the rule apparently prohibits any new or increased discharges of storm water from facilities in

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the three sub basins. At the time the rule was first adopted, storm water was not regulated by the Department and was not intended to be covered by the rule. However, a strict interpretation of the current rule language would not allow the Department to issue permits for new or increased discharges of storm water in the three sub basins. This is not a practical application of the rule unless it is the intent of the Commission to stop most new development in the sub basins.

#### RELATIONSHIP TO FEDERAL AND ADJACENT STATE RULES

OAR 340-41-470(1) is more stringent than required by the Clean Water Act or federal rules because it prohibits any new or increased discharges into the Clackamas, North Santiam and McKenzie river sub basins. This is more than is required to meet water quality standards and protect beneficial uses and more than what is required by the federal anti-degradation rule, 40 CFR 131.12.

All of the rule amendment alternatives included in this staff report, while allowing various levels of relaxation of the current rule, would still result in a rule, if adopted, that is more stringent than required by federal law or rules. Alternative 6, however, would not change any rule and therefore, retain the more stringent state rule.

Alternatives 1, 2 and 4 would only allow an exception to the current rule for Kinross Copper Corporation in the North Santiam sub basin. This narrow exemption, if adopted, would leave most of the prohibitions of the current rule in place and, therefore, would result in requirements that are clearly more stringent than federally mandated.

Alternatives 3 and 5 would provide exceptions to 340-41-470(1) for most categories of activities other than industrial and sanitary waste water discharges in all three sub basins. If adopted, these proposals would result in requirements equivalent to federal requirements for these activities. Alternative 3 would further allow the EQC to grant case-by-case exceptions to facilities discharging industrial or sanitary waste water if the facility meets the High Quality Waters rule, OAR 340-41-026(1)(a)(A). The High Quality Waters rule is equivalent to the federal anti-degradation rule, 40 CFR 131.12. Thus, Alternative 3 comes closest to mirroring the minimum federal requirements, but is still more stringent in that it prohibits new or increased discharges without specific EQC approval.

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The Environmental Protection Agency has required all states that implement the NPDES Permit program to have an anti-degradation policy that is at least as stringent as that in the federal regulations. Because the anti-degradation policy requirement is nationwide, other states would have rules equivalent to Oregon's High Quality Waters rule.

**AUTHORITY TO ADDRESS THE ISSUE**

Oregon Revised Statutes (ORS) 468.020 authorizes the Commission to adopt rules and standards as considered necessary to perform its statutory functions. ORS 468B.035 authorizes the Commission to adopt rules as needed to carry out provisions of the Federal Water Pollution Control Act (Clean Water Act) and federal regulations and guidelines issued pursuant to the Act. The Commission may adopt, modify or repeal rules, pursuant to ORS 183.310 to 183.550, for the administration and implementation of the Act.

**PROCESS FOR DEVELOPMENT OF THE RULE-MAKING PROPOSAL (INCLUDING ADVISORY COMMITTEE AND ALTERNATIVES CONSIDERED)**

The Commission directed the Department to proceed to rule-making and bring forth a proposed rule for action by the Commission at the January 27-28, 1994 meeting. This schedule precluded the use of an advisory committee.

In its petition to the Commission, Kinross Copper Corporation proposed a rule amendment that deals specifically with the proposed copper mine. That is one of three alternatives presented here that deal specifically with the proposed copper mine.

Since it is also critical that the Commission consider the issue of whether to allow discharges such as storm water and other non-process waste water into these sub basins, the Department is recommending the adoption of an amendment, which addresses these discharges.

Five rule-making alternatives and a "do nothing" alternative (alternative 6) are presented below for consideration by the Commission:

**Alternative 1:** This is the proposed language that Kinross Copper Corporation included in its petition to the Commission on December 10, 1993 (Attachment A - Alternative 1). Alternative 1 would deal specifically with the mine and would allow discharge to Cedar Creek and the unnamed tributary to

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Cedar Creek. The Department believes that this alternative does not adequately address how the Department's High Quality Waters Policy for Surface Waters in OAR 340-41-026(1)(a) would be applied to the proposed copper mine discharge.

Alternative 2: Alternative 2 is a Department modification of the language proposed by Kinross Copper Corporation (Attachment A - Alternative 2). This alternative would also deal only with the mine and would allow discharge to Cedar Creek and the unnamed tributary to Cedar Creek. The modification proposed by the Department would enable the Commission to allow discharges into these two streams if the Commission determines that the discharge would meet the High Quality Waters Policy. The language proposed in Alternative 2 is consistent with the Department's anti-degradation policy.

Alternative 3: Alternative 3 proposes amendments to this rule to address the broader issue of whether to allow other discharges into the three sub basins (Attachment A - Alternative 3). These amendments would:

- (1) exempt outright discharges other than industrial process waste water and sanitary waste water from OAR 340-41-470(1);
- (2) enable the Commission to permit discharges of industrial process waste water and sanitary waste water provided the discharges comply with the Department's High Quality Waters Policy in OAR 340-41-026(1)(a)(A);
- (3) enable the Director to allow short-term discharges of industrial or sanitary waste water in the three sub-basins in an emergency; and
- (4) sunset the new provisions of the rule in one year.

This was the alternative the Department had recommended in the rule-making proposal mailed to the public. However, as a result of internal discussions during the preparation of this staff report and initial concerns expressed by the public, the Department has concluded that this alternative may be broader than necessary to deal with potential new or increased discharges during the one year interim as final rules are developed for adoption by the Commission.

Alternative 4: Alternative 4 is a modification of alternative 2 and also deals only with the copper mine (Attachment A - Alternative 4). This alternative would require that the discharge meet the provisions of the Department's High Quality Waters Policy and cause no measurable lowering of water

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quality at the confluence of Cedar Creek and the Little North Santiam River (about three miles downstream of the proposed mine). If the Commission wishes to adopt a rule amendment that would specifically exempt the Kinross copper mine from 340-41-470(1), the Department believes this alternative is the best of the three presented.

Alternative 5: This alternative would enable the Department to issue NPDES permits for storm water discharges (including storm water from construction activities regulated by federal law); short term construction activities requiring certification under section 401 of the Federal Clean Water Act; underground storage tank cleanup activities using best available treatment technology such as air stripping and carbon adsorption; filter backwash discharges from drinking water treatment plants; vehicle and equipment washing activities that do not use soaps, detergents or other chemicals; and non-contact cooling water. These discharges are not expected to impair the beneficial uses of the receiving stream and therefore, have been exempted. Discharges of all other industrial waste water and sanitary waste water would be prohibited.

This alternative would be effective for a one year period. During this period, the Department would form a broad-based advisory committee to assist in developing a final rule-making proposal. The Department recommends adoption of this alternative to allow these types of activities to proceed and avoid potentially significant economic dislocations during the one year period that final rules are being developed.

Alternative 6: The Commission also has the alternative of not adopting any rule amendments at this time and end the rule-making process or direct the Department to go through its normal rule development process with the expectation that the Department would return to the Commission in approximately one year with any proposed rule changes.

The Kinross Copper mine cannot discharge waste water without a NPDES permit, and a permit cannot be issued under the current rule for new or increased discharges. Kinross Copper Corporation has asserted that the project cannot proceed without a NPDES permit because a "no discharge" option is not feasible.

Storm water and other non-process waste water discharge permits, and 401 certifications cannot be issued under the current rule for any other new or increased discharges such as

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storm water and highway repair or construction in the three sub basins. Significant adverse economic effects are likely without a rule amendment to allow such activities. Discharges of storm water and other minor activities, other than industrial process waste water and sanitary waste water discharges, should not significantly impair existing high quality waters in the three sub basins, especially if these discharges are required to meet the High Quality Waters Policy. For these reasons, the Department does not recommend the do nothing alternative as it relates to storm water, non-process waste water discharges and 401 certifications.

**EVALUATION OF THE PROPOSED DISCHARGE BY KINROSS COPPER CORPORATION AND THE DEPARTMENT'S HIGH QUALITY WATERS POLICY:**

If the Commission adopts one of the proposed rule amendments, which would allow a discharge from the proposed mine, and wishes to consider whether the Kinross discharge should be allowed, it needs to apply the Anti-degradation Policy for Surface Waters to determine whether the proposed discharge meets the requirements of the rule.

The Anti-degradation Policy (OAR 340-41-026(1)(a)) classifies surface waters into three categories: High Quality Waters, Water Quality Limited Waters, and Outstanding Resource Waters. Kinross Copper Corporation is proposing to discharge to either Cedar Creek or the unnamed tributary to Cedar Creek. Both these streams are classified as "high quality waters" and, therefore, the High Quality Waters Policy in OAR 340-41-026(1)(a)(A) is applicable. These streams are not water quality limited, nor have they been designated as outstanding resource waters.

**The High Quality Waters Policy (OAR 340-41-026(1)(a)(A)) states:**

"Where existing water quality meets or exceeds those levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, and other designated beneficial uses, that level of water quality shall be maintained and protected. The Environmental Quality Commission, after full satisfaction of the intergovernmental coordination and public hearing provisions of the continuing planning process, and with full consideration of sections (2), (3) and (5) of this rule, may allow a lowering of water quality in these high quality waters if they find:

- i) No other reasonable alternatives exist except to lower water quality; and
- ii) The action is necessary and justifiable for economic or social development benefits and outweighs the environmental costs of lowered water quality; and
- iii) All water quality standards will be met and beneficial uses protected."

If the Commission adopts one of the proposed rule amendments which would allow a discharge from the proposed mine and wishes to apply the High Quality Waters Policy to the proposed discharge, the necessary findings are presented below. Alternatively, the Commission can direct that a hearings officer conduct a public hearing on this issue and bring it for consideration by the Commission at the March, 1994 meeting or a later meeting.

Another option would be for the Commission to direct the Department to draft the NPDES Permit for the facility and make the necessary findings under the High Quality Waters Policy in the permit evaluation report. The Department would then send a draft permit out for public comment and conduct a public hearing. After the conclusion of the public participation process, the Department would then bring this issue to the Commission for consideration, probably at the April, 1994 meeting.

The following is a discussion of the requirements of the High Quality Waters Policy as it applies to the proposed Kinross discharge. Kinross Copper Corporation is proposing to discharge process waste water, storm water and mine water (groundwater encountered during mining). The NPDES Permit application and supporting documentation includes an estimate of the concentration of pollutants in the proposed discharge. Information on background water quality has also been gathered and is presented in the NPDES Permit application and Environmental Impact Statement, which was completed by the United States Department of Agriculture - Forest Service in April 1993.

As outlined above, the High Quality Waters Policy, which is applicable to the proposed discharge, states, "Where existing water quality meets or exceeds those levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, and other designated beneficial uses, that level of water quality shall be maintained and protected."



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The Department conducted a mass balance analysis to determine whether the existing level of water quality will be "maintained and protected" (Attachment C). The analysis indicates that the discharge, after mixing with the stream, would be well below the most stringent water quality standards, chronic toxicity. Therefore, water quality standards would not be violated and beneficial uses would be protected. However, there would be a measurable increase in background levels at the downstream edge of the mixing zone for some parameters. A few thousand feet downstream of the mixing zone, the Kinross discharge would not be measurable.

It is not clear whether these levels can be considered to "maintain and protect" the existing level of water quality or whether they should be considered a lowering of water quality that would require EQC findings and approval under the High Quality Waters Policy. Therefore, if the EQC wishes to allow the Kinross discharge it should determine whether a lowering of water quality is consistent with the criteria contained in OAR 340-41-026(1)(a)(A)(i) to (iii). To do so, the EQC must (A) satisfy the intergovernmental coordination and public hearing provisions of the continuing planning process; (B) give full consideration to sections (2), (3), and (5) of OAR 340-41-026; and (C) find that the criteria in OAR 340-41-026(1)(a)(A)(i) to (iii) are met.

A. Continuing Planning Process: 40 CFR 130.5 requires each state to establish and maintain a Continuing Planning Process. The State's Continuing Planning Process for Water Quality Program Management (last updated in 1989) provides a broad overview of the Water Quality Program, focuses on specific elements of the program and procedures for accomplishing work, and describes the basic relationships between major program elements. The Public Information and Input Process of the Continuing Planning Process includes the Department's procedures for distributing information to the public, obtaining input from the public, and utilizing public comment in program decisions.

Attachment B, the rule-making proposal, along with a cover letter, was distributed to the public. This information was also distributed to government agencies who may be affected by the proposed rule amendment. The Department has invited the public and government agencies to comment on this matter either in writing by January 24, 1994, or orally at the public hearing on January 27, 1994. The public notice issued by the Department, this staff report, and the public hearing before

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the Commission meets the provisions of the Continuing Planning Process.

B. Consideration of Section (2), (3) and (5) of OAR 340-41-026: The text of OAR 340-41-026 is included in Attachment D. Since OAR 340-41-026(2) applies to existing discharges, Kinross Copper Corporation's proposed discharge would not be subject to this provision.

The provisions of OAR 340-41-026(3) have historically been applied to dischargers that have mass load limits for Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS) such as sanitary waste water discharges and discharges from pulp and paper mills. The discharge from this facility would not have a BOD component and would not be subject to mass load limits. Although applied in the manner outlined above, the rule language is broad and is not limited to these provisions. Therefore, an evaluation of the findings in the rule has been included.

Under section (3), the Commission may grant approvals to section (5) of OAR 340-41-026 for major dischargers and the Department would grant approvals for other dischargers. Since Kinross Copper Corporation is not classified as a major discharger, the Department is responsible for determining whether the requirements of sections (3) and (5) are met.

Kinross Copper Corporation has stated that a no discharge option is not practicable. Therefore, it is appropriate to consider whether a new source discharge can be approved under section (3) of the rule. As required by section (3)(a) of OAR 340-41-026, the Department has determined that (A) the new discharge load would not cause water quality standards to be violated; (B) the new discharge load would not unacceptably threaten or impair any recognized beneficial uses; (C) the new discharged load is not to a water quality limited stream; and (D) the activity is consistent with acknowledged local land use plans as evidenced by submission of a land use compatibility statement to the Department.

Further, under section (3)(b) of OAR 340-41-026, the Department has considered the following environmental and economic effects criteria:

**Environmental Effects Criteria:**

**Adverse out-of-stream effects:** A non-discharge alternative such as spray irrigation is not viable because of the steep terrain and because irrigation would be during the wet weather

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season. Since the proposed mine is located on a steep hill side in the Willamette National Forest, installing a irrigation system may not be practicable and may negatively impact both surface water and groundwater quality. Furthermore, spray irrigation would primarily be during the wet weather season when the capacity of the soil to assimilate the waste water is at a minimum. Irrigating under these conditions would increase run-off and impact surface waters. These conditions would not lend themselves to a non-discharge alternative such as spray irrigation.

**Instream Effects:** Since the discharge by Kinross Copper Corporation is new and there are no other existing discharges located in the area that contribute similar pollutants, it is not possible to reduce total stream loading. Note, however, that Kinross Copper Corporation is proposing to discharge only during the wet weather season when the assimilative capacity of the stream is at its highest. With the proposed seasonal discharge, there would be no effect on the receiving stream during critical low flow periods and a minimal impact during periods of discharge.

**Beneficial Effects:** Since land application of waste water is not a viable option, there are no beneficial effects such as replenishing groundwater levels or increasing stream flow during low flow periods.

**Economic Effects Criteria:**

**Value of assimilative capacity:** An analysis of the proposed discharge indicates that the discharge would comply with water quality standards at or near the discharge location. The discharge would not measurably change the concentrations of pollutants above background levels in streams other than the immediate receiving stream and therefore, would not measurably reduce assimilative capacity in streams other than the unnamed tributary to Cedar Creek (Bornite Brook). The development of the mine is expected to create 100 construction jobs and 80 for the life of the mine (8 - 10 years) in an economically depressed area. The proposed mine would be beneficial to residents of the area and the discharge would not measurably reduce the assimilative capacity of the streams in the basin other than the receiving stream.

**Cost of treatment technology:** As previously mentioned, a non-discharge alternative is not viable at this facility. The anticipated discharge quality is expected to meet water quality standards at or immediately downstream of the discharge location. Since the estimated concentration of

pollutants in the proposed discharge is already quite low, it is unlikely that additional treatment would further improve the quality of the discharge. With the selection of a limited discharge alternative, there would be no effect on the receiving stream during critical low flow periods and a minimal effect during periods of discharge.

C. Evaluation of OAR 340-41-026(1)(a)(A)(i) to (iii): Since the public notice and the scheduled public hearing satisfy the requirements of the Continuing Planning Process and the applicability of sections (2), (3) and (5) of this rule have been considered and findings made by the Department, the Commission can, if it chooses, take an action on this item under OAR 340-41-026(1)(a)(A). An evaluation of the criteria for allowing a lowering of water quality is presented below:

- (i) **No other reasonable alternatives exist except to lower water quality** - Kinross Copper Corporation has explored other alternatives and has significantly modified the original design of the proposed facility, which has reduced the expected discharge volume. However, due to the heavy precipitation in the area and the potential for encountering high volumes of groundwater during the mining operation, Kinross would not be able to develop and operate the mine without a NPDES waste discharge permit.

Kinross has reduced the expected discharge volume by proposing to store water from ore processing, precipitation, and groundwater encountered during mining operation in a lined tailings impoundment. The proposed facility would discharge only during the wet weather season when the storage capacity of the tailings impoundment has been exceeded.

- (ii) **The action is necessary and justifiable for economic or social development benefits and outweighs the environmental costs of lowered water quality** - The water quality analysis presented in Attachment C provides an indication of the anticipated lowering in water quality in the receiving stream as a result of the proposed discharge. The proposed mine is expected to provide 100 construction jobs and 80 jobs for the life of the mine (8 - 10 years) in an economically depressed area. The comment period and the public hearing will also provide an opportunity for the Commission to consider the economic and social benefits and determine whether these benefits

outweigh the environmental costs of lowered water quality.

- (iii) **All water quality standards will be met and beneficial uses protected** - Although the water quality analysis presented in Attachment C indicates that the discharge would cause a change in stream background levels, the analysis also indicates that the change would not violate water quality standards and, thus, beneficial uses would be protected.

#### DISCUSSION OF INFORMATION DISTRIBUTED TO THE PUBLIC

Attachment B contains the rule-making proposal that was mailed to the public to provide information regarding the proposed rule amendment. The rule-making proposal, which was mailed to the public, presented three alternatives and recommended the adoption of alternative 3. The adoption of alternative 3 would: (1) clarify that OAR 340-41-470(1) only applies to discharges of industrial waste water and sanitary waste water and exempt all other discharges from the rule; (2) enable the Commission to permit discharges of industrial and sanitary waste water in the Clackamas, McKenzie and North Santiam sub basins provided the discharges comply with the Department's High Quality Waters Policy in OAR 340-41-026(1)(a)(A); (3) enable the Director to allow short-term discharges of industrial or sanitary waste water in the three sub basins in an emergency; and (4) sunset the new provisions of the rule in one year.

As a result of internal discussions during the preparation of this staff report and initial concerns expressed by water suppliers and environmental organizations, the Department is no longer recommending the adoption of alternative 3 because it may be broader than necessary to deal with the immediate issues posed by the current rule during the one year interim while final rule language is developed for adoption.

After meetings with water suppliers and environmental organizations, the Department is proposing three additional alternatives for consideration by the Commission. Alternative 4 is a modification of alternative 2 and deals only with the proposed discharge from the copper mine. No other discharges would be allowed into these sub basins as a result of adopting alternative 4.

Alternative 5 would: (1) clarify that OAR 340-41-470(1) applies only to new or increased waste discharges; (2) clearly

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describe the discharges, which would be exempt from the provisions of OAR 340-41-470(1); (3) enable the Director to allow short-term discharges to respond to emergencies; and (4) sunset the new provisions of the rule in one year.

Alternative 6 makes no change to the existing rules and allows the Commission to either end the rule-making process or direct the Department to go through its normal rule development process with the expectation that the Department would return to the Commission in approximately one year with any proposed rule changes.

All comments received by the Department will be forwarded to the Commission for consideration. Any other changes to the proposed rule would be the result of deliberation by the Commission.

**SUMMARY OF HOW THE PROPOSED RULE WILL WORK AND HOW IT WILL BE IMPLEMENTED**

If the Commission adopts any of the proposed rule amendments, which would allow a discharge from the proposed mine, and if the Commission determines that the discharge from the proposed copper mine meets the requirements of the High Quality Waters Policy, the Department would process the NPDES permit application through its normal process. The next step in that process is sending a draft permit out for public review and comment. Upon completion of the public review process, and a determination that the facility meets all the requisite requirements, the Department would issue an NPDES permit for the facility.

If the Commission adopts any of the proposed rule amendments, which would allow a discharge from the proposed mine and chooses to consider at a later date the issue of whether the discharge from the proposed copper mine meets the requirements of the High Quality Waters Policy, the Commission needs to direct the Department how and when it wishes to consider this issue. One alternative is for the EQC to assign a hearings officer to hear testimony on the issue next month and bring the issue to the Commission at its March 10-11 meeting for a decision. Another alternative would be for the EQC to direct the Department to take the draft Kinross permit out for public comment/hearing and to take comment on the High Quality Waters Policy during that process, and then bring the High Quality Waters Policy issue to the EQC for a decision at the April meeting.

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If the Commission adopts the rule amendments contained in Alternative 5, storm water discharges (including storm water from construction activities that are regulated by federal law), short term construction activities requiring certification under section 401 of the Federal Clean Water Act, underground storage tank cleanup activities, filter backwash discharges from drinking water treatment plants, vehicle and equipment washing activities, and non-contact cooling water would be exempt from OAR 340-41-470(1). These discharges would be allowed only to the extent that they do not significantly impair the existing water quality in the these three river basins.

Further, alternative 5 would authorize the Director to allow a temporary, short-term lowering of water quality in any of the three sub-basins in order to respond to emergencies or to otherwise avoid imminent and serious danger to public health or welfare. The Department expects this authority would only be used rarely when a true emergency exists that threatens public health or welfare.

Finally, Alternative 5 provides that the amendments to OAR 340-41-470(1) adopted by the Commission would sunset in one year. During that year, the Department plans to form a broad-based advisory committee of interested parties to review OAR 340-41-470(1) and determine what permanent amendments to the rule are necessary and appropriate.

#### RECOMMENDATION FOR COMMISSION ACTION

##### Kinross Copper Corporation Rule-making Petition:

The rule amendment proposed by Kinross Copper Corporation is one of three alternatives presented here that deal specifically with the proposed copper mine. After considering the written comments submitted during the public notice period and the oral testimony presented during the public hearing, the Commission can consider the whether or not it is appropriate to adopt one of the three rule amendments. If the Commission adopts one of these three rule amendments, the Commission may also consider Kinross Copper Corporation's discharge under the High Quality Waters Policy (OAR 340-41-026(1)(a)(A)) and adopt the staff report as findings in support of that determination, or if it wishes more time to make that decision it should direct the Department on how and when it would like to make the determination.

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Storm Water and Other Discharges:

It is recommended that the Commission adopt the rule amendments regarding the proposed modifications to OAR 340-41-470(1) as presented in Attachment A - Alternative 5 of the Department Staff Report, and direct the Department to immediately begin rule-making using a broad-based advisory committee of interested parties to develop permanent rule amendments.

ATTACHMENTS

- A. Rule Amendments Proposed for Adoption
- B. Supporting Procedural Documentation:
  - 1. Legal Notice of Hearing
  - 2. Public Notice of Hearing (Chance to Comment)
  - 3. Rule-making Statements (Statement of Need)
  - 4. Fiscal and Economic Impact Statement
  - 5. Land Use Evaluation Statement
- C. Kinross Copper Corporation - Water Quality Analysis
- D. Oregon Administrative Rules 340-41-026
- E. Staff Report for Agenda Item I, December 10, 1993, EQC Meeting

Approved:

Section: Thomas J. Lucas  
Division: Tom Lucas for Mike Dause

Report Prepared By: Rajeev Kapur  
Phone: 229-5185  
Date Prepared: January 21, 1994  
Revised: January 25, 1994

RK:



ATTACHMENT A - ALTERNATIVE 1

OAR 340-41-470 - Special Policies and Guidelines

(1) In order to preserve the existing high quality water for municipal water supplies and recreation, it is the policy of the EQC to prohibit any further waste discharges into the water of:

- (a) The Clackamas River Subbasin;
- (b) The McKenzie River Subbasin above Hayden Bridge (river mile 15);
- (c) The North Santiam River Subbasin, except Bornite Brook and Cedar Creek. The Department may approve discharges to Bornite Brook or Cedar Creek only if the Department determines that the discharges (i) will not significantly impair the existing high quality water of the subbasin for municipal water supplies, recreation uses and (ii) will meet all other applicable requirements for issuance of discharge permits. The Commission may review and affirm, modify, or reverse any Department determination under this paragraph at its next regularly scheduled meeting after the Department's issuance of a discharge permit, either on its own motion or at the request of any interested person.

ATTACHMENT A - ALTERNATIVE 2

OAR 340-41-470 - Special Policies and Guidelines

(1) In order to preserve the existing high quality water for municipal water supplies and recreation, it is the policy of the EQC to prohibit any further waste discharges to the waters of:

- (a) The Clackamas River Subbasin;
- (b) The McKenzie River Subbasin above the Hayden Bridge (river mile 15);
- (c) The North Santiam River Subbasin, except Bornite Brook and Cedar Creek. The Environmental Quality Commission may approve new discharges to Bornite Brook or Cedar Creek only if the Commission determines that the discharges will meet the High Quality Waters Policy contained in OAR 340-41-026(1)(a)(A). If the discharge cannot meet the High Quality Waters Policy without a lowering of water quality, the Environmental Quality Commission may allow a lowering of water quality if they find the criteria in OAR 340-41-026(1)(a)(A)(i) to (iii) are met.

ATTACHMENT A - ALTERNATIVE 3

OAR 340-41-470 - Special Policies and Guidelines

- (1) In order to preserve the existing high quality water for municipal water supplies and recreation, it is the policy of the EQC to prohibit any further waste discharges to the waters of:
  - (a) The Clackamas River Subbasin;
  - (b) The McKenzie River Subbasin above the Hayden Bridge (river mile 15);
  - (c) The North Santiam River Subbasin.
- (2) Section (1) of this rule applies to new or increased discharges from facilities treating sanitary wastewater and industrial process wastewater. All other discharges are exempt from Section (1).
- (3) The Environmental Quality Commission may approve a new or increased discharge from a facility subject to Section (1) of this rule if it determines the High Quality Waters Policy contained in OAR 340-41-026(1)(a)(A) will be met. If the discharge cannot meet the High Quality Waters Policy without a lowering of water quality, the Environmental Quality Commission may allow a lowering of water quality if they find the criteria in OAR 340-41-026(1)(a)(A)(i) to (iii) are met.
- (4) The Director or a 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.
- (5) Sections (2), (3), and (4) of this rule are effective until January 28, 1995.
- [(2)](6) The Environmental Quality Commission shall ....
- [(3)](7) In order to improve water quality within the Tualatin River subbasin .....
- [(4)](8) In order to improve water quality within the Yamhill River subbasin ....

ATTACHMENT A - ALTERNATIVE 4

OAR 340-41-470 - Special Policies and Guidelines

(1) In order to preserve the existing high quality water for municipal water supplies and recreation, it is the policy of the EQC to prohibit [~~further~~] new or increased waste discharges to the waters of:

- (a) The Clackamas River Subbasin;
- (b) The McKenzie River Subbasin above the Hayden Bridge (river mile 15);
- (c) The North Santiam River Subbasin, except Bornite Brook and Cedar Creek. The Environmental Quality Commission may approve new discharges to Bornite Brook or Cedar Creek only if the Commission determines that the discharges will meet the High Quality Waters Policy contained in OAR 340-41-026(1)(a)(A). If the discharge cannot meet the High Quality Waters Policy without a lowering of water quality, the Environmental Quality Commission may allow a lowering of water quality if they find the criteria in OAR 340-41-026(1)(a)(A)(i) to (iii) are met and there is no measurable lowering of water quality at the confluence of Cedar Creek and the Little North Santiam River.

ATTACHMENT A - ALTERNATIVE 5

OAR 340-41-470 - Special Policies and Guidelines

(1) In order to preserve the existing high quality water for municipal water supplies and recreation, it is the policy of the EQC to prohibit [~~further~~] new or increased waste discharges to the waters of:

- (a) The Clackamas River Subbasin;
- (b) The McKenzie River Subbasin above the Hayden Bridge (river mile 15);
- (c) The North Santiam River Subbasin.

(2) The following discharges are exempt from section (1) of this rule to the extent that they do not significantly impair existing water quality: storm water; short term construction activities obtaining certification under section 401 of the Federal Clean Water Act; underground storage tank cleanup activities using best available treatment technology; filter backwash discharges from drinking water treatment plants; vehicle and equipment washing activities that do not use soaps, detergents or other chemicals; and non-contact cooling water.

(3) The Director or a designee may allow lower water quality on a short term basis in order to respond to emergencies or to otherwise avoid imminent and serious danger to public health or welfare.

(4) Sections (2) and (3) of this rule are effective until January 28, 1995.

[(2)](5) The Environmental Quality Commission shall ....

[(3)](6) In order to improve water quality within the Tualatin River subbasin .....

[(4)](7) In order to improve water quality within the Yamhill River subbasin ....

NOTICE OF PROPOSED RULEMAKING HEARING

(Rulemaking Statements and Statement of Fiscal Impact must accompany this form.)

Department of Environmental Quality Water Quality Division  
OAR Chapter 340

DATE: 1/27/1994 TIME: 3:00 p.m. LOCATION: Conference Room 3A, DEQ Offices  
811 S. W. Sixth Avenue  
Portland, Oregon

HEARINGS OFFICER(s): Environmental Quality Commission, Chairman  
William Wessinger

STATUTORY AUTHORITY: ORS 468.020

ADOPT:

AMEND: OAR 340-41-470(1)

REPEAL:

This hearing notice is the initial notice given for this rulemaking action.

Auxiliary aids for persons with disabilities are available upon advance request.

SUMMARY:

OAR 340-41-470(1) prohibits the discharge of any further waste into the Clackamas River, North Santiam River and the McKenzie River (above Hayden Bridge) sub-basins. Kinross Copper Corporation has proposed an underground copper mine in the North Santiam River Basin. The proposed facility would discharge treated process waste waters, storm water runoff and mine water (water encountered during the mining operation) to Cedar Creek and an unnamed tributary of Cedar Creek (designated as Bornite Brook). The U.S. Forest Service has completed an environmental impact statement, and signed the record of decision enabling the project to proceed.

To proceed with the project Kinross Copper Corporation needs to secure a NPDES (National Pollutant Discharge Elimination System) waste discharge permit from the Department of Environmental Quality. The Department is unable to issue this permit because of the restrictions in OAR 340-41-470(1). On December 10, 1993, at the Environmental Quality Commission meeting, the Kinross Copper Corporation presented a petition for rulemaking to amend the above rule. The Environmental Quality Commission accepted the petition and directed the Department to proceed to

rulemaking. The Commission will consider an amendment to this rule, which would allow the discharge of waste waters to Cedar Creek and the unnamed tributary. Two proposals will be presented to the Commission for consideration: one is the proposed language that Kinross Copper Corporation included in its petition and the second is a Department modification of that language.

Since the rule prohibits the discharge of any further waste into these three basins, the Commission will also consider the broader issue of whether to allow discharges other than industrial process waste water and sanitary waste water into these basins. When originally adopted, the rule was meant to prevent new discharge of industrial process waste water and sanitary waste water into these basins. However, the rule language is broad and effectively prevents the issuance of permits for any new facilities (including storm water permits). The Department is proposing to amend the rule to exempt discharges other than industrial process waste water and sanitary waste water from OAR 340-41-470(1). In addition, the Department is proposing to include language which would allow industrial process waste water and sanitary waste water discharges into these basins provided the discharges comply with the Department's High Quality Waters Policy (OAR 340-41-026(1)(a)(A)).

The amendments proposed by the Department, which deal with the broader issue of whether to allow new discharges into these basins, would be effective for a one year period. During this period, Department would form an advisory committee to assist in developing a final rulemaking proposal.

LAST DATE FOR COMMENT: January 24, 1994.

DATE PROPOSED TO BE EFFECTIVE: Upon adoption by the Environmental Quality Commission and subsequent filing with the Secretary of State.

AGENCY RULES COORDINATOR:

Harold Sawyer, (503) 229-5776

AGENCY CONTACT FOR THIS PROPOSAL:

Raj Kapur

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TELEPHONE:

(503) 229-5185  
or Toll Free 1-800-452-4011

Interested persons may submit written comments by January 24, 1994 for consideration by the Commission. The Commission will also receive testimony on the proposed rules at their meeting on January 27, 1994.

Signature

*Thomas J. Lucas*

Date 12/15/93

*Oregon Department of Environmental Quality*

## **A CHANCE TO COMMENT ON...**

Proposed Modification to OAR 340-41-470(1)

Date Issued: December 23, 1993  
 Comments Due: January 24, 1994  
 Public Hearing: January 27, 1994

### **WHO IS AFFECTED:**

Citizens living in the Clackamas River, North Santiam River and McKenzie River (above Hayden Bridge) Drainage Basins and municipal water suppliers that obtain water from these basins.

### **WHAT IS PROPOSED:**

Amendments to OAR 340-41-470(1) for consideration by the Environmental Quality Commission would: (1) allow the discharge of waste water to Cedar Creek and an unnamed tributary of Cedar Creek (designated Bornite Brook); streams located in the North Santiam River Basin; and (2) exempt outright from OAR 340-41-470(1) discharges other than industrial waste water and sanitary waste water, and enable the Commission to permit discharges of industrial and sanitary waste water provided the discharges comply with the Department's High Quality Waters Policy in OAR 340-41-026(1)(a)(A).

### **WHAT ARE THE HIGHLIGHTS:**

OAR 340-41-470(1) prohibits the discharge of any further waste into the Clackamas River, North Santiam River and the McKenzie River (above Hayden Bridge) sub-basins. Kinross Copper Corporation has proposed an underground copper mine in the North Santiam River Basin. The proposed facility would discharge treated process waste waters, storm water runoff and mine water (water encountered during the mining operation) to Cedar Creek and an unnamed tributary of Cedar Creek (designated as Bornite Brook). The U.S. Forest Service has completed an environmental impact statement, and signed the record of decision enabling the project to proceed.

To proceed with the project Kinross Copper Corporation needs to secure a NPDES (National Pollutant Discharge Elimination System) waste discharge permit from the Department of Environmental Quality. The Department is unable to issue this permit because of the restrictions in OAR 340-41-470(1). On December 10, 1993, at the Environmental Quality Commission meeting, the Kinross Copper Corporation presented a petition for



811 S.W. 5th Avenue  
 Portland, OR 97204

11/1/88

### **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.



rulemaking to amend the above rule. The Commission accepted the petition and directed the Department to proceed to rulemaking. The Commission will consider an amendment to this rule, which would allow the discharge of waste waters to Cedar Creek and the unnamed tributary. Two proposals will be presented to the Commission for consideration: one is the proposed language that Kinross Copper Corporation included in its petition and the second is a Department modification of that language.

Since the rule prohibits the discharge of any further waste into these three basins, the Commission will also consider the broader issue of whether to allow discharges other than industrial process waste water and sanitary waste water into the these basins. When originally adopted, the rule was meant to prevent new discharge of industrial process waste water and sanitary waste water into these basins. However, the rule language is broad and effectively prevents the issuance of permits for any new facilities (including storm water permits). The Department is proposing to amend the rule to exempt discharges other than industrial process waste water and sanitary waste water from OAR 340-41-470(1). In addition, the Department is proposing to include language which would allow the Commission to permit industrial process waste water and sanitary waste water discharges into these basins provided the discharges comply with the Department's High Quality Waters Policy (OAR 340-41-026(1)(a)(A)).

The amendments proposed by the Department, which deal with the broader issue of whether to allow new discharges into these basins, would be effective for a one year period. During this period, the Department would form an advisory committee to assist in developing a final rulemaking proposal.

#### HOW TO COMMENT:

Public Hearings to provide information and receive public comment are scheduled as follows:

January 27, 1994 at 3:00 p.m.  
Conference Room 3A, Department of Environmental Quality  
811 S. W. Sixth Avenue, Portland, Oregon

Written comments must be received by 5:00 p.m. on January 24, 1994 at the following address:

Department of Environmental Quality, Water Quality Division  
811 S. W. 6th Avenue, Portland, Oregon, 97204

A copy of the Proposed Rule may be reviewed at the above address. A copy may be obtained from the Department by calling the Water Quality Division at 229-5185 or calling Oregon toll free 1-800-452-4011.

#### WHAT IS THE NEXT STEP:

The Department will forward all comments received during the public notice to the Environmental Quality Commission for consideration. In addition, the Commission will take testimony and consider the matter at their January 27, 1994 meeting.

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal  
for

Proposed amendments to OAR 340-41-470(1) for consideration by the Commission would: (1) allow the discharge of waste water to Cedar Creek and an unnamed tributary of Cedar Creek (designated Bornite Brook); streams located in the North Santiam River Basin; and (2) exempt discharges other than industrial waste water and sanitary waste water from OAR 340-41-470(1) outright, and enable the Commission to permit discharges of industrial and sanitary waste water provided the discharges comply with the Department's High Quality Waters Policy in OAR 340-41-026(1)(a)(A).

Rulemaking Statements

Pursuant to ORS 183.335(7), this statement provides information about the Environmental Quality Commission's intended action to adopt a rule.

1. Legal Authority

Oregon Revised Statutes (ORS) 468.020 authorizes the Environmental Quality Commission to adopt rules and standards as considered necessary to perform its statutory functions. ORS 468B.035 authorizes the Commission to adopt rules as needed to carry out provisions of the Federal Water Pollution Control Act and federal regulations and guidelines issued pursuant to the Act. The Commission may adopt, modify or repeal rules, pursuant to ORS 183.310 to 183.550, for the administration and implementation of the Act.

2. Need for the Rule

OAR 340-41-470(1) prohibits discharge of any further waste into the Clackamas River, North Santiam River, and McKenzie River (above Hayden Bridge) sub-basins. Kinross Copper Corporation has proposed an underground copper mine in the North Santiam River Basin. The proposed facility would discharge to Cedar Creek and an unnamed tributary of Cedar Creek (designated as Bornite Brook).

To proceed with the project Kinross Copper Corporation needs to secure a NPDES (National Pollutant Discharge Elimination System) waste discharge permit from the Department of Environmental Quality. The Department is unable to issue

this permit because of the restrictions in OAR 340-41-470(1). The Commission will consider an amendment to this rule, which would allow the discharge of waste waters to Cedar Creek and the unnamed tributary.

Since OAR 340-41-470(1) prohibits the discharge of any further waste into these sub-basins, the Commission will also consider the broader issue of whether to allow other waste water discharges into these basins.

3. Principal Documents Relied Upon in this Rulemaking

Report to the Environmental Quality Commission, Agenda Item I, December 10, 1993.

Petition for Rule Amendment, presented by Kinross Copper Corporation to the Environmental Quality Commission, December 10, 1993.

OAR Chapter 340, Division 41.

Final Environmental Impact Statement for the Bornite Project - an Underground Copper Mine, U.S. Forest Service, April 1993.

4. Advisory Committee Involvement

None. On December 10, 1993, at the Environmental Quality Commission meeting, Kinross Copper Corporation presented a petition for rulemaking and proposed to amend OAR 340-41-470(1). The Environmental Quality Commission accepted the petition and directed the Department to proceed to rulemaking. Furthermore, the Commission directed the Department to bring a proposed rule for action by the Commission at their January meeting. To comply with this schedule, there is not sufficient time to form an advisory committee.

It is critical that the Commission also consider the broader issue of whether to allow other discharges into these sub-basins. Therefore, this item has been included on the agenda for the January 27, 1994 Commission meeting. The rule proposed by the Department would be effective for a one year period. During this period, the Department would form an advisory committee to assist in developing a final rulemaking proposal.

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal  
for

Proposed amendments to OAR 340-41-470(1) for consideration by the Commission would: (1) allow the discharge of waste water to Cedar Creek and an unnamed tributary of Cedar Creek (designated Bornite Brook); streams located in the North Santiam River Basin; and (2) exempt discharges other than industrial waste water and sanitary waste water from OAR 340-41-470(1) outright, and enable the Commission to permit discharges of industrial and sanitary waste water provided the discharges comply with the Department's High Quality Waters Policy in OAR 340-41-026(1)(a)(A).

Fiscal and Economic Impact Statement

Introduction

Since the proposed rule would enable the development of the underground copper mine which is anticipated to create 100 construction jobs and 80 permanent jobs the overall fiscal and economic impact on businesses and the general public within the area will be very positive. The proposed rule would also allow growth and development in the Clackamas River, North Santiam River and McKenzie River sub-basins.

General Public

The proposed rule amendments should not have any fiscal and economic impact on the general public throughout the State. The impact in the North Santiam River Sub-basin should be positive due to increased employment and earnings. Since the proposed rule will protect the beneficial uses of the Clackamas River, North Santiam River, and the McKenzie River sub-basins, negative fiscal and economic impacts are not anticipated.

Large Business and Small Businesses

The fiscal and economic impacts on business in general will be very positive. The addition of jobs in an area with a depressed economy, such as the Little North Santiam River Basin, will reduce unemployment and increase sales and income for most local businesses. Furthermore, the proposed rule should have a positive affect on the housing industry in all three basins.

### Local Governments

The fiscal and economic impacts on local governments in the general area should be positive. The addition of new jobs and housing should result in increased tax bases and tax revenues through new housing and increased business.

### State Agencies

- DEQ. The proposed rule amendments will not have any fiscal or economic impact on the Water Quality Division. There will not be any change in budgets, operating expenses or staffing levels. The proposed rule amendments will be incorporated into the existing work program associated with permit writing, compliance and enforcement.

- Other State Agencies. The proposed rule amendments should not have any fiscal or economic impact on other state agencies.

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal  
for

Proposed amendments to OAR 340-41-470(1) for consideration by the Commission would: (1) allow the discharge of waste water to Cedar Creek and an unnamed tributary of Cedar Creek (designated Bornite Brook); streams located in the North Santiam River Basin; and (2) exempt discharges other than industrial waste water and sanitary waste water from OAR 340-41-470(1) outright, and enable the Commission to permit discharges of industrial and sanitary waste water provided the discharges comply with the Department's High Quality Waters Policy in OAR 340-41-026(1)(a)(A).

Land Use Evaluation Statement

1. Explain the purpose of the proposed rules.

OAR 340-41-470(1) prohibits discharge of any further waste into the Clackamas River, North Santiam River, and McKenzie River (above Hayden Bridge) sub-basins. Kinross Copper Corporation has proposed an underground copper mine in the North Santiam River Basin. The proposed facility would discharge to Cedar Creek and an unnamed tributary of Cedar Creek (designated as Bornite Brook).

To proceed with the project Kinross Copper Corporation needs to secure a NPDES (National Pollutant Discharge Elimination System) waste discharge permit from the Department of Environmental Quality. The Department is unable to issue this permit because of the restrictions in OAR 340-41-470(1). The Commission will consider an amendment to this rule, which would allow the discharge of waste waters to Cedar Creek and the unnamed tributary.

Since OAR 340-41-470(1) prohibits the discharge of any further waste into these sub-basins, the Commission will also consider the broader issue of whether to allow other waste water discharges into these three basins.

2. Do the proposed rules affect existing rules, programs or activities that are considered land use programs in the DEQ State Agency Coordination (SAC) Program?

Yes  No

a. If yes, identify existing program/rule/activity:

NPDES permitting program requires land use compatibility statement (LUCS) for all new sources. The LUCS must be sent in before the Department can initiate review of engineering plans and specifications.

b. If yes, do the existing statewide goal compliance and local plan compatibility procedures adequately cover the proposed rules?

Yes X No \_\_\_\_\_ (if no, explain):

c. If no, apply the following criteria to the proposed rules.

Staff should refer to Section III, subsection 2 of the SAC document in completing the evaluation form. Statewide Goal 6 - Air, Water and Land Resources is the primary goal that relates to DEQ authorities. However, other goals may apply such as Goal 5 - Open Spaces, Scenic and Historic Areas, and Natural Resources; Goal 11 - Public Facilities and Services; Goal 16 - Estuarine Resources; and Goal 19 - Ocean Resources. DEQ programs or rules that relate to statewide land use goals are considered land use programs if they are:

1. Specifically referenced in the statewide planning goals; or
2. Reasonably expected to have significant effects on
  - a. resources, objectives or areas identified in the statewide planning goals, or
  - b. present or future land uses identified in acknowledged comprehensive plans.

In applying criterion 2. above, two guidelines should be applied to assess land use significance:

- The land use responsibilities of a program/rule/action that involves more than one agency, are considered the responsibilities of the agency with primary authority.
- A determination of land use significance must consider the Department's mandate to protect public health and safety and the environment.

In the space below, state if the proposed rules are considered programs affecting land use. State the criteria and reasons for the determination.

3. If the proposed rules have been determined a land use program under 2. above, but are not subject to existing land use compliance and compatibility procedures, explain the new procedures the Department will use to ensure compliance and compatibility.

*Hydia Taylor*

12/15/93

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Division

Intergovernmental

Coord.  
Date

## Kinross Copper Corporation - Water Quality Analysis

Parameter	Estimated Discharge Concentration	Concentration After 20:1 Dilution	Chronic Water Quality Standard	Background Level	Percent of Water Quality Standard	Percent of Background Concentration
pH	7.2	7	6.5-8.5	7	100	100
TDS (mg/l)	168	8.4	100	45	8.4	18.7
Chloride (mg/l)	9.3	0.465	230	3	0.2	15.5
Antimony (mg/l)	0.047	0.00235	1.6	<0.02	0.15	23.5
Arsenic (mg/l)	<0.003	<0.00015	N/A	<0.0015	N/A	10
Beryllium (mg/l)	0.0013	0.000065	0.0053	<0.0002	1.2	65
Cadmium (mg/l)	<0.0002	<0.00001	0.0011	<0.0001	<0.91	10
Chromium (mg/l)	<0.005	<0.00025	N/A	<0.005	N/A	5
Copper (mg/l)	0.001	0.00005	0.012	<0.002	0.42	5
Iron (mg/l)	0.51	0.0255	1	0.03	2.6	85
Lead (mg/l)	0.003	0.00015	0.0032	0.001	4.7	15
Mercury (mg/l)	<0.00017	<0.0000085	0.000012	<0.0001	<70.8	17
Nickel (mg/l)	0.01	0.0005	0.16	<0.01	0.31	10
Selenium (mg/l)	<0.003	<0.00015	0.035	<0.002	<0.43	7.5
Silver (mg/l)	0.0002	0.00001	0.00012	<0.0002	8.3	10
Zinc (mg/l)	0.005	0.00025	0.11	<0.002	0.23	25



basin, or water body are met. This shall be established by accepted biomonitoring techniques.

(37) "Without Detrimental Changes in the Resident Biological Community" means no loss of ecological integrity when compared to natural conditions at an appropriate reference site or region.

(38) "Ecological Integrity" means the summation of chemical, physical and biological integrity capable of supporting and maintaining a balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of the natural habitat of the region.

(39) "Appropriate Reference Site or Region" means a site on the same water body, or within the same basin or ecoregion that has similar habitat conditions, and represents the water quality and biological community attainable within the areas of concern.

(40) "Critical Habitat" means those areas which support rare, threatened or endangered species, or serve as sensitive spawning and rearing areas for aquatic life.

(41) "High Quality Waters" means those waters which meet or exceed those levels that are necessary to support the propagation of fish, shellfish, and wildlife and recreation in and on the water, and other designated beneficial uses.

(42) "Outstanding Resource Waters" means those waters designated by the Environmental Quality Commission where existing high quality waters constitute an outstanding state or national resource based on their extraordinary water quality or ecological values, or where special water quality protection is needed to maintain critical habitat areas.

(43) "Short-Term Disturbance" means a temporary disturbance where water quality standards may be violated briefly, but not of sufficient duration to cause acute or chronic effects on beneficial uses.

Stat. Auth.: ORS 183.500, 468.020, 468.705, 468.710 & 468.735

Hist.: DEQ 128, f. & ef. 1-21-77; DEQ 24-1981, f. & ef. 9-8-81; DEQ 16-1988, f. & cert. ef. 7-13-88; DEQ 16-1989, f. & cert. ef. 7-31-89 (and corrected 8-3-89); DEQ 30-1989, f. & cert. ef. 12-14-89; DEQ 22-1990, f. & cert. ef. 7-6-90; DEQ 14-1991, f. & cert. ef. 8-13-91; DEQ 17-1991, f. & cert. ef. 9-30-91

#### 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) In order to maintain the quality of waters in the State of Oregon, the following is the general policy of the EQC:

(a) Antidegradation Policy for Surface Waters. The purpose of the Antidegradation Policy is to guide decisions that affect water quality such that unnecessary degradation from point and nonpoint sources of pollution is prevented, and to protect, maintain, and enhance existing surface water quality to protect all existing beneficial uses. The standards and policies set forth in OAR 340-41-120 through 340-41-962 are intended to implement the Antidegradation Policy:

(A) High Quality Waters Policy: Where existing water quality meets or exceeds those levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, and other designated beneficial uses, that level of water quality shall be maintained and protected. The Environmental Quality Commission, after full satisfaction of the intergovernmental coordination and public participation provisions of the continuing planning process, and with full consideration of sections (2), (3) and (5) of this rule, however, may allow a lowering of water quality in these high quality waters if they find:

(i) No other reasonable alternatives exist except to lower water quality; and

(ii) The action is necessary and justifiable for economic or social development benefits and outweighs the environmental costs of lowered water quality; and

(iii) All water quality standards will be met and beneficial uses protected.

(B) The Director or a 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;

(C) Water Quality Limited Waters Policy: For water quality limited waterbodies, the water quality shall be managed as described in section (3) of this rule;

**OREGON ADMINISTRATIVE RULES**  
**CHAPTER 340, DIVISION 41 — DEPARTMENT OF ENVIRONMENTAL QUALITY**

(D) Outstanding Resource Waters Policy: Where existing high quality waters constitute an outstanding state or national resource such as those waters designated as extraordinary resource waters, or as critical habitat areas, the existing water quality and water quality values shall be maintained and protected, and classified as "Outstanding Resource Waters of Oregon". The Commission may specially designate high quality waterbodies to be classified as Outstanding Resource Waters in order to protect the water quality parameters that affect ecological integrity of critical habitat or special water quality values that are vital to the unique character of those waterbodies. The Department will develop a screening process and establish a list of nominated waterbodies for Outstanding Resource Waters designation in the Biennial Water Quality Status Assessment Report (305(b) Report). The priority waterbodies for nomination include:

- (i) National Parks;
- (ii) National Wild and Scenic Rivers;
- (iii) National Wildlife Refuges;
- (iv) State Parks; and
- (v) State Scenic Waterways.

(E) The Department will bring to the Commission a list of waterbodies which are proposed for designation as Outstanding Resource Waters at the time of each Triennial Water Quality Standards Review.

(F) In designating Outstanding Resource Waters, the Commission shall establish the water quality values to be protected and provide a process for determining what activities are allowed that would not affect the outstanding resource values. After the designation, the Commission shall not allow activities that may lower water quality below the level established except on a short term basis to respond to emergencies or to otherwise protect human health and welfare.

(b) Point source discharges shall follow policies and guidelines in sections (2), (5), and (6) of this rule, and nonpoint source activities shall follow guidelines in sections (7), (8), (9), (10), and (11) of this rule.

(2) In order to maintain the quality of waters in the State of Oregon, it is the general 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 except as provided in section (3) of this rule.

(3) The Commission or Department may grant exceptions to sections (2) and (6) of this rule and approvals to section (5) of this rule for major dischargers and other dischargers, respectively. Major dischargers include those industrial and domestic sources that are classified as major sources for permit fee purposes in OAR 340-45-075(2):

(a) In allowing new or increased discharged loads, the Commission or Department shall make the following findings:

(A) The new or increased discharged load would not cause water quality standards to be violated;

(B) The new or increased discharge load would not unacceptably threaten or impair any recognized beneficial uses. In making this determination, the

Commission or Department may rely upon the presumption that if the numeric criteria established to protect specific uses are met the beneficial uses they were designed to protect are protected. In making this determination the Commission or Department may also evaluate other state and federal agency data that would provide information on potential impacts to beneficial uses for which the numeric criteria have not been set;

(C) The new or increased discharged load shall not be granted if the receiving stream is classified as being water quality limited under OAR 340-41-006(30)(a), unless:

(i) The pollutant parameters associated with the proposed discharge are unrelated either directly or indirectly to the parameter(s) causing the receiving stream to violate water quality standards and being designated water quality limited; or

(ii) Total maximum daily loads (TMDLs), waste load allocations (WLAs) load allocations (LAs), and the reserve capacity have been established for the water quality limited receiving stream; and compliance plans under which enforcement action can be taken have been established; and there will be sufficient reserve capacity to assimilate the increased load under the established TMDL at the time of discharge; or

(iii) Under extraordinary circumstances to solve an existing, immediate, and critical environmental problem that the Commission or Department may consider a waste load increase for an existing source on a receiving stream designated water quality limited under OAR 340-41-006(30)(a) during the period between the establishment of TMDLs, WLAs and LAs and their achievement based on the following conditions:

(I) That TMDLs, WLAs and LAs have been set; and

(II) That a compliance plan under which enforcement actions can be taken has been established and is being implemented on schedule; and

(III) That an evaluation of the requested increased load shows that this increment of load will not have an unacceptable temporary or permanent adverse effect on beneficial uses; and

(IV) That any waste load increase granted under subparagraph (iii) of this paragraph is temporary and does not extend beyond the TMDL compliance deadline established for the waterbody. If this action will result in a permanent load increase, the action has to comply with subparagraphs (i) or (ii) of this paragraph.

(D) The activity, expansion, or growth necessitating a new or increased discharge load is consistent with the acknowledged local land use plans as evidenced by a statement of land use compatibility from the appropriate local planning agency.

(b) Oregon's water quality management policies and programs recognize that Oregon's water bodies have a finite capacity to assimilate waste. Unused assimilative capacity is an exceedingly valuable resource that enhances in-stream values specifically, and environmental quality generally. Allocation of any unused assimilative capacity should be based on explicit criteria. In addition to the conditions in subsection (a) of this section, the Commission or Department shall consider the following:

**OREGON ADMINISTRATIVE RULES**  
**CHAPTER 340, DIVISION 41 — DEPARTMENT OF ENVIRONMENTAL QUALITY**

**(A) Environmental Effects Criteria:**

(i) **Adverse Out-of-Stream Effects.** There may be instances where the non-discharge or limited discharge alternatives may cause greater adverse environmental effects than the increased discharge alternative. An example may be the potential degradation of groundwater from land application of wastes;

(ii) **Instream Effects.** Total stream loading may be reduced through elimination or reduction of other source discharges or through a reduction in seasonal discharge. A source that replaces other sources, accepts additional waste from less efficient treatment units or systems, or reduces discharge loadings during periods of low stream flow may be permitted an increased discharge load year-round or during seasons of high flow, as appropriate;

(iii) **Beneficial effects.** Land application, upland wetlands application, or other non-discharge alternatives for appropriately treated wastewater may replenish groundwater levels and increase streamflow and assimilative capacity during otherwise low streamflow periods.

**(B) Economic Effects Criteria.** When assimilative capacity exists in a stream, and when it is judged that increased loading will not have significantly greater adverse environmental effects than other alternatives to increased discharge, the economic effect of increased loading will be considered. Economic effects will be of two general types:

(i) **Value of Assimilative Capacity.** The assimilative capacity of Oregon's streams are finite, but the potential uses of this capacity are virtually unlimited. Thus it is important that priority be given to those beneficial uses that promise the greatest return (beneficial use) relative to the unused assimilative capacity that might be utilized. In-stream uses that will benefit from reserve assimilative capacity, as well as potential future beneficial use, will be weighed against the economic benefit associated with increase loading;

(ii) **Cost of Treatment Technology.** The cost of improved treatment technology, non-discharge and limited discharge alternatives shall be evaluated.

(4)(a) A receiving stream shall be designated as water quality limited through the biennial water quality status assessment report prepared to meet the requirements of Section 305(b) of the Water Quality Act. Appendix A of the Status Assessment report shall identify: What waterbodies are water quality limited, the time of year the water quality standards violations occur, the segment of stream or area of waterbody limited, the parameter(s) of concern, whether it is water quality limited under OAR 340-41-006(30)(a), (b) or (c). Appendix B and C of the Status Assessment report shall identify the specific evaluation process for designating waterbodies limited;

(b) The WQL list contained in Appendix A of the Status Assessment report shall be placed on public notice and reviewed through the public hearing process. At the conclusion of the hearing process and the evaluation of the testimony received, Appendix A will become the official water quality limited list. The Department may add a waterbody to the water quality limited list between status assessment reports after placing that action out on public notice and conducting a public hearing;

(c) For interstate waterbodies, the state shall be responsible for completing the requirements of section (3) of this rule for that portion of the interstate waterbody within the boundary of the state;

(d) For waterbodies designated WQL under OAR 340-41-006(30)(c), the Department shall establish a priority list and schedule for future water quality monitoring activities to determine; if the waterbody should be designated WQL under OAR 340-41-006(30)(a) or (b), if estimated TMDLs need to be prepared, and if an implementation plan needs to be developed and implemented;

(e) For waterbodies designated WQL under OAR 340-41-006(30)(b), requests for load increases shall be considered following subsection (3)(b) of this rule.

(5) 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 subject to the criteria in section (3) of this rule.

(6) No discharges of wastes to lakes or reservoirs shall be allowed except as provided in section (3) of this rule.

(7) Log handling in public waters shall conform to current EQC policies and guidelines.

(8) 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.

(9) 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.

(10) 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.

(11) 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 of water and related resources. Such programs may include, but not be limited to, the following:

(a) Development of projects for storage and release of suitable quality waters to augment low stream flow;

(b) Urban runoff control to reduce erosion;

(c) Possible modification of irrigation practices to reduce or minimize adverse impacts from irrigation return flows;

(d) Stream bank erosion reduction projects.

Stat. Auth.: ORS 183.500, 468.020, 468.705, 468.710 & 468.735

Hist.: DEQ 128, f. & ef. 1-21-77; DEQ 1-1980, f. & ef. 1-9-80; DEQ 13-1989, f. & cert. ef. 6-14-89; DEQ 22-1990, f. & cert. ef. 7-6-90; DEQ 17-1991, f. & cert. ef. 9-30-91

**OREGON ADMINISTRATIVE RULES**  
**CHAPTER 340, DIVISION 41 — DEPARTMENT OF ENVIRONMENTAL QUALITY**

**Biological Criteria**

**340-41-027** Waters of the State shall be of sufficient quality to support aquatic species without detrimental changes in the resident biological communities.

Stat. Auth.: ORS 468.735

Hist.: DEQ 14-1991, f. & cert. ef. 8-13-91

**340-41-029** [Renumbered to 340-40-001  
thru 340-40-080]

**Beneficial Uses of Waters to be Protected by Special Water Quality Standards**

**340-41-030** [SA 26, f. 6-1-67;

Repealed by DEQ 128,  
f. & ef. 1-21-77]

**Policy on Sewerage Works Planning and Construction**

**340-41-034** (1) Oregon's publicly owned sewerage utilities have since 1956 developed an increasing reliance on federal sewerage works construction grant funds to meet a major portion of the cost of their sewerage works construction needs. This reliance did not appear unreasonable based on federal legislation passed up through 1978. Indeed, the Environmental Quality Commission (EQC) has routinely approved compliance schedules with deadlines contingent on federal funding. This reliance no longer appears reasonable based on recent and proposed legislative actions and appropriations and the general state of the nation's economy.

(2) The federal funds expected for future years will address a small percentage of Oregon's sewerage works construction needs. Thus, continued reliance by DEQ and public agencies on federal funding for sewerage works construction will not assure that sewage from a growing Oregon population will be adequately treated and disposed of so that health hazards and nuisance conditions are prevented and beneficial uses of public waters are not threatened or impaired by quality degradation.

(3) Therefore, the following statements of policy are established to guide future sewerage works planning and construction:

(a) The EQC remains strongly committed to its historic program of preventing water quality problems by requiring control facilities to be provided prior to the connection of new or increased waste loads;

(b) The EQC urges each sewerage utility in Oregon to develop, as soon as practicable, a financing plan which will assure that future sewerage works construction, operation, maintenance and replacement needs can be met in a timely manner. Such financing plans will be a prerequisite to Department issuance of permits for new or significantly modified sewerage facilities, for approval of plans for new or significantly modified sewerage facilities, or for access to funding assistance from the state pollution control bond fund. The Department may accept assurance of development of such financing plan if necessary to prevent delay in projects already planned and in the process of implementation. The Department will work with the League of Oregon Cities and

others as necessary to aid in the development of financing plans;

(c) No sewerage utility should assume that it will receive grant assistance to aid in addressing its planning and construction needs;

(d) Existing sewerage facility plans which are awaiting design and construction should be updated where necessary to include:

(A) Evaluation of additional alternatives where appropriate, and re-evaluation of costs of existing alternatives;

(B) Identification and delineation of phased construction alternatives; and

(C) A financing plan which will assure ability to construct facilities over an appropriate time span with locally derived funds.

(e) New sewerage works facility planning initiated after October 1, 1981 should not be approved without adequate consideration of alternatives and phased construction options, and without a financing plan which assures adequate funding for construction, operation, maintenance and replacement of sewerage facilities:

(A) The EQC recognizes that many cities in need of immediate sewerage works construction have completed planning and are awaiting design or construction funding. These cities have developed their program relying on 75 percent federal grants. They will have difficulty developing and implementing alternatives to fund immediate construction needs. Many are, or will be, under moratoriums on new connections because existing facilities are at, or near, capacity. The EQC will consider the following interim measures as a means of assisting these cities to get on a self-supporting basis provided that an approvable long-range program is presented:

(i) Temporary increases in waste discharge loading may be approved provided a minimum of secondary treatment, or equivalent control is maintained and beneficial uses of the receiving waterway are not impaired;

(ii) Installation and operation of temporary treatment works may be approved providing:

(I) The area served is inside an approved urban growth boundary and the proposal is consistent with State Land Use Planning laws;

(II) A master sewerage plan is adopted which shows how and when the temporary facilities will be phased out;

(III) The public agency responsible for implementing the master plan is the owner and operator of the temporary facilities;

(IV) Sewerage service to the area served by the temporary facility is necessary as part of the financing program for master plan implementation and no other option for service is practicably available;

(V) An acceptable receiving stream or method of effluent disposal is available for the temporary facility.


(B) Compliance schedules and other permit requirements may be modified to incorporate an approved interim program. Compliance with a permit so modified will be required at all times.

(f) Sewerage Construction programs should be designed to eliminate raw sewage bypassing during the summer recreation season (except for a storm event greater than the one in ten year 24 hour storm) as soon as practicable. A program and

State of Oregon  
Department of Environmental Quality

Memorandum<sup>†</sup>

Date: December 10, 1993

To: Environmental Quality Commission  
From: Fred Hansen, Director   
Subject: Agenda Item I, December 10, 1993, EQC Meeting

Implementation of OAR 340-41-470(1), Which Prohibits Further Discharges to the Clackamas River, North Santiam River, and McKenzie River (above Hayden Bridge) Subbasins in order to Preserve Existing High Quality Waters for Municipal Water Supplies and Recreation.

#### Statement of Purpose

The rule cited above prohibits any new discharges to the three river subbasins. When originally adopted in 1977, a major purpose of the rule was to preserve existing high quality waters for use as domestic water supplies for the growing Willamette Valley population centers. The rule has prevented the proliferation of small recreational developments with inadequate sewage treatment facilities. The rule has also prevented increases in permitted discharges, which existed when the rule was adopted. However, the rule language is broad and effectively prevents the issuance of permits for any new facilities (including new facilities requiring stormwater permits) regardless of the impact of the discharge. The rule may effectively preclude development and other activities in these areas that were not intended to be affected by the rule.

The Department wanted to alert the Commission regarding the impact of this rule, and to request guidance as to whether the Department should re-visit this rule (via rule making) to allow some discharges in these three river basins.

#### Background

OAR 340-41-470(1) states:

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<sup>†</sup>Accommodations for disabilities are available upon request by contacting the Public Affairs Office at (503)229-5317 (voice)/(503)229-6993 (TDD).

Memo To: Environmental Quality Commission  
Agenda Item I  
December 10, 1993 Meeting  
Page 2

"In order to preserve the existing high quality water for municipal water supplies and recreation, it is the policy of the EQC to prohibit any further waste discharges to the waters of:

- (a) The Clackamas River Subbasin;
- (b) The McKenzie River Subbasin above the Hayden Bridge (river mile 15);
- (c) The North Santiam River Subbasin."

"Wastes" are defined in OAR 340-41-006(13) as

"'Wastes' means sewage, industrial wastes, and all other liquid, gaseous, solid, radioactive, or other substances which will or may cause pollution or tend to cause pollution of any water of the state."

In most cases, the Department has previously denied direct discharge permits in these subbasins, and has required that all existing dischargers (such as the cities of Estacada and Stayton) stay within existing waste loads when expanding facilities. Until this year, with minor exceptions, the Department has been able to find reasonable alternatives to the new or increased discharges.

The immediate reason to bring this issue to the Commission's attention now is a pending discharge permit application for an underground copper mine from Kinross Gold USA, Inc. (see Attachment 1 for further information regarding this project). This is the first significant project for which the Department is unable to find a reasonable alternative. The Department has evaluated the proposed discharge and has concluded that the site can be managed and operated to minimize water quality impacts. Based on the information presented in the permit application, there would be no measurable impact on the North Santiam River or on the Little North Santiam River. As a result of the high rainfall in the area, it is likely that the mining project would not be able to proceed if the Department is unable to issue a discharge permit.

In carefully reviewing the implications of this rule, however, the Department believes there are several other types of situations in which this rule could unreasonably restrict further growth or potentially cause other legal difficulties:

1. A strict interpretation of this rule could result in a permanent moratorium on sewer connections in communities with discharges to these river basins. The Department has chosen to interpret this rule for existing dischargers to mean that no increase in waste loads could be granted. This would only apply to those pollutants having a waste load limit (pounds per day). However, the rule could be interpreted to mean that no expansion of treatment plants could occur even if the waste loads are not increased. Since treatment plants also discharge other substances such as ammonia, nitrates, and phosphates, the amount of these substances will increase as the community served by the treatment plant expands. In other words, this rule could be interpreted to prohibit any additional residential or other growth where treated wastes are discharged to any of the three river subbasins.
2. No storm water permits could be issued for new activities. Federal regulations require that permits be issued for the following types of activities: construction on five or more acres, and manufacturing facilities including wood products, furniture and fixtures, stone products, and several other types of manufacturing and recycling facilities. Prior to the adoption of these regulations, facilities that discharged storm water only were not required to obtain a permit. Attachment 2 lists the types of facilities affected by these regulations. Note that EPA is proposing to include several additional activities in Phase II of its storm water regulations.
3. No new industrial facilities could be built with a discharge to any of these rivers, regardless of the impact on water quality or value to the community of the new facility.
4. A non-discharging community sewage facility may not be a practicable option for existing communities with failing on-site sewage disposal systems, which will mean continuing potential health hazards. Detroit and Lyons are two communities located on the North Santiam that are facing this situation.

It should be noted that when this rule was adopted in 1977, regulations dealing with storm water had not been adopted by EPA and the Department had not contemplated issuing storm water permits.

Authority of the Commission with Respect to the Issue

The Commission has the authority to adopt rules relating to protection of water quality pursuant to ORS 468B.035. The existing rule OAR 340-41-470(1) does not provide for exceptions to be granted by the Commission.

Alternatives and Evaluation

1. Do nothing alternative - The Department can continue to severely limit the issuance of any new permits for these three river basins, including storm water and construction permits. This may effectively preclude development and other activities in these areas.
2. Consider storm water separately - The Department can separate storm water discharges from other types of discharges and can propose rule modification to specifically exclude storm water from OAR 340-41-470(1) and bring this to the Commission for consideration. To address storm water issues, the Department believes that the Commission should consider the following:
  - a. Adopt a temporary rule at this meeting.
  - b. Ask the Department to draft a temporary or a permanent rule for consideration by the Commission at the next meeting (January 28, 1994). For a permanent rule, the Department would not be able to conduct a public hearing prior to the Commission meeting due to time constraints. Thus, the Commission would conduct a public hearing and evaluate testimony at its January 28, 1994 meeting.
  - c. Ask the Department to draft a permanent rule and bring it for consideration by the Commission at a later date. In drafting a permanent rule, the Department would conduct public hearings and summarize public comment before bringing it to the Commission for consideration.
3. Consider new discharges other than storm water separately - For new discharges other than storm water, the Department can propose rule modifications to bring to the Commission for consideration. Since discharges other than storm water such as those from the proposed copper mine have a greater potential to adversely impact water supplies in the three basins, the Department would expect



to work through an advisory committee. The committee would include representatives of potentially affected municipalities and other interested parties.

### Conclusions

- The existing rule adopted in 1977 protects high quality waters in these three subbasins by prohibiting new discharges or increased discharges.
- The rule prohibits development requiring a discharge permit, regardless of the impact on water quality. No exceptions are allowed. This rule, together with the requirements for storm water permits, may have the effect of precluding activities and land uses in these subbasins that were never intended to be precluded.
- The Department believes that some flexibility is warranted, and that some new discharges can be granted without adversely impacting water quality. Additional flexibility would require a rule change.

### Intended Future Actions

If directed by the Commission, the Department would draft a rule to exclude storm water from OAR 340-41-470(1) and bring it to the Commission for consideration. If directed by the Commission, the Department would also convene an advisory committee and proceed to rule making for new discharges other than storm water.

### Department Recommendation

The Department recommends that storm water discharges be considered separately from other types of discharges. With respect to storm water issues, it is recommended that the Commission direct the Department to draft a permanent rule excluding storm water from OAR 340-41-470(1) for consideration by the Commission at a later date.

With respect to new discharges other than storm water, it is recommended that the Commission discuss the matter, and provide advice and guidance to the Department as appropriate.

### Attachments

Attachment 1 - Summary of Kinross Gold USA's Proposed Discharge

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Attachment 2 - Summary of Activities or Facilities Requiring  
Storm Water Discharge Permits

Reference Documents (available upon request)

None.

Approved:

Division: Michael Potts

Report Prepared By: Barbara Burton &  
Rajeev Kapur

Phone: 378-8240 & 229-5185

Date Prepared: November 29, 1993  
Amended: December 3, 1993

BAB:RK

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Attachment 1

Summary of Kinross Gold USA's Proposed Discharge

Kinross Gold USA has submitted an application for a National Pollutant Discharge Elimination System (NPDES) permit to discharge wastewater from an underground copper mining operation in the North Santiam River Subbasin. The proposed discharge would include process water, mine water (water encountered during the mining operation), and storm water. The application proposes to treat the effluent prior to discharging it to an unnamed tributary of Cedar Creek, which is a tributary of the Little North Santiam River. The proposed discharge point is approximately 30 river miles above the City of Salem's water intake on the North Santiam River.

Pollutants of potential concern with this discharge are turbidity, copper, chromium, cadmium, lead, mercury, silver, zinc and pH. The Department has evaluated the on-site control measures proposed, and agrees that the site can be managed and operated to minimize water quality impacts. The proposed discharge has been evaluated by the Department, and is projected to meet in-stream water quality standards within a few feet of the point of discharge. There will be no measurable impact on the Little North Santiam River at the point of confluence with Cedar Creek, nor at the City of Salem water intake point.

In reviewing the application, the Department determined that although the permit could be issued without any adverse water quality impacts, we are prohibited from issuing the permit because of OAR 340-41-470(1). The Oregon Attorney General's office has confirmed that the Department cannot issue the permit. It is likely that Kinross Gold USA would not be able to proceed with the project if it is not able to obtain a discharge permit from the Department.

**Attachment 2**


Summary of Activities or Facilities Requiring Storm Water Discharge Permits

1. Facilities subject to new source performance standards, or toxic pollutant effluent standards. These include fertilizer and pesticide manufacturers, petroleum refining operations and others.
2. Listed manufacturing facilities, including pulp and paper mills, timber products, chemical manufacturing, petroleum refining, rubber products, leather products, stone, clay and concrete products.
3. Mining and mineral extraction.
4. Hazardous waste treatment, storage or disposal facilities.
5. Landfills.
6. Recycling facilities including metal scrap yards, salvage yards, and automobile junkyards.
7. Steam electric power generating facilities.
8. Listed transportation facilities which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations.
9. Sewage treatment plants with a design flow of more than one million gallons per day.
10. Construction activities that disturb more than five acres of land.
11. Listed light manufacturing facilities but only if storm water is exposed to materials used in the process.

State of Oregon  
Department of Environmental Quality

Memorandum<sup>†</sup>

Date: January 21, 1994

To: Environmental Quality Commission  
From: Fred Hansen, Director   
Subject: Agenda Item N, January 28, 1994, EQC Meeting

Petition for Rule Amendment by Northwest EEE ZZZ Lay Drain Co.

Statement of the Issue

Northwest EEE ZZZ Lay Drain Company petitions the Commission to amend portions of the on-site sewage disposal rules pursuant to ORS 183.390 and OAR 137-01-070. (See Attachment A) The purpose of the amendment is to allow the installation of a proprietary filter material in lieu of drain rock in the construction of on-site sewage disposal leach fields within Oregon. In addition, they request to allow the use of these material in a special pipe system in non-standard disposal trenches, and to reduce the size of disposal trenches when this system is used.

Background

In June, 1992, Northwest EEE ZZZ Lay Drain Company submitted to the Department a request for approval of their product to be used for the replacement of drain rock in the construction of on-site sewage disposal systems. The product consists of recycled Expanded Polystyrene Aggregate packed within a high strength polyethylene netting around a plastic perforated drain pipe. This forms a 10 inch diameter cylinder of the material around the drain pipe. The proposal also includes the use of non-standard trench designs and the reduction in overall trench size.

Current on-site disposal rules allow only rock to be used in the construction of on-site sewage drain lines. However, rules regarding experimental systems would allow the installation of alternative materials on an experimental basis. The company has been invited to install several systems under the experimental program. They have elected not to do that.

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<sup>†</sup>Accommodations for disabilities are available upon request by contacting the Public Affairs Office at (503)229-5317(voice)/(503)229-6993(TDD).

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The Department is aware of some of the deficiencies within the on-site sewage disposal rules and has formed a Technical Rule Review Committee (hereafter called Committee) to work on appropriate revisions to the rules. This Committee has been actively working on rule revisions since June 1993. It is hoped that the Committee will be able to finish its work and make recommendations for rule changes by the end of March 1994. One of the areas being actively pursued is the revision of the definition of "filter material" in order to approve of filter media other than rock. The rule changes contemplated would not only allow systems such as EEE ZZZ Lay, but other non-aggregate systems to be used as alternatives to the standard system.

#### Authority to Address the Issue

Oregon Revised Statutes (ORS) 468.020 authorizes the Environmental Quality Commission to adopt rules as considered necessary to perform its statutory functions.

As per ORS 183.390, upon being petitioned for rule making, the Commission must either deny the petition in writing or initiate rule making within 30 days of filing of the petition (on January 19, 1994).

ORS 454.625 directs the Commission to adopt such rules it considers necessary for the purpose of carrying out ORS 454.605 through 745, including the establishment of minimum requirements for the design and construction of subsurface and alternative sewage disposal systems.

#### Alternatives and Evaluation

1. **Deny the petition.** - This would also send a signal to the Committee that the Commission is not interested in rule making on this particular issue.
2. **Accept the petition and direct the Department to move immediately to rule making regarding the issues raised by the petition.** - This would require the Department to divert staff currently working on the more comprehensive on-site rule revision project in order to go through the rule making process for this single issue. It would undoubtedly delay the rule making currently in progress.
3. **Accept the petition and direct the Department to add the language proposed in the petition as one alternative the rule making changes currently being considered. The Committee would be free to propose other alternatives.** - The petitioner has requested that the definition of "Filter Material" be changed to allow media other than rock. The Committee has already proposed language

equivalent to what is proposed by the petitioner in order to allow the use of approvable materials other than rock. However, the petitioner not only is requesting that the definition be changed in order to allow alternative drain media, but has also petitioned that their particular proprietary material be allowed by rule to be used to replace rock at any installation. At this point in time the Department is not confident that the material could be used in every instance. There is some concern that under certain conditions where the leach field area is subjected to surface loads which might have a tendency to compact the soft polystyrene material, the material could be compressed to the point that flow of sewage effluent through the material would be severely limited causing premature failure. One example of this might be a leach field constructed in a pasture where cattle are grazing. The Department believes this particular issue needs further input and evaluation.

4. **Deny the petition and direct the Department to give due consideration to the information and issues included in this petition during the rule making process currently underway.** - This would allow the Committee to more methodically evaluate the information submitted by the petitioner and to limit or condition the installation of this material if found to be necessary for certain installations. The petitioner has already been told that the Department would consider a certain number of installations on an experimental basis. The petitioner has elected not to proceed that direction. If included in the rule making process already under way, the petitioner's request would be delayed by only about three months.

#### **Summary of Any Prior Public Input Opportunity**

There has been no public input on this issue. Through the normal rule making process, public input would be solicited.

#### **Conclusions**

- The Commission has received a petition for rule making from Northwest EEE ZZZ Lay Drain Company.
- The Department is already in a rule making process which will resolve many, if not all of the petitioner's concerns.
- Initiating independent rule making on the issues raised in the petition would undoubtedly delay the rule making currently underway.

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- The Department is not currently prepared to agree with all of the rule changes requested in the petition.
- Delaying the rule making by including the petitioned issues in the rule making currently under way would delay rule making only about 3 months.

**Recommendation for Commission Action**

It is recommended that the Commission approve Alternative 3., which is to accept the petition and direct the Committee and Department to consider the proposal as one alternative in the rule making process currently underway. It should be made clear that the Committee and Department may develop and recommend alternative language to that presented in the petition.

**Attachments**

A. Petition from Northwest EEE ZZZ Lay Drain Company

**Reference Documents (available upon request)**

1. ORS 183.390
2. OAR Chapter 340 Division 71 (Current On-Site Sewage Disposal Rules).
3. ORS 454.605 through 775

Approved:

Section:

*James Sawyer for Kent Ashbaker*

Division: \_\_\_\_\_

Report Prepared By: Charles K. Ashbaker

Phone: 229-5566

Date Prepared: January 21, 1994

cka:cka  
(File Name/Number)  
January 21, 1994



1                   BEFORE THE ENVIRONMENTAL QUALITY COMMISSION  
2                   OF THE STATE OF OREGON

3 In the matter of the petition of Northwest                    )  
4 EEE ZZZ Lay Drain Co. to amend                                ) PETITION FOR RULE AMENDMENT  
5 340-71-100(53) and modifying OAR 340-71-260                )  
6 thru 340-71-360, and OAR 340-73-060(2)                    )  
7 of Oregon, Administration Rules, Chapter 340,                )  
8 Divisions 71 & 73   ) REQUESTED)

9  
10                   I. INTRODUCTION AND SUMMARY

11 Pursuant to ORS 183.90 and OAR 137-01-070, Northwest EEE ZZZ Lay Drain  
12 Company respectfully petitions the Commission to amend OAR 340-71-100(53) page 71-6  
13 and modify OAR 340-71-260 thru 360 and page 71-57 thru 71-93 and OAR 340-73-060(2) ,  
14 page 73-17 thru 20 of the On-Site Sewage Disposal Rules at or before the Commission's  
15 scheduled January 27 and 28, 1994 meeting.

16 OAR 340-71-100 (53) establishes a definition for "Filter Material" for use in septic  
17 drain field systems. The definition is intended to give regulators and installers a guideline  
18 for acceptable filter material to be used in on-site septic effluent disposal systems.  
19 Specifically, OAR 340-71-100(53) provides:

20 "Filter material" means clean washed gravel ranging from three quarters (¾)  
21 to two and one half (2½) inches in size, or clean crushed rock ranging in size  
22 from one and one half (1½) to two and one half (2½) inches.

23 The difficulty posed by this definition is that it excludes other scientifically proven  
24 material, in particular, recycled Expanded Polystyrene Aggregate (EPS). Although the  
25 current definition is intended to provide high-quality septic effluent drainage and to maintain  
26 the quality of public waters and to protect the public health, the definition prohibits all other  
filter material, including drain material scientifically proven to be demonstrably a better  
effluent filter material. The absolute nature of the definition has a substantial negative effect  
for recycling efforts for EPS throughout Oregon. In addition, there is a significant negative  
economic effect to the State of Oregon due to the barrier to job creation because EPS

1 recycled material is unavailable in the marketplace. Furthermore, the rule negatively effects  
2 the state's environment by increasing the amount of EPS in the waste stream and  
3 unnecessarily burdening the state's landfills.

4 OAR 340-71-260 establishes criteria for Alternative Systems, General. The advent of  
5 new drain material and sound engineering practice used for construction design should allow  
6 for this rule to be modified to include a new section that provides for the use of Expanded  
7 Polystyrene Aggregate Systems. OAR 340-71-260(1)(2)(3)(4) provides:

8 (1) For the purpose of these rules "Alternative System" means any  
9 Commission approved on-site sewage disposal system used in lieu of the  
standard subsurface system.

10 (2) "Sewage Stabilization Ponds" and "Land Irrigation of Sewage" are  
11 alternative systems available through the Water Pollution Control Facilities  
(WPCF) permit program.

12 (3) Unless otherwise noted, all rules pertaining to the siting,  
13 construction and maintenance of standard subsurface systems shall apply to  
alternative systems.

14 (4) General Requirements:

15 (a) Periodic Inspection of Installed Systems. Where required by  
16 rule of the Commission, periodic inspections of installed alternative  
17 systems shall be performed by the Agent. An inspection fee may be  
charged.

18 (b) A report of each inspection shall be prepared by the Agent.  
19 The report shall list system deficiencies and correction requirements  
20 and timetables for correction. A copy of the report shall be provided  
promptly to the system owner. Necessary follow-up inspections shall  
be scheduled.

21 In June of 1992, Northwest EEE ZZZ Lay Drain Company submitted to the  
22 Department of Environmental Quality scientific information and documentation for approval  
23 of Expanded Polystyrene Aggregate Systems for drain field application. Since that time the  
24 company has submitted additional support for utilization of recycled EPS and answered all  
25 questions addressed to it by the Department. Furthermore, the Director of the Department  
26 has created a Technical Advisory Committee to revise the On-Site Sewage Disposal Rules.

1 This Committee has made significant progress on revising the existing rules but has not  
2 developed any proposed rules to address recycled expanded polystyrene applications.

3 The Advisory Committee work to date has been commendable. However, further  
4 delay in addressing the use of recycled EPS will continue the negative economic and  
5 environmental consequences stated above.

6 For these reasons, Northwest EEE ZZZ Lay Drain Company respectfully asks the  
7 Commission to adopt proposed amendments to OAR 340-71-100(53) and to modify OAR  
8 340-71-260 thru 340-71-360 to add a new section and to modify 340-73-060 (2).

9 The effect of the proposed amendments and modifications would, as a practical  
10 matter, provide new tax revenues, jobs and a major recycling facility in the State.

## 11 II. PETITIONER

12 Petitioner's full name and address is:

13 Northwest EEE ZZZ Lay Drain Company  
14 P.O. Box 654  
Gresham, Oregon 97030

15 Northwest EEE ZZZ Lay Drain Company is an Oregon, woman business enterprise (WBE),  
16 an Emerging Small Business (ESB), and a Disadvantaged Business Enterprise (DBE) as  
17 recognized by the Oregon Department of Consumer and Business Services, Office of  
18 Minority, Women and Emerging Small Business, operating under a licensing agreement from  
19 EEE ZZZ Lay Drain Company, Inc., whose address is P.O. Box 867 Pisgah Forest, NC  
20 28768.

21 Northwest EEE ZZZ Lay Drain Company is represented in this  
22 matter by:

23 Vincent P. Salvi, OSB No. 78479  
24 Weiss, Jensen, Ellis & Botteri  
25 2300 US Bancorp Tower  
111 SW Fifth Avenue  
Portland, Oregon 97204

26 Northwest EEE ZZZ Lay Drain Company is an "interested person" as that term is

1 used in ORS 183.90 and OAR 137-01-070(1), because it is an applicant for amendments to  
2 existing rules. The proposed amendments would allow the Department to prioritized a rule  
3 change.

### 4 III. OTHER INTERESTED PERSONS

5 The proposed amendments would be limited, as a practical matter, to material  
6 recycled at Northwest EEE ZZZ Lay Drain Company's proposed recycling facility.  
7 Northwest EEE ZZZ Lay Drain Company is not aware of any other person who might be  
8 affected by the proposed amendments.

### 9 IV. RULES TO BE AMENDED

10 Petitioner asks the Commission to amend, at its scheduled January 27 and 28, 1994  
11 meeting, OAR 340-71-100(53) Page 71-6 of the ON-SITE SEWAGE DISPOSAL RULES,  
12 State of Oregon Department of Environmental Quality, Oregon Administrative Rules,  
13 Chapter 340-Divisions 71 and 73 as follows (the proposed amendment is shown by underling  
14 with new proposed rules following):

15 340-71-100(53) Delete existing.

16 Replace with:

17 "Drain material" means clean, washed gravel, clean crushed  
18 rock, or other distribution media approved by the Director or  
19 designee for the purpose of distributing effluent throughout the  
20 soil disposal system. When gravel or crushed rock is used it  
21 should range from three quarters ( $\frac{3}{4}$ ) to two and one-half ( $2\frac{1}{2}$ )  
22 inches in size and no more that 1% by weight shall pass a  $\frac{3}{4}$   
23 inch sieve. Whatever material is used shall be durable and inert  
24 so that it will maintain its integrity and not collapse or  
25 disintegrate with time. (See Diagrams 6, 7, 9, 12, 14, 15, 16,  
26 and 17)

1 340-71-\_\_\_ Conventional Expanded Polystyrene Aggregate (New)

2 (1) For the purpose of these rules

3 (A.) "Conventional Expanded Polystyrene Aggregate"

4 means an on-site sewage disposal system consisting of a septic  
5 tank, distribution unit and gravity-fed absorption facility  
6 constructed in accordance with section (2) of OAR 340-71-220  
7 rules as modified by (2) below, utilizing expanded polystyrene  
8 aggregate for the purpose of filtering and distributing the  
9 effluent back into the soil.

10 (2) Expanded Polystyrene Aggregate Systems shall be constructed  
11 pursuant to OAR 340-71-220(2) and the manufacture's installation and sizing  
12 criteria, Exhibit A.

13 (3) Expanded Polystyrene Aggregate Systems may be permitted on any  
14 site that fully complies with the criteria for the installation of a standard  
15 subsurface sewage disposal system, as identified in OAR 340-71-220(2) and  
16 (3) as modified by Section (2) above, and 340-71-260(3).

17 340-73-060 PIPE MATERIALS AND CONSTRUCTION (New)

18 . . .

19 (2) .

20 .

21 (g) Expanded Polystyrene Aggregate Systems (EPSAS)

22 shall be constructed using a four inch perforated corrugated  
23 plastic pipe with three holes ASTM F 405 standard specification  
24 for corrugated polyethylene (PE) tubing, surrounded by EPS  
25 aggregate, held in a cylindrical shape by a ten inch diameter,  
26 high strength polyethylene netting. Aggregate tubes shall be

1 constructed using a cylindrical ten inch netting filled with EPS  
2 aggregate.

3 The EPS aggregate tubes and the pipe surrounded by  
4 EPS shall be in ten foot sections.


5 (h) When four or six inch diameter corrugated plastic  
6 tubing is used for EPSAS, it shall be certified as complying with  
7 applicable ASTM standards, F405 and F2412. The corrugated  
8 tubing shall have three rows of holes, each hole between one-  
9 half inch and three fourths inch in diameter, and spaced  
10 longitudinally approximately four inches on center, the rows of  
11 holes may be equally spaced 120 degrees on center around the  
12 peripher, or three rows may be located in the lower portion of  
13 the tubing, the outside rows being approximately on 120-degree  
14 centers. All pipe shall be surrounded by the EPS aggregate as  
15 stated above.

16  
17 Conclusion

18 For the reasons set forth above, Northwest EEE ZZZ Lay Drain Co. requests the  
19 Commission to initiate expedited rule making to adopt the proposed rule amendments and  
20 modifications.

21 DATED: January 18, 1994.

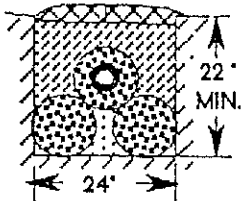
22 WEISS, JENSEN, ELLIS & BOTTERI

23   
24 \_\_\_\_\_  
25 Vincent P. Salvi  
26 Of Attorneys for  
Northwest EEE ZZZ Lay Drain Co.

26 F:\VPS\MAUCK\EZLAY\PETITION.001 [74059.1]

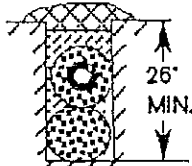
**SIZING BY PANKOW'S EQUATION  
 FOR OREGON APPLICATIONS**

Note: \*Required linear feet is based on a 2' wide by 1' deep stone trench as determined from Table 4 and 5 of the Oregon rules.



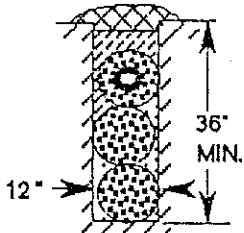
**2003 TRIANGULAR  
 INSTALLATION**

\_\_\_\_\_ linear ft. X 0.67 = \_\_\_\_\_ linear ft.  
 EXAMPLE - 125 linear ft. required.\*  
 125 X 0.67 = 84 linear ft.  
Use 90 ft.



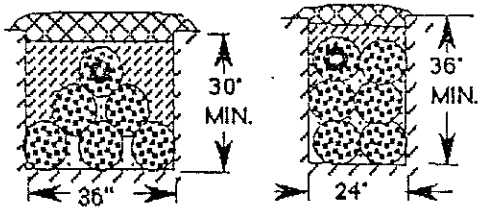
**2002 VERTICAL  
 INSTALLATION**

\_\_\_\_\_ linear ft. X 0.73 = \_\_\_\_\_ linear ft.  
 EXAMPLE - 125 linear ft. required.\*  
 125 X 0.73 = 91 linear ft.  
Use 100 ft.



**2003 VERTICAL  
 INSTALLATION**

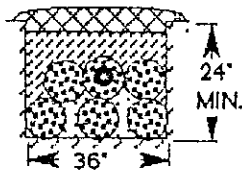
\_\_\_\_\_ linear ft. X 0.39 = \_\_\_\_\_ linear ft.  
 EXAMPLE - 125 linear ft. required.\*  
 125 X 0.39 = 49 linear ft.  
Use 50 ft.



**2006 TRIANGULAR  
 INSTALLATION**

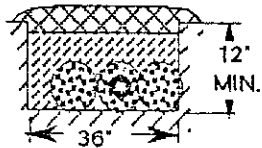
**2006 VERTICAL  
 INSTALLATION**

\_\_\_\_\_ linear ft. X 0.30 = \_\_\_\_\_ linear ft.  
 EXAMPLE - 125 linear ft. required.\*  
 125 X 0.30 = 38 linear ft.  
Use 40 ft.



**2006 HORIZONTAL  
 INSTALLATION**

\_\_\_\_\_ linear ft. X 0.42 = \_\_\_\_\_ linear ft.  
 EXAMPLE - 125 linear ft. required.\*  
 125 X 0.42 = 53 linear ft.  
Use 60 ft.



**2003 SHALLOW  
 INSTALLATION**

\_\_\_\_\_ linear ft. X 1.00 = \_\_\_\_\_ linear ft.  
 EXAMPLE - 125 linear ft. required.\*  
 125 X 1.00 = 125 linear ft.  
Use 130 ft.

THIS SIZING IS SUPPORTED BY

THE ZZZ LAY DRAIN ONSITE WASTE WATER DISPOSAL SYSTEMS EXPERIENCE AND ENGINEERING SUPPORT  
 BY KENNETH O. PANKOW, PE AS PRESENTED AT  
 THE NATIONAL ENVIRONMENTAL HEALTH ASSOCIATION 57TH ANNUAL EDUCATIONAL CONFERENCE  
 JULY 1993

January 28, 1994

## STATEMENT OF POLICY ON REFILLABLE BOTTLES

The Oregon Environmental Quality Commission strongly supports the use of refillable bottles as an important part of Oregon's solid waste reduction and pollution prevention strategy.

Oregon's Bottle Bill has long been a shining example of the best way to manage solid waste from containers. The Bottle Bill, passed in 1972, has been one of the most popular and most effective pieces of environmental legislation in the state's history. The success of the bottle bill is clearly demonstrated in the fact that more than 90 percent of containers covered by the deposit law are returned and either refilled or recycled.

One of the primary benefits of the Bottle Bill has been to keep the use of refillable bottles feasible. Without Oregon's deposit law, refillable containers could not be collected and reused. The Environmental Quality Commission appreciates the efforts of breweries and other bottlers in Oregon and Washington to keep the refillable bottle alive in Oregon.

The Environmental Quality Commission finds that the use of refillable bottles should be encouraged for many reasons. First, the state of Oregon has adopted solid waste priorities that place reuse above recycling. Refillable bottles are one of the few materials in the solid waste system that clearly fit into the "reuse" category.

Second, refillable bottles save a significant amount of energy and conserve natural resources. Although recycling containers meets these same goals to some extent, recycled glass and aluminum cans use two to three times as much energy as refillable bottles.

Another important reason to support the use of refillable bottles is the glut of recycled glass. Because the high return rate on containers, along with highly successful curbside collection of glass, the supply of used glass is much higher than the market for recycled bottles can absorb. Refillable bottles help take the burden off the recycling system.

The Environmental Quality Commission opposes any changes in the container collection system established by the Bottle Bill that would discourage or preclude the use of refillable bottles. Glass crushers used in reverse vending machines installed in stores to handle returnable containers preclude the reuse and refilling of bottles. The Environmental Quality Commission strongly discourages the use of reverse vending machines or any other device or container collection system that would discourage the use of refillable bottles or make returning refillable bottles more difficult than returning other types of containers.



---

811 SW Sixth Avenue  
Portland, OR 97204-1390  
(503) 229-5696





January 28, 1994

Dear Interested Persons:

As members of the Environmental Quality Commission, we are pleased to adopt the Oregon Integrated Resource and Solid Waste Management Plan. This plan provides overall guidance and direction for the development of solid waste policy in Oregon for the next ten years. Adoption of this plan signifies strong support for a waste prevention program initiative in Oregon. The plan also emphasizes the need for good educational programs in Oregon on solid waste management in general, including waste prevention, recycling, and disposal and the public-private partnership necessary to develop a solid waste system that is economically self-sustaining and places value on waste as a resource.

The Commission would like to take this opportunity to reiterate several specific concerns which we believe should be considered during implementation of this plan.

- Although it is important to recognize that labeling standards should be established at the national level, it is also important for Oregon to be a leader and be proactive in addressing labeling issues.
- In general, the usefulness of tax credits as an incentive for pollution prevention has diminished over the years; however, it is recognized that a single tax credit program aimed specifically at developing markets for recyclable materials is needed in the near term to address the supply and demand problem associated with recycling.
- It is important to be specific in measuring success through trends in reduction of the amount of waste disposed. Measurement of weight and volume are important indicators, as well as developing a method of looking at the value of waste.
- It is important to emphasize waste prevention in solid waste. However, in doing so, the state should not lose sight of the continuing need for public educational efforts on recycling.

It will be a challenge to all Oregonians to implement this plan over the next ten years, and the Department of Environmental Quality is committed to carrying out its part.

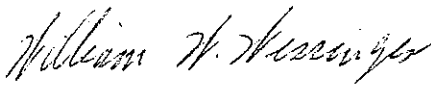


811 SW Sixth Avenue  
Portland, OR 97204-139  
(503) 229-5696

January 28, 1994  
Page 2

We recognize that this plan was developed through an extensive and interactive process involving the public, the Solid Waste Advisory Committee, other state agency representatives, local government, business and industry. We would like to personally thank everyone for his or her time commitment and invaluable advice and consultation in the development of this plan.

Sincerely,



William W. Wessinger  
Commission Chair



Emery N. Castle  
Commission Vice Chair



Henry Lorenzen  
Commissioner



Carol A. Whipple  
Commissioner



Linda McMahan  
Commissioner

WW:jw:k  
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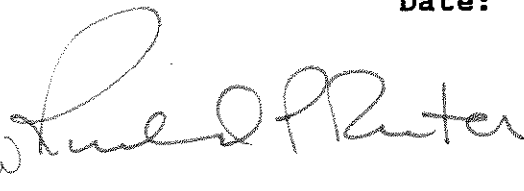
State of Oregon  
Department of Environmental Quality

Memorandum

Date: January 24, 1994

To: Fred Hansen

From: Rich Reiter  
Mary Wahl



Subject: Agenda Items C & D, January 28, 1994 EQC Meeting

I respectfully request that Agenda Items C & D be removed from the agenda or not acted upon by the EQC at the January 28, 1994 meeting. (Items C & D are the UST fee increase and modifications to the UST financial assistance program.)

I have been notified by Rich Reiter that notice of rulemaking for these Agenda items was not given to all necessary persons. Larry Frost, the rule writer only provided notice for the Secretary of State's Bulletin. Notice was not given to DEQ's Interested Party list or other interested parties. Although hearings were held only persons reading the Bulletin had an opportunity to comment. No verbal or written comments were received.

Larry Edelman, AG's office has opined that if adopted these rules would be flawed and could be successfully challenged since proper notice was not given to all parties.

According to Larry Edelman the situation can be corrected by notifying all interested parties and allowing verbal and written comment before adopting the rules. Thus, I am requesting delaying action on Agenda Items C & D until the next EQC meeting on March 11, 1994.

MW:ldf

cc: Harold Sawyer  
Richard Reiter

Before the Environmental Quality Commission  
of the State of Oregon

In the Matter of National Pollutant  
Discharge Elimination System Waste  
Discharge Permit No. 100715 issued  
to the City of St. Helens on  
November 14, 1990,

and

In the Matter of National Pollutant  
Discharge Elimination System Waste  
Discharge Permit No. 100716, issued  
to James River II, Inc. on  
November 14, 1990.

ORDER DISMISSING  
CONTESTED CASE

On January 11, 1994, the City of St. Helens, James River Paper Company, Inc., formerly known as James River II, Inc. ("James River"), and Boise Cascade Corporation ("Boise Cascade") filed a joint motion for a final order dismissing the contested case in its entirety as moot.

FINDINGS

1. On November 14, 1990, the Department of Environmental Quality issued National Pollutant Discharge Elimination System (NPDES) Permit No. 100715 to the City of St. Helens and NPDES Permit No. 100716 to James River II, Inc. The permits were appealed, and a contested case proceeding was commenced before Hearings Officer Arno Denecke.
2. The EQC determination on the contested case was made at the March 12, 1992 EQC Meeting in Hillsboro. The written order setting forth the decision was signed and mailed to the parties on April 16, 1992.
3. Petitions for Reconsideration or Rehearing of the Commission's Decision in the Contested Cases were received from James River II on 6/11/92 and Boise Cascade Corporation on 6/12/92.
4. The Environmental Quality Commission considered the petitions on July 23, 1992, and by order dated August 10, 1992, granted the petitions for reconsideration of portions of the Findings of Fact and Conclusions of Law and Final Order relating to the mills' NPDES permit conditions regulating the discharge of organochlorines other than dioxin. The order further specified that a hearing will be held by the

Commission on the matter at a date to be scheduled by the Department subject to approval by the Commission Chair during the period between July 1, 1993 and November 30, 1993.

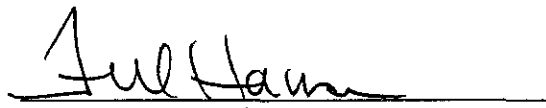
5. At the October 29, 1993 meeting of the Commission, the Commission entered an order extending the November 30, 1993 deadline for proceeding with the reconsideration until January 31, 1994.
6. On December 23, 1993, the Department issued NPDES Permit No. 101173 to the City of St Helens, and NPDES Permit No. 101172 to James River Paper Company. The permittees state in their motion for dismissal that these permits are acceptable to them and that the contested case filed in 1990 is now moot.
7. The Motion for dismissal was mailed by the petitioners to all of the parties in the contested case.

#### ORDER

The joint motion for an order dismissing the contested case in its entirety is hereby granted.

Dated this 1st day of February, 1994.

On behalf of the Commission

  
Fred Hansen, Director  
Department of Environmental Quality

## Certificate of Mailing

I certify that I mailed the attached ORDER DISMISSING CONTESTED CASE to each of the following persons on February 2, 1994:

William W. Wessinger, Chair  
Environmental Quality Commission  
121 S. W. Salmon, Suite 1100  
Portland, OR 97204

Emery N. Castle, Vice Chair  
Environmental Quality Commission  
Oregon State University  
307 Ballard Hall  
Corvallis, OR 97331

Henry Lorenzen, Member  
Environmental Quality Commission  
Corey, Byler, Rew, Lorenzen, & Hojem  
P.O. Box 218  
Pendleton, OR 97801

Carol A. Whipple, Member  
Environmental Quality Commission  
21755 Hwy. 138 West  
Elkton, OR 97436

Linda R. McMahan, Member  
Environmental Quality Commission  
The Berry Botanic Garden  
11505 S. W. Summerville Avenue  
Portland, OR 97219

Mr. Michael D. McIntyre  
Associate General Counsel  
Boise Cascade Corporation  
One Jefferson Square  
P.O. Box 50  
Boise, Idaho 83728-0001

Michael R. Campbell  
Stoel Rives Boley Jones & Grey  
900 S. W. Fifth Avenue, # 2300  
Portland, Oregon 97204

Larry Edelman  
Assistant Attorney General  
Oregon Department of Justice  
1515 S. W. Fifth Avenue, Suite 410  
Portland, Oregon 97201

John W. Gould  
Richard H. Williams  
Lane Powell Spears Lubersky  
520 S. W. Yamhill Street, Suite 800  
Portland, Oregon 97204

Michael Huston  
Assistant Attorney General  
Oregon Department of Justice  
1515 S. W. Fifth Avenue, Suite 410  
Portland, Oregon 97201

Peter M. Linden  
City Attorney  
City of St. Helens  
P.O. Box 278  
St. Helens, Oregon 97051

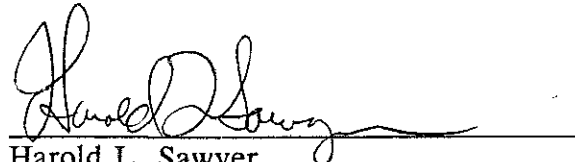
John Bonine  
Western Environmental Law Clinic  
Law Center  
University of Oregon  
Eugene, Oregon 97403

Jay T. Waldron  
David F. Bartz, Jr.  
Schwabe, Williamson & Wyatt  
1600-1950 Pacwest Center  
1211 S. W. Fifth Avenue  
Portland, Oregon 97204

William C. Carpenter  
Sorenson Law Office  
Lane Building Suite 303  
P.O. Box 10836  
Eugene, Oregon 97440

Linda Williams  
1744 N. E. Clackamas Street  
Portland, Oregon 97232

Michael Downs, Administrator  
Water Quality Division  
Department of Environmental Quality  
811 S. W. 6th Avenue  
Portland, OR 97204



---

Harold L. Sawyer  
Inter/Intra Program Coordinator  
Department of Environmental Quality

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Portland, OR 97217  
(503) 286-8352

January 4, 1994

Mr. Charles R. Clinton, Manager, Hazardous Waste Division  
Oregon Department of Environmental Quality  
1500 S.W.. 1st Avenue, Suite 710  
Portland, OR 97201-5884

Dear Mr. Clinton:

Enclosed is the latest version of the management plan for used oil processing at Portland, Oregon. Please note that there are a number of minor revisions which were agreed upon during our two earlier meetings.

There still are five areas that need your review and agreement to complete the plan.

We have taken the effort to bring together the necessary information and support for these areas of concern so that DEQ can support the needed recycling of these oily wastes, thereby preventing them from being disposed of in our landfills and illegally dumped throughout the Oregon countryside.

After your review we are willing to meet at your convenience should further changes be necessary.

Since any delay while DEQ is working to get the management plan in place is very damaging to our company, please consider this our request to start the management dispute proceeding in our settlement agreement should these major issues not be part of our recycling plan.

The first issue is: Petroleum and used-oil-contaminated waters that contain recoverable oils.

A. Process water generated on site from the incoming used oil and storm water that has fallen on the process site. Since this is a used oil processing site, these waters will contain, through use, process, and contact, co-products of used oil and petroleum, as many of these contaminants are water soluble and emulsified into the water.

During the processing all but deminimus levels of the contaminants of used oil are recovered and the remaining are either recovered as they become concentrated in the water evaporator or as the water is evaporated or are considered part of the permitted air or water discharge. All of their activities are part of used oil processing.



Mr. Charles R. Clinton, Manager, Hazardous Waste Division  
Oregon Department of Environmental Quality  
January 4, 1994  
Page 2

B. Our used oil process can handle all oily petroleum waters from generators off site as long as they have not been mixed with hazardous wastes. The used oil regulations under the proposed oil regulations Draft 7-16-93 are a "codification of the department's interpretation of the existing definition of used oil." Therefore, all state and federal rules concerning used oils, which are a distinct set of rules separate from other environmental divisions and include interpretations, preambles, rulings, precedents, and EPA letters which would be part of the support for oily waters to be part of or become part of the used oil recycling system. See Federal Register /Vol. 50 No. 230/11-29-85. "Set up a statute that used oil has its separate standards for its management" - Pages 49175-49176, 49179-49180-49181: "...RCRA as amended draws clear distinctions between hazardous waste and used oil. The statute contains a separate provision dealing with used oil as a distinct class and authorizes separate standards for its management.... "

And Federal Register Vol. 57, No. 176-9-10-92 Recycling Presumptions Criteria:  
"EPA has exempted wastewaters contaminated with very small amounts of used oil, since such mixtures are not likely to pose a significant hazard. If mixtures of used oil and sorbent materials from which used oil can not be separated, however, are burned for energy recovery, the Agency believes that such recycling is acceptable."

See Page 19 EPA 530-2-42 Oil Preamble of Final rule 279: "The commenters to the 1991 Supplemental Proposal overwhelmingly favored implementation of the recycling presumption. However, many commenters stated that the criteria provided for rebutting the recycling presumption (e.g., water content, BTU Value) would be difficult to comply with and, therefore, EPA should not develop such criteria. In addition, commenters stated that all used oils are recyclable and the extent of recycling depends on the cost to generators. For example, if the used oil is actually a mixture of oil and water, then the cost of recycling the mixture would be higher than recycling used oil that is straight out of engines or from metal working operations. Upon further evaluation of comments, the feasibility of applying these criteria for a rebuttal, and the analytical requirements accompanying the proposed criteria, the Agency decided against finalizing the specific criteria for rebutting the presumption of recycling. The Agency believes that recycling is a more viable alternative than disposing of used oil as a characteristic waste. Therefore, used oil handlers will react to market conditions, thus selecting recycling over disposal."

Mr. Charles R. Clinton, Manager, Hazardous Waste Division  
Oregon Department of Environmental Quality  
January 4, 1994  
Page 3

See Page 67 EPA 530-2-42 Oil Preamble of Final Rules 279: "...(e.g., water content, level of contamination) and the corresponding cost of recycling the used oil."

"After considering the public comments supporting the recycling presumption, and the difficulties associated with promulgating and enforcing the proposed "recyclability criteria," the Agency has decided that specific criteria to rebut the presumption are not necessary. The Agency agrees with the commenters that the physical characteristic of the used oil and the used oil recycling market will dictate the conditions for recycling of used oil. However, the Agency has retained the recycling presumption because the presumption simplifies the used oil management system by ensuring that generators and others may comply with one set of standards, the Part 279 standards promulgated today, regardless of whether the used oil exhibits a hazardous characteristic and regardless of whether the used oil will ultimately be recycled or disposed. In other words, the generator ( or any other person who handles the oil prior to the person who decides to dispose of the oil) need not decide whether the used oil eventually will be recycled or disposed and thus need not tailor its management of the based upon that decision..."

See Final rules Page 82 - 9-10-93 of 279: "Used oil mixed with other solid wastes" (water) "or with other material" (water) "(e.g. virgin fuel oil) are regulated as used oil." One could say in order to encourage recycling and not disposal when water, a non-hazardous material has been contaminated with used oil which has the same constituents as petroleum, including fuels, gasoline, kerosene, diesel fuel, fuel oil, etc. can be regulated as used oil. Since our process can remove all but deminimus levels of emulsified petroleum constituents, these oily waters are going for recycling, not disposal.

See EPA 530-2-42 - Oil Preamble of final Rules 279, Page 193: "...However, mixtures of nonhazardous materials and used oils that exhibit a characteristic by their own nature (i.e., the used oil is characteristically hazardous prior to mixing) or mixtures of used oil and characteristic hazardous waste that do not exhibit a characteristic are subject to the standards in Part 279 if they are being recycled." Here again while one could get into the old argument about the definition of used oil, what we are saying is that petroleum fuel products going for recycling are still products if they are not used oil and can become used oil when blended with used oil. It is not the water, but the contaminants of petroleum fuel that are still emulsified in the water and can be disposed of in deminimus levels under an air or clean water permit after the recoverable petroleum product or used oil has been recovered.

Mr. Charles R. Clinton, Manager, Hazardous Waste Division  
Oregon Department of Environmental Quality  
January 4, 1994  
Page 4

See Page 101 EPA 530-2-42 - Oil Preamble of Final Rule 279: "Persons who generate mixtures of used oil and other materials or solid wastes (e.g., used oil filters, rags, sorptive minerals, sorbent materials, scrap metals) are subject to Part 279."

Here again, if one blends petroleum products into used oil, it then becomes used oil. The water was not a regulated waste and petroleum fuels or fuel products are allowed to come under 279.10 (3) (d) (1) as used oil.

See Page 195 EPA 530-2-42 - Oil Preamble of Final Rule 279: "As discussed in V1.B of this preamble almost all commenters supported the concept of the recycling presumption, but few supported establishment of formal criteria of 'nonrecyclability.' Commenters were concerned that the criteria for rebutting the recycling presumption (e.g., water content, BTU value, or any other measure) are not meaningful measure of recyclability, since basically any used oil can be recycled and the degree of treatment prior to recycling is a function of the cost to the used oil generator. EPA has determined that it is not practical to set such criteria. Therefore, EPA is not establishing formal criteria on which to base a determination of nonrecyclability. Rather, a used oil handler who is not recycling used oils under Part 279 must dispose of the used oil in compliance with applicable regulations."

Since the oily waters, petroleum fuels, oily solids, are going for recycling, not for disposal, until such time as the recycler sends them for disposal, they are not required to have a hazardous waste determination.

The second issue that must be settled is regarding "Fuel products that fail a hazardous waste characterization will not be accepted if they require processing before or after acceptance."

We are taking this statement to mean that petroleum fuel products that could have a flash below 140°, or have benzene or lead, by their own nature, over the TCLP levels can only be accepted if blended directly into our finished fuels. Does DEQ understand that many times the reason that these petroleum fuels are available is that they are no longer able to be used for the physical reasons, water, dirt, age, etc., and must be recycled to make them into usable fuels again? Since these petroleum fuels are still products, and contain normally lower levels of contaminants and the same chemical constituents as used oil, they can and should become regulated as used oil. This provides for an orderly method of recycling, including the ability to pick up these petroleum fuels at the same time as used oil.

Mr. Charles R. Clinton, Manager, Hazardous Waste Division  
Oregon Department of Environmental Quality  
January 4, 1994  
Page 5

See 279.10 rules (3) (d) (1) which states, "fuels or other fuel products are subject to regulation as used oil," which orderly provides for our facility to handle fuels under the used oil system.

How is it encouraging recycling over disposal, unless DEQ allows the same petroleum constituents in fuels that are in used oil to be handled in the same way? Please review and remove this requirement from our management plans.

The third issue in Portland is oily solids burned in what we believe is an industrial furnace or boiler for energy recovery and material recovery, and the handling of used oil filters.

We believe that these break down into several areas:

- A. Are our six heating units industrial furnaces or boilers and/or can a used oil processor burn off-specification used oil fuels?
- B. Can oily wastes be regulated under 279 used oil rules and handled by FPI as part of the used oil recycling system?
- C. Used oil filters for energy and scrap metal recovery.

Regarding (A.) Above: Are FPI's boilers, process heaters, and kiln allowed to burn off-specification fuels which require industrial heaters, furnaces, and/or boilers? In order to assist, we have asked Pacific Combustion Engineering to write a statement on how these units work, as we can not find anything in the design that does not do what an industrial heater would do! That is, it is not an incinerator as all the heat is utilized due to the design efficiency of the unit, which is more than the 60%/75% required for industrial heaters. They do not burn hazardous wastes, but fuels that are allowed under off-specification used oil regulations and we have always been a notified off-specification used oil burner with the air discharge permit.

The one area concerning DEQ regarding the kiln has been, "the combustion chamber and primary energy recovery sections must be of integral design." 260.10 Definitions Subpart B(ii) Boiler means, etc. Since it is "one manufactured or assembled unit which has direct attached welded metal airways to the primary heat recovery areas, one for the oil heating coils and the other for water evaporation, with all the hot air passing directly through the water, it does identically what any industrial process heater does. See last sentence under 260.10 (ii) Boiler means. This energy and material recovery unit is a proper recycling system and needs your support.

Mr. Charles R. Clinton, Manager, Hazardous Waste Division  
Oregon Department of Environmental Quality  
January 4, 1994  
Page 6

Regarding (B) above: Oily petroleum wastes regulated under 279.

1. Produced on site from the incoming oil, filter solids, clean up material, tank settlings from used oil, and other miscellaneous oily solids recovered from the used oil made into used oil fuels to be burned for energy recovery. We have agreed that these are usable for energy recovery under used oil regulations.
2. Outside oily petroleum wastes such as clean up debris from petroleum fuels, small spills, oily sumps, other oil processors' used-oil oily solids from the processing of used oil, etc.

Regarding (C) above: Used oil filters for energy and scrap metal recovery including undrained, paper and terne plated.

1. Undrained metal filters, since they are now covered under 279 and our draft rules and are no longer in 261 hazardous waste division, they are part of the used oil regulations.

See Federal Register/Vol 50 No. 230 - 11-29-85: "Set up a statute that used oil has its separate standards for its management" Pages 49175-49176, 49179-49180-49181  
"...RCRA as amended draws clear distinctions between hazardous waste and used oil. The statute contains a separate provision dealing with used oil as a distinct class and authorized separate standards for its management..." and (i) page 23 of 7-16-93 draft. Since used oil going for recycling is covered under the separate and distinct used oil 279 rules, the hazardous waste determination is necessary when they or the residuals from the recycling are going for disposal. See EPA 530-2-42 Oil Preamble of Final Rules, Page 68: "Re-refining residuals: For used oil processing and re-refining residuals, a hazardous waste determination will be necessary when the residuals are managed in a manner other than recycling for energy recovery or when re-refining distillation bottoms are used as a feed material for asphalt products (see discussion in Section IV of this preamble).

See Fed. Reg. Vol 58, No 83 5-3-93 (corrects 279.10 original): "Materials containing or otherwise contaminated with used oil that are burned for energy recovery are subject to regulation as used oil under this part."

2. Terne plated metal filters are going for metal recycling, not disposal, and can therefore be handled under the scrap metal recycling exemption by our operation.

Mr. Charles R. Clinton, Manager, Hazardous Waste Division  
Oregon Department of Environmental Quality  
January 4, 1994  
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Also see EPA 530-2-42-Oil Preamble of Final Rules 279, Page 102: ...Mixtures of used oil and solid waste (e.g., natural or synthetic sorbent materials) from which used oil can not be separated when burned for energy recovery is subject to used oil specification fuel requirements.

See EPA 530-2-42-Oil Preamble of Final Rules 279, Page 80: Mixtures: The following section discusses management of mixtures of used oil and used oil-contaminated wastes. Used oils mixed with other solid wastes or with other materials (e.g., virgin fuel oil) are regulated as used oil under the Part 279 standards.

See EPA 530-2-42-Oil Preamble of Final Rules 279, Page 193: ...However, mixtures of nonhazardous materials and used oils that exhibit a characteristic by their own nature (i.e., the used oil is characteristically hazardous prior to mixing) or mixtures of used oil and characteristic hazardous waste that do not exhibit a characteristic are subject to the standards in Part 279 if they are being recycled.

See EPA 530-2-42 - Oil Preamble of Final Rule 279, Page 101: Persons who generate mixtures of used oil and other materials or solid wastes (e.g. used oil filters, rags, sorptive minerals, sorbent materials, scrap metals) are subject to Part 279.

See EPA 530-2-42- Oil Preamble of Final Rules 279, Page 195: As discussed in VI.B of this preamble, almost all commenters supported the concept of the recycling presumption, but few supported establishment of formal criteria of "nonrecyclability." Commenters were concerned that the criteria for rebutting the recycling presumption (e.g., water content, BTU value, or any other measure) are not a meaningful measure of recyclability, since basically any used oil can be recycled and the degree of treatment prior to recycling is a function of the cost to the used oil generator. EPA has determined that it is not practical to set such criteria. Therefore, EPA is not establishing formal criteria on which to base a determination of nonrecyclability. Rather, a used oil handler who is not recycling used oils under Part 279 must dispose of the used oil in compliance with applicable regulations.

See Federal Register - Vol. 57, No. 176 - 9-10-92: ...The Agency has retained the recycling presumption because the presumption simplifies the used oil management system by ensuring that generators and others may comply with one set of standards the part 279 standards promulgated today, regardless of whether the used oil exhibits a hazardous characteristic and regardless of whether the used oil will ultimately be recycled or disposed. In other words, the generator...need not decide whether the used oil eventually will be recycled or disposed and thus need not tailor its management of

Mr. Charles R. Clinton, Manager, Hazardous Waste Division  
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the oil based upon that decision and if destined for disposal, whether the used oil is hazardous. Rather the part 279 standards apply to all used oils until a person disposes of the used oil or sends it for disposal.

See HWTC II 861 V.2 d at 289: The court in rejecting both arguments, noted that EPA's decision to impose less stringent requirements on used oil fuel that contains hazardous characteristics through normal use was based on its concern that overly stringent regulation in this area could discourage burning. This in turn would result in a glut of used that would encourage improper disposal and thus cause more environmental harm and decrease energy conservation.

Since the 7-16-93 draft rules are considered to be equal to the prior federal used oil rules and the proposed federal 279 rules, oily solids, used oil filters, and oily waters containing recoverable petroleum all of which have not been mixed with hazardous waste, but are going for recycling in our operation, are covered under these rules and would be encouraged by DEQ to better protect human health and the environment.

When would you like to discuss further so that these are all included in our management plan, or do we need to carry these matters to the next level of the dispute resolution?

At a later time we would also like to review oily wastes from other states, and how to handle used anti freeze so it can be disposed of in an orderly, cost effective way. These are not issues that should hold up the approval of our needed management plan.

Thank you for your efforts.

Yours truly,

Bill Briggs  
President

**Other areas of concern - Fuel Processors, Inc. and Industrial Oils, Inc.  
January 4, 1994**

Recyclable wastes from other states not destined for landfill or disposal.

Methods to recycle used anti freeze without the necessity of hazardous waste determination when going for recycling, not for disposal.

Removal of the 5,000 BTU per pound requirement from oily wastes.

While there are questions that need to be answered, let's not hold up the management plan waiting for the answers.

I am requesting a meeting in the next 30-days to see what can be done to help in these recycling areas.



Dick Briggs  
Consulting Services  
80 W. 23rd Ave.  
Eugene, Oregon 97405

February 17, 1994

Gil Hargreaves  
Presiding Officer  
Department of Environmental Quality  
811 S.W. 6th Ave.  
Portland, Oregon 97204

Subject: Rules Update Hearing, 22 Feb. 1994: Used Oil Rules

The Department's decision to adopt EPA's rules by reference and not write separate Oregon used oil rules makes good regulatory and economic sense. EPA took many years of study to adopt these new and very strict management rules. At the same time, the rules provide the regulatory flexibility that can encourage the recycling of all oils and oily wastes that have not been mixed with hazardous waste. Using EPA rules also promotes standardization between states which will encourage utilization of this resource.

DEQ's proposal to clarify the EPA used oil rules by adding to definitions of solvents in the proposed rule, OAR 340-111-002(2)(b); used oil, OAR 340-111-002(2)(d) and mixing of listed or characteristic hazardous waste do not add clarification. These new definition actually create more confusion and should be deleted. The EPA definitions reflect the results of the years of review of the definitions and should be used without change.

EPA created a new and very strict management system for used oil. This system is, by law, separate from the hazardous waste system. To make the new used oil system work and recover the maximum quantities of oils, the regulation of used oil must not be mixed with hazardous waste regulation. Reference to hazardous waste regulation should be removed from the used oil regulation.

To illustrate why this clear separation is vital is DEQ's proposal that the 5,000 BTU value criteria for hazardous waste burned for energy be added to used oil when burned for energy recovery. DEQ's proposal to apply the hazardous waste BTU standard to used oil when burned for energy recovery would seriously impact upon the collection system. This illustrates the importance of this regulatory separation.

DEQ has shown no environmental need or justification to add this BTU restriction. EPA clearly considered various restrictions in their years of study and deliberation and decided that to include this type of criterion would actually discourage the collection of oils and be detrimental to the environment. I have attached a more detailed discussion and background of how the 5,000 BTU requirement applies to hazardous waste not used oil burned for energy recovery. The proposed 340-111-010(3)(b) should be deleted and the wording of 340-111-010(3)(c) should be change by deleting "with energy values of 5,000 BTU's per pound" .

If the word "Person" is used in the proposed 340-111-081, the term requires a definition. As the paragraph is now written, the word "person" expands the scope and applicability of the used oil regulation to individuals while the rule applies to the used oil management system. This wording should be changed by deleting the words " No person shall dispose of used oil" and replacing them with a phrase such as "Used oil will not be disposed of by" etc. If the "no person " wording is retained, the specific legal authority to apply this rule to individuals outside the used oil management system should be provided.

The new EPA Used Oil Rule provides a very strict management system for used oil. The system also contains the regulatory flexibility that all oils and related wastes can be collect and managed in the same system.

This used oil management system should be expanded to encourage the collection of all oils and waste that can technical be managed within the used oil system. EQC should establish a policy that there be a continuing effort by DEQ, in conjunction with those in the industry, to find ways to encourage the collection of other wastes within the used oil system. For instance, if you are a used oil collector or processor, your permit should also be good as a solid waste permit. A simple change of regulations that would allow for this dual permit would reduce the cost to the system and encourage the collection through the used oil system.

Presently, there is no system to encourage the collection and utilization of other oils and oily waste. These waste are simply dumped. Another example would to place the used oil management system under DEQ,s recycling rules. This would put used oil recycling under the most compatible regulatory system, simplify reporting and clearly separate it from hazardous waste.

In conclusion; EQC should adopt the EPA rule with out definitional changes, not make any requirement stricter than the EPA rule and change the regulatory numbering of the used oil system to DEQ's recycling regulation.

Thank you,

  
Dick Briggs

The EPA preambles in 1983, 1985, 1991 and 1992 concerning used oil clearly describe that the 5,000 BTU requirement pertains to hazardous waste mixtures of hazardous waste and used oils. The same preambles separates used oil from these hazardous waste mixtures and provides guidance that recycled used oil is permitted to be burned as off specification fuels in industrial boilers.

The references that the DEQ have quoted to justify adding the 5,000 BTU requirement to used oil for energy recovery, clearly indicates that this is the requirement for energy recovery from hazardous waste. The same references separates used oil from this hazardous waste. Through out the 1991 and 1992 used oil preambles, there are numerous references that indicate that fuel specification are the controlling criteria for fuels from used oils. Even the early 16 March 1983 Federal Register, Pg 11157 (DEQ's base reference) clearly indicates that the 5,000 BTU requirement applies to energy recovery from hazardous waste fuel.

Extracts from that reference are shown below.

"I. Introduction

A. Purpose

This memorandum provides guidance to determine when burning hazardous waste fuels in boilers will be considered legitimate recycling"

B. Regulatory Background

"EPA promulgated an exception from regulation for certain hazardous wastes being beneficially used , reused, recycled, or reclaimed( "recycled")."

"II. General Distinctions between Wastes Being Burned as Legitimate or Sham Recycling

A. Energy value of Wastes Being Burned  
Burning of hazardous waste as fuels"

" The energy value of the hazardous waste being blended or burned"

The above references clearly applies to hazardous waste being burned for energy recovery and not used oil.

The 1985 Federal Register, Vol. 50, No. 230 / Friday, November 29, pg 49166 and 49167 again clearly separates hazardous waste and used oil burned for energy recover." We explained that burning of low energy hazardous waste as alleged fuel is not considered legitimate energy recover."

There are numerous provisions and discussions within the Federal Register Used Oil Preambles and the Federal Codes that provide direct guidance that used oil that is recycled is to be regulated as recycled used oil and regulated under part 279, Used Oil Management System and not hazardous waste rules.

To add the 5,000 BTU requirement for energy recovery of oils that have not been mixed with hazardous waste is counter to the EPA discussion in the preambles and exceeds EPA requirements. In the preamble of the final rule, page 195, EPA concluded that they would not set a BTU value in determining if used oil was recyclable. If the BTU question is not clarified, some used oils will be treated as a hazardous waste and not recycled. The continued the hazardous stigma creates significant impediment to the collection, recovery and utilization of oily wastes. Clarifying that the 5,000 BTU requirement does not apply to used oil and applies only to hazardous waste mixtures burned for energy recovery will provide an additional incentive to keep used oil from being mixed with hazardous waste. It will also encourage the collection and recycling of used oil.

Removal of the proposed 5,000 BTU requirement from used oil also make the definition consistent with DEQ's present definition of "energy recovery", and will add constancy to DEQ's regulatory definitions. The present definition of energy recovery is shown below.

OAR 340 -90- 005 RECYCLING AND WASTE REDUCTION. The definition of energy recover is " Energy recovery means recovery in which all or part of the solid waste materials are processed to utilize the heat content, or other forms of energy, of or from the material".

*State of Oregon?*

February 2, 1994

Mr. Gil Hargreaves  
Public Hearing Officer  
State of Oregon  
Department of Environmental Quality  
811 S.W. 6th Avenue  
Portland, Oregon 97204

Dear Mr. Hargreaves:

D.E.Q. is to be commended in their decision to adopt by reference the federal Used Oil Rules. They will find that these rules can allow Universal Oil Recycling of all non-hazardous oily wastes.

I. The federal rules make it clear that used oil recycling is covered by a distinct and separate set of rules that were designed to encourage recycling. They are not hazardous waste regulations which discourage the recovery of used oil. Hazardous waste rules are designed to stop disposal of wastes; used oil rules are for recycling and recovery. Used oil rules must be part of the recycling division and should not be part of D.E.Q.'s hazardous waste division.

II. Rule 340-111-010 Mixtures and residues of used oil and other wastes (a) (b) (c) (3) Burning for energy recovery (a) (b) (c) (d) (4) Oil recovered from parts cleaners, etc. (a) (b) (5) Any person may petition, etc. are redundant with present rules and E.P.A. 279 rules. They are not necessary and will discourage needed recycling. Additionally, D.E.Q. does not have the studies that are necessary to document their need.

III. Division III - Used Oil Management

Under Definitions 340-111-002

(b) "Solvent" definition should be removed or changed as it could include soap and water and most recyclable oils, as one of the main characteristics of all oils is to clean and mobilize the contaminants so they are moved from engines, etc.

(d) "Used oil means" narrows the federal definition, limits the ability to recycle

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many petroleum products requiring recoverable matter to be disposed of in lieu of the more preferable recycling. It has taken E.P.A. over 15 years to come to their definition and D.E.Q. is now changing that which restrains many petroleum wastes from being recycled.

The federal definition should be used, as it is the best to encourage recycling: "Used Oil means any oil that has been refined from crude oil or any synthetic oil, that has been used and as a result of such use, is contaminated by physical or chemical impurities." It allows for universal oil recovery. Oregon will be more restrictive than the federal 279 rules if Oregon definition remains. How can this encourage recycling? Further, the BTU requirement of 5,000 BTU per pound will only means another useable, recyclable material will end up in the land fill. Does that make sense?

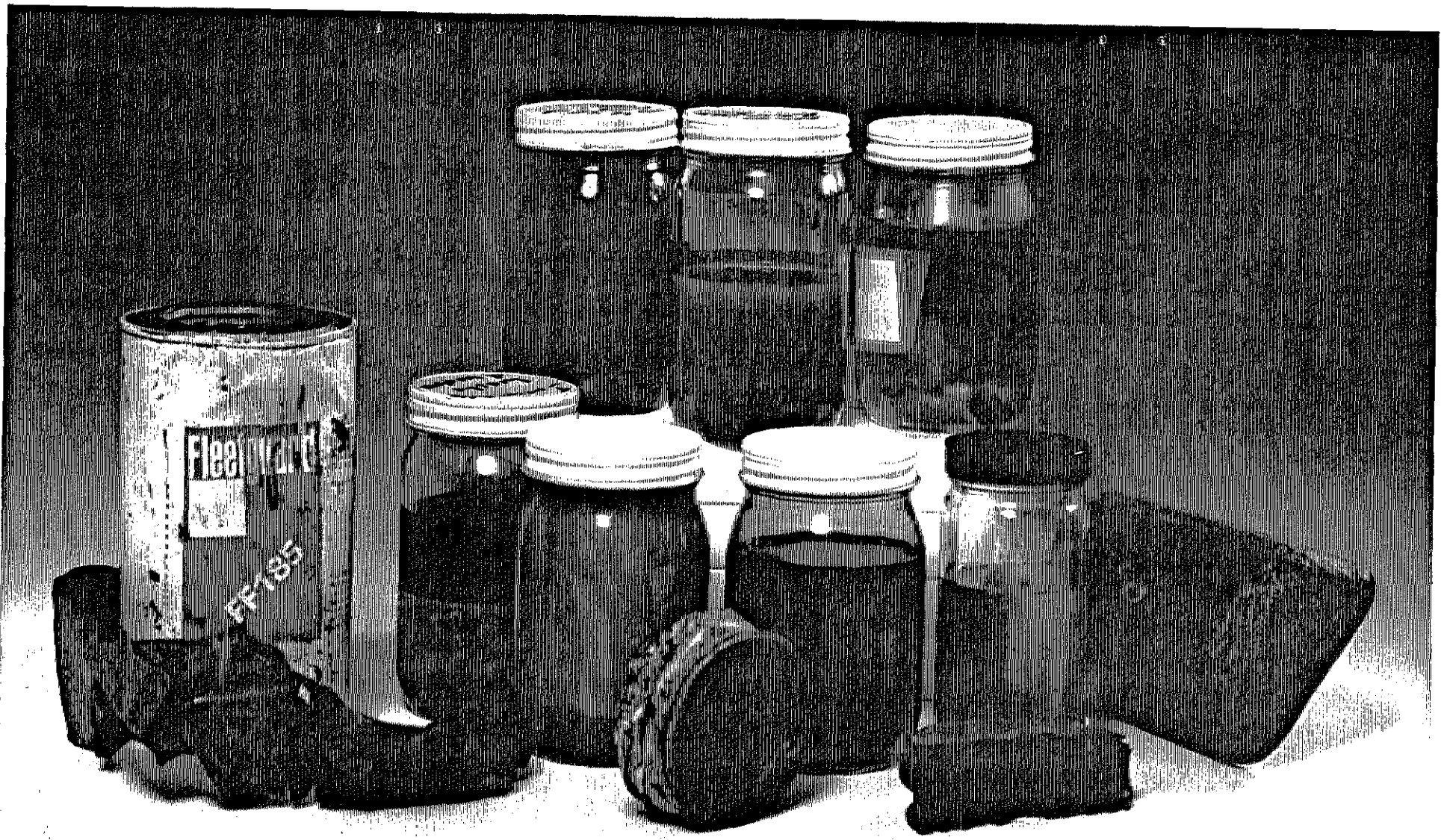
Please simply adopt the federal rules by reference and, 2 or 3 years from now, review the results and make any adjustment, if necessary.

As one of the few used oil experts in the nation, one who has worked on the rules with both E.P.A. and the National Oil Recyclers Association, and owned and operated several used oil recyclers which have safely handled hundreds of millions of gallons of oily waste, the next step should be the federal 279 rules. I would be happy to discuss or make a presentation at any committee or public meeting.

Yours Truly,

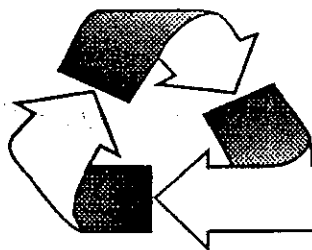
W. L. Briggs

WLB:gw



Top row: Left, incoming waste antifreeze with oil and other contaminants; Right: finished product without color and additives; Center, new anti-freeze with color and additives, ready for use.  
 Bottom center (4 jars): Left to right, water plus solids, oil floating on top; emulsified oil and solids; finished industrial grade fuel; diesel fuel ready to use; not pictured - asphalt flux used for asphalt roads and roofing; inert non-hazardous ash; and recovered distilled water that is treated and evaporated.  
 Around front: Left to right, used oil filter and part of scrap barrel feedstock; compressed oil filter burned clean; cutaway view of compressed filter; Right, finished steel ingot.





# Oil Re-Refining Inc.

Petroleum Recycling Since 1979

October 26, 1993

Mr. Rick Volpel  
Hazardous & Solid Waste Section  
State of Oregon D.E.Q.  
811 S.W. 6th St.

Dear Rick:

Please consider this a follow-up to the meeting on the 15th and request to meet with you and others this week or next. I believe it will require 3 or 4 hours for us to cover known items with discussions from both sides.

I am looking forward to working together to see what is necessary for a Universal Oil Recovery System or to simply adopt the Federal 279 as written, as they could be considered the basis for such a plan.

Since your draft and the other information support that Used Oil regulations are distinct and separate from other regulations, it seems we first need to work together to see how the federal Used Oil rules provide for the best and largest recovery of oil. Which in turn provides the best protection for human health and our environment.

As you and your group have said many times, a clear definition makes any system work well. It seems to me that by starting with the Federal 279 definition which states all oil would support the next statements.

"Materials including Oil or Oily Waste which has been mixed with hazardous wastes as listed in CFR-261.32 or that by themselves are one of those listed wastes are not to be included in the used oil system. However, if the listed substance is there in levels below 1000 ppm (.1%) it will not be considered mixing but are there through use or by the nature of the product before it is used it can therefore be regulated under the Used Oil system."

~~Characteristic hazardous~~ wastes, (normally ignitable and toxic) as listed in CFR 261.21 and 261.24 that contain contaminants common to used oil and at or below the levels normally in used oil may be managed within the used oil system providing the characteristic wastes when mixed exhibit the characteristic of specification Used Oil Fuel. Since some oils, by their own nature or by contamination through use, exhibit characteristics, (examples - gasoline/petroleum distillate/mineral spirits/kerosene, etc.) one may need to support that the characteristics came from the oil and not from mixing listed wastes, if it is to be managed under the used oil regulation.

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Mixtures of other than the items covered above (listed hazardous wastes and characteristics which still exhibit the characteristics) and used oil in any amounts can be managed under the used oil regulations and standards when being recycled. When going for disposal they must meet the requirements of the hazardous waste regulations to determine if they are regulated as such.

Oily Water - our research shows that, water when not contaminated with listed hazardous wastes, comes in contact with oil and goes for recycling could be regulated under the used oil regulation so long as the oil is recovered and the resulting water is not a hazardous waste. In other words, that oily wastes regulated as used oil, until the used oil has been removed. Two or three of the present used oil processors are able to do just that and DEQ needs to make a clearer statement to the public of that fact. These processors have already made the investments in good systems and without these water streams for income will not be profitable enough to provide services for other oil and oily wastes.


Recycling Material with BTUs under 5000 Current 1993 EPA used oil rules clearly suggest that when oil and oily wastes are to be recycled and that the BTUs, water, etc. are not the factors to consider, but the processors makes the determination of recyclability based on their technology and ability to use the incoming stream. As the only one in Oregon who has made the major investment to handle oily wastes and who have operated for several years with DEQ knowledge, properly recovering energy (over 80% recovery) from the wastes this in turn reduces the volume and protects our landfills from oil and oily leaching, to apply rules stronger than EPAs, would damage this protective industry and reduce the protection of our environment.

You will find a list of a few of the oils I can recall, that are available for collection, which under DEQ proposal some regulators could question if they are, or could become, part of the used oil regulated products. One can see that the range of oils are much wider than DEQ proposed definition and EPA "any oil" definitions clarifying it indeed include all oil except EPA listed hazardous wastes and is best for the protection of our environment.

Rick, all of these comments are well supported in EPA regulations and it comes down to how DEQ views the need to recycle and provide for an orderly method to reduce the disposal of oily wastes by allowing recovery and recycling. Which, in turn can be shown to be the most protective to human health and the environment, not by making restrictive rules that discourage materials recovery when there is little support for such regulation.

Surely DEQ, as do we, wants to consider all the options and thereby gain understanding for the best results, including the support of the regulated community. With all this said, we look forward to making a contribution to DEQ proposals for the best use of oily wastes and becoming more of a member of that group. When is the best time to meet for further discussion?

Best Regards,



Bill Briggs

WLB:gw  
Enclosure

Information - Partial list of oils that may not be included in DEQ proposed system;

**Absorption oils-**used to remove a gas or other ingredient from a product or process.

**Asphalt & Asphalt coatings-** including petroleum roof coatings. These are non hazardous products which are 100% oil which when blended back into lighter oil are high in BTU and make good oil fuels

**Blending Oils -** there are 100s of these oils which are used in all kinds of oil base products- rubbing oils to oil polishes etc. etc.

**Bakery Pan oil-** & other food oils

**Broaching oils-** used in steel & metal working machinery operations.

**Base Oils -** these are oils that make up many components for all most oils and oil base products.

**Cutting Oils -** for thread making etc. Tapping & reaming oils.

**Collar Oil and Leather oil-** for treatment of leathers etc.

**Cable oils -** anti rust oil for inside of cables under water etc.

**Drawing oil-** for drawing metals

**Form oil, brick oil, parting oil-** all to coat the forms or parts so they will come loose and make a clean finish.

**Fire retardent oil -** for safety were heat areas could be dangerous.

**Flushing oil -** use to clean out a system so new clean oil can be added.

**Heat Treating oil-** Dip to temper steel & metal products.

**Hydrostatic Lubrication Oil -** water based oils.

**Industrial Oils -**100s of oils for many industrial application such as guage oils,drip oils for simple application, for food grade, to one time use.

**Neutral Oils -** special oils for base products in a number of products.

**Penetrating Oils -** to break down rusts and to free up nuts and bolts

**Process Oils** - a number of various oils for special applications & as a part of a product.

**Pale oil** - simple oils for formulation and components of products.

**Petroleum Solvents** - non listed petroleum products with ability to thin and carry other components , clean, and cool.

**Petroleum Thinner** - used to thin products and to become part of the product.

**Petroleum Ink oils** - the base oils for making oil base inks- non hazardous unless a hazardous product is mixed with them.

**Petroleum Mineral Spirits** - a non listed petroleum solvent.

**Petroleum Distillates** - a 100% petroleum crude cut in the range between gasolines and motor oils.

**Petroleum Naphthas** - a 100% petroleum crude cut in the gasoline range of products.

**Quenching Oils** - Heat treating oil to produce steels with stronger surfaces.

**Rolling Oils** - to roll steel -aluminum- copper etc into sheet metals

**Railroad oils** - Switching oils-flange oils - rail oils etc. etc.

**Rust Preventative Oils** to protect metal from rusting.

**Shingle and Floor Oils** oils used to prevent wood from cracking,splitting,and to reduce dusts etc.

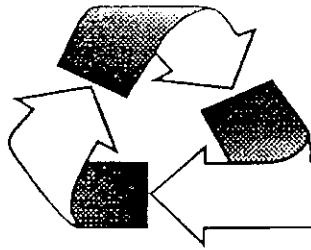
**Torque converter oil** - to transfer power by the use of fluid flow.

**Utility Oils** - Less expensive oils for many uses, blending,formulation etc.

**Vaseline Petroleum Jelly**

**Waxes paraffin & wax emulsions** from petroleum make a good fuels when blended back into the original crude oil base fuels.

**White Oils** - Normally need for human and medical applications



# Oil Re-Refining Inc.

Petroleum Recycling Since 1979

October 26, 1993

Sandy Gurkewitz  
Hazardous Waste/Toxics Use  
Reduction Advisory Committee  
HSW-HWPPD  
State of Oregon DEQ  
811 SW 6th Ave.  
Portland, OR 97204-1390

Dear Ms. Gurkewitz:

You will find attached additional comments and information concerning the proposed Used Oil Regulations, including a listing of a few of the oils in our environment that are not covered by D.E.Q. proposed limiting used oil rules.

Questions that still need your consideration and actions:

Does over regulation provide for maximum recovery of oily wastes? Do management standards provide a better answer?

Do EPA new Used Oil Rules provide for Universal Oil Recovery System which would be the most protective of our environment?

Have, or should DEQ review and rework their proposed used oil regulations to clarify that the intent is to provide for a system to include all oil and oily wastes?

What support, scientific documentation, studies, background, experts, etc. is available to show DEQ reasons for their proposal?

Is there more information available which could be added to DEQs that would widen DEQ's proposal to make it supportive of a Universal Oil Recovery System?

As an expert in oil and used oil matters, I would be pleased to help on any group that would wish to review these important matters.

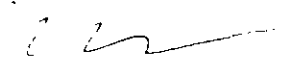
If time allows, I would like to show the committee how the oils are handled and what more could be done if the used oil processor were made more a part of the solution. Will there be 15 or 20 minutes available?

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(503) 286-8352, 1-800-367-8894, Fax (503) 286-5027

It would appear that the most prudent methods would be to refer it back for more study or to adopt EPA 279 rules with the recommendation to DEQ to then review the matter and come back with later amendments!

Please feel free to ask questions and, when you might be available, to tour our facilities.

Yours Truly,



W. L. Briggs

WLB:gw

Enclosure

cc: Dick Briggs  
Rick Volpel  
Rob Guttridge

*none allowed*  
*Bill Briggs*

4

Dick Briggs Consulting Services  
80 W. 23rd Ave.  
Eugene, Oregon 97405

*Information  
for Washington State  
WBS/SP*

October 18, 1993

Rick Volpel  
Waste Management and Cleanup Division  
DEQ, 811 SW Sixth Ave  
Portland, Oregon 97204-1390

Dear Rick,

Just a short comment to emphasis several remaining points that, while said before, need additional emphasis.

First, CFR 279 is a petroleum recycling system that is distinct from hazardous waste management. RCRA requires separate management systems and requires used oil to be managed by recycling. This used oil recycling management system provides a structure that can be used for all oils that are not hazardous. RCRA does not contain the authorization to require recycling of other oils but State law mandates the recycling of all waste. Without DEQ guidance to encourage the recycling of all oils that are not hazardous waste, much of this waste oil will not be collected and managed. I need your guidance on how to make this happen during this rule making process.

The used oil management system is a major new regulatory initiative. The chances of this new regulatory system causing more environmental damage than protection is significant. To error on the side of less stringent regulation to encourage the collection of oils is prudent.

Even if you do not make this a universal oil recycling management system at this time, the rule should contain guidance in the applicability section how solid wastes, chemical products and fuels can be recycled within the used oil system. This direction needs to be a positive approach. Also since the counties and cities must report recycled material, the rule should be coordinated with several counties to insure that they know how to report recycled waste oil.

Alternative means of dispute resolution can be from formal rules to a simple process to insure that there is direct meaningful communication before legal action. This just means an abbreviated process where a neutral third party listens to both sides and recommends some action. I find the reluctance to use this type of process to encourage communication and avoid litigation shows a misunderstanding of the process and benefits. This is especially true when you set the terms. If there is one thing that would help you improve waste management of all types, it is to encourage communication with those people who handle the waste.

The last comments is that to put an artificial ceiling on the recovery of energy in the used oil system defies logic. The 5,000 btu requirement was clearly to manage hazardous waste and was not included in the fuel specification. There has to be a better way than to exclude material from the used oil management system. After all, the material has little or no management if it is not managed by the used oil system. I have read all the references you have quoted except the 1983 FR reference you mentioned during the last meeting. I would appreciate a copy of that reference. It also appears that if this limitation does exist for used oil that it would be in the adopted rules, not in a preamble that is 11 years old.

Rick, I do appreciate the work you are doing. I hope that you and Roy will see that to provide for a universal oil recycling system as this rule is put in place will create the most positive impact upon the collection system and save DEQ a lot of effort in the long run.

Keep up the good work.

Dick Briggs



## AREAS OF MAJOR CONCERN

October 12, 1993

Areas of Major Concerns in D.E.Q.'s proposed Used Oil Rules of Draft 9-8-93 and the changes necessary for a Universal Oil Recycling or Recovery System.

- I. Page 16 of draft. current: Solvent means any petroleum product that is used to solubilize (dissolve or mobilize other constituents for activities such as degreasing, cleaning, painting or coating. (Defines solvents. Describes process involved with the generation of the waste material and not the specific material used as a solvent. Used oil definition.)

Page 16. Recommend: Definition of Solvents should be replaced as follows: EPA Listed hazardous solvents, for other than ignitability, normally in the F-1 through F-5 listing are not to be mixed with used oil or it must be managed as Hazardous Waste. However, de minimis levels, under 1000 PPM through contamination by use, see rebuttable presumption for used oil 340-111-10 (b) (i) (ii), are allowed: Nonlisted petroleum solvents which by their own nature may have a flash point below 140 can become used oil when blended with used oil so that the resulting product does not exhibit a flash lower than original petroleum solvent (Mineral spirits - petroleum distillation). (For information, it requires at least 3% to 10% (30,000 PPM to 100,000 PPM) to cause a flash point equal to original product.)

- II. Page 17 of Draft. current: Used oil means any oil that has been refined from crude oil, or any synthetic oil, that has been used as a lubricant, coolant (non-contact heat transfer fluids) emulsion, hydraulic fluid or for similar uses and as a result of such use is contaminated by physical or chemical impurities. Used oil includes, but is not limited to, used motor oil, greases, cutting oils, hydraulic fluids, brake fluids, electrical insulation oils, heat transfer oils and refrigeration oils. Used oil also includes oil recovered from parts cleaning units when there is a method to continuously remove oil from parts cleaning medias. Used oil does not include oily wastes, used oil mixed with hazardous waste except as allowed in 340-111-10(b)2&3, oil based products used as solvents, oil contaminated soils, media or debris, antifreeze, wastewaters contaminated with de minimis quantities of used oils or sludges contaminated with oil. (Definition of used oil has been expanded to exclude hazardous wastes from being classified as used oils. Definition is based on used oil definition discussion found in preamble of federal rule. Addition is meant to clarify used oil definition. It is believed to be equivalent to the original published definition.

Page 17 Recommend: Definition of D.E.Q. Used Oil should be changed to the current federal in CFR-40 279:

Oil means any oil that has been refined from crude oil, or any synthetic oil, that has been used and as a result of such use is contaminated by physical or chemical impurities..

- III. Page 21 of Draft. current: (ii) Are subject to all applicable hazardous waste regulations of OAR 340, Divisions 100 to 110 and 120 and 40 CFR, parts 260 through 266, 268, 270 and 124 of this chapter.

Page 21 (c) has an error: (ii) add "if applicable" before, are subject to, and delete, all, after the to and before applicable..., add 124, in front of 260.

- IV. Page 21 of Draft. current: (2) Materials containing or otherwise contaminated with used oil that have a BTU value of 5,000 BTUs or more per pound and are burned for energy recovery are subject to used oil regulation under this part. *(Section is added to prohibit the burning of low BTU value mixtures as fuels for energy recovery. EPA prohibits the burning of low BTU value materials for the purpose of energy recovery. Boiler and industrial furnace rules (40 CFR 266.100 states that materials that are burned for energy recovery must have a BTU value of at least 5,000 BTUs per pound). This provision is viewed to be equivalent to existing EPA rule regarding burning hazardous wastes for energy recovery.*

and

Page 25 of Draft. current: d) Other Prohibitions (1) Burning of mixtures of used oil and non-hazardous solid waste for energy recovery with BTU values of less than 5,000 BTUs per pound is prohibited. *(Prohibits the burning of low BTU value mixtures of used oil and non-hazardous waste. Viewed as equivalent to federal hazardous waste burning for energy recovery regulation.*

and

Page 39 of Draft. current: (iii) Any mixture of used oil and non-hazardous solid waste burned for energy recovery has an energy value of 5,000 BTU or greater per pound. *(Requires mixtures of used oil and non-hazardous waste burned for energy recovery to have a minimum of 5,000 BTUs per pound. Considered to be equivalent to federal hazardous waste burning regulations.)*

Page 21 (c) (2); Page 25 (3)(d) and Page 39 (iii): Recommend: These paragraphs should be removed as this restriction does not apply to used oil rules but are a part of hazardous waste burning regulations.

- V. Page 21 (4) of Draft. current: (4) Used oil handlers that generate materials that do not explicitly fit the definition of used oil found in 340-111-1, may petition the Department in writing following the procedures in 40 CFR 260.20 for a decision on whether the material can be managed in the used oil management system. *(Provision allows persons with used oil and used oil mixtures not fitting the definition found in 340-*

*III-1 a process to gain approval for their materials to be included in the used oil management structure. Considered to be equivalent to federal used oil rule.*

Page 21 (4)

Recommend: Delete and replace with:

"To provide for an orderly method for answers to questions and to settle disputes concerning used oil and regulations thereof: any regulated party can request access in writing to the dispute resolution as, and unless the matter is mutually settled by all parties within 30 days of the written request the dispute resolution will be undertaken. The prevailing party will be reimbursed for reasonable expense and costs in such an action from the other party.

"If these changes can not be made in the draft simply recommend that the federal CFR-40 Used Oil Rules be adapted."

## DEFINITION OF USED OIL

- I. EPA/530-2-42-011: Hazardous Waste Management System; Identification and listing of Hazardous Waste; Recycled Used Oil Management Standards  
U.S. EPA -- Final Rule

"2. Regulatory Actions Related to Used oil. -- On December 18, 1978, EPA initially proposed guidelines and regulations for the management of hazardous wastes as well as specific rules for the identification and listing of hazardous wastes under Section 3001 of the Resource Conservation and Recovery Act (RCRA) (43 FR 58946). At that time, EPA proposed to list waste lubricating oil and waste hydraulic and cutting oil (*Footnote 1 -- The term "waste oil" included both used and unused oils that may no longer be used for their original purpose.*) as hazardous wastes on the basis of their toxicity. In addition, the Agency proposed recycling regulations to regulate (1) the incineration or burning of used lubricating, hydraulic, transformer, transmission, or cutting oil that was hazardous and (2) the use of waste oils in a manner that constituted disposal."

1. Oct 15, 1980 Appendix J, Federal Public Law

- A. Sec. 3 Section 1004 of the Solid waste Disposal Act is amended by adding the following new paragraphs at the end thereof:

"(36) The term 'used oil' means any oil which has been --

"(A) refined from crude oil,

"(B) used, and

"(C) as a result of such use, contaminated by physical or chemical impurities.

"(37) The term 'recycled oil' means any used oil which is reused, following its original use, for any purpose (including the purpose for which the oil was originally used). Such term includes oil which is re-refined, reclaimed, burned, or reprocessed.

"(38) The term 'lubricating oil' means the fraction of crude oil which is sold for purposes of reducing friction in any industrial or mechanical device. Such term includes re-refined oil.

"(39) The term 're-refined oil' means used oil from which the physical and chemical contaminants acquired through previous use have been removed through a refining process."

- B. Any State plan submitted under this subtitle may include, at the option of the State, provision to carry out each of the following:

"(1) Encouragement, to the maximum extent feasible and consistent with the protection of the public health and the environment, of the use of recycled oil in all appropriate areas of State and local government.

"(2) Encouragement of persons contracting with the State to use recycled oil to

the maximum extent feasible, consistent with protection of the public health and the environment.

"(3) Informing the public of the uses of recycled oil.

"(4) Establishment and implementation of a program (including any necessary licensing of persons and including the use, where appropriate of manifests) to assure that used oil is collected, transported, treated, stored, reused, and disposed of, in a manner which does not present a hazard to the public health of the environment.

2. Para 1321 Title 33 Navigation and navigable waters

(1) "oil" means oil of any kind or in any form, including, but not limited to petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil:

3. EPA/530-2-42-Oil (Preamble of Final Rule 279 (11-29-85))

In the May 19, 1980 regulations (45 FR 33084), EPA decided to defer promulgation of the recycling regulations for waste oils to consider fully whether waste- and use-specific standards may be implemented in lieu of imposing the full set of Subtitle C regulations on potentially recoverable and valuable materials. At the same time, EPA deferred the listing of waste oil for disposal so that the entire waste oil issue could be addressed one time. Under the May 19, 1980 regulations, however, any waste oil exhibiting one of the characteristics of hazardous waste (ignitability, corrosivity, reactivity, and toxicity) that was disposed, or accumulated, stored, or treated prior to disposal became regulated as a hazardous waste subject to all applicable Subtitle C regulations.

4. Federal Register / Vol 57 / 5-20-92

The term "waste oil" includes both used and unused oils that may no longer be used for their original purpose.

Use in a manner constituting disposal"

UORA defined used oil as "any oil which has been refined from crude oil, used, and as a result of such use, contaminated by physical or chemical impurities."

...the Agency is interested in obtaining the optimal level of used oil recycling.

5. State of Oregon November 7, 1991

"Used oil" means any oil that has been refined from crude oil or synthetic lubricating oil, used, and as a result of such use contaminated by physical or chemical impurities. Used oils include the following: (1) lubricating oils (spent automotive, engine, turbine, or

gear); (2) Spent transmission and brake fluids, and hydraulic oils; (3) Spent industrial oils, including compressor, turbine, and bearing oils, electrical oils, refrigeration oils, and railroad oil drainings; (4) spent industrial process oils; and (5) metalworking fluid, including, cutting grinding, machining, rolling, stamping, quenching, and coating oils. "Used Oil" also includes petroleum fuel oil that through use or management has become contaminated by physical or chemical impurities such that the fuel cannot be used for its specific originally-intended purpose, if such fuels are burned for energy recovery or rerefined.

This definition of used oil does not include the use of a petroleum substance as a solvent or cleaning agent. However, EPA may wish to further examine this issue to see if certain uses of solvents should qualify as used oil since the contaminants expected to be picked up by the solvents do not differ significantly from the contaminants commonly found in used oil. Since this definition of used oil is by use, it also would not include other types of petroleum substances sometimes improperly passed off as used oil including spent inks.

6. State of Oregon 340-122-210

Petroleum -- means gasoline, crude oil, fuel oil, diesel oil lubricating oil, oil sludge, oil refuse, and crude oil fractions and refined petroleum fractions, including gasoline, kerosene, heating oils, diesel fuels, and any other petroleum related product, or waste or fraction thereof that is liquid at a temperature of 60 degrees Fahrenheit and a pressure of 14.7 pounds per square inch absolute. (NOTE: this definition does not include any substance identified as a hazardous waste under 40 CFR Part 261)

7. State of Oregon 468.850 Definitions:

(5) "Used Oil" means a petroleum based oil which through use, storage, or handling has become unsuitable for its original purpose due to the presence of impurities or loss of original properties. (1977 C d/83 S2)

8. RCRA Sec 1004 Definitions:

(38) The term "lubricating oil" means the fraction of crude oil which is sold for purposes of reducing friction in any industrial or mechanical device. Such term includes re-refined oil.

9. Federal Register / Vol 52 / No 130 7-8-87

This provision clearly states that recycled oil means any oil which is reused following its original use for any purpose, including burning.

10. EPA Subpart E Used Oil Burned for Energy Recovery

Prior to 279 rules

(a) The regulations of this subpart apply to used oil that is burned for energy recovery in any boiler or industrial furnace that is not regulated under Subpart O of Part 264 or 265 of this chapter, except as provided by para (c) and (e) of this section. Such used oil is termed "used oil fuel" Used oil fuel includes any fuel produced from used oil by processing, blending, or other treatment.

(b) "Used oil" means any oil that has been refined from crude oil, used and as a result of such use, is contaminated by physical or chemical impurities.

(c) Except as provided by para (d) of this section, used oil that is mixed with hazardous waste and burned for energy recovery, is subject to regulation as hazardous waste fuel under Subpart H of Part 266. Used oil containing more than 1000 ppm of total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in Subpart D of Part 261 of this chapter. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste (for example, by showing that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in Appendix VIII of Part 261 of this chapter).

(d) Used oil burned for energy recovery is subject to regulation under this subpart rather than as hazardous waste fuel under Subpart H of this part if it is a hazardous waste solely because it:

- (1) Exhibits a characteristic of hazardous waste identified in Subpart C of Part 261 of this chapter, provided that it is not mixed with a hazardous waste or
- (2) Contains hazardous waste generated only by a person subject to the special requirements for small quantity generators under Section 261.5 of this chapter.

(e) Except as provided by para (c) of this section, used oil burned for energy recovery and any fuel produced from used oil by processing, blending, or other treatment, is subject to regulation under this subpart unless it is shown not to exceed any of the allowable levels of the constituents and properties in the specification shown in the following table. Used oil fuel that meets the specification is subject only to the analysis and recordkeeping requirements under Section 266.43(b) (1) and (6) Used oil fuel that exceeds any specification level is termed "off-specification used oil fuel".

#### 11. RCRA Definitions -- the term "used oil"

- (18) recoverable refers to the capability and likelihood of being recovered from solid waste for a commercial or industrial use.
- (19) recovered material means waste material and byproducts which have been recovered or diverted from solid waste, but such term does not include those material and byproducts generated from, and commonly reused within, an original manufacturing process.

- (20) recovered resources means material or energy recovered from solid waste.
- (22) resource recovery means the recovery of material or energy from solid waste.

12. EPA/530-2-42-Oil Preamble of Final Rule

On November 29, 1985 (50 FR 49239), EPA proposed to list all used oils as hazardous waste, including petroleum-derived and ...

13. EPA/530-2-42-Oil Preamble of Final Rule

(IV) Definition of Used Oil

EPA's 1985 proposal to list used oil as a hazardous waste included the following proposed definition of used oil:

"Used oil" means petroleum-derived or synthetic oil including, but not limited to, oil which is used as a: i) lubricant (engine, turbine, or gear); ii) hydraulic fluid (including transmission fluid); iii) metalworking fluid (including cutting, grinding, machining, rolling, stamping, quenching, and coating oils); iv) insulating fluid or coolant, and which is contaminated through use or subsequent management.

14. EPA/530-2-42-Oil Preamble of Final Rule

All used oils, in general, are managed in similar manners (e.g., burned for energy recovery, re-refined to produce lube oil feedstock, or reconstituted as recycled products). Therefore EPA believes that all used oils, including used synthetic oils, should be regulated in a similar fashion and, hence EPA has decided to include synthetic oils in the definition of used oil...

... Today, EPA is promulgating a regulatory definition for "used oil" at 40 CFR 2610 as follows:

Used oil means any oil that has been refined from crude oil, or any synthetic oil, that has been used and as a result of such use is contaminated by physical or chemical impurities.

This regulatory definition of used oil is drawn from the statutory definition of used oil found at #1004(36) of RCRA and is similar to the current definition of used oil found at 40 CFR 266.40(b). EPA believes that this definition covers the majority of oils used as lubricants, coolants (non-contact heat transfer fluids), emulsions, or for similar uses and are likely to get contaminated through use. Therefore, specific types of used oils are not identified in the definition.



The definition includes all used oils derived from crude oil, as well as used synthetic oils that are contaminated by physical (e.g., high water content) or chemical (e.g., lead, halogens, or other toxic or hazardous constituents) impurities as a result of such use. However, with today's rule, EPA is interpreting the definition of used oil contained in the statute to include used synthetic oils, including those derived from coal or shale or from a polymer base starting materials.

The agency's position continues to be that synthetic oils should be included in the definition of used oil due to the fact that these oils are generally used for the same purposes as petroleum-derived oils, are usually mixed and managed in the same manner after use, and present the same level of hazard as petroleum-based oils.

EPA has decided to adopt this approach and consider the technical criteria for making a listing determination, given a universe of used oils that are managed in accordance with a protective set of management standards.

In making a listing determination for recycled used oils, EPA evaluated the technical criteria for listing a waste as hazardous, the fate and plausible mismanagement of used oils that are recycled, and the impacts of the management standards proposed in 1985 and 1991 and finalized today. EPA has determined that used oils that are recycled do not pose a substantial present or potential hazard to human health or the environment when the used oils are managed properly from the time they are generated until they are recycled. As discussed in the next section of this preamble, EPA believes that used oil that is recycled and handled in compliance with the used oil management standards promulgated today will not pose serious adverse risks to human health and the environment.

15. Federal Register/ Vol. 58 No. 83 / 5-3-93

40 CFR Part 279 Petroleum, Recycling, Reporting and recordkeeping requirements, Used Oil.

## SOLVENT

### 1. Federal Register / Vol. 50, No. 251 / 12-31-85

Refers to Listed Solvents vs. spent solvents

Excluding dilute mixtures or *de minimis* concentrations

Refers to F001 through F005 (to include mixtures containing ten percent or more total listed solvent (by volume) (*10% Rule*))

Removed spent chlorinated solvents from being burned (Page 53317)

Does not include Mineral Spirits, Petroleum Naphtha and Petroleum Distillates which are not listed wastes and are oil which by their own nature have a hazardous waste characteristics therefore are still used oil if flash in under 140.

See page 53319

2. Petroleum solvents that are not listed hazardous waste, can be characteristic hazardous waste but if mixed or blended with used oil, unless through use or by nature of the used oil or they no longer exhibit a characteristic they are to be regulated under 279 as used oil.

## MIXTURES

1. EPA Used Oil Rule / 279.10 (Page 41614 Vol 57 9-10-92)

(2) Materials produced from used oil that are burned for energy recovery (e.g. used oil fuels) are subject to regulation as used oil under this part.

2. Federal Register / Vol 55, No 61 / 3-29-90 / Page 11840

Characteristically hazardous used oil that is being burned for energy recovery is subject to subpart E of part 266 -- i.e., off-specification used oil is subject to certain administrative requirements, while specification used oil is subject only to the analysis and recordkeeping requirements of 40 CFR 266.43(b) (1) and (6)

3. Federal Register / Vol 46 No. 221 / 11-16-90 (Water & Solvents)

...The Agency believes that the risk posed to human health and the environment from the management of these waste mixtures as hazardous is inappropriate... ...the Agency is therefore taking action to exclude from the presumption of hazardousness certain types of mixtures of listed hazardous wastes and wastewaters, and mixtures of solid wastes and hazardous wastes which are listed solely because they exhibit one or more of the hazardous waste characteristics...

(many comments throughout)

4. Federal Register / Vol 58 No. 83 / 5-3-93 (Corrects 279.10 original)

(2) **Materials containing or otherwise contaminated with used oil that are burned for energy recovery are subject to regulation as used oil under this part.**

5. Federal Register / Vol 50 No. 230 / 11-29-85

"Set up a statute that used oil has its separate standards for its management"

Pages 49175-49176, 49179-49180-49181

"Also Flash - light ends - by-products

...RCRA as amended draws clear distinctions between hazardous waste and used oil. The statute contains a separate provision dealing with used oil as a distinct class and authorizes separate standards for its management...

6. Used Oil Questions -- Answers by EPA 54-93

16. How are mixtures of used oil and characteristic hazardous waste regulated? How are mixtures of used oil and ignitable-only hazardous wastes regulated?

Mixtures of used oil and characteristic hazardous waste (other than ignitable-only waste) are regulated as hazardous waste if they display any characteristic of hazardous waste and as used oil if they are free of all characteristics, including any applicable land disposal restriction (LDR) requirements.

Mixtures of used oil and ignitable-only hazardous waste (e.g., mineral spirits) are regulated as hazardous waste if they retain the ignitability characteristic and as used oil if they are not ignitable (279.10(b)(2)(i)-(iii)). The rationale for this distinction is as follows. If the solvents are hazardous only because of ignitability, and are not listed in Part 261, Subpart D, and do not exhibit the toxicity characteristic, then mixing the solvents with used oil should not affect the chemical constituents or other properties of used oil. The solvents in question (e.g., mineral spirits) are petroleum fractions, are typically used by the same businesses that generate used oil, and are managed in a manner similar to used oil (e.g., burning for energy recovery or distillation to recover the solvent). As such, efficient and sound management can include mixing with used oil and management by used oil recyclers. If the mixture exhibits ignitability, however, this can mean that the mixing has changed the nature of hazards involved in managing the used oil, and this mixture should remain subject to hazardous waste controls (56 FR 48060; September 23, 1991).

17. Does mixing used oil and characteristic hazardous waste constitute hazardous waste treatment? How would the dilution prohibition in 268.3 affect the mixing of ignitable-only hazardous waste with used oil?

Yes, mixing a characteristic hazardous waste with used oil to render the waste nonhazardous constitutes treatment of hazardous waste, if the purpose of the mixing is to make the waste more amenable for recovery (e.g., energy recovery) and/or to make the waste less hazardous (50 FR 49180; November 29, 1985 and 260.10). However, EPA does not require a permit if this treatment if performed in accumulation tanks or containers (51 FR 10168; March 24, 1986), provided that the generator stores the waste according to used oil and hazardous waste regulations and meets the waste analysis plan requirements in 262.34 and 268.7(a)(4).

The LDR treatment standard for ignitable-only hazardous waste (D001) that are high in total organic carbon (i.e. mineral spirits greater than or equal to 10 percent TOCs) are either fuel substitution, recovery of organics, or incineration (268.42). If the used oil will ultimately be treated by one of the specified treatment technologies for D001, then mixing mineral spirits that are only classified as D001 with used oil is aggregation of like wastestreams and, therefore, is not considered

impermissible dilution. The generator conducting the treatment of the D001 would also be subject to LDR notification in 268.7(a)(1) and waste analysis in 268.7(a)(4).

7. EPA 279 preamble -- page #79 Sept 10, 1993 FR

...all used oils are recyclable and the extent of recycling depends on the cost to generators. For example, if the used oil is actually a mixture of oil and water then the cost of recycling the mixture would be higher than recycling used oil that is straight out of engines or from metalworking operations. .... the Agency decided against finalizing the specific criteria for rebutting the presumption of recycling. The Agency believes that ***recycling is a more viable alternative than disposing of used oil as a characteristic waste. Therefore, used oil handlers will react to market conditions, thus selecting recycling over disposal...***

8. EPA-530-2-42-Oil Preamble of Final Rules 279, Page 68

Re-refining residues: For used oil processing and re-refining residuals, a hazardous waste determination will be necessary when the residuals are managed in a manner other than recycling for energy recovery or when re-refining distillation bottoms are used as a feed material for asphalt products (see discussion in Section IV of this preamble).

9. EPA 530-2-42-Oil Preamble of Final Rules 279, Page 80

Mixtures: The following section discusses management of mixtures of used oil and used oil-contaminated wastes. Used oils mixed with other solid wastes or with other materials (e.g., virgin fuel oil) are regulated as used oil under the Part 279 standards.

...Based on the available data, the Agency has concluded that the mixing to manage ignitable solvents appears to be acceptable, provided the characteristic of ignitability of the ignitable solvents is removed.

...EPA believes that if the solvents are hazardous only because of ignitability, and are not listed in Part 261, Subpart D, and do not exhibit the toxicity characteristic, then mixing the solvents in with used oil should not affect the chemical constituents or other properties of used oil. The solvents in question (i.e., mineral spirits) are petroleum fractions, are typically used by the same businesses that generate used oil, and are managed in a manner similar to used oil, i.e., burning for energy recovery or distillation to recover the solvent. As such, efficient and sound management can include mixing with used oil by used oil generators, and management by used oil processors...

(Note: Used oils that are identified as hazardous wastes may be burned for energy recovery in compliance with Part 279 instead of 40 CFR Part 266, Subpart H, provided the used oil fuel is hazardous solely because it exhibits a characteristic of hazardous waste

by its own nature...

10. EPA-530-2-42-Oil Preamble of Final Rules 279, Page 102

...Mixture of used oil and solid waste (e.g., natural or synthetic sorbent materials) from which used oil can not be separated when burned for energy recovery is subject to used oil specification fuel requirements.

11. EPA-530-2-42-Oil Preamble of Final Rules 279, Page 193

...However, mixtures of nonhazardous materials and used oils that exhibit a characteristic by their own nature (i.e., the used oil is characteristically hazardous prior to mixing) or mixtures of used oil and characteristic hazardous waste that do not exhibit a characteristic are subject to the standards in Part 279 if they are being recycled.

12. U.S. EPA letter of 9-24-93, Page 2, para 2:

Regarding the applicability of section 279.10(b)(2), as correctly stated in your letter, the provisions are not limited to generators but apply also to marketers, processors/re-refiners, transporters and burners.

## BTU'S OR USED OIL MIXTURES

1. Specs of used oil burned for Energy recovery does not include BTU's in listing of specifications.

2. Federal Register / Vol 57 No. 176 / 9-10-92 Recycling Presumptions Criteria

EPA has exempted wastewaters contaminated with very small amounts of used oil, since such mixtures are not likely to pose a significant hazard. If mixtures of used oil and sorbent materials from which used oil can not be separated, however, are burned for energy recovery, the Agency believes that such recycling is acceptable.

3. Oregon DEQ Administrative Rules 340-61-010 #42

"Energy recovery in which all or a part of the solid waste materials are processed to utilize the heat content, or other forms of energy of or from the material

4. Federal Register / Vol 58 / 9-23-91 #3 Rebuttal of Recycling Presumptions

5. Page 67 EPA 530-2-42-Oil Preamble of Final Rules 279

...(e.g., water content, level of contamination) and the corresponding cost of recycling the used oil.

After considering the public comments supporting the recycling presumption, and the difficulties associated with promulgating and enforcing the proposed "recyclability criteria," the Agency has decided that specific criteria to rebut the presumption are not necessary. The Agency agrees with the commenters that the physical characteristic of the used oil and the used oil recycling market will dictate the conditions for recycling of used oil. However, the Agency has retained the recycling presumption because the presumption simplifies the used oil management system by ensuring that generators and others may comply with one set of standards, the Part 279 standards promulgated today, regardless of whether the used oil exhibits a hazardous characteristic and regardless of whether the used oil will ultimately be recycled or disposed. In other words, the generator (or any other person who handles the oil prior to the person who decides to dispose of the oil) need not decide whether the used oil eventually will be recycled or disposed and thus need not tailor its management of the oil based upon that decision...

6. Page 79 EPA 530-2-42-Oil Preamble of Final Rule 279

The commenters to the 1991 Supplemental Proposal overwhelmingly favored implementation of the recycling presumption. However, many commenters stated that the criteria provided for rebutting the recycling presumption (eg., water content, BTU value) would be difficult to comply with, and therefore EPA should not develop such criteria. In addition, commenters stated that all used oils are recyclable and the extent of recycling

depends on the cost to generators. For example, if the used oil is actually a mixture of oil and water, then the cost of recycling the mixture would be higher than recycling used oil that is straight out of engines or from metalworking operations. Upon further evaluation of comments, the feasibility of applying these criteria for a rebuttal, and the analytical requirements accompanying the proposed criteria, the Agency decided against finalizing the specific criteria for rebutting the presumption of recycling. The Agency believes that recycling is a more viable alternative than disposing of used oil as a characteristic waste. Therefore, used oil handlers will react to market conditions, thus selecting recycling over disposal.

7. Page 101 EPA 530-2-42-Oil Preamble of Final Rule 279

Persons who generate mixtures of used oil and other materials or solid wastes (e.g., used oil filters, rags, sorptive minerals, sorbent materials, scrap metals) are subject to Part 279.

8. Page 195 EPA 530-2-42-Oil Preamble of Final Rule 279

As discussed in VI.B of this preamble almost all commenters supported the concept of the recycling presumption, but few supported establishment of formal criteria of "nonrecyclability." Commenters were concerned that the criteria for rebutting the recycling presumption (e.g., water content, BTU value, or any other measure) are not a meaningful measure of recyclability, since basically any used oil can be recycled and the degree of treatment prior to recycling is a function of the cost to the used oil generator. EPA has determined that it is not practical to set such criteria. Therefore, EPA is not establishing formal criteria on which to base a determination of nonrecyclability. Rather, a used oil handler who is not recycling used oils under Part 279 must dispose of the used oil in compliance with applicable regulations.



## RECYCLING

1. Federal Register / Fol 57 No 176/ 9-10-92

...The Agency has retained the recycling presumption because the presumption simplifies the used oil management system by ensuring that generators and others may comply with one set of standards the part 279 standards promulgated today. regardless of whether the used oil exhibits a hazardous characteristic and regardless of whether the used oil will ultimately be recycled or disposed. In other words, the generator... need not decide whether the used oil eventually will be recycled or disposed and thus need not tailor its management of the oil based upon that decision and if destined for disposal, whether the used oil is hazardous. Rather the part 279 standards apply to all used oils until a person disposes of the used oil or sends it for disposal.

2. Oregon Senate Bill 66

Recycling Goal declares goal that by Jan 1 2000, the amount of recovery from the general solid waste stream shall be at least 50 percent

3. Federal Register / Vol 51 no 223 / 11-19-86

...The administrator shall ensure that the recovery and reuse of used oil are not discouraged

...Recycled oil occupies a unique position in the Subtitle C structure and is to be accorded distinct regulatory treatment.

4. Federal Register / Vol 57 No 98 / 5-20-92

The Agency is interested in obtaining the optimal level of used oil recycling.

5. Excerpts from Comments of State Government Agencies on EPA Proposals Nov 91 -- OREGON DEQ--

"Today's comments augment DEQ's previous positions, particularly our thought that used oil should not be listed as a RCRA listed hazardous waste due to the effect such listing may have on the recycling of household used oil. In our opinion, regulating used oil under RCRA Section 3014 as we previously suggested, will provide the necessary protection of the environment and human health from hazards associated with recycling used oil. We remain concerned that listing used oil as hazardous waste could significantly reduce the opportunities available to the public for recycling oil, and that greater environmental damage and waste of resources may result."

6. HWTC II 861 F.2d at 289

The court in rejecting both arguments, noted that EPA's decision to impose less stringent requirements on used oil fuel that obtains hazardous characteristics through normal use was based on its concern that overly stringent regulation in this area could discourage burning. This in turn would result in a glut of used oil that would encourage improper disposal and thus cause more environmental harm and decrease energy conservation.

7. Page 5 of EPA 530-2-42-Oil of Final Rule 279 Preamble

II. Background

A. Authorities and Regulations Covering Used Oil Management

1. Statutory Authority.

Section 3014 of RCRA requires EPA to establish standards applicable to recycled used oil that will protect public health and the environment and, to the extent possible within that context, not discourage used oil recycling. Section 3014 was added to the RCRA statute by the Used Oil Recycling Act (UORA) of 1980. The UORA required the Agency to establish performance standards and other requirements "as may be necessary to protect the public health and the environment from hazards associated with recycled oil" as long as such regulations "do not discourage the recovery or recycling of used oil."

The Hazardous and Solid Waste Amendments of 1984 (HSWA) reemphasized that the protection of human health and the environment was to be of primary concern in the regulation of hazardous waste. Specific to used oil, HSWA slightly altered the language of RCRA 3014 to direct the Administrator to "promulgate regulations....as may be necessary to protect human health and the environment from hazards associated with recycled oil. In developing such regulations, the administrator shall conduct an analysis of the economic impact of the regulations on the oil recycling industry. The Administrator shall ensure that such regulations do not discourage the recovery or recycling of used oil consistent with the protection of human health and the environment." (Emphasis added to highlight HSWA language amending RCRA 3014 (a).)

EPA is therefore directed to promulgate standards for the handling and management of recycled oil. Section 1004 of RCRA, in defining the term "recycled oil," includes used oil being reused for any purpose, including used oil being re-refined or being processed into fuel.

8. EPA/530-2-42-Oil (Preamble of Final Rule 279 (11-29-85))

In the May 19, 1980 regulations (45 FR 33084), EPA decided to defer promulgation of the recycling regulations for waste oils to consider fully whether waste- and use-specific standards may be implemented in lieu of imposing the full set of Subtitle C regulations on potentially recoverable and valuable materials. At the same time, EPA deferred the listing of waste oil for disposal so that the entire waste oil issue could be addressed one time. Under the May 19, 1980 regulations, however, any waste oil exhibiting one of the characteristics of hazardous waste

(ignitability, corrosivity, reactivity, and toxicity) that was disposed, or accumulated, stored, or treated prior to disposal became regulated as a hazardous waste subject to all applicable Subtitle C regulations.

## SOLVENT

### 1. Federal Register / Vol. 50, No. 251 / 12-31-85

Refers to Listed Solvents vs. spent solvents

Excluding dilute mixtures or *de minimis* concentrations

Refers to F001 through F005 (to include mixtures containing ten percent or more total listed solvent (by volume) (*10% Rule*))

Removed spent chlorinated solvents from being burned (Page 53317)

Does not include Mineral Spirits, Petroleum Naphtha and Petroleum Distillates which are not listed wastes and are oil which by their own nature have a hazardous waste characteristics therefore are still used oil if flash in under 140.

See page 53319.

2. Petroleum solvents that are not listed hazardous waste, can be characteristic hazardous waste but if mixed or blended with used oil, unless through use or by nature of the used oil or they no longer exhibit a characteristic they are to be regulated under 279 as used oil.

## BTU'S OR USED OIL MIXTURES

1. Specs of used oil burned for Energy recovery does not include BTU's in listing of specifications.
2. Federal Register / Vol 57 No. 176 / 9-10-92 Recycling Presumptions Criteria

EPA has exempted wastewaters contaminated with very small amounts of used oil, since such mixtures are not likely to pose a significant hazard. If mixtures of used oil and sorbent materials from which used oil can not be separated, however, are burned for energy recovery, the Agency believes that such recycling is acceptable.

3. Oregon DEQ Administrative Rules 340-61-010 #42

"Energy recovery in which all or a part of the solid waste materials are processed to utilize the heat content, or other forms of energy of or from the material

4. Federal Register / Vol 58 / 9-23-91 #3 Rebuttal of Recycling Presumptions
5. Page 67 EPA 530-2-42-Oil Preamble of Final Rules 279

...(e.g., water content, level of contamination) and the corresponding cost of recycling the used oil.

After considering the public comments supporting the recycling presumption, and the difficulties associated with promulgating and enforcing the proposed "recyclability criteria," the Agency has decided that specific criteria to rebut the presumption are not necessary. The Agency agrees with the commenters that the physical characteristic of the used oil and the used oil recycling market will dictate the conditions for recycling of used oil. However, the Agency has retained the recycling presumption because the presumption simplifies the used oil management system by ensuring that generators and others may comply with one set of standards, the Part 279 standards promulgated today, regardless of whether the used oil exhibits a hazardous characteristic and regardless of whether the used oil will ultimately be recycled or disposed. In other words, the generator (or any other person who handles the oil prior to the person who decides to dispose of the oil) need not decide whether the used oil eventually will be recycled or disposed and thus need not tailor its management of the oil based upon that decision...

6. Page 79 EPA 530-2-42-Oil Preamble of Final Rule 279

The commenters to the 1991 Supplemental Proposal overwhelmingly favored implementation of the recycling presumption. However, many commenters stated that the criteria provided for rebutting the recycling presumption (eg., water content, BTU value) would be difficult to comply with, and therefore EPA should not develop such criteria. In addition, commenters stated that all used oils are recyclable and the extent of recycling

depends on the cost to generators. For example, if the used oil is actually a mixture of oil and water, then the cost of recycling the mixture would be higher than recycling used oil that is straight out of engines or from metalworking operations. Upon further evaluation of comments, the feasibility of applying these criteria for a rebuttal, and the analytical requirements accompanying the proposed criteria, the Agency decided against finalizing the specific criteria for rebutting the presumption of recycling. The Agency believes that recycling is a more viable alternative than disposing of used oil as a characteristic waste. Therefore, used oil handlers will react to market conditions, thus selecting recycling over disposal.

7. Page 101 EPA 530-2-42-Oil Preamble of Final Rule 279

Persons who generate mixtures of used oil and other materials or solid wastes (e.b., used oil filters, rags, sorptive minerals, sorbent materials, scrap metals) are subject to Part 279.

8. Page 195 EPA 530-2-42-Oil Preamble of Final Rule 279

As discussed in VI.B of this preamble almost all commenters supported the concept of the recycling presumption, but few supported establishment of formal criteria of "nonrecyclability." Commenters were concerned that the criteria for rebutting the recycling presumption (e.g., water content, BTU value, or any other measure) are not a meaningful measure of recyclability, since basically any used oil can be recycled and the degree of treatment prior to recycling is a function of the cost to the used oil generator. EPA has determined that it is not practical to set such criteria. Therefore, EPA is not establishing formal criteria on which to base a determination of nonrecyclability. Rather, a used oil handler who is not recycling used oils under Part 279 must dispose of the used oil in compliance with applicable regulations.

## RECYCLING

1. Federal Register / Fol 57 No 176/ 9-10-92

...The Agency has retained the recycling presumption because the presumption simplifies the used oil management system by ensuring that generators and others may comply with one set of standards the part 279 standards promulgated today. regardless of whether the used oil exhibits a hazardous characteristic and regardless of whether the used oil will ultimately be recycled or disposed. In other words, the generator... need not decide whether the used oil eventually will be recycled or disposed and thus need not tailor its management of the oil based upon that decision and if destined for disposal, whether the used oil is hazardous. Rather the part 279 standards apply to all used oils until a person disposes of the used oil or sends it for disposal.

2. Oregon Senate Bill 66

Recycling Goal declares goal that by Jan 1 2000, the amount of recovery from the general solid waste stream shall be at least 50 percent

3. Federal Register / Vol 51 no 223 / 11-19-86

...The administrator shall ensure that the recovery and reuse of used oil are not discouraged

...Recycled oil occupies a unique position in the Subtitle C structure and is to be accorded distinct regulatory treatment.

4. Federal Register / Vol 57 No 98 / 5-20-92

The Agency is interested in obtaining the optimal level of used oil recycling.

5. Excerpts from Comments of State Government Agencies on EPA Proposals Nov 91 -- OREGON DEQ--

"Today's comments augment DEQ's previous positions, particularly our thought that used oil should not be listed as a RCRA listed hazardous waste due to the effect such listing may have on the recycling of household used oil. In our opinion, regulating used oil under RCRA Section 3014 as we previously suggested, will provide the necessary protection of the environment and human health from hazards associated with recycling used oil. We remain concerned that listing used oil as hazardous waste could significantly reduce the opportunities available to the public for recycling oil, and that greater environmental damage and waste of resources may result."

6. HWTC II 861 F.2d at 289

The court in rejecting both arguments, noted that EPA's decision to impose less stringent requirements on used oil fuel that obtains hazardous characteristics through normal use was based on its concern that overly stringent regulation in this area could discourage burning. This in turn would result in a glut of used oil that would encourage improper disposal and thus cause more environmental harm and decrease energy conservation.

7. Page 5 of EPA 530-2-42-Oil of Final Rule 279 Preamble

II. Background

A. Authorities and Regulations Covering Used Oil Management

1. Statutory Authority.

Section 3014 of RCRA requires EPA to establish standards applicable to recycled used oil that will protect public health and the environment and, to the extent possible within that context, not discourage used oil recycling. Section 3014 was added to the RCRA statute by the Used Oil Recycling Act (UORA) of 1980. The UORA required the Agency to establish performance standards and other requirements "as may be necessary to protect the public health and the environment from hazards associated with recycled oil" as long as such regulations "do not discourage the recovery or recycling of used oil."

The Hazardous and Solid Waste Amendments of 1984 (HSWA) reemphasized that the protection of human health and the environment was to be of primary concern in the regulation of hazardous waste. Specific to used oil, HSWA slightly altered the language of RCRA 3014 to direct the Administrator to "promulgate regulations...as may be necessary to protect human health and the environment from hazards associated with recycled oil. In developing such regulations, the administrator shall conduct an analysis of the economic impact of the regulations on the oil recycling industry. The Administrator shall ensure that such regulations do not discourage the recovery or recycling of used oil consistent with the protection of human health and the environment." (Emphasis added to highlight HSWA language amending RCRA 3014 (a).)

EPA is therefore directed to promulgate standards for the handling and management of recycled oil. Section 1004 of RCRA, in defining the term "recycled oil," includes used oil being reused for any purpose, including used oil being re-refined or being processed into fuel.

8. EPA/530-2-42-Oil (Preamble of Final Rule 279 (11-29-85))

In the May 19, 1980 regulations (45 FR 33084), EPA decided to defer promulgation of the recycling regulations for waste oils to consider fully whether waste- and use-specific standards may be implemented in lieu of imposing the full set of Subtitle C regulations on potentially recoverable and valuable materials. At the same time, EPA deferred the listing of waste oil for disposal so that the entire waste oil issue could be addressed one time. Under the May 19, 1980 regulations, however, any waste oil exhibiting one of the characteristics of hazardous waste



(ignitability, corrosivity, reactivity, and toxicity) that was disposed, or accumulated, stored, or treated prior to disposal became regulated as a hazardous waste subject to all applicable Subtitle C regulations.

It is the State of Oregon's policy that when two or more persons cannot settle a dispute, it is preferable that the disputants be encouraged and assisted by a trusted and competent third party rather than the dispute remaining unresolved or in litigation. (ORS 36.100 - 210).

It is Legislative Policy that alternated dispute resolution frequently represents the most efficient use of public resources and Agencies are authorized and encouraged to establish and use alternate means of dispute resolution whenever possible (ORS 183.310 to 183.550). Also HB 3427.

Both references establish standards for the selection of third party arbitrators and administrative procedures.

MEDIATION

**36.100 Policy for ORS 36.100 to 36.210.**  
 It is the policy and purpose of ORS 36.100 to 36.210 that, when two or more persons cannot settle a dispute directly between themselves, it is preferable that the disputants be encouraged and assisted to resolve their dispute with the assistance of a trusted and competent third party mediator, whenever possible, rather than the dispute remaining unresolved or resulting in litigation. (1989 c.718 §1)

**36.105 Declaration of purpose of ORS 36.100 to 36.210.** The Legislative Assembly declares that it is the purpose of ORS 36.100 to 36.210 to:

- (1) Foster the development of community-based programs that will assist citizens in resolving disputes and developing skills in conflict resolution;
- (2) Allow flexible and diverse programs to be developed in this state, to meet specific needs in local areas and to benefit this state as a whole through experiments using a variety of models of peaceful dispute resolution;
- (3) Find alternative methods for addressing the needs of crime victims in criminal cases when those cases are either not prosecuted for lack of funds or can be more efficiently handled outside the courts;
- (4) Provide a method to evaluate the effect of dispute resolution programs on communities and on the justice system; and
- (5) Encourage the development and use of mediation panels for resolution of civil litigation disputes. (1989 c.718 §2)

**36.110 Definitions for ORS 36.100 to 36.210.** As used in ORS 36.100 to 36.210:

- (1) "Arbitration" means any arbitration whether or not administered by a permanent arbitral institution.
- (2) "Commission" means the Dispute Resolution Commission created under ORS 36.115.
- (3) "Director" means the director appointed by the Dispute Resolution Commission under ORS 36.130.
- (4) "Dispute resolution services" include but are not limited to mediation, conciliation and arbitration.
- (5) "Dispute resolution program" means an entity that receives state funds to provide dispute resolution services.
- (6) "Mediation" means a process in which a mediator assists and facilitates two or more parties to a controversy in reaching a mutually acceptable resolution of the controversy and includes all contacts between the mediator and any party or parties, until such

time as a resolution is agreed to by the parties or the mediation process is terminated.

(7) "Mediation program" means a program through which mediation is made available and includes the director, agents and employees of the program.

(8) "Mediator" means a third party who performs mediation. (1989 c.718 §3)

**36.115 Dispute Resolution Commission; terms; confirmation.** (1) There is established a Dispute Resolution Commission consisting of seven members appointed by the Governor.

(2) The term of office of each member is four years, but a member serves at the pleasure of the Governor. Before the expiration of the term of a member, the Governor shall appoint a successor whose term begins on July 1, next following. A member is eligible for reappointment. If there is a vacancy for any cause, the Governor shall make an appointment to become immediately effective for the unexpired term.

(3) The appointment of the members of the Dispute Resolution Commission is subject to confirmation by the Senate in the manner prescribed in ORS 171.562 and 171.565. (1989 c.718 §4, 1991 c.535 §1)

Note: The amendments to 36.115 by section 1, chapter 536, Oregon Laws 1991, become operative July 1, 1992. See section 6, chapter 538, Oregon Laws 1991. 36.115 (1989 Edition) is set forth for the user's convenience.

**36.115.** (1) There is established a Dispute Resolution Commission consisting of seven members appointed by the Governor.

(2) The term of office of each member is four years, but a member serves at the pleasure of the Governor. Before the expiration of the term of a member, the Governor shall appoint a successor whose term begins on July 1, next following. A member is eligible for reappointment. If there is a vacancy for any cause, the Governor shall make an appointment to become immediately effective for the unexpired term.

(3) The appointment of the members of the Dispute Resolution Commission is subject to confirmation by the Senate in the manner prescribed in ORS 171.562 and 171.565.

(4) Notwithstanding the term of office specified by subsection (2) of this section, of the members first appointed to the Dispute Resolution Commission:

- (a) Two shall serve for a term ending June 30, 1990.
- (b) Two shall serve for a term ending June 30, 1991.
- (c) Three shall serve for a term ending June 30, 1992.

**36.120 Members of commission; reimbursement.** (1) The members of the Dispute Resolution Commission shall be citizens of this state who are well informed on the principles of dispute resolution. Specific formal education in any field shall not be a prerequisite to serving on the commission.

(2) A member of the Dispute Resolution Commission is not entitled to compensation

October 12, 1993

Bill Briggs, President  
Fuel Processors, Inc.  
4150 N. Suttle Rd.  
Portland, OR 97217

Dear Mr. Briggs:

This letter responds to your letter dated September 6, 1993, which I received on September 24 requesting my comments on your September 21 letter addressed to Mr. Don Haagensen, Chair of the Hazardous Waste/Toxics Use Reduction Advisory Committee (attached), and your earlier comments on the July 16 draft both of which concerned the Department's proposed used oil draft rules. The Department appreciates your participation in the Department's development of rules for the regulation of used oil. I will preface my response with background information, after which I will address the issues in the letters.

First, the DEQ is proceeding with the adoption of the federal used oil rules promulgated by the Environmental Protection Agency as required under the Resource Conservation and Recovery Act (RCRA) to obtain and maintain authorization to administer and enforce a state hazardous waste program in lieu of the federal program. DEQ is authorized to administer the federal hazardous waste program in Oregon (see ORS 466.086). In addition, DEQ is authorized to adopt federal rules under RCRA as specified in Section 3006(b) of the Act. Further, *Oregon Revised Statutes* (ORS 468.869) requires the Environmental Quality Commission to adopt rules relating to the use, management, disposal of and resource recovery from used oil. The Department's proposed used oil draft rules contain the original federal rules as listed in the *Federal Register* Vol 57 No 176, September 1992. In addition, the draft rules include: a definition of used oil based on the federal definition and reflecting EPA's explanation of the federal definition in the preamble to FR Vol 57, 176 so there is a better understanding for all concerned about materials that are and are not used oil; recommended revisions or additions to the federal rule resulting from Department analysis, two informal public meetings and a formal Advisory Committee meeting; and language from existing state environmental rules in OAR 340-93-040(3)(a), 340-100-010, 340-108-002 and 340-102-011.

*need to  
start from  
1978  
to get  
the background  
& full  
story*

Second, the Department is **not** opposed to legitimate recycling of used oil through energy recovery. As you are aware, EPA hazardous waste rules exempt used oil exhibiting hazardous waste characteristics from the provisions in 40 CFR 260 through 268 when the used oil is recycled. EPA has stated in several Federal Registers (see Federal Registers dated 3/16/83 pg 11157;



811 SW Sixth Avenue  
Portland, OR 97204-1390  
(503) 229-5696  
TDD (503) 229-6993



11/29/85, pg 49166; 9/23/91, pg 48037) that the minimum energy value for materials burned for energy recovery is 5,000 BTUs per pound. EPA further states that burning low energy materials (<5,000 BTUs per pound) for energy recovery could be considered "sham recycling" or incineration. It is the Department's view that materials burned for energy recovery should have a minimal fuel value to be considered legitimate recycling. This minimum fuel value criterion is especially important because such materials receive an exemption from hazardous waste management requirements when they are recycled or burned for energy recovery. If a person desires to burn low energy value mixtures of used oil and non-hazardous waste, that person may apply for a solid waste disposal or treatment and air permit from the Department. In addition, if a person desires to burn, treat, store or dispose of hazardous waste, used oil mixed with listed hazardous waste, mixtures of used oil and characteristic hazardous waste that exhibit a hazardous waste characteristic, that person may apply for a hazardous waste treatment, storage or disposal facility permit as a boiler, industrial furnace or incinerator.

not correct!  
hazardous waste only

In regard to the issues raised in your letter to Don Haagensen:

1. *"What studies, scientific support, legal and their regulatory basis does DEQ rely for their change in favor of the EPA rules?"*

DEQ has relied on used oil development documents found in the Federal Register, including information found in FR Vol. 57, No. 176; FR Vol. 57, No. 58; FR Vol. 50, No. 184; FR Vol. 48 No. 52; FR 50, No. 8; FR Vol. 50, No. 230. DEQ also has relied on Oregon Revised Statutes Chapters 459 and 468 and Oregon Administrative Rules Chapter 340 Divisions 100 - 111.

less than 25% of available

2. *"Who are DEQ's experts, their background, findings and reports to support DEQ's proposed rules?"*

DEQ regulatory and policy personnel familiar with hazardous waste rules and environmental rule development have been involved with developing the proposed draft rules. Again, their findings are based on EPA's data published during the development of the used oil rules. In addition, DEQ has relied on the expertise of the regulated community and interested parties. Thus far, the Department has held two public meetings to obtain feedback on the proposed draft rules.

3. *"Definition of Used Oil: DEQ's proposal restricts legitimate recycling and more protective measures for our environment. It causes unnecessary damage to a very small industry which protects our environment."*

As you are aware, in Oregon there have been recent enforcement actions involving the interpretation of the definition of used oil. DEQ is attempting to clarify the definition of used oil by including language from the preamble to the federal rules and allow

DEQ would never allow a open hearing only threats of chemical action!

thereby to prevent future conflict over what is and what is not used oil (See FR Vol. 57, No. 176 dated 9/10/92, pgs 41573-41575). DEQ's proposed draft definition of used oil is consistent with the way DEQ and EPA currently interpret the used oil definition. DEQ does not intend to restrict legitimate recycling of used oil. DEQ has been working closely with EPA at both the Headquarters and Regional level in developing this definition and has requested and received confirmation from EPA that DEQ's definition is consistent with the intent of the federal definition (attached).

*not  
industry  
intent!*

4. *"Oily Wastes and solids going for recycling and energy recovery."*

DEQ is not proposing to prohibit used oil processors or re-refiners from legitimately recycling oily wastes and solids. However, the preamble to the federal rule published on September 10, 1992, pg 41574, makes clear that the definition of used oil does not include used oil residues or sludges resulting from the storage, processing or re-refining of used oils. EPA believes that the types and concentrations of hazardous constituents in used oil residues and sludges are different than those typically found in used oils, and therefore these residues and sludges warrant separate regulatory consideration.

*not  
correct  
it does*

5. *"Oily Waters where the oil is recovered and the water can be made usable again."*

DEQ is not proposing to limit processing mixtures of non-hazardous waste and used oil when the mixture indeed contains a used oil and there is recoverable used oil contained in the mixture. DEQ expects that the oil recovered will be managed as a used oil and the wastewater will be properly managed.

*see later  
letter they  
are doing  
just that --*

6. *"Allowing petroleum solvents, (not listed chlorinated or halogenated solvents) that contain or exhibit the same characteristics as new oil or used oil that is recycled to become used oil and therefore be recycled."*

OAR Section 340-111-10(b)(2) of the proposed used oil draft rules details how mixtures of used oil and characteristic hazardous waste should be managed. In a few specific instances, petroleum solvents may be mixed with used oil and the resultant mixture may be managed as a used oil. In most cases, mixtures of characteristic hazardous waste and used oil must be managed as a hazardous waste. DEQ has not altered this provision as it is written in the EPA rules.

7. *"Dispute resolution that can be called upon by the party seeking a ruling to go to an outside, independent referee or to arbitration. This would do much to show that DEQ is fair in its actions and bring more creditability to the agency."*

A method for dispute resolution currently exists within the agency which starts by contacting the regional office and using the rulemaking petitioning process referenced

*not available  
without  
20,000 or more  
to set a ruling*

in 340-111-10(c)(4) to resolve a conflict. If a resolution is not reached at this level, an appeal may be made to the Environmental Quality Commission to affect a rule change. Depending on your dispute, you may then need to appeal to the EPA for a federal rule change or the state legislature for a possible change in statute. There is presently no state-wide mechanism or authority established for an independent referee or arbitrator as you suggest in state government for dispute resolution.

8. "Definition of de minimis levels."

EPA defines "de minimis" [see 40 CFR 279.10(f)(1)] quantities of used oils as "small spills, leaks, or drippings from pumps, machinery, pipes, and other similar equipment during normal operations or small amounts of oil lost to the wastewater treatment system during washing or draining operations". This exception does not apply if the used oil is discarded as a result of abnormal manufacturing operations resulting in substantial leaks, spills, or other releases, or to used oil recovered from wastewaters. EPA has not applied a numerical level to the definition of de minimis concentrations, but rather states that it will vary depending on the processors ability to remove oil from the mixture. The Department feels that if there is sufficient oil to be recovered in a mixture and the mixture does not contain a hazardous waste as prohibited in OAR 340-111-10 it can be recovered and legitimately recycled as a used oil.

*EPA Action  
any level  
of oil to  
be recovered!*

In regard your comments on the July 16, 1993 version of the draft rules, I will address only concerns that have not been previously discussed or addressed. Please be aware that there have since been changes to this draft and you have been sent a more recent draft dated 8/30/93:

1. Used oil and solvents (pg 17).

Response: The definition of used oil applies to petroleum oils that are commonly used as oils and does not apply to petroleum products that are used for other purposes such as solvents, binders or carriers. The Department does not consider oils that have been used primarily as lubricants to be solvents. You are correct that oil may solubilize contaminants through use as a lubricant, but unless the oil is used primarily as a solvent, it will still be considered to be a used oil.

2. Used oil handlers (pg 18).

"Used oil handler" is a broad category that includes used oil generators, transporters, collection facilities, processors and re-refiners, marketers and off-specification used oil burners. Each of these categories has specific requirements found in subparts C through H of the federal rules. Requirements for off-specification used oil fuel burners remain essentially unchanged from existing rules found in 40 CFR 266.

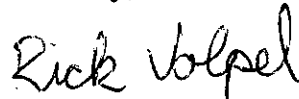
Bill Briggs  
October 12, 1993  
Page 5

3. Used oil mixtures (pg 19-20).

DEQ has not significantly changed the provisions found under OAR 340-111-10 from the parallel federal rule. With the exception of the CEG hazardous waste restriction, clarifications regarding the existing 5,000 BTU limit and land disposal restriction requirements, the state draft rule is unchanged from the published and since amended federal rules.

I hope this has adequately addressed your questions. If you have additional comments or questions, please contact me at 229-6590.

Sincerely,



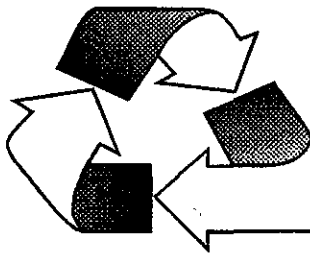
Rick Volpel  
Hazardous Waste Policy and  
Program Development

RV:b

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cc: Don Haagensen, Hazardous Waste Advisory Committee  
Chuck Clinton, NWR  
Brett McKnight, ER  
Larry Edelman, AG  
Mary Wahl, DEQ  
Stephanie Hallock, DEQ  
Tom Bispham, DEQ  
Steve Greenwood, DEQ





# Fuel Processors Inc.

Petroleum Recycling Since 1979

October 11, 1993

Mr. Don Haagensen  
Hill, Huston, Cable, Ferris & Haagensen  
2000 Security Pacific Plaza  
1001 S.W. 5th Ave.  
Portland, OR 97204-1136

Re: Hazardous Waste Advisory Committee

Dear Mr. Haagensen:

For your use and information, you will find enclosed the latest letter for our 3000 plus customers, on the need for a universal oil recycling system.

On the 15th, I plan to be prepared to show the committee how oil is recycled, the various waste streams, the products, the technology now operating and the damaging effect the rule changes have on used oil recycling by restricting the incoming waste stream.

I will have information on the changes necessary in D.E.Q draft rules to allow universal recycling or how E.P.A. rules already do this if D.E.Q. would support these more protective regulations.

Already this week, I was able for the first time, to give Rick Vopel information, references, etc., hopefully that will provide a wider view to show how we all have the opportunity to make Oregon 1st again! Universal oil recycling is possible in Oregon because of the pioneering of technology by our recycling industry and concerns for better protection to human health and our environment.

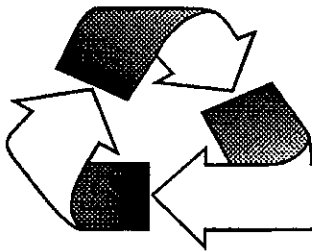
We continue to be amazed that D.E.Q. has not studied, and endorsed universal recycling. Please refer their draft proposal back for more study and consideration before their changes are allowed to damage our environment. This committee must have an equal amount of used oil industry representatives and at least one qualified expert in the used oil field. I would like to offer my time and services in one of these capacities.

Thank you for your efforts.

Yours Truly,

W. L. Briggs  
President

4150 N. Suttle Rd. Portland, OR 97217 EPA# ORD 980975692  
(503) 286-2089, 1-800-367-8894, Fax (503) 286-5027



# Oil Re-Refining Inc.

Petroleum Recycling Since 1979

October 7, 1993

Mr. Rick Volpel  
Oregon D.E.Q.  
811 S.W. 6th Avenue  
Portland, OR 97204-1390

Rick:

Here is what we believe supports the changes necessary to improve D.E. Q.'s proposal and which could become the Universal Oil Recovery System that will do more to protect our environment and help the recycling of oil and oily wastes.

Please allow us two or three hours to discuss this with you before the October 15th meeting.

Best Regards,

Bill Briggs

WLB:gw

Enclosure

*10 minutes was allowed - not enough!*



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

SEP 24 1993

OFFICE OF  
SOLID WASTE AND EMERGENCY  
RESPONSE

Mr. Christopher Harris  
General Counsel  
National Oil Recyclers Association  
The Evening Star Building  
Suite 800  
1101 Pennsylvania Avenue, N.W.  
Washington, D.C. 20004

Dear Mr. Harris:

Thank you for your letter dated July 19, 1993 regarding the Recycled Used Oil Management Standards. Specifically, you requested confirmation of your interpretation of the used oil management standards as they pertain to mixtures of used oil and characteristic hazardous waste.

In response to your request, this letter provides clarification of the used oil regulations applicable to mixtures of used oil and characteristic waste. The used oil regulations distinguish between mixtures of used oil and ignitable-only characteristic waste and all other used oil/characteristic hazardous waste mixtures. Under section 279.10(b)(2)(ii), mixtures of used oil and a characteristic hazardous waste that solely exhibits one or more hazardous waste characteristics identified in 40 CFR Part 261 subpart C (other than ignitable-only characteristic waste) and mixtures of used oil and hazardous waste that is listed in subpart D solely because it exhibits one or more of the characteristics of hazardous waste identified in subpart C (other than ignitable-only characteristic waste) are regulated as used oil if the resultant mixture does not exhibit any hazardous waste characteristics. On the other hand, these mixtures are regulated as hazardous wastes if they display any characteristic of hazardous waste.

Under section 279.10(b)(2)(iii), mixtures of used oil and ignitable-only characteristic hazardous waste (e.g. mineral spirits) are regulated as used oil provided that they do not exhibit the characteristic of ignitability. The rationale for distinguishing between ignitable only solvents and other characteristic hazardous waste is as follows. If the solvents are hazardous only because of ignitability, then mixing the solvents with used oil should not affect the chemical constituents or other properties of the used oil. The solvents

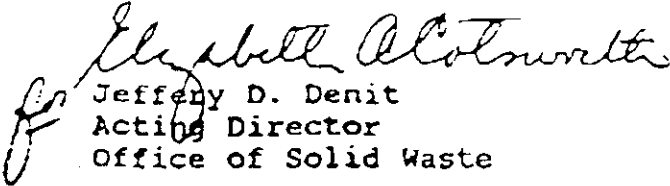


in question (e.g., mineral spirits) are petroleum fractions that are typically used by the same businesses that generate used oil and are managed in a manner similar to used oil (e.g., burning for energy recovery or distillation to recover the solvent). Therefore, EPA believes these mixtures can and will be properly managed as used oil. If the mixture exhibits ignitability, however, this can mean that the mixing has changed the nature of the hazards involved in managing the used oil, and the mixture should remain subject to hazardous waste controls.

Regarding the applicability of section 279.10(b)(2), as correctly stated in your letter, the provisions are not limited to generators but apply also to marketers, processors/re-refiners, transporters, and burners.

Finally, you are correct in stating that the used oil regulations promulgated at section 279.10(b)(2)(i) do not establish new policy but reiterate existing EPA policy. However, the section 279.10(b)(2)(iii) provisions pertaining to ignitable only characteristic waste do constitute a change from (or expansion of) previous regulatory policy. If you have any further questions on these or other matters pertaining to the used oil management standards, please call Eydie Pines at (202) 260-3509.

Sincerely,

  
Jeffery D. Denit  
Acting Director  
Office of Solid Waste



# National Oil Recyclers Association

Christopher Harris, *General Counsel*

The Evening Star Building, Suite 800 • 1101 Pennsylvania Avenue, N.W.  
Washington, D.C. 20004 • (202) 639-6320 • FAX (202) 628-4912

June 29, 1993

CLIENT'S COPY

Ms. Michaelle D. Wilson  
Chief, Special Programs Section  
U.S. Environmental Protection Agency  
Office of Solid Waste (OS-330)  
401 M Street, S.W.  
Washington, D.C. 20460

Dear Ms. Wilson:

On behalf of the members of the National Oil Recyclers Association, I am writing to seek confirmation that EPA's used oil regulations, set forth in 40 C.F.R. § 279, allow the mixing of used oil and hazardous waste that solely exhibits one or more hazardous waste characteristics (or hazardous waste that is listed in Subpart D solely because it exhibits one or more hazardous waste characteristics.) Such mixtures are regulated as used oil under section 279 if the resultant mixture does not exhibit any hazardous waste characteristic. See 40 C.F.R. § 279.10(b)(2). In addition, I would like to confirm that this regulatory provision applies to all entities including processors and marketers, not just generators.

Finally, I would like to confirm that the regulatory policy set forth in 40 C.F.R. § 279.10(b)(2) does not constitute a new policy but merely restates existing regulatory policy.

If you have any questions concerning this inquiry, please let me know.

Thank you for your assistance.

Sincerely,

Christopher Harris  
General Counsel

John J. Nolan  
President  
(703) 536-9732, FAX (703) 536-0263

Kathryn McWilliams  
Executive Director  
(216) 623-8397, FAX (216) 623-8393

September 23, 1993

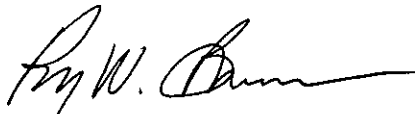
Mr. Bill Briggs  
4150 N. Suttle Road  
Portland, OR 97217

*Marked  
in the  
Revised  
2/8/93*

Dear Mr. Briggs:

This is in regard to your September 22, 1993 fax requesting time on the Hazardous Waste/Toxics Use Reduction Advisory Committee agenda to present your views on DEQ's proposed used oil regulations. Unfortunately, we may not be able to accommodate your request at the September 24th meeting. This meeting was set in advance as a means for staff to provide background and technical information on the proposed used oil rule as well as proposed language to be adopted to the advisory committee and to address committee inquiries. In accordance to the manner in which our advisory committee meetings are conducted, public comment/questions will be taken at the end of the meeting. If we cannot accommodate public comment at this time, we will dedicate a block of time for public comment at the October 15 advisory committee meeting.

Sincerely,



Roy W. Brower, Manager  
Hazardous Waste Policy and  
Program Development Section

RWB:rv:b  
U:\HWPD\LTR\ZB12606

*Never was allowed time to cover the full range.  
W. Brown*



811 SW Sixth Avenue  
Portland, OR 97204-1390  
(503) 229-5696  
TDD (503) 229-6993

DEQ-1



# OIL RE-REFINING CO, INC.

4150 N. Suttle Road  
Portland, OR 97217  
(503) 286-8352

1-800-367-8894  
EPA# WAD 980986012

P. O. Box 1407  
701 Bozarth  
Woodland, WA 98674  
(206) 225-6571

September 21, 1993

Mr. Don Haagensen  
State of Oregon  
Hazardous Waste/Toxics Use Reduction  
Advisory Committee  
2000 Security Pacific Plaza  
1001 S.W. 5th Ave.  
Portland, OR 97204-1136

Dear Mr. Haagensen:

As an expert in oil, used oil, and related matters, having spent over 35 years in the oil industry, been a fuel and lube oil engineer for Chevron Oil, served as an officer of the largest such association in the United States, the National Oil Recyclers Association (NORA), built over 6 operating oil recycling plants and recycled over 100,000,000 gallons of used oil in the last 13 years, I prepared to give testimony that DEQ should adopt EPA's 40 CFR 279 new rules as written, not as amended by DEQ, will be more protective to human health, recycling, landfills, and our environment.

I am prepared to discuss the major area of concern and offer support for a better method to assist recycling and more protective than DEQ's proposal. Questions that need to be answered first:

- A. What studies, scientific support, legal and their regulatory basis does DEQ rely for their change in favor of the EPA rules?
- B. Who are DEQ's experts, their backgrounds, findings and reports to support DEQ's proposed rules?

The areas of concern that will need to be reviewed which could be best done by a sub-committee with at least three used oil experts from the used oil industry on it are:

- A. Definition of Used Oil: DEQ's proposal restricts legitimate recycling and more protective methods for our environment. It causes unnecessary damage to a very small industry which protects our environment.
- B. Oily Wastes and solids going for recycling and energy recovery.

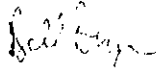
- C. Oily Waters where the oil is recovered and the water can be made usable again.
- D. Allowing petroleum solvents, (not listed chlorinated or halogenated solvents) that contain or exhibit the same characteristics as new oil or used oil that is recycled to become used oil and therefore be recycled.
- E. Dispute resolution that can be called upon by the party seeking a ruling to go to an outside, independent referee or to arbitration. This would do much to show that DEQ is fair in its actions and bring more creditability to the agency.
- F. Definition of de minimis levels.

The presentations will take a minimum of 30 minutes, better at 45 minutes.

Please allow this very important testimony or, set up a sub-committee to study and bring back the answer the questions and obtain the necessary support to do the right thing.

Looking forward to the meeting on September 24th.

Yours Truly,



Bill Briggs  
President

WLB:gw



Dick Briggs Consulting Services  
80 W. 23rd Ave.  
Eugene, Oregon 97405  
343-4670

September 16, 1993

DEQ, Hazardous Waste and  
Toxic Use Reduction Advisory Committee  
811 SW Sixth Ave.  
Portland, Oregon 97204-6993

Comments Concerning Recycling of Oil for Your 24 September Meeting

I have just received your agenda and the latest updated DEQ used oil rule draft. Apparently the regulatory policy makers have not explored the option to expand the rules to encourage universal recycling of all oils and oil products. I have commented to DEQ and EQC on the development of this draft rule. I also worked on SB 1014 in the past legislative session that reconfirmed the legislative direction to recycle and reuse oil. The law also established a used oil recovery advisory committee to review the effectiveness of current statutory provisions and collection activities.

In your previous meetings, you had a subcommittee to review the used oil management system and the DEQ rule. It seems that your subcommittee and members of the recovery committee would be an appropriate advisory committee to provide a detailed review of Oregon's regulatory effort to manage and reuse oils.

The new EPA management rules for used oil contain the flexibility to recycle and reuse all oils that are not mixed with listed hazardous waste. The EPA rule provides that used oil be recycled and managed under used oil management rules -- not hazardous waste rules. If used oil is to actually be disposed, then a hazardous waste determination would have to be made.

This approach provides the required balance between the federal oil recycling act, solid waste rules, and hazardous waste rules. With just a little additional direction, it would be a relatively easy task to expand the draft rule to provide both the conditions and ways to recycle all oil and oil products through the new management system. This would provide a system that most oils would be collected. The damage from oil comes primarily from oil that is not collected and managed.

The used oil management system is a major change and places strict requirements upon those in the system. The impact of these strict new rules is unknown by either the small number of service providers or the regulatory system. Oregon does not have the data on quantities and types of oils that are not recovered. Without good data, there is no evidence that the present system does not work or needs restrictions that exceed EPA's. Nor can the damage that unwarranted regulations have upon our environment be estimated.

Without data to show that stricter regulation than EPA will have a positive impact upon our environment, no part of the regulation should be stricter than EPA. Anecdotal data is not sufficient to justify more restrictive regulation. After EPA's system is in place for several years, the data will be available to justify either more or less regulation.

Oregon has a unique opportunity to provide improved environmental services and lead the nation in universal oil recycling of all oils and oil products. I was informed by EQC direction, that universal recycling of all oils would be included as an option in the development of Oregon's used oil rules. This option has not been part of the written material being shared with the regulated community. Serious consideration of this unique opportunity needs your direct guidance. This approach would make many of the definitions of oil a moot point as the method of recycling would be the focus. In addition, the system would provide a means to reuse even small quantities of oil and best serve Oregon's environment. Universal oil recycling could put our regulatory efforts in a position of national leadership.

Recommend that you advise DEQ that a universal oil recycling option should be fully developed; that a joint advisory committee be formed to advise and insure that the regulatory system fully supports the recycling and reuse of oils; and in the meantime EQC simply adopt the EPA-279 rules as written by EPA.

Thank you,

  
Dick Briggs

Staff has done a good job in identifying issues and understands how this new oil management system could be expanded to include all waste oils. It appears that the constraint is their belief that this process will require resources that they do not have. To expand the rule to include the ways to encourage the system to manage all waste oil in this new system, would take less resources and time to develop. If the system does not provide a means to collect and utilize all the marginal oily waste, then DEQ will have to devote many more resources. The system needs to encourage the maximum collection of waste oils while at the same time insuring that we do not place artificial restrictions on this collection process.

To make this to happen, your committee should advise the staff to take the following actions:

That a three person task force, with at least two waste oil experts, be utilized to work with Staff to develop alternate language to the present draft rules that provides the clear guidance and processes that will allow and encourage this management system be utilized for all waste oils.

That the task force be asked to work toward providing language that will promote the maximum collection of waste oils and that they review the documentation supporting any additional restrictions in to the system.

That this task force bring this expanded waste oil management system language back to your next meeting for review.

I would further recommend that your Committee ask this small Sub-Committee to monitor the development and implementation of Oregon's universal waste oil collection and management system.

An alternate to this approach would be to adopt the EPA used oil rules without change and to implement the expanded waste oil management system over a longer period of time. I do not think that this delay is necessary or desirable. But a delay is a better course of action than to disrupt and change Oregon's system of recycling waste oil twice in a short time frame. Oregon laws mandated recycling. These mandates and common sense will require a universal waste oil recycling system to meet the goals. By a little additional effort now, we have the opportunity to make this happen without having to make another set of rules at a latter date.

I will be available at the October meeting for discussion of how the language of the draft could be changed and make waste oil recycling a reality in Oregon.

Thank you,

  
Dick Briggs

Dick Briggs Consulting Services  
80 W 23rd Ave.  
Eugene, Oregon 97405

September 11, 1993

Hazardous Waste and Toxic Use  
Reduction Advisory Committee, DEQ  
811 SW Sixth Ave.  
Portland, Oregon 97202 - 6993

Comments Concerning Recycling of Oil for Your 15 October 1993 Meeting

I have previously communicated with the EQC, DEQ staff and your Committee concerning expanding Oregon's used oil management system to include all waste oils. Oregon has a unique opportunity to make the EPA Used Oil Management System a management system to recycle all waste oils.

The term "waste oil" includes both used oil and oils that may no longer be used for their original purpose( Vol 57 FR, 5-20-92). Federal law provides that State plans may include, at the option of the State, the recycling of oils. State law concerning recycling, waste oil and solid waste clearly requires that waste oils be recycled and reused to the maximum extent feasible.

The authority to utilize the EPA used oil management system to provide for a system to recycle all waste oils is clear. The Director of the DEQ's Solid Waste Division in her response to my letter to the EQC said that " I assure you that this option will be given consideration during the rule making process and that the Commission will be provided with an analysis of the viability of this option for Oregon." As the draft rules have not provided the regulated community the opportunity to review rule language that could implement this expanded recycling option, this language should be added before we take the draft rule to formal public hearings.

It would not require much rewrite of the present draft used oil rules to place emphasis and guidance on recycling of all waste oils. The rules could provide under what conditions waste oil and waste oil that is mixed with other solid waste could enter the enter the used oil system and that once that it entered the used oil system that it would be managed under that system. The rules would continue the prohibit the mixing with listed hazardous waste.

Most waste oil can already be added to the used oil management system as a solid waste. With just a little additional guidance, Oregon's management system could provide the flexibility needed to collect and manage all waste oils that are not hazardous waste.

Dick Briggs Consulting Services  
80 W. 23rd Ave  
Eugene, Oregon 97405

27 August 1993

Rick Volpel  
Hazardous Waste Policy  
and Program Development, DEQ  
811 SW Sixth Avenue  
Portland, OR 97204

Dear Rick,

I thought the meeting on the 24th was useful. This type of informal forum is needed on a continued basis. It provides DEQ with a means to extract information from this very small recycling industry and facilitate the communication needed with the industry. For future meetings, I would suggest a work session with a round table setting would produce even better communication.

I have had a chance to read your July draft and continue to be concerned with what appears to be two general directions that you are heading. First, that there seems to a mind set that the used oil management system for Oregon should be restricted by the federal rule. This approach limits the emphasis on the recovery and recycling that by Oregon law is required. I realize that it has not been customary for DEQ to move outside the scope of the federal rule, but to make this management system work efficiently in Oregon, it is imperative that this happen. We aren't managing one industrial waste, but a whole societies waste. The emphasis on industry recycling and utilizing alternate products works better when it is directed at those specific industries and waste streams.

Second, it seems that we tend to want to regulate areas before we have good data that the regulation is needed or that the regulation will improve the management of the substance. To address this type of potential problem, situations where there is insufficient data to indicate either a problem or the extent of the problem, the use of an informal process in the rule to resolve those issues when the need arises is a better way to address the concern. This approach adds the flexibility needed and encourages participation in resolving problems. With those comments, I will move to a page by page comments on the July draft.

Page 2:

Page 14; Authority: Add the 1980 Federal Used Oil Recycling Act and other appropriate Federal laws that must be considered when providing the balanced management system for oils. Also, add the State laws concerning the management of oils and recycling. These references are essential for both understanding and balance by decision makers and to insure EPA also considers State law during their review. EPA actions, by Federal law, must be consistent with State law when they do not conflict. This also helps the various committees and the public understand the rule.

Page 15; Definitions: EPA use's standard terms. To use other terms creates continued misunderstanding and unnecessarily complicates Oregon's rules. In addition, it does not follow the intent of Oregon law to make the regulation understandable by the average citizen. It is vital for understanding that the base definitions are the same. An approach that could accomplish this is to use the EPA term and add the State restrictions or approach to defining the EPA term as a subset. This allows you to add clarity to the term without changing the EPA term. It is a small difference in the method but makes is clearer that the EPA definition is primary and that the State is either clarifying or restricting the EPA definition.

Page 16; Oily Waste: I think your definition will detract from the maximum collection of oils, especially those wastes that are recycled through the used oil management system. An approach to defining oily waste that would encourage the collection and reuse of the waste would be to include a straight forward definition that oily waste that is recycled through through the used oil management system is managed as used oil. This approach gives you the best of both approaches. It allows processing as used oil and defines the waste as a solid waste if it is not recycled through the used oil system. This provides a means to utilize the oily waste, encourages additional collection and decreases the impact that theses wastes can have on our environment.

Page 16; On-site: In your notes, it would be helpful if you would explain why and how this definition applies to the used oil management system. I do not see the need for the same restrictive definition as hazardous waste to apply to the used oil management system.

Page 16; Person: I have no problem with the definition but do not find any placed in the rule that the definition adds clarity or is really needed. The use of the term is so inclusive that when it is used, either you have to provide the exceptions such as individuals, DIY's, farmers etc or mislead the reader. Your rule would be clear without this definition.

Page 3:

Page 16; Solvent: The proposed definition does not clarify what is a solvent as all oils do the same functions as used in the definition. A more practical approach would be to allow non hazardous solvent products to be recycled as used oil if they have not been mixed with listed hazardous waste, etc. If you use this approach, the matter if it is a solid waste or a used oil becomes moot. The used oil management system provides a management system more than capable of environmentally sound recycling of these non hazardous products. This approach also simplifies the management and regulation of these products.

Page 17, Used Oil: While I think the Oregon definition of used oil is equivalent and should be used, the EPA definition of used oil could also be used. Your additions to the definition further complicate the definition and is not equivalent to the EPA definition. A different approach to this definition would be to allow oily wastes, oil based products, contaminated soils, waste waste and sludges contaminated with oils, antifreeze and other oily substances to be managed by the used oil management system if they are recycled. If they are not recycled, they would remain a solid waste. I would suggest that you use either the present Oregon legislated definition or the EPA definition. Then provide whatever clarification you decide outside the actual definition. This approach keeps the definition straight forward, while at the same time gives guidance on how you want various substance managed.

Page 18; Used Oil Transporter: Change the addition, last line to read, Used oil transporter does not include transporters of used oil etc. The use of "persons" is not needed and makes the rule less readable.

Page 20; (3) Conditionally exempt small quantity generator  
If it is necessary to make this portion more stringent than federal rules in Oregon, you should provide the data of how this will protect our environment better and encouraging collection and management by these small generators. What I think will be the result of this change is to make criminals of a lot of small generators and increase the chance of inappropriate disposal, just the opposite of what is intended. This was one of the places that EPA maintained a balance. Without some actual data to support this more restrictive regulation, it should not be made until you have a proven need.

Page 4:

Page 21, Materials etc: Restricting "BTU value of 5000 BUT's or more" is the kind of change that defy's logic. If you can successfully utilize oily non hazardous substances with less than 5000 BUT's per pound within the used oil management system, you have made use of the energy value of the substance. If the additional restriction stays, it should be fully justified in terms of how this improves our environment and encourages recycling within the used oil management system.

Page 22, (5) I do not see why this statement is needed. If it is needed it should be rewritten in a more direct way. For example, "Residuals from burning off-specification used oil fuels may accumulate sufficient quantities of listed hazardous waste that the residuals may be subject to hazardous waste management."

Page 23, 1: Second and third lines. Stop the sentence after used oil filters and delete the words "when reasonable and legitimate recycling services are available." The deleted words weaken the statement and are not needed

Page 33,(3): This statement does not appear to be needed. Delete.

Page 24, Burning in particular units: Change the first sentence to " Burners of off-specification used oil must comply with air emission requirements." The use of the term "person" is not needed and confusing. The sentence applies to off specification fuel burners. If this is not the case, then you should reference the specific law that provides the requirement that all individuals must have a permit to burn used oil.

Page 25, (1) Household " Do - it - your - selfer"  
Add "who generate an average of 25 gallons per month or less" are not subject etc. This make this consistent with the Farmers exemption in (4).

Page 25, (4) Retain the EPA exception in total. DEQ does not need the additional task and there is not adequate data to support removing this exemption. If you feel that you need to comment on this exception, encourage them to recycle their oils.

Page 27, (3) Change the sentence to, Have the opening covered when in use , except when filling or removing oil or mataining the tank." Sentence more clearly defines the intent.



Page 5:

Page 28; (d): Change the sentence to " The burner is operated to a specifications needed for used oil burning." More clearly describes the desired results. Once again, if you are going to be more restrictive than, EPA you should be able to show that the present system needs to change. This requirement would be one of those that you should delay until you have better data on the need to make the additional restriction.

Page 38 (iii) The requirement for 5000 BTU's or greater is more restrictive and should contain complete justification. The limit tends to discourage beneficial use of non hazardous waste and limit the recovery of used oil. Recommend that this portion be deleted.

Page 52; (2) Residues: Same comment as previously made for page 22.

Page 58; (2) Residues: Same as the above statement

Rick, I appreciate the work you are doing. It is not easy to get people to understand a system as complicated as this but it does give an opportunity to make the system both simpler and more environmentally sound by using a little common sense. Please send me a list of the those that were at the 24th meeting.

Thanks again,

  
Dick Briggs

Dick Briggs Consulting Services  
80 W. 23rd Ave  
Eugene, Oregon 97405

23 August 1993

Rick Volpel  
Hazardous Waste Policy  
and Program Development, DEQ  
811 SW Sixth Avenue  
Portland, OR 97204

Dear Rick,

Your used oil draft rules and the announcement of your 24 August meeting arrived last Friday, but the copy of the draft rules was the same 5/20/93 draft rules that I had previously commented upon. As it was too late to get your revised draft rules, my comments will have to be general.

It appears that the process that DEQ is using for the review of this management system will tend to reduce the scope of the EPA oil management system and not take advantage of the years of effort that it took EPA to provide a new balanced yet restrictive management system to recycle oils. Your process is likely to produce a system that is unnecessarily restrictive and narrow in scope and will be both environmentally and economically negative. It is hard to comment directly upon your process as I have not seen it in writing.

DEQ has the authority and should exercise that authority to expand the used oil management system to include all waste oils that are not mixed with "listed" hazardous wastes. The used oil management system could easily accommodate all oils that have not been so mixed. In fact, this is the most logical and environmentally sound way to collect and manage anything to do with oils and oil products. This approach could resolve DEQ concerns over the management of specific petroleum products by providing specific performance standards for these products or process approvals and would provide a means for reuse of all oils.

You indicated that you were going to send your recent draft to DEQ's Hazardous Waste Advisory Committee in September to begin formal rule making. While they may be available, I have not seen your background paper or the options for that committee to consider, such as universal recycling of all oil's or options to have a group of individuals whom are experts in the system advise this group. This could be a separate committee or the Used Oil Recovery Committee that was created by the recent legislature. There needs to be a

discussion, both with those in the industry and DEQ of how DEQ intends to provide the leadership that will ensure that the oil management system encourages recycling and how DEQ intends to facilitate the collection of all oil and oil products and reuse this oil. A full understanding of the impact that further restrictions on EPA's management system will have upon our environment or the ability of the collection system to support these additional restrictions is essential to provide the balance equivalent to that provided by the EPA rules.

The draft rules must contain the rationale and data as to why the additional DEQ restrictions or narrowing of definitions are desirable. Without specific data that indicates that the EPA rules must be changed, no change should be made. The draft rules should contain references to both Federal and State used oil and recycling laws. While care must be taken to insure that this system does not accept hazardous wastes, the rule is primarily a recycling law. Applicable reference to both Federal and State oil recycling laws that must be considered when adopting this rule must be part of the record and the rule. In addition all requirements that are not directly Federal requirements must have a direct legal reference.

Additionally, to make this system work, the draft rule needs an inspection check list for your compliance inspectors that provide what they should do for each required action with the appropriate references. These should be included for the main types of inspections that they will perform. This could be an appendix to the rules and will serve to instruct, not just your inspectors, but every one involved with the management of oils. I have seen this check list work in several well managed systems. It works, is relatively easy to develop and adds accountability to the system.

To move this draft to the Hazardous Waste Advisory Committee without these discussions and the supporting data, for their action is premature. Without the additional material and discussion occurring first, the final product is likely to be unsatisfactory, both to DEQ and certainly for everyone in this state who uses oils.

You have a unique opportunity to expand this new waste oil management system so that it will be a model. You have the legislative direction to encourage the recycling of used oil to the maximum extent; you have the EPA rule that provides the flexibility for the needed management system for all waste oils. EPA is looking for ways to institute universal waste management systems and you have both Federal and State recycling laws to support your actions. In addition, you have a recent legislative mandate to look at the recycling of used oil that provides a committee structure that could give you some practical assistance.

DEQ can implement a win win position if your organization understands that the way a management system for waste oil will function is to recycle all of it through the same oil management system. The two systems are nearly identical and neither system can function economically separately. Remember what happened in the past when the oil collection system lost it's price advantage and when the cost of collection exceeded the price of sale. There were huge losses of companies in the business and less oil was recovered. Well intended but unworkable regulation of this recycling industry restricts the investment needed to better utilize the material and encourage additional collection of oils. This has been a historical fact. Less investment and less collection of oils directly caused by misdirected regulation and subsequently additional degradation of our environment. A recycling system takes other peoples wastes and finds a use for it. It does not have the flexibility or the unity of effort that a separate company has to change either the material they use or to charge someone else for the waste.

Prior to the draft rules being forwarded to the Hazardous Waste Management Committee, I am requesting you provide the background papers, an option to expand the used oil management system to include all oil's and options for detailed review of the rules by individuals knowledgeable in the collection, management and recycling of oils.

In addition, I would like to have at least an additional week, after receiving these drafts, to provide comment on the draft rules, background papers, management and process options and ways to obtain the input of individuals that are knowledgeable in the management and recycling of use oils. I realize that this will delay your process but the additional delay will vastly improve your eventual product.

DEQ needs the data and knowledge of the system to get the job done correctly and the process that appears to be emerging does not provide the information or understanding that is essential for an environmentally sound oil's management rule.

Thank you for your efforts and the chance to continue to participate in the process.

  
Dick Briggs

## ***Comments on Proposed Oil Regulations - Draft 7-16-93***

Page 1-3 and Page 15 under Authority : Having read the citations, one could make a strong legal argument that to adopt other than the Federal rules as contained in the Federal 279 for used oil would be in violation of Federal law — not the least of which is the Federal Department of Transportation. Please Comment.

Page 6 271.26 (a) through (h) requires equivalent, not better or worse; therefore, does 279 give you the authority to do other? Comment please.

Page 11 (4): "Used Oil" means a petroleum based oil which through use, storage, or handling has become unusable for its original purpose due to the presence of impurities or loss of original properties."

This definition by Oregon is still the best for the nation, as it allows for the maximum recycling of oils and oily wastes which offers the best protection of the environment and human health. With technology now operating in Oregon, oily wastes with any amount of oil can be orderly recovered and recycled, but not without DEQ's support. Why shouldn't this definition continue in use?

Page 16 - 340-111-10 Definition - Why not use the same definition in all areas of Oregon and Federal rules? Common definitions are necessary to end confusion and the lack of a common definition leads to many problems and misunderstandings. Are we not able to write clear regulations?

Page 16 - Oily Waste : If recycling and maximum protection of the environment is the goal, then oily wastes going for recycling would be considered as part of the used oil regulations. This should include oily water going for recycling. Leave 279 alone, as it already handles oily wastes and waters as used oil. Mixtures need to be defined so that there is no confusion between through use, by its own nature, or when it has the same constituents as the original product.

Page 17: The lack of a definition of solvents has long been a problem in many areas of waste management. However, this proposed definition could well stop all oil recycling, as all oils solubilize (dissolve) or mobilize other constituents, they also clean, etc., as do many other chemicals and materials. Since the goal is to recycle, a simple statement that as long as it is not mixed with a listed hazardous waste and is oil, and when recycled the resulting product does not exhibit any characteristics other than that of used oil specification or off-specification fuel, should do much to correct the problem and make it better for the environment.

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Page 17 - Definition of Used Oil: 279's definition was developed through more than 13 years of nation wide studies, meetings, comments, etc., and while it could include all non-listed wastes, it does the job and could include all oily wastes that can be recycled. Why is DEQ trying to restrict recycling and the protection of our environment? What studies does DEQ have that support a more restrictive definition? If they have such studies, why not include them with DEQ's proposed changes? The only ones that benefit from DEQ's proposed definitions are the hazardous waste cartel which continues to try to make used oil a hazardous waste. Also, there may well be a conflict of interest in the addition of "there is a method to continuously remove oil." etc. This could be corrected by just letting CFR-279 happen, including mineral spirits becoming used oil.

Page 18 - Used Oil Handler:" Should this include off-specification burners? This could bring off-specification burners under the full set of regulations just as a processor, etc.. This could be very damaging, as we all need some off-specification burners as they are part of the needed solution, and if they must do much more than what is now required in the rules, they simply will burn virgin oil, natural gas, etc.. and off-specification fuel could then only be handled as hazardous waste fuels, which not only increases everyone's costs, but hazardous waste burners do not have the capacity to burn more fuel.

Page 18: DEQ should consider adding "other than a generator on the generator's own site," to "Used Oil Processor."

Page 19 - 340-111-100 (b): Mixtures of used oil and hazardous Wastes: Your addition "Hazardous or non-hazardous substances," etc. sentence is unclear to us and is not necessary. Again, please define mixed in your proposed regulations, as it differs from use by the product's own nature if the used oil then only exhibits true characteristics of either specification used oil fuel or off-specification used oil fuel and has not been mixed with listed hazardous wastes.

Page 20: (iii) - (3) - (c)(1) 2 - (d)(1) : All of these have been changed far beyond CFR-279 and we all need to know the basis for any and all changes. These changes not only further restrict used oil recycling, but will cause damage to the environment and only help the hazardous waste cartel. Please either adopt CFR-279 as written, or develop a subcommittee which includes used oil experts to make any needed proposals. It took more than 13 years for EPA to get to this point.

Page 23 (2): "Burning of mixtures of used oil and non-hazardous solid waste for energy recovery with BTU values of less than 5,000 BTU's per pound prohibited." Why? What studies and basis for this addition, as these are materials which can be recovered. Since they are not hazardous and the oil will be removed by burning, even if they were then landfilled the environment would be better off and the landfill safer. As an example, kitty litter from oil cleanups, etc. - Since 50,000 ppm of oil

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*Page 3*

and grease if often the limit for landfill, that's 5% or about 1,000 BTU's – what happens to wastes that have less than 25% oil in them? Does this encourage recycling? Present systems allow 70% & more recovery of all energy in these fuels, and the 5,000 BTU's is not applicable. This method is far superior to landfilling.

Page 26 - 340-111-210 - is not the same as 279 and is not correct, as it is much more restrictive and should be changed to include 340-111-100 (b)(2)(ii) and (iii).

Page 28 - (5) (e): Make this the same as the SPCC requirements by changing the 500 gallons to SPCC gallonage.

Page 28 - 340-111-230 - Space Heaters: What happens if the burner does not follow the rules? What happens if he has five units (2.5 million BTU's) on his site? Shouldn't all of these units be licensed, etc.?

Page 28 - 340-111-240: Add "or leased" to (1) and on (1) on the next page.

(a) (2): I believe the 55-gallon limit is too small for generators. 220 gallons is needed in the outlying areas.

Page 33 (c) - Used oil Discharges: Spell it out so we all can have one place to get the information.

Page 38 - 340-111-500 (III) - 5,000 BTU's: See Page 4 & Page 23 comment. This is not needed, and is damaging to our environment.

Page 40-41 - Required Aisle Space: This needs to say 2.5 feet on all new, remodeled or future changes, and where small containers such as barrels can now be rearranged.

Page 53 - 340-111-620 - Notification: Why are presently notified off-specification burners required to renotify? This makes it more difficult, as burners do not like to do anything that isn't required of virgin fuel burners, and EPA 279 does not include this requirement, and it was not lined out.

*Phil Proccamando*  
*Phil Buzz*

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June 28, 1993

Mr. Rick Volpel  
Hazardous Waste Policy & Program Development  
Oregon Department of Environmental Quality  
811 S.W. 6th Avenue  
Portland, OR 97204-1390

Dear Mr. Volpel:

Thank you for the efforts to start to incorporate the Federal used oil regulations into Oregon's Administrative Rules.

The Federal Rules 279 have, as you know, been in development since 1980 and there have been hundreds of hearings, meetings, studies, etc., with input from all over the Nation. It has been the Nation's best effort to bring about a balance between the need to recycle oily wastes and to protect human health and the environment.

As a member of the used oil industry, I support DEQ's efforts to adopt the 279 rules with few, if any, changes other than the necessary numbering, etc., to make them into OAR Division 111.

It would be even better if Oregon were able to incorporate changes to make recycling more effective in lieu of limiting it, which both the Federal rules do in 279 and DEQ now proposes to do further. It is a fact that in the Northwest many new methods have been developed to make used oil into usable products, and for material recovery which would, if encouraged, help our Nation. DEQ could well support these efforts by becoming pro active, more knowledgeable about used oil, and providing for a working climate with those in the industry in lieu of the current hazardous waste enforcement actions and limited support given this important used oil industry. Used oil can now be made into diesel fuel, asphalt, and later lube oil base stock, but it will not happen in Oregon soon unless Oregon gives their support.

We would recommend starting out by just adopting 279 and then agreeing to take under consideration all suggested DEQ changes and those from the used oil industry, the generators of used oil, and the general public. Then, at the end of a reasonable period, a report would be prepared giving all the facts, comments received, etc., and asking for final input. Then call for public hearings to review any proposed changes.



Mr. Rick Volpel  
Hazardous Waste Policy & Program Development  
Oregon Department of Environmental Quality

June 13, 1993

Page 2

If such a program cannot be worked, then just adopting 279 without changes is the best approach. To do otherwise is to reduce recycling and recovery of oily wastes, unnecessary increase costs, damage the used oil industry, and cause increased dumping with the resulting damage to our environment.

It is time for DEQ and the used oil industry to work together. I believe the used oil industry would welcome the long overdue support, perhaps this can be the start!

You will find attached a starting list of questions, comments and proposals.

Yours truly,

Gerry Wright

GW:mb

## QUESTIONS:

1. What studies have been done to support DEQ's proposed rules and changes over Federal 279 present rules? Please list and supply copies of all information to support other than 279.
2. Who wrote the proposed changes?
3. What was the basis for each change?
4. What was the background of each party proposing a change?
  - A. Years in the used oil industry or work experience.
  - B. Technical training in oil, used oil, petroleum engineering, etc.?
  - C. Are any of them used oil experts?
  - D. Schooling and training attended and completed concerning used oil?
5. What effect would the changes have on the recovery of oily wastes? Copies of support studies please.
6. What effect have the changes, policies, and these actions of DEQ had on the used oil industry in the Northwest? What has been done to help this needed industry?
7. Why is used oil given such low funding and why is it part of the hazardous waste system in Oregon when it is exempt when going for recycling and not for disposal?
8. Who stands to benefit from the proposed changes?
  - A. The hazardous waste cartel?
  - B. The used oil industry?
  - C. The generators and the general public?
  - D. The environment?
9. Does the DEQ proposal follow the Federal 279 rules other than lined out or underlined area? If not, why? What is the support for such changes?
10. What input has been used from the National Oil Recyclers Association, American Petroleum Institute, or other national bodies?

Dick Briggs Consulting Services  
80 W. 23rd Ave  
Eugene, Oregon 97405  
343-4670

16 June 1993

Rick Vopel  
DEQ, Hazardous Waste  
Policy and Program Development  
811 SW Sixth Ave  
Portland, Oregon 97204-6993

Dear Rick,

I was pleased to get your draft used oil rule. It is always nice to have the opportunity to comment early in the development of the environmental policy. It will be interesting to watch those, both in the industry and the Agency, who do not understand the importance of the used oil management system to Oregon's environment. This little appreciated and often misunderstood industry essentially takes societies waste oil out of the environment and recycles it into a usable product. It is taken for granted that this can be done profitably. To allow this system to function, it is important, that the regulatory system encourage the used oil collection system to collect the maximum quantities allowed by the EPA rule. DEQ's institutional bias toward hazardous regulation of this industry needs to change to one that uses the used oil management system to improve Oregon's environment. DEQ must provide clear direction that will allow the maximum environmentally sound recycling of all oil.

I also realize that you and others that have an understanding of the system will not make the final recommendations on the direction DEQ goes on managing used oil. I will continue to work to convince other decision makers to spend the time needed to understand that the used oil management system should be the tool used by DEQ to resolve waste disposal problems. After many years of investigation, EPA concluded that, on balance, the used oil system with reasonable management standards provides the best system to manage most used oils.

Without an aggressive used oil collection system and the motivation to collect it all, there would be a lot more oil that is not collected. Another element that must be considered in making used oil collection feasible, and is often ignored, is that the collection must be done over a large area, 400 to 800 miles, to collect enough oil to make it feasible to invest in the capital equipment to refine the oil. That is one of the prime reasons that all the larger processors are located in the Portland area. It is not that they want to be in Portland but that is where the bulk of the used oil is and where the transportation system are available to collect from other areas.

As you know, the used oil business is a very competitive with few processors remaining in the business. The characteristics of used oil collection appears to be similar in most parts of the world. These characteristics can be a distinct advantage in developing a management system to facilitate that the maximum amount of used oil is collected and managed.

If these businesses were not out every day aggressively seeking the small quantities of oil produced by thousands of users, much of the oil would never be recovered. Our real task is not to just complete an administrative rule that can be enforced, but to create a set of management standards that will encourage the collection of all used oil. ~~If these businesses were not out there everyday aggressively seeking the small quantities of oil produced by thousands of users, much of the oil will never be recovered.~~ If we error, it should be on the side of being sure that the rules encourages the maximum collection of used oil. To add additional restrictions over the already major changes required by the EPA used oil management system will seriously impair the system, require unnecessary governmental price support and significantly decrease the amount of used oil collected.

It is important to note that Oregon now recovers a larger share of their used oil than many other states. Just the 9,900,000 gallons collected in the Metro Area approaches the 10,500,000 gallons that Oregon could expect to recover from the whole state. This is using the best collection model projections available. Accurate data is not kept and probably will never be available. Annotate data also indicates that there are few incidents that would support a conclusion that the present collection system does not work. This is not to say that we should not improve the collection system. I have seen no evidence that there are sources of used oil for which a collection is not available. The key to increased collection is essentially to allow the maximum allowed by EPA and clearly separate the system from the hazardous waste system.

Page 6

Oily Waste. What term is used to define mixtures of oil and material that is not waste? What is the value of excluding oily waste from the used oil definition? By including oily waste as used oil and subjecting it to the used oil management system you provide an environmentally sound means for it's disposal when possible. What provisions do you have for the recycling oily waste other than land or air disposal or burning as hazardous waste?

Person: What is the need to define person in this manner? I find it a little confusing between DIY and person. Is this regulation applicable to all persons and not DIY's and households? It would be useful to straight out say that this is applicable to all entities except household DIY if that is the intent. It would also be useful to clarify that the EPA exemption for farmers is not included as DIY used oil. This area needs clarification.

Page 17: Reportable Quantities. It would be useful for convenience to include basic reportable quantities for spills with the reference. EPA's concept of including this division as a separate section was so that the used oil manager and inspector would not normally have to look up additional regulations.

Solvent: There is more than one basic type of solvent. To say all used solvent are not used oil does not recognize that mineral spirits are fractions of oil, are not listed as hazardous waste and can best be managed by recycling first at the generators facility and then under the used oil management system. To exclude any oil that is not listed as hazardous waste from the used oil management system should be justified by hard evidence, not just that it is hard to inspect. If solvents are not included as used oil, then a more environmentally sound means of management should be provided. By excluding all solvents from the used oil management system, you are discouraging collection, recycling and environmentally sound use of this resource.. How do you propose to do manage used mineral spirits? If an individual has a small quantity of used mineral spirits, will this small quantity be recovered if it is treated as a hazardous waste? I would suggest that you define both mineral spirit and unlisted solvents to be managed under the used oil management system, and clearly state that listed hazardous solvents are hazardous waste. The incentive to use solvent recyclers will remain if you use a significant quantity. The used oil management system will facilitate the collection and reuse of this oil fraction that no other system can do.

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By adding a statement such as " Mixtures of used oil and non-hazardous waste that have a BTU value less than 5,000 BTU per pound may be part of the used oil system when added inconjunction with other energy recover operations. This type of permissive operation inconjunction with approved energy recovery operation utilizes the used oil collection and management system to provide environmental and economically sound recovery and cleanup for low grade oil wastes.

Page 21, Mixtures of used oil with products: Change to mixtures of used oil and fuels or other products are subject to regulation as used oil. This restores the language in the EPA rule and makes the DEC regulation more consistent with the EPA used oil management system. It is clear that EPA intenced that the used oil management system be a method that recycable oil can be recovered from oil products.

Page 24, Prohibitions: Burning in particular units: Delete " Any person who burns used oil for energy recovery, must comply with the emission requirements of the state and local air pollution authority. Add: (4) Air Quality Permits are required for industrial boilers or furnaces burning used oil. Paragraph (2) iii. Change to: Used Oil Space Heaters belonging to he generator. This is the EPA requirement. To add the requirement that the generator follow the manufacture's instructions for off specification used oil effectively eliminates this means of burning. If this is the intent of this requirement, say so and provide the justification and the data supporting the justification.

Page 25, Other Prohibitions : Burning of mixtures of less that 5,000 BUTs per pound. See previous comment. If you really need to do this , the rational and data should be provided.


Page 25, (4) Retain the farmer exemption. To subject the farmer to all the requirements of a business generator without showing a specific environmental necessity or without clear direct legislative direction is not necessary. It also exceeds EPA direction.

Page 27, Condition of units. Delete (3) Closed except when adding or removing oil. and Add: "Fitted with a cover that will reduce the chance of spill or contamination. " Sentence provides better description of the condition of a tank that you want to accomplish.

Page 9

Page 28, On-site burning in space heaters. Delete (d) The burner is operated following manufacturers instructions. Few space heater manufactures provide instruction for burning used oil and used oil that can be burned in a space heater is little different than other low quality oil. This also exceeds EPA requirements and places used oil at a disadvantage from similar new oil.

Page 30, First (2) Be registered etc place an "or" between county/ municipal government. This clarifies that only one approval is required.

Page 32, Notification, (a) and (b) Clarify that only one identification number and notification is needed or both are required. Also consider changing the title of the Hazardous Waste Form to Used Oil Management Form. The management of used oil is not a hazardous waste activity and should be separated in people minds. 

Other general Comments:

You should add a section that requires DEQ to develop a management checklist for various functions within the used oil management system . This could be the most important single document that you can develop that will provide the technical assistance that is needed to encourage environmentally sound used oil management. You need to insist that those who must use, manage, and regulate the system understand what is required and be consistent in the application of the rule. This check list would not be difficult to make and could be constantly improved by working with the industry and the inspectors. If you do not carefully consider the impact of DEQ's actions, you run the risk of destroying this small industry. You will end up with a system that must be subsidized by government, discourages the collect of this resource and is creates additional environmental damage!

It is nice to be working with you,

  
Dick Briggs

April 27, 1993

Dick Briggs  
Consulting Services  
80 W. 23rd Avenue  
Eugene, OR 97405

Dear Mr. Briggs:

This is in response to your letter dated March 30, 1993, to Rick Volpel and me regarding information concerning used oil. In responding to your requests, I offer the following:

1. You have been sent all written staff internal opinions to date regarding DEQ's used oil draft rule. In addition to the information already sent to you, there may be additional used oil correspondence found in Department files. Because of the potential volume and associated copying costs, you are encouraged to review existing files. The files will contain any comments to EPA from the Department regarding used oil and should contain the information that you are requesting. However, we do not have the available resources to conduct the file review for you.
2. The only document being withheld is dated February 28, 1993 from Shelly McIntyre, Assistant Attorney General, Oregon Department of Justice to Rick Volpel. The document is protected under the attorney, client privilege, because of an ongoing enforcement case. Please see ORS 192.501 for applicable statute.
3. Please contact the following persons to gain access to material concerning used oil:

Helen Buschert 229-6461  
Hazardous and Solid Waste  
811 SW 6th Avenue  
Portland, OR 97204

Graciela Arrastia 229-5081  
Air Quality Division  
811 SW 6th Avenue  
Portland, OR 97204

Graciela Arrastia 229-5081  
Water Quality Division  
811 SW 6th Avenue  
Portland, OR 97204

Catherine Blaine 229-5263  
Northwest Region  
1500 SW 1st #750  
Portland, OR 97201





Dick Briggs  
Consulting Services  
80 W. 23rd Ave.  
Eugene, Oregon 97405

March 30, 1993

Rick Volpel  
Oregon, DEQ  
Hazardous and Solid Waste Division  
111 S. W. Sixth Ave.  
Portland, Oregon 97204-1390

Dear Rick,

I appreciated the information that you recently sent me. I continue to gather the information needed to understand any special concerns that DEQ has regarding the management of used oil and to promote better ways to utilize this resource.

The years of study done by EPA indicates that the more restrictions that are put upon the collection system or narrowing the definition causes increased pollution. There does not appear to be any significant problem with the present collection system that is not adequately addressed by the EPA rule. When special procedures are required to collect oil from the user, it has a negative impact on the amount collected and subsequently the environment. If it is easy to get rid of, people don't go around the system. Artificial restrictions on the collection and processing of this resource both increases the cost and decrease innovative ways to reuse the resource. This was the theme in the EPA final management decision that includes a broad interpretation on what is used oil and that it is not a regulated hazardous waste unless it is disposed. If you really want to reduce the potential for pollution caused by oil, provide direction on how all oily wastes and petroleum solids should be recycled as used oil. This would reduce the chances that it would be dumped, illegally disposed or put into landfills.

Once you have a stable regulatory system that is inclusive of all recyclable oily wastes, you should encourage more environmentally acceptable ways to reuse oils. This will require regulations that are flexible and can easily be changed to take advantage of improved ways to reprocess oil. Equally as important is to improve DEQ's ability for better communication between those who handle other peoples waste. If you do not facilitate this vital link, your regulatory efforts are likely to be counter productive to improved management, processing and a better environment.

That is enough of my pontificating. What I need to assist you in your task of adopting the EPA regulation without unnecessary restrictions on the collection and reuse of oil is the DEQ institutional memory.

I am requesting the following information from DEQ files.  
Copies of all written comments, inquires and responses to and from EPA concerning the management of used oil, waste oils and other oily substances since mid 1988.

Copies of internal and external comments, inquires, directions and responses concerning oily solid wastes, oily hazardous waste, and used oil during this same time period.

Copies of written comments, inquires, direction and responses concerning air emissions and controls on burning used oil during the last two years.

Copies of the 1989 legislative direction to DEQ provide management standards for used oil and copies of all internal directions on how this was to be implemented.  
I do not need the published administrative rule on used oil for dust control.

I understand that this information may be several pages and I am willing to review this information with you at your office. If there is any of the above information that is is not available, I am requesting a listing of the information similar to that requested of Mr Bower in the attached letter.

Thank You.

  
Dick Briggs

343 - 4670 FAX: 343 - 8675